

# 2017 USTTC Series Regulations

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All relevant rules and regulations listed in the NARRA Competition Handbook apply with the exception or addition of those listed within.

## 2017 USTTC Series Regulations

### 1. SERIES OVERVIEW

The Whelen US Time Trial Championship aims to create the premier national Time Trial series for the country's top tuning houses, teams and drivers, as well as amateurs. While considered a pinnacle of the Time Trial disciplines, the series also provides a competition alternative, and stepping stone, to wheel to wheel racing for SOLO and track day drivers. Open to all high end and high horsepower cars, placed in four simple power-to-weight based classes including the no-holds-barred TT-Unlimited class, allowing the nation's fastest cars to compete.

### 2. CHAMPIONSHIP FORMAT

The 2017 Whelen US Time Trial Championship will consist of 13 Rounds. Unless otherwise specified, each Round will consist of a minimum of four competition sessions. Where possible sessions will be added. Results and the podium for each Round will be determined by fastest time, collated from all sessions. All Rounds will be awarded standard NARRA points. Double points will be awarded for the 4<sup>th</sup> and final round. Each event will consist of a Friday Test Day, and a Round on each Saturday and Sunday.

Rounds 1 & 2	May 12-14	Watkins Glen International, NY
Rounds 3 & 4	Sep 8-10	Pittsburgh International Race Complex, PA

- 2.1. **National Championship**, for each class, will be determined tallying the best 3 of 4 rounds. Drivers must earn points in a minimum of 2 race weekends within their class in order to be eligible for championship title, trophies, prizes, etc.
- 2.2. **Regional Cups** are designed to reward drivers who choose not to travel outside of their region. Each Regional Cup will be awarded to the Driver with the most points from 3 of the specified event weekends. Drivers are eligible to win both a single Regional Cup and National Championship. **NOTE: Regional Cups will not be offered during the 2017 season.**
- 2.3. A driver may only enter 1 Regional Cup. Unless otherwise notified it will be based on the address provided during membership registration. **NOTE: Regional Cups will not be offered during the 2017 season.**

### 3. CAR ELIGIBILITY

Cars must be closed wheel, closed roof, and based on the shape of a passenger vehicle with doors, however passenger seating and functioning doors are not required.

- 3.1. **Convertibles** will be accepted only if factory hardtop is fitted and properly attached.

### 4. CAR CLASSIFICATION

The Whelen US Time Trial Championship consists of four separate racing divisions or classes:

TT-U = Any weight/Unlimited Wheel Horsepower (WHP)

TT-1 = 6.25:1 or greater Weight/WHP

TT-2 = 7.50:1 or greater Weight/WHP

TT-3 = 8.75:1 or greater Weight/WHP

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Example: Car Weight 3480 lbs divided by 525 WHP equals 6.63:1 and would fit in TT-1

- 4.1. Cars with 10.00:1 or greater Weight/WHP are not permitted to compete without prior approval.
- 4.2. Cars may change classification during a round, however previous sessions and results will be void.
- 4.3. Competitors may run in a higher class, ie: a GT-1 car may run in GT-U.

### 5. HORSEPOWER

A car's competing Wheel Horsepower must be recorded, and Dyno Affidavit form provided as proof, during Tech. Dyno Affidavit forms must be completed by a company that offers commercial dynamometer testing as part of their business and must be signed by a representative of that company. The Dyno Affidavit must reflect the current engine and drivetrain configuration of the car and be dated within 12 months of the event date. Any addition engine development or changes require a new affidavit. Missing or Invalid Dyno Affidavits will result in the car being classified as TT-U.

- 5.1. **One Event Grace Period** exists for new competitors only.
- 5.2. **Dynojet Brand Dynamometer** models 224, 248, or 424 should be used.
- 5.3. **Alternate Brand Dynamometer:** If used will have 10% added to the recorded Wheel Horsepower figure.
- 5.4. **SAE Correction Factor:** All dyno results should be in SAE correction factor, not actual, STD, or STP.
- 5.5. **275 Tire Rule:** Cars with a largest tire size being 275 or smaller may add 0.4 to their Weight/WHP ratio.
- 5.6. **Multiple ECU Maps:** The use of more than one engine map during a session is prohibited. Cars must only run the map corresponding to the Dyno Affidavit form. If multiple maps exist within the ECU, a verified dynamometer graph must be supplied for each one and you must declare which one is being used for competition. Upon request from a NARRA official, the car owner or driver must disclose any method for changing or verifying which ECU map is in use.
- 5.7. **Gear Dependent Tuning** is prohibited, i.e.: tuning 4<sup>th</sup> gear to be class legal for dyno testing purposes, but not limiting 1st, 2nd, 3rd, and 5th gears to the same parameters.

### 6. WEIGHT

During all Official Practice, Qualifying and Races, competitors must meet their Minimum Weight. Minimum Weight is defined as the total of the driver, inclusive of racing clothing and helmet, and car, regardless of fuel load.

- 6.1. Competitors must ensure their Minimum Weight corresponds to their Wheel Horsepower and Class Classification as recorded during Tech.
- 6.2. It is highly recommended that the car is weighed with little or no fuel at the beginning of the race weekend to establish Minimum Weight.
- 6.3. **Ballast** may be added to the car to ensure Minimum Weight compliance provided it is contained within the wheelbase of the car, and attached securely to the main chassis structure.

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### 7. BALANCE OF PERFORMANCE

To verify Car Classification and achieve parity NARRA Officials may collect data from competitor's equipment or install monitoring devices. Furthermore, a competitor may request Officials to compare a rival's data to his own. In both cases the data will be studied to assess whether driver, setup or power is contributing to the performance. If NARRA Officials deem a car's performance to be suspect, or deems the disparity between cars in a class to be too great, NARRA reserves the right to request a new Horsepower Affidavit Form and dynamometer test to be done and/or enforce Balance of Performance measures against the competitor in question. This may include:

- a) Requiring weight, not counted towards the car's official Weight to Wheel Horsepower ratio, to be added.
- b) It is **recommended** that all USTT cars have the AIM Sports part #DNKTKPFSOL5 data box mount installed on their vehicle to provide the necessary mounting of the AIM Sports Solo Data unit. The mounting surface is to be approximately oriented either horizontally or vertically either parallel or perpendicular to the longitudinal axis of the car and must be accessible from the exterior of the car with the driver on board -- it should have a view of the sky, and not be located under any bodywork. The purpose of this requirement is to allow the random placement of data boxes on cars by NARRA officials and the collection of the box when the car exits the race track. Contact AIM Sports and their distributors for direct purchase.

### 8. TIRES

Tires are open for competitors to select their preferred brand and size at the approval of NARRA for safety and performance. However, NARRA recommends Hoosier Models S80, S100, D.O.T. R7, D.O.T. A7, and D.O.T. H20 Wet, which can be ordered from Hoosier by calling Jeff Speer at (574) 784-3152.

### 9. ADDITIONAL CAR REQUIREMENTS

#### BRAKE SYSTEM

- 9.1. **Brake Fluid** with a Dry Boiling Point 580 or above must be used.  
It is highly recommended brakes be bled before, during and after an event.
- 9.2. **Brake Pads** Racing or Performance brake pads are highly recommended. Competitors are reminded to ensure they have sufficient pad material (usually 50% or more) throughout an event.

#### CABIN

- 9.3. **Bulk Head** between the cabin and the Fuel Tank must be completely sealed.
- 9.4. Driver Restraint System (RECOMMENDED) meeting SFI Specs 16.1, 16.5 or 16.6, or FIA Standard is recommended.. Mounting points should be integral to the chassis or roll cage. Any mounting position with hardware that pierces the vehicle floor pan must be reinforced with a backing plate of sufficient size to spread the load.
- 9.5. **Fire Extinguisher** (RECOMMENDED): It is recommended that all cars carry, at a minimum, a 2 lbs Fire Extinguisher. The extinguisher must be securely mounted in the vehicle within reach of the driver.
- 9.6. **Passenger Safety Equipment**, such as seat, harness, etc., must be equal to that of the driver.

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- 9.7. **Racing Seat** (RECOMMENDED): It is recommended that a racing seat meeting SFI Specs 39.1 or 39.2, or FIA Standard is installed.
- a) Mounting points should be integral to the frame of the car or to the roll cage. Any mounting hardware that penetrates the vehicle floor pan must be reinforced with a backing plate of sufficient size to distribute the load.
  - b) Unless FIA rated, the back of the seat shall be firmly attached to the main roll hoop or its cross bracing so as to provide aft and lateral support.
- 9.8. **Roll Cage** (RECOMMENDED) meeting the latest SCCA General Competition Rules and Specifications for GT and Production based cars is recommended.
- 9.9. **Roll Cage Padding** – Material that provides energy absorption must be installed on the exterior of the roll bars in areas subject to contact by the driver must be padded with a minimum 1 inch of material is required. Padding that meets SFI 45.1 or FIA 8857-2001 (curved padding), or SFI 45.2 or FIA sports car head rest material (flat padding) specification is recommended.
- 9.10. **Window Net** (RECOMMENDED) certified as meeting SFI Spec 27.1 covering the driver's side window opening is recommended and must be securely attached to the Roll Cage. The Window Net must be easily removable from both the inside and outside of the car to allow access through the window. A window net is not required if a glass or Lexan window is present.
- 9.11. **Roll Cage Net** (RECOMMENDED): It is recommended that a Roll Cage Net certified as meeting SFI Spec 37.1 shall be fitted in the center of the car, and shall be attached at the narrow point of the triangle by a quick release. Each of the wide ends of the triangle must be securely attached to the roll cage or chassis.
- 9.12. **Windshields:**
- 9.12.1. The OEM Safety Glass mounted and located as delivered from the manufacturer is permitted (or)
  - 9.12.2. Polycarbonate windshields such as Lexan may be used, identical in size, shape and curvature to the original glass. These must be secured with 3 or more windshield safety clips (3 inch x 1 inch x 1/8 inch) bolted or riveted to the top edge of the windshield, and 2 or more safety clips (3 inch x 1 inch x 1/8 inch) bolted or riveted to the body at the bottom of the windshield. Clips must be spaced at least 12 inches apart.
    - 9.12.2.1. If a polycarbonate rear window is installed it shall be secured to the top and bottom of the frame with two metal straps (1 inch wide x 1/8 inch thick).
    - 9.12.2.2. No clips or straps are required if polycarbonate front windshields and rear windows are securely bolted to the frame.
  - 9.12.3. It is recommended that 3 strips of steel/aluminum (1 inch wide) be installed behind windshield for support.

### ELECTRONICS

- 9.13. **Battery** must be securely mounted and the positive connection insulated to prevent grounding.

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- 9.14. **Brake Lights:** Brake lights must be fitted and in working order at all times, and must not be wired in a way that allows them to be switched off or delayed.
- 9.15. **Headlights:** It is highly recommended to have operational Headlights.
- 9.16. **Kill Switch (RECOMMENDED)** installed to 'kill' the engine, ignition and fuel pump if activated while the engine is running is recommended.
- 9.17. **Radio System (RECOMMENDED)** installed for Communication with their crew, operational even if the Car's ignition is off, is recommended. All Frequencies must be made available to NARRA if requested.
- 9.18. **Rain Light:** At least 1 Rain Light or Tail Light is required to be operational during wet conditions.
- 9.19. **Transponder** is mandatory and must compatible with AMB/MyLaps TranX260 (Direct Powered or Rechargeable) system. It is the responsibility of the competitor to ensure their transponder is working at all times, and Officials have the correct transponder number.
- 9.19.1. **Rental Transponders** are available from Registration for a fee.
- 9.20. **Video Camera:** All Cars must have an operating front facing Video Camera at all times on the Track, and all footage must be made available to the Chief Steward. All media cards must be marked with car number and driver name. Failure to comply will render the Car ineligible competing, unless approved by NARRA Officials in advance, and may result in a Points Penalty or Disqualification from the Results.
- 9.20.1. It is recommended that additional Video Cameras facing rearwards and aimed at the driver are also fitted.
- 9.20.2. **Camera Mounting and Tethering:** As well as being mounted and fastened securely, all cameras must be tethered. The tether must attach from the camera body or housing to the car directly, may not include any part of the primary mount, and must be sufficient enough to retain the camera should the primary mount fail. The tether must be minimal in length, and must prevent the camera from obstructing the driver or control systems of the car.

### EXHAUST SYSTEM

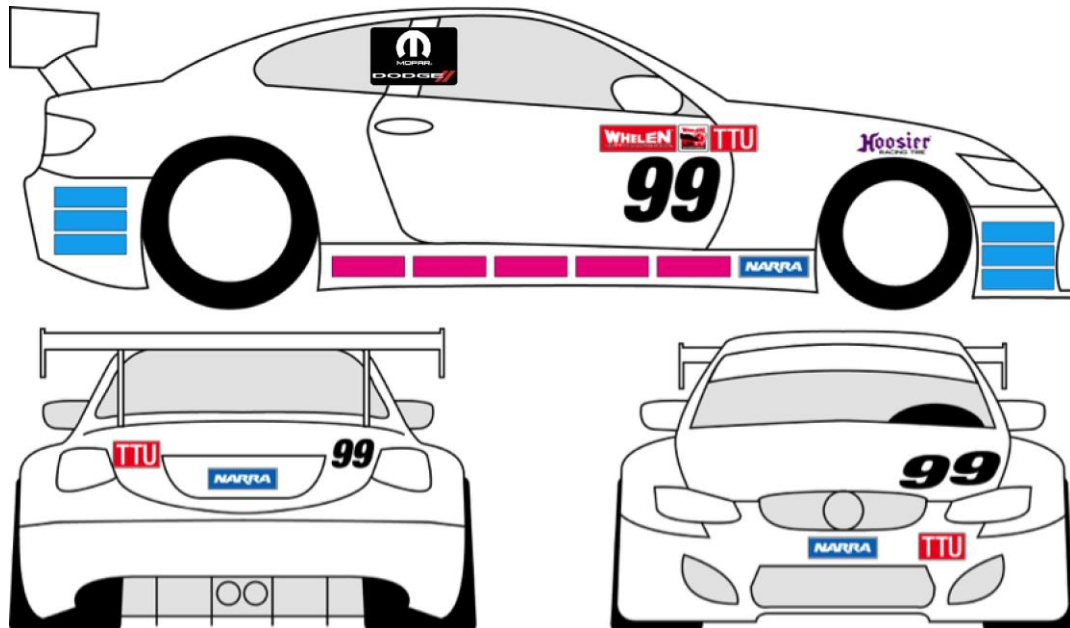
- 9.21. **Mufflers:** NARRA will endeavor to post any Sound Restrictions in Supplementary Event Regulations, but it is up to the competitor to ensure compliance with any Track mandated Sound Restrictions. It is highly recommended to be prepared at all times with pre-fitted sound suppression devices, such as a Muffler or Pipe Turn Down.

### EXTERIOR

- 9.22. **Presentation**  
The presentation of the Car is paramount to the profile of the championship/series, its sponsors, and its audience. Cars must be presented in the highest order at all times, and Officials reserve the right to refuse an entrant based on the presentation of their Car. This includes where the car is presented at a race event bearing accident damage sustained at a previous event and has not been fully and properly repaired.
- 9.23. **Numbers**

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- 9.23.1. Only single, double or triple digit numbers will be accepted, i.e.: '6', '26', '007', '00', '999'. Letter prefix or suffixes such as 'X8' or '8A' are not permitted.
- 9.23.2. No car in a given Session may have the same Car Number. While NARRA will to its best to accommodate competitor's requests, all competitors must be prepared to run an alternative Car Number at any time, for any reason, if requested by NARRA.
- 9.23.3. Car Numbers must be of a contrasting color to their background, neatly fashioned and well presented, i.e.: painters tape will not be accepted. Car Number decals are available for purchase from NARRA.
- 9.24. **Rookie Driver Decal (RECOMMENDED):** Novices and Rookies should display a prominent 'X' on the rear of their Car for their first 6 events.
- 9.25. **Series Decals:** All Series and Series Sponsor decals, as available from NARRA Officials at the beginning of an event, are mandatory and must be applied to the car for all sessions. Decals should be displayed in the locations indicated below. Neat alternatives may be accepted.



- 9.25.1. **Whelen USTTC Long and Square Decals:** (2 x 2 kind) Each kind must be prominently displayed on either side of the car, preferably in the location shown, above the number.
- 9.25.2. **Class Decals:** (4) Must be prominently displayed on the front of the car (US driver's side or centered), rear of the car (US driver's side or centered), and in close proximity to the car number.
- 9.25.3. **NARRA Decals:** (4) Must be prominently displayed on the front, rear and both sides of the car.
- 9.25.4. **Hoosier Decals:** (2) Must be prominently displayed above the front tire, on either side of the car if running Hoosier tires.

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- 9.25.5. **Contingency and Series Decals:** (2 x Each Kind) Each kind must be prominently displayed on either side of the car, preferably in the locations marked in Pink. The locations marked in Blue may be required for additional Contingency and Series Decals.
  - 9.25.6. **Opposing Series Decals** are permitted at the discretion of NARRA Officials provided NARRA Series Decals are displayed as equally as prominent.
  - 9.25.7. **Opposing Contingency or Sponsor Decals**, with the exception of a team sponsors, are not permitted and must be neatly covered up.
- 9.26. **Tow Strap** (RECOMMENDED) or Tow Eye is recommended on both the front and rear of the car, and colored in a bright or contrasting color to the bodywork, such as red. If not easily seen, its location must be indicated by bright or contrasting arrows.

### FUEL SYSTEM

- 9.27. **Stock (OEM) Fuel Tanks**, unmodified and fitted in their stock location, are permitted. However, Fuel Cells are highly recommended.
- 9.28. **Fuel Cells** (if installed) certified as meeting SFI Specs 28.1 or 28.2, or FIA Standard, and fuel cell bladder certified as meeting SFI Spec 28.3 or 32.1, or FIA Standard, and must be current, within 5 years of the date or manufacture, or re-certification, as marked on the outside of the bladder. Teams must be prepared to expose the bladder for inspection.

### 10. DRIVER EQUIPMENT

- 10.1. **Driving Accessories** (RECOMMENDED) such as gloves, underwear, hoods, socks, shoes, boots, helmet supports, harness pads, arm restraints, helmet skirts, and sports bras must be damage free and be certified as meeting SFI Spec 3.3, FIA 1986 Standard or FIA 8856-2000.
- 10.2. **Driving Suits** (RECOMMENDED) must be damage free, and bear a label certified as meeting SFI Spec 3.2A/1, FIA 1986 Standard or FIA 8856-2000.
- 10.3. **Head Restraints** (RECOMMENDED) must bear a label certifying they meet SFI Spec 38.1 or FIA 8858-2002.
- 10.4. **Helmet** must be damage free, and meet SFI Spec 31.1/2005 or 31.1/2010, or FIA 8860-2004. Closed face helmets are highly recommended and required for open cockpit cars.

### 11. TIMETRIAL COMPETITION SESSION SPECIFICS

TimeTrial competition, is a timed competition to see which Competitor can achieve the fastest lap throughout the day. A driver's best recorded timed lap, from all sessions of a given round, will be scored against all other times recorded for the given class. While passing may occur in TimeTrial, at no point are the Competitors directly racing each other for position.

- 11.1. **Grid Order:** Cars will be gridded by fastest times from all previous times. If no times exist, Cars will be gridded in order of fastest to slowest class, in order of car number.
  - 11.1.1. It is up to competitors to calculate and place themselves in their correct grid position.



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- 11.2. **Warm Up Lap:** The first lap of each session will be a Warm Up Lap, under yellow flag conditions, and passing is not permitted. Weaving and accelerating and decelerating to generate tire and brake temperature is permitted, however must be exercised with extreme caution.
- 11.2.1. It is the job of the lead car to maintain a speed of approximately 50mph to allow the field to warm up the tires. Towards the end of the lap the lead car must gradually slow down to approximately 20mph to allow the field to bunch, before accelerating to full pace approaching and through the final corner to commence its first official timed lap.
- 11.3. **Point-By Passing** is recommended. Drivers of a faster car should wait for a Point-By to pass. A Point-By is a definitive hand gesture indicating the side the car behind should pass. Each car requires a separate Point-By. The car in front, giving the Point-By, should stay on the typical 'racing' line. The car behind will pass off-line to the side gestured by the driver in front.
- 11.4. **Equal Entitlement:** Drivers of all classes and ability are equally entitled to the track, and endeavoring to record fast lap times. All drivers, regardless of class must be courteous to each other, and must work together to achieve this.
- 11.5. **Impeding Another Driver:** Drivers who are deemed to be unreasonably impeding another driver, or cause the following listed below, will have their fastest lap(s) disallowed:
- a) A Yellow Flag to be displayed for more than one lap,
  - b) A Black Flag All
  - c) A Red Flag
- 11.5.1. **Mechanical Failure:** To avoid a penalty from suffering from a mechanical failure, the driver must make every attempt to remove their car off the racing surface in a safe location, near a corner station, and if possible through a gap in the guardrail.
- 11.6. **Entering and Exiting a Session** at any time is permitted provided approved by NARRA and Race Control Officials. Drivers exiting at any time during a session are reminded that a NARRA official on pit lane may direct you to the tech area for post session inspection.
- 11.7. **Pit Lane Release:** Competitors may be held at the discretion of NARRA Officials to ensure release in a safe and sporting manner.
- 11.8. **General Track Conduct:** Drivers are expected to adhere to all relevant rules in the NARRA Competitor Handbook.
- 11.9. **Abandoning a Session:** If it is deemed that a Session was stopped prior to all Cars having adequate time to complete a lap, whether they did or not, the session will be considered abandoned, and times disallowed.
- 11.10. **Competition Minimum:** If it is deemed that competition has ceased before for all cars had adequate time to complete a lap, whether they did or not, the Round will be considered null and void.

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All relevant rules and regulations listed in the NARRA Competition Handbook apply with the exception or addition of those listed within.