

TA2 RACING

THAILAND

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TECHNICAL REGULATIONS VERSION 7 - 2nd April 2019

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TECHNICAL RULES 2019

1.0 Overview:

"TA2 Asia Racing" referred to as "TA2 Racing" for the duration of this document.

TA2 Racing will be run under management of TA2 Racing Thailand in Cooperation with Racing Spirit for 2019 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 TA2 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 TA2 Racing within seven (7) days of meeting conclusion or rule breach notification if outside the confines of and official "TA2 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 TA2 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 TA2 Racing Car. No enquiries will be considered from a person without direct connection to a TA2 Racing Car or anyone who DOES NOT hold an official position in a TA2 Race Team. (craig@ta2asiaracing.com / jono@ta2asiaracing.com / <a href="mailto:jono@ta2



These rules are to benefit the class of "TA2 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** 2018 TA2 CHAMPIONSHIP. Please refer to TA2 race schedule. Points awarded for race finishing positions will be as per TSS points system.
- **1.2** Success Compensation time will be added after each race as follows:

1 ST	12 seconds
2 nd	10 Seconds
3 rd	8 Seconds

1.2.1 Compensation Times driver level

Bronze – Single	8 seconds
Bronze- Bronze	0 seconds
Bronze-Silver	30 Seconds
Bronze-Gold/Platinum	34 Seconds
Silver -Silver	52 Seconds
Silver Single	60 Seconds

1.2.2 BangSaen Race Specific rules:

Compensation Times driver level

1000	////
Bronze – Single	5 seconds
Bronze- Bronze	0 seconds
Bronze-Silver	20 Seconds
Bronze – Gold/platinum	22 Seconds
Silver -Silver	35 Seconds
Silver Single	40 Seconds

- 1.3 All TA2 races at all circuits will have a compulsory minimum pit stop time of 85 seconds
- **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 Specifications:

TA2 Thailand Race vehicle Specifications

Wheel Base: 2640mm (+/- 25.4mm) (104")

Overall maximum axle width: Front: 2000mm (+/- 25.4mm) (Outside of tyre to outside of tyre at widest point)

Overall maximum axle width: Rear: 2000mm (+/- 25.4mm) (Outside of tyre to outside of tyre at widest point)

Minimum Weight: 1260kg at the end of the race include Driver (Everything in car during race included).

Driver weight for single driver (In case of 2 drivers the average weight of theirs will be included) and car weight can be calculating separately.

Minimum Front Ride Height 75mm with Tire pressure at min 1.5 bars without Driver



CHASSISRAIL

FLOOR

Minimum Rear Ride Height 75mm with Tire pressure at min 1.5 bars without Driver

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

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.

Fuel Cell Size: 24Gal/91ltr Fuel(plus 5L pot): ETS Racing Fuel or TSS CONTROLLED FUEL 102 RACE FUEL ONLY



Controlled Components

Some components fitted are controlled and MUST BE PURCHASED through TA2 Asia Racing Thailand. Even if these parts are available from a normal or specialized retail outlet.

These components are vital to keeping the class of "TA2 Racing" equal and the mechanical specifications of the cars as equal as possible. The components listed below are vital could be easily modified to give and individual car an un-fair advantage. The following parts must be purchased through TA2 Asia Racing.

TABLES:

Parts Name / designation	Parts ref or parts code
Upper Control arm (front)	2213407
Lower Control arm (RH front)	229926R
Lower Control arm (LH front)	229926L
Front Up-right R/H (stub)	346104
Front Up-right L/H (stub)	34610L4
Complete LS Engine with TA2 engine number	LS3
Electronic Control Module locked	Motec M150
Axle L/H	TG3001-34
Axle R/H	TG3001-34
Caster rod	22945A-18
Brake Rotor Wilwood RF	WW120-13948N
Brake Rotor Wilwood LF	WW120-12949N
Brake Rotor Wilwood RR	WW120013263N
Brake Rotor Wilwood LR	WW120-13264N
Brake Rotor Runstop FR	
Brake Rotor Runstop FL	
Brake Rotor Runstop RR	
Brake Rotor Runstop RL	
Brake pads Front Winmax M207	As supplied by TA2
Brake pads Rear Winmax S83	As supplied by TA2
Front Hub	205800



Rear Hub	205300
Penske Shocks Or MCS	PK8347 8300 or MCS SHO-2W-0150/0151
Front Swaybar measuring 2.25"	23660
Rear Swaybar measuring 3/4"	23610
Front Spring load 550	
Rear Spring load 250	
All Body Panels	As supplied by TA2
Windscreen Camaro	FS81131-63343
Windscreen Mustang	FS81321-63343
Rear Wing	92550 as supplied by TA2
Wind screen Challenger	TBA
Gearbox (Sealed)	HGT or TTI (All same Ratio)
Diff Ford 9" (Sealed) 3.25 ratio	Detroit locker as supplied by TA2
Rims Steel basset or Lenso alloy	As supplied by TA2
Fuel Pump Bosch	044 or other supplied by TA2
Fuel Regulator (SEALED – 3.8/4.2 Bar) Turbosmart	TS-0401-1110 as supplied by TA2

3.0 Chassis - Howe TA2 THAI Spec only

- 1) The Howe THAI approved chassis must be used.
- 2) Only car's purchased via TA2 Racing Thailand will be eligible to compete in sanctioned TA2 Racing Events.
- 3) Strictly no modification to the chassis/frame or body parts under any circumstances.

 All parts must fit to original dedicated mounting points.

 No spacers or packers allowed
- 4) Chassis must remain in good order provide the driver with protection in the case of an accident. Damage to a major chassis member must be repaired or replaced to the highest standards and meet the satisfaction of the scrutineer. Cars involved in a major accident may be subject to an extraordinary scrutineering prior to being allowed to compete at future sanctioned events.
- 5) Any modification to suspension pick up points or engine mounting points or mounting plates will be treated as deliberate cheating.
 - a) 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.
 - b) Weight must be attached via positive means to the satisfaction of the scrutineer (minimum M12 or $\frac{1}{2}$ " UNC Bolts with Lock Nuts).
 - c) Any TA2 car that has added weight fall off during a TA2 event will be subject to penalties that may include point's deduction.



6) 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

- 1) All replacement body panels must be supplied by TA2 Racing and hold the TA2 Racing part number (TA2 or Five Star or Howe)
- 2) Repairs to body panels must not change the shape of the panels to aid in aerodynamic performance
- Cowl panel (below windscreen) must remain unchanged all engine intake air or cooling air must come through the front bumper grille section only.
- 4) Grille
- a) Grille/bumper sections may not be modified.
- b) Grilles must retain the original profile as viewed from the top, sides and front.
- 5) Quarter panels must remain un-modified other than repairs to damage.
- 6) Rear boot/trunk must remain un-modified other than repairs.
 - a) Rear wing mounts are to remain unmodified.
- 7) Hoods.
- a) Hoods must remain unmodified.
- b) Additional fasteners are allowed on the hood section.
- c) no tape is allowed to be used for aero benefit.
- 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.
- 9) Windscreens must be fitted, and
 - a) The front windscreen must be TA2 spec Clear sheet and have no holes other than the mounting holes. All replacement windscreens must be TA2 spec screen only.
 - b) The rear windscreens are to be fitted. TA2 Spec screen only.
- 10) Aerodynamics.



- a) Only factory supplied front splitter (P/N FS81001-41851) For Mustang and Dodge and B91750D for Dodge is permitted. A local Alternative may be supplied at the discretion of TA2 Asia Racing. The Mercedes splitter part number will be advised.
- 11) Rear Wing
 - a) TA2 Thai Spec Rear Wing must be fitted.
 - b) TA2 Thai Spec Rear Wing, hardware and mounts cannot be modified.
 - c) No packers or shims are allowed to alter the standard TA2 Thai spec Wing.
- 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.
- 13) Side mirrors must be fitted.
- 14) Internal rear view mirror is permitted.
- 15) Aerials and antennas may be fitted to roof of boot/trunk.
- 16) Internal cameras are permitted; 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.
- 17) TA2 Thai 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

- TA2 Racing LS3 supplied engines only. All engines must be purchased through the TA2 Racing.
- 2) All engines come complete and are sealed for even performance, integrity and identification with TSS Seal
- 3) NO MODIFICATIONS TO THE COMPONENTS OF THE ENGINE ARE PERMITTED OTHER THAN AS MENTIONED IN THIS RULE SECTION.
- 4) No replacement components those are not identical in their manufacturer and part number unless specific permission is granted, via writing from TA2 Racing Management.
- 5) Complete fuel system with regulator and fuel pump supplied by TA2
- 6) The air cleaner element must be present and must be the filter as supplied by TA2. Original Airbox and Filter location must remain unchanged,
 - a) All engine intake air must pass by the inlet air filter and throttle body, no other inlet air to the engine is permitted.
- 7) Exhaust manifold (extractor header pipes are spec parts) and balance of exhaust parts. No modification to these parts is permitted.
- 8) Rocker cover type and design is free.
- 9) Water pump must be crankshaft belt driven.
- 10) An engine crankshaft belt driven alternator must be fitted, the alternator must be operational.
- 11) TA2 spec ECM/ECU units must be used. Strictly no modifications to this part will be tolerated. Strict penalties apply to anyone competing in a TA2 event with a modified ECM/ECU.ECU will be Password locked



- The engine must be able to start under its own power at any time as requested by the TSS Racing scrutineer.
- 13) Starter motor position is fixed.
- 14) Coolant pipes are free.
- 15) Radiator and oil cooler type and position are fixed. Only TA2 Spec units purchased via TA2 Thai are permissible.
- 16) Thermo fans are optional.
- 17) The ECM/ECU Rev limiter must not be tampered with. The scrutineer can, at any time, check the operation of the rev limiter. All ECM/ECU Rev limiters are set to 6300rpm with no tolerance. TA2 Racing reserves the right to test all or any ECM/ECU at any race event. A TA2 Racing ECM/ECU Unit may be supplied to a competitor during these tests.
- Engine repairs/rebuilding will be done by TA2 Thai ONLY. Engine rebuilding will be at cost to the competitor and meet the maximum HP window set by TA2 Racing. If your engine is making metal in the filter or making noises not consistent with a healthy engine, the engine must be removed by the owner and TA2 Thai will sell a sealed TA2 rebuilt engine. The faulty engine is sent for repair and a report will be given to the owner on the failure of that engine. If economical, it will be repaired and Dyno checked and set. If uneconomical to repair, a new engine will ordered to replace TA2 stock. The uneconomical failed engine will be returned to the owner in as is condition.
- Any engine found to have missing or broken seals will be deemed illegal until the seal is replaced at the discretion of the approved TA2/ TSS Racing scrutineer.
- These engines rules are in place to protect the integrity and cost effectiveness of TA2 Racing.

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

 If you are unsure of a modification, or wish to make a repair that requires the removal of an engine seal, check with your TA2 representative before attempting repair. No repairs outside TA2 Thai.
- 21) A TA2 Sump guard protector must be run at all times.

6.0 Driveline

1.Transmission (Only TA2 Racing sealed transmissions are eligible)

TA2 Thai Spec HGT 6 Speed Sequential Transmission or TTI 6 speed sequential with TSS Seal

- 1) Transmissions must always retain an operational reverse gear.
- 2) Transmission cooler is permitted.
- 3) Transmission repairs can be performed by a suitability qualified person and sealed with TSS seals. Transmission must remain mounted to the engine by standard bell housing.

2.Clutch and Bell Housing



- 1) Clutch Plate and pressure plate must be single plate design of the same size as the Howe original.
- 2) Clutch operation is to be via internal slave cylinder.
- 3) Clutch master cylinder Must be TA2 part
- 4) Flywheel is a spec part only available via your TA2 Thai (P/N 12571611)

3.Driveshaft

- 1) Driveshaft must be two pieces
- 2) Driveshaft must not be aluminium or composite.
- 3) Yokes and free.
- 4) Universal joints are free, but must be a four roller conventional commercially available type joint.

Differential and Axle Housing

- 1) Axles must remain un-modified from original supplied type. No machining or drilling permitted. With TSS Seal
- 2) Diff spec ratio is 3.25:1
- 3) No camber or toe adjustable hubs are permitted.
- 4) No method of adjusting rear wheel camber permitted.
- 5) Maximum of factory tolerance 0.50 degrees of camber +/- vertical.
- 6) Maximum of factory tolerance 1mm of toe +/- horizontal

7.0 Brakes

- 1) The brake package fitted to the TA2 car must be the controlled parts as supplied by TA2.
- 2) Any breaches to the brakes rules will be dealt with harshly and considered a deliberate attempt to cheat.
- 3) Front rotors are Wilwood and Runstop brand (see Page 5 spec P/N)
- 4) Rear rotors are Wilwood brand and Runstop brand (see Page 5 spec P/N)
- 5) Wilwood Grand National GN6R" Caliper to be used.
 - a) Front Caliper Number. 120-13948-N
 - b) Rear Caliper Number. 120-13263-N
 - c) No other Caliper to be used.
 - d) Caliper spacers permitted if required
- 6) Only pads as supplied byTA2 are permitted.
- 7) No cutting or modifying of compound brake pad.
- 8) Master cylinder size Front 7/8" Part No 524313 Rear 1" Part No 524316
- 9) Master cylinder brand Howe.
- 10) Brake bias adjuster must be Howe unit P/N 52620 and remain in original location.
- 11) Brake line material must be FIA approved material.



- 12) All four wheel brakes must be operational at all times.
- 13) No line lock devices are allowed.
- 14) No bracing or modification of caliper mounts, front or rear.

8.0 Suspension and Steering

8.1 Suspension: Front

- 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.
- 2) Upper Control arms must remain un-modified and TA2 Racing spec only.
- 3) Upright (stub axle) must remain un-modified.
- 4) Lower control arms must remain un-modified.
- 5) Caster Bar (Radius Rod) must remain un-modified.
- 6) All chassis mounts must fit within the original measurements (10mm tolerance).
- 7) Any shims are permissible on the top arm to facilitate desired wheel alignment specifications.
- 8) Shock absorbers double adjustable and approved component by TA2
- 9) Re-valving of the shock absorber is Not Permitted
- 10) Coil spring must remain in original location and be hypercoil only, purchased via TA2 Racing.
- 11) Coil spring range; Front as set per track, Rear as set per track. Front 550lb only, Rear 250lb
- One spring plus one helper spring per wheel. Helper spring optional. Only 1 helper spring as per part number TA2. Spring packers maybe utilized.
- 13) Springs can be tested and must be within 10% of rating shown on spring.
- 14) Front Swaybar measuring 2.25"

8.2 Suspension: Rear

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

- 1) All differential mounting points must match CAD drawings available from TA2 Racing Management upon request.
- 2) Upper and lower trailing arms must be steel. No aluminium or carbon allowed.
- 3) Watts linkage are factory supplied only.
- 4) Pinion angle is free.
- 5) No remote adjusters for sway bars watts link or rear end top link are permissible.
- 6) Shock absorbers double adjustable and approved component by TA2
- 7) Rear sway bar ¾" only



8.3 Steering

- 1) TA2 spec Woodward 18.25" rack only. No Modifications are allowed.
- 2) Steering column Must stay as fitted to Cars now.
- 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.
- 4) Power steering lines and pump outlet fitting must Stay as fitted to Cars.. Power steering pump P/N KRC 29116811.
- 5) Power steering pump must remain belt driven from the front of the engine crankshaft.
- 6) Power steering cooler may be fitted.
- 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

- 1) Battery must be a dry cell race type 12 volt. The battery must remain in the original location within 50mm in any direction.
- 2) Factory and TA2 wiring looms only.
- 3) Switch gear is free but ignition "on/off" and "Start" button must be clearly marked.
- 4) Strictly no changes to wiring or ECU permitted.

9.2 Data Collection

Data Collection is allowed through Motec dash only.

10.0 Wheels and Tyres

10.1 Wheels

- 1) 15' x 10' Bassett Steel wheels and Alloy TA2 LENSO (no wheel spacers or alterations to offset permissible)
- 2) Wheels maybe coated, painted or chromed.
- 3) Wheels must be in good condition.
- 4) All wheel weights must be covered with race tape.

10.2 Tires

- 1) Hoosier 3045 Tyres are to be used. Available only from TA2 Racing. Size 27.0/10.0-15
- 2) Tyres can be lined with latex internally to aid sealing.
- 3) Hoosier Wets Part No. 44307 only.



- 4) No tyre grooving permitted.
- 5) The use of any device that controls or regulates the pressure of the tyre during racing is not permitted.
- 6) Tyre warming devices are prohibited.
- 7) For Qual and Races Only 2 new Sets can be used. All tires bar code will be record by TSS.
- 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

- 1) Driver must hold an International C or Thai Racing License. No professional drivers and/or previously disqualified drivers may compete in the TA2 2018 Championship. If there is any doubt as to whether the driver will be allowed to complete under these rules, please contact TA2 Racing for clarification.
- 2) All TA2 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.
- 3) It is the DRIVERS responsibility to keep informed of any current regulations, or changes to those regulations, for the drivers own safety apparel.
- 4) TA2 Racing will, when possible, inform all nominated drivers of any updated or changes to the regulations.
- 5) All drivers' restraints (safety harness) must meet or exceed FIA 8853/98.
- 6) FIVE POINT HARNESSES ARE A MINIMUM REQUIREMENT.
- 7) The safety harness must be presented within the required "date" as marked on the harness by the manufacturer.
- 8) Safety harness must be in perfect structural condition and work faultlessly when tested.
- 9) Safety harness must be mounted using the correct and approved mounting hardware and be within the manufacturer's guidelines.
- 10) Drivers Safety and Racewear must comply with TSS 2019 Technical Regulation
- 11) Fire bombs are mandatory at all official TA2 Racing Events.
- 12) Fire bombs must be approved style and type and meet all current guidelines as required by the governing body for the event.
- 13) Fire bomb activation must be clearly marked.
- 14) Read your owner's manual so you know exactly how this system works.
- 15) Car must have sign on Door pointing to door handle.
- All drivers must supply their own camera for front recording during practice/qualifying and racing. Camera housing must firmly be fixed to frame or part of car out of the direct view of driver. (refer TSS rule further details)

All safety equipment must be kept in excellent condition and fitted to meet or exceed the manufacturer's requirements.

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



The scrutineer of the event will have final say on any safety item issues, regardless of that being personal driver apparel or a TA2 race car fitted item.

12.0 Bolts and Fasteners

- 1) All major component bolts must be 'GRADE 5' or 'GRADE 8' High tensile or equivalent. No "torque to yield" bolts permissible.
- 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.
- 3) Pop Rivets, where used, may be replaced with another fastening means. Rivets may be coloured.
- 4) Dzus fasteners may be replaced or up graded.
- 5) No quick release fasteners to be used on driver's protection firewalls, front, sides or back.
- 6) All seat belt and seat fasteners to be of the highest quality.
- 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 Identification and Markings – Must comply with TSS requirements and TA2 below.

- 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.
- 2) An area on sides of car, front and rear of car must be made available for TA2 Championship sponsor logos. ADD PHOTO TA2 logos on car to be advised prior to season start.
- 3) The top of windscreen must be left available for TA2 Series Sponsor signage as required.
- 4) Drivers race suits must display TA2 logos on front left side. (logos will be supplied for attaching to race suit.)

14.0 Performance Upgrades or rule updates

TA2 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. TA2 Racing will liaise with the Factory before any changes are published.

15.0 Rule Changes/Eligibility/Final decisions.

15-1 above is subject to change. Any changes are at the Discretion of TA2 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

1) All Competitors must follow TSS Sporting Regulations

