NATIONAL AUTO SPORT ASSOCIATION

®

NASA Super Touring and Super Unlimited (NASA ST and SU)
Official 2012 National Rules

Version 6.2, February 29, 2012

1 Definitions and Claims

NASA Super Touring (NASA ST) and NASA Super Unlimited (NASA SU) are automobile competition series focused on road course competition, and shall function as an advertising and marketing tool for the series sponsors, the independent sponsors of each team, as well as the official sanctioning body of the series. The trade names, "Super Touring® (ST)", "NASA Super Unlimited (SU)" and these rules are the property of the National Auto Sport Association, Incorporated ®; located at P.O. Box 21555, Richmond, CA 94820; 510-232-NASA (6272).

2 Sanctioning Body

The NASA ST/SU series is sanctioned by the National Auto Sport Association (NASA). All events are governed by these rules, applicable addendums, prima facie rules, as well as those found in the latest version of the NASA *Club Codes and Regulations* © (CCR).

3 Intent

The intent of these rules is to provide mandates to ensure that all Super Touring vehicles are modified within clearly established limits, so as to ensure an even platform, in which a contest of driving skill may provide the most talented drivers with great rewards. The rules shall be applied in a logical manner that seeks to provide competitors a safe and fair venue for competition, without a constrained interpretation of the rules based on phraseology or verbiage.

If a modification is not specifically allowed by the rules, it is prohibited unless the NASA ST Director (or Assistant Director) declares it to be legal via a Technical Bulletin published in the Super Touring section of the www.nasaforums.com website and/or in a future Super Touring specific website. A permitted item cannot be modified to perform either a prohibited function, or the function of an item that would otherwise be assessed an additional Modification Factor. Vehicle legality is the sole responsibility of the driver.

4 Purpose

NASA ST/SU provides a venue for spirited on-track competition in high performance racecars of all makes, models, and types. Several key factors are considered in classing vehicles, using an "Adjusted" Weight/Power ratio as the ultimate equalizer between vehicles. The relatively few modification specific rules will allow competitors to configure their cars to perform at an optimal level by using aftermarket parts, providing an opportunity for promotional exposure for the competitors' sponsors, aftermarket tuners, parts manufacturers, and the vehicle manufacturers.

Additionally, these series should provide a stage to showcase driving talent, in hopes that the most talented drivers will advance to even higher-level professional series. The format of the rules encourages direct crossover from both high level NASA TT classes and race classes from multiple organizations.

5 The Classes

There are four Super Touring classes—Super Touring 1 (ST1), Super Touring 2 (ST2), Super Touring R1 (STR1), and Super Touring R2 (STR2)—with STR1 and ST1 being the higher performance level classes of the four. Super Unlimited (SU) is an unrestricted class for any closed wheel/fendered vehicle that complies with the safety requirements in the NASA CCR. An "Adjusted" Weight/Power ratio (section 7.4), modified based on body type, transmission, drivetrain, tires, and overall weight, is used to equalize cars in each of the Super Touring classes, although there are some additional restrictions placed on all vehicles in Super Touring classes (sections 7.2 & 7.3). STR1 and STR2 are for closed wheel/fendered monocoque sports racers, tube-frame, tube-frame conversion, partial tube-frame, and other production and non-production four wheel vehicles.

6 Super Unlimited (SU)

Any four wheel racecar that passes NASA safety tech inspection can be used to compete in SU (note: open wheel formula cars are not permitted). There are no maximum power limits or minimum weight limits. Any type and size tires may be used. All types of transmissions, chassis frames, suspensions, aerodynamic modifications, and braking systems are legal. All of the rules in the NASA CCR in Section 15 and 18 will apply, except, the following rules will supercede those in the CCR:

CCR 15.6—Roll cages may be built to provide an unlimited amount of chassis stiffening. Any number of cage mounting points may be used above the six (6) minimum requirement, and, any number of additional tubes may be used above the minimum with additional attachment points to the body, including tubes that penetrate the firewall, or convert a production vehicle into a tube-frame chassis vehicle.

CCR 15.8—An electrical master cut-off switch is required.

CCR 15.16—An approved suitable racing seat is required.

CCR 18.3—Tires may be "grooved"

CCR 18.5—Any type of fuel or additives that are approved by the Race Director are permitted.

CCR 18.6—Engine modifications and motor swaps are unlimited.

Front driver and passenger side fixed/Lexan windows are specifically not permitted unless they are factory installed during the manufacturing of the vehicle. Both front side windows must otherwise be in the down position while on track.

7 Super Touring (ST1, ST2, STR1, STR2)

7.1 Class Eligibility

7.1.1 ST1 & ST2

Any closed wheel/fendered production vehicle, approved for street use by the D.O.T., T.U.V., or Japanese government, that complies with all NASA safety requirements in the CCR, and all of the restrictions and limitations listed below in 7.2 and 7.3 is eligible to compete based on the "Adjusted" Weight/Power Ratios below:

Super Touring 1 (ST1) = "Adjusted" Wt/Hp Ratio equal to, or greater than, **5.50:1**
Super Touring 2 (ST2) = "Adjusted" Wt/Hp Ratio equal to, or greater than, **8.70:1**

Performance enhancing modifications are otherwise unlimited. Some kit cars and purpose-built tube-frame or monocoque racecars may be permitted to compete in ST1 and ST2 with the approval of the NASA National Super Touring Director as they present for competition. The National ST Director will determine and publish any additional Modification Factor(s) for the Adjusted Weight/Power Ratio for those vehicles, as well as any other specific limitations and restrictions placed on those vehicles. ~~Note, the addition of the STR1 and STR2 classes in February of 2009 does not negate or repeal the previous (or future) approvals of the tube-frame and non-production vehicles for ST1 and ST2 listed in Section 8.~~

7.1.2 STR1 & STR2

Any closed wheel/fendered racecar, that complies with all NASA safety requirements in the CCR, and all of the applicable restrictions and limitations listed below in 7.2 and 7.3 is eligible to compete based on the "Adjusted" Weight/Power Ratios below:

Super Touring R1 (STR1) = "Adjusted" Wt/Hp Ratio equal to, or greater than, **5.50:1**
Super Touring R2 (STR2) = "Adjusted" Wt/Hp Ratio equal to, or greater than, **8.70:1**

Performance enhancing and chassis/body/aero modifications are otherwise unlimited.

Any vehicle legal for ST1 may also compete in STR1, and any vehicle legal for ST2 may also compete in STR2, using a copy of its ST Car Classification Form with the applicable STR class handwritten at the top of the Form. (Note-This will allow the legal ST cars lighter than 1851 lbs to avoid the -2.7 Modification Factor placed on STR-only chassis vehicles lighter than 1851 lbs).

7.2 NASA CCR Section 15 and 18 Exceptions

All of the rules listed in the NASA CCR Sections 15 and 18 will apply, except, the following rules will supercede those in the CCR:

CCR 15.6—Roll cages may be built to provide an unlimited amount of chassis stiffening. Any number of cage mounting points may be used above the six (6) minimum requirement, and, any number of additional tubes may be used above the minimum with additional attachment points to the body, including tubes that penetrate the firewall.
CCR 15.8—An electrical master cut-off switch is required.
CCR 15.9—Steering wheel lock removal is recommended, but not required.
CCR 15.16—An approved suitable racing seat is required.
CCR 18.6—Engine modifications and motor swaps are unlimited.

Front driver and passenger side fixed/Lexan windows are specifically not permitted unless they are factory installed during the manufacturing of the vehicle. Both front side windows must otherwise be in the down position while on track.

7.3 Vehicle Modification Restrictions/Limitations

Unless listed below or in Section 7.2, any other performance enhancing modifications are permitted, provided that the vehicle complies at all times with the minimum "Adjusted" Weight/Power Ratio (7.4) for its class.

1) ST1 and ST2 only (not applicable for STR1 and STR2): Every vehicle must retain its unmodified: OEM frame rails and/or unibody, strut towers, floor pan, inner fender wells, transmission tunnel, rocker panels, windshield frame location, and subframes, with the following exceptions: a) Frame rails and unibodies may have maximum diameter 0.75 (3/4) inch holes drilled into them for purposes other than lightening, such as for the attachment of ancillary parts. Cutting and channeling is not permitted. b) Frame rails may have maximum diameter 1.25 (1-1/4) inch holes drilled solely for the purpose of the placement of jacking lugs/plates. c) Modification of the OEM roof line is permitted, but will be assessed via a Modification Factor in the "Adjusted" Weight/Power Ratio. d) Modification of the floor pan for purposes of exhaust clearance only is permitted and will be assessed via a Modification Factor in the "Adjusted" Weight/Power Ratio. e) Additional permitted floor pan modifications are listed in Appendix A. Floorpan modifications to include items such as subframe connectors, roll cage bracing, and fuel cell placement may be approved on a case-by-case basis by the National ST Director. Such modifications will be subject to approval and possible Modification Factor assessments.

   Tube-frame chassis conversion (partial or complete) is not permitted without a waiver from the National ST Director. If a vehicle cannot be driven with any of the added tubes removed, it is considered a tube-frame chassis conversion. Relocation of suspension mounting points and modified crossmembers are permitted. Modification and/or relocation of components of the firewall with engine relocation ten (10) inches or less is permitted, but is limited by the requirement to retain the unmodified transmission tunnel and floor pan.
2) Aerodynamic modifications are unrestricted with the following exceptions:
   a.) Active aerodynamic modifications (including, but not limited to, computerized, cockpit adjustable, self-adjusting, etc.) are not permitted.
   b.) ST1 and ST2 only (not applicable for STR1 and STR2) A rear wing (or rear spoiler for wagon-style bodies) may not exceed a height of eight (8) inches above the roofline (or OEM windshield height for convertibles).
3) Nitrous Oxide use is prohibited. Pre-existing tanks must be removed. Methanol/Alcohol-water injection is permitted provided that the mixture does not exceed 50% alcohol by volume. Methanol is not permitted as a fuel (see CCR 15.19 and 18.5)
4) Sequential, paddle shift/semi-automatic, and dog-ring/straight-cut gears (i.e. non-synchromesh) transmissions are permitted, but will be assessed via the "Adjusted" Weight/Power Ratio formula regardless of whether they are OEM or not.
5) Tire and wheel size are unlimited, but non-DOT approved tires will be assessed via the "Adjusted" Weight/Power Ratio. Tire treatments and softeners are not permitted.
6) Up to two hundred and fifty (250) lbs. of added ballast is permitted. All ballast must be of solid material (no fluids or shot pellets) and safely secured in any location on the vehicle approved by NASA safety technical inspectors. The preferred method is to use at least one (1) 3/8-inch grade-5 bolt, two (2) "fender" washers and a locking

nut system for every fifteen (15) pounds of weight.(supercedes Section 15.20 of the NASA CCR)

7) From the start of qualifying through the end of post-race inspection, vehicles may not have any adjustments or modifications made to systems that could alter chassis dynamometer readings by changing horsepower levels (without the direct approval of the Race Director.)

7.4 Adjusted Weight/Power Ratio Calculation

7.4.1 Definitions

The "Adjusted" Weight/Power Ratio for each vehicle will be calculated based on a simple competition weight to peak chassis dynamometer horsepower ratio (wt./hp), followed by the adjustment of the resulting ratio by adding to, or subtracting from it, based on the list of "Modification Factors" below. Competition weight is defined as the minimum weight of the vehicle, with driver, any time that it competes in a qualifying session or race. Note: peak chassis dynamometer horsepower and dynamometer testing procedures are defined in Section 9.

Tire width is determined by the number printed on the tire sidewall by the manufacturer, unless specified otherwise in these rules. If a tire does not have a manufacturer's printed number on the sidewall, then actual tread width measurement (not contact patch) will be used. All DOT-approved tires must be available for purchase by the general public through Federal or state licensed tire dealers.

7.4.2 Modification Factors—**ST1 and ST2** (see 7.4.4 for STR1 and STR2)

The "Modification Factor" listed after each item below is added or subtracted from the actual measured wt/hp ratio to determine the "Adjusted" Wt./Hp Ratio that determines vehicle legality in each ST class.

Body Type: 4-door Sedan or 5-door Wagon = +0.4
Modification of the OEM roof line/shape = -0.4
Modification of the floor pan for exhaust clearance only = -0.4

Transmission: Dog-ring/straight-cut gears (non-synchromesh),
and/or sequential/paddle shift/semi-automatic = -0.2
(no assessment for automatic utilizing a torque converter)

Drivetrain: AWD = -0.5
FWD = +1.0

Tires: Non-DOT approved tires = -0.75 (VRL & GAC Continentals see App. A)
Size 10.5" (267mm) to 9.6" (244mm) non-DOT approved = +0.4
Size 9.5" (241mm) or smaller non-DOT approved = +0.8
Size 275 to 250 (DOT approved) = +0.4
Size 245 or smaller (DOT approved) = +0.8

Competition Weight:

Equal to or **Less** than:

3150-2750lbs	2650-2250lbs	2150-1750lbs	1650-1450lbs
3150 lbs -0.05	2650 lbs -0.3	2150 lbs -0.55	1650 lbs -0.8
3050 lbs -0.1	2550 lbs -0.35	2050 lbs -0.6	1550 lbs -0.85
2950 lbs -0.15	2450 lbs -0.4	1950 lbs -0.65	1450 lbs -0.9
2850 lbs -0.2	2350 lbs -0.45	1850 lbs -0.7	
2750 lbs -0.25	2250 lbs -0.5	1750 lbs -0.75	

Equal to or **Greater** than:

3300-3500lbs	3550-3750lbs	3800-4000lbs	4050-4250lbs
3300 lbs +0.05	3550 lbs +0.35	3800 lbs +0.65	4050 lbs +0.9
3350 lbs +0.1	3600 lbs +0.4	3850 lbs +0.7	4100 lbs +0.95
3400 lbs +0.15	3650 lbs +0.45	3900 lbs +0.75	4150 lbs +1.0
3450 lbs +0.2	3700 lbs +0.55	3950 lbs +0.8	
3500 lbs +0.3	3750 lbs +0.6	4000 lbs +0.85	

Note: If between 3151 lbs and 3299 lbs, there is no modification factor.

Note: All vehicle weights will be measured to the tenth of a pound (xxxx.x), then rounded off to the nearest pound for all calculations. Any weight ending in ".5" (xxxx.5x) will be rounded up or down to the benefit of the competitor.

7.4.3 Example Calculations

Example: 2003 Dodge Viper, with OEM transmission, on DOT approved 345 size tires, weighing 3701 lbs, with peak chassis dyno power of 450 hp:
3701/450 = 8.22, plus 0.55 (weight 3700 lbs or greater) = 8.77 (ST2)

Example: 2004 Chevrolet Corvette Z06, with OEM transmission, on DOT approved 345 size tires, weighing 3265 lbs, with 375 peak hp:
3265/375 = 8.70 (ST2)

Example: 2005 Ford Mustang, with dog-ring gearbox, non-DOT 11" slicks, weighing 3000 lbs, with peak chassis dyno power of 435 hp:
3000/435 = 6.89, minus 0.2 (dog box) = 6.69, minus 0.75 (slicks) = 5.94, minus 0.1 (3050 lbs or less) = 5.85 (ST1)

Example: 2005 Subaru STI, with OEM transmission, on DOT approved 305 size tires, weighing 3201 lbs, with 550 peak awhp:
3201/550 = 5.82, plus 0.4 (4-door sedan) = 6.22, minus 0.5 AWD = 5.72 (ST1)

Example: 2000 Dodge Viper with OEM transmission, on DOT approved 345 size tires, weighing 3451 lbs, with 645 peak rwhp:
3451/645 = 5.35, plus 0.2 (3450 lbs or greater) = 5.55 (ST1)

Example: 2002 Ferrari 360, with OEM sequential transmission, on non-DOT approved 12" slicks, weighing 2851 lbs, with 410 rwhp:
2851/410 = 6.95, minus 0.2 (sequential transmission) = 6.75, minus 0.75 (slicks) = 6.00, minus 0.15 (2950 lbs or less) = 5.85 (ST1)

Note: If one knows the competition weight of the vehicle, a simple reverse calculation will yield the maximum horsepower allowed for that vehicle. Begin by adding/subtracting all of the Modification Factors for the vehicle as listed above. Then use either the 5.50 or 8.70 ratio (depending on which class the car is being prepared for), and subtract that number from the ratio to get the vehicle's actual target wt/hp ratio. Divide the competition weight by this number to obtain the horsepower target.
Using the Ferrari 360 example above:
-0.2 – 0.75 – 0.15 = -1.1
5.5 + 1.1 = 6.6 (note that subtraction of the negative number here results in addition)
2851/6.6 = 432 max hp for ST1 2851/9.8 = 291 max hp for ST2

7.4.4 Modification Factors—**STR1 and STR2**

The "Modification Factor" listed after each item below is added or subtracted from the actual measured wt/hp ratio to determine the "Adjusted" Wt./Hp Ratio that determines vehicle legality in each ST class.

Body Type: 4-door Sedan or 5-door Wagon = +0.4

Transmission: Dog-ring/straight-cut gears (non-synchromesh), and/or sequential/paddle shift/semi-automatic = -0.2
(no assessment for automatic utilizing a torque converter)

Drivetrain: AWD = -0.5
FWD = +1.0

Tires: Non-DOT approved tires = -0.75 (VRL & GAC Continentals see App. A)
Size 10.5" (267mm) to 9.6" (244mm) non-DOT approved = +0.4
Size 9.5" (241mm) or smaller non-DOT approved = +0.8
Size 275 to 250 (DOT approved) = +0.4
Size 245 or smaller (DOT approved) = +0.8

Competition Weight:
Equal to or **Less** than:

3150-2750lbs	**2650-2250lbs**	**2150-1750lbs**	
3150 lbs -0.05	2650 lbs -0.3	2150 lbs -0.55	
3050 lbs -0.1	2550 lbs -0.35	2050 lbs -0.6	
2950 lbs -0.15	2450 lbs -0.4	1950 lbs -0.65	
2850 lbs -0.2	2350 lbs -0.45	1850 lbs -2.7	
2750 lbs -0.25	2250 lbs -0.5		

Equal to or **Greater** than:

3300-3500lbs	3550-3750lbs	3800-4000lbs	4050-4250lbs
3300 lbs +0.05	3550 lbs +0.35	3800 lbs +0.65	4050 lbs +0.9
3350 lbs +0.1	3600 lbs +0.4	3850 lbs +0.7	4100 lbs +0.95
3400 lbs +0.15	3650 lbs +0.45	3900 lbs +0.75	4150 lbs +1.0
3450 lbs +0.2	3700 lbs +0.55	3950 lbs +0.8	
3500 lbs +0.3	3750 lbs +0.6	4000 lbs +0.85	

Note: If between 3151 lbs and 3299 lbs, there is no modification factor.
Note: All vehicle weights will be measured to the tenth of a pound (xxxx.x), then rounded off to the nearest pound for all calculations. Any weight ending in ".5" (xxxx.5x) will be rounded up or down to the benefit of the competitor.

(See Appendix A for:
Allison Legacy's, Baby Grands, Legends, Pro Challenge, Thunder Roadsters)

8 ST1 & ST2 Approved Non-Production & Tube-Frame Vehicles

The following vehicles are approved for ST1 and ST2 based on their "Adjusted" Wt/Hp Ratio, with the listed Modification Factors:

~~7's Only Mazda GT Spec RX7 (-0.2 modification factor—See Appendix A)~~
~~Active Power GTR MKI, GTR 2D, GTR 70, M6 GTR (-0.75 modification factor)~~
Backdraft Cobra RT3 (TD body style (aero), hardtop, or if any aero mods, wing, or splitter -0.4 Modification Factor. Note: no Modification Factor for FF Challenge "standard front air dam"—See Appendix A)
Brunton Stalker (If aero mods, wing, or splitter, then -0.75 Modification Factor)
Brunton Stalker (If no aero mods, wing, or splitter, +0.75 Modification Factor)
Caterham & Lotus 7 (if aero mods, wing, or splitter, then -0.75 Modification Factor)
Caterham & Lotus 7 (if no aero mods, wing, or splitter, then +0.75 Modification Factor)
Dodge Viper Competition Coupe (-0.2 Modification Factor)
Ferrari 348, 355, and 360 Challenge Series (no Modification Factor)
Ferrari 430 Challenge (-0.2 Modification Factor)
~~Factory Five GTM Supercar (-0.75 modification factor)~~
Factory Five Roadster (if aero mods, wing, or splitter -0.4 Modification Factor. Note: no Modification Factor for FF Challenge "standard front air dam"—See Appendix A)
Factory Five Type 65 Coupe (-0.4 Modification Factor)
Lotus 2-Eleven (no Modification Factor)
~~Panoz GTRA, GTWC (-0.2 modification factor)~~
~~Panoz GTS (-0.2 modification factor)~~
Porsche 997 & 996 GT3 Cup (-0.4 Modification Factor)
~~Pro Challenge Road Race Spec Car (See Appendix A)~~
~~RCR Superlite Coupe (-1.0 modification factor)~~
Rossion Q1 (-0.2 Modification Factor)
~~Thunder Roadster ('08 released body/wing type -0.75 modification factor. Note: must keep chassis, body, wing to TR specs)~~

Note: Future approved vehicles will be posted on the www.nasaforums.com website in the Super Touring section.

Note: It is anticipated that the remaining tube-frame vehicles on this list will be deleted in the 2013 ST Rules, leaving the tube-frame vehicles to compete in STR and SU.

9 Dynamometer/Power Testing

Each year, the owner/driver must submit a completed NASA Super Touring Car Classification Form and a certified dynamometer (Dyno) report to the ST Director prior to the car's first competition in order to compete in ST1, ST2, STR1, and STR2. Certified Dyno reports are potentially valid for up to a maximum of three years (provided that no changes have been made to the vehicle that would alter Dyno readings). However, at his discretion, a NASA ST Director (or Race Director) may require an updated certified Dyno report (at the driver's/owner's expense) after one year from the date of the previous report. Any competitor wishing to drive without a certified Dyno report will compete in the Super Unlimited (SU) class. All competitors will be required to include the latest certified Dyno report and minimum weight in their vehicle logbook at all times. Any subsequent modifications or adjustments done to the car that could alter power output will require repeat Dyno testing, and a new certified Dyno report. NASA Officials may request repeat Dyno testing at any other time. Competitors may submit a certified Dyno report from the previous year provided there have been no modifications to the power output of the vehicle since the Dyno testing.

A certified Dyno report consists of three separate, reproducible Dyno tests with SAE correction, with the car owner's name, car number, car year/make/model, shop name and phone number, and Dyno operator's name on the sheet, accompanied by a completed ST Dyno Form. Dyno reports submitted before 1-9-12 are exempt from the requirement to submit an ST Dyno Form, and Dyno sheets from dynamometer tests done prior to 1-9-12 are exempt from the requirement to have the Dyno operator's name on the sheet. The highest peak horsepower number of the three tests will be used as the official certified horsepower for weight to horsepower calculations. A smoothing factor up to five (5) is permitted. All Dyno graphs must show decreasing power for 300 rpm from the peak horsepower level, or the car must reach the rev-limiter during the Dyno testing. Dynamometer tests must be conducted on a Dynojet Model 248 or 224 for front and rear wheel drive vehicles, and on a Dynojet, Mustang, Dyno Dynamics, or Dynapack for AWD cars, in a commercial facility that offers dynamometer testing as part of their business and is open to the public. All Dyno test results using a Mustang dynamometer or Dyno Dynamics dynamometer will have 10% added to the maximum horsepower reading to obtain the number that will be used to calculate the "Adjusted" Weight/Power ratio (Mustang or Dyno Dynamics Dyno awhp x 1.1 = Maximum awhp for wt/hp calculation). Each Regional ST or Race Director may retain the option to specify which business locations will be the approved centers for that particular region. Please check with the ST Director in your area for instructions. All sites approved by the NASA American Iron series are approved for Super Touring.

Dynamometer tests are official and certified when performed by series Officials. It is the responsibility of the competitor to be within power levels on any Dyno that NASA officials choose to use for testing. The Dynojet will be the preferred Dyno for all vehicles, and will be used exclusively when available.

As AWD Dyno availability is limited, NASA Officials may use any of the four AWD Dynos listed above. AWD drivers need to be especially careful that their cars will be compliant on any official Dyno that is available.

From the start of qualifying through the end of post-race inspection, vehicles may not have any adjustments or modifications made to systems that could alter chassis dynamometer readings by changing horsepower levels (without the direct approval of the Race Director.)
Examples of such systems are driver-adjustable electronic tuning and engine timing advance devices, fuel pump output modification devices, boost controllers, adjustable MAP and MAF voltage clamps, and any other system that could alter the Dyno readings when measured for compliance purposes. Vehicles that have more than one fuel/timing program or "map" in the computer/ECU/PCM must submit a certified Dyno report (3 pulls) for each of those fuel/timing "maps" regardless of which one will be used during competition. As well, the method used to switch between these "maps" must be clearly written on the ST Car Classification Form and the ST Dyno Form. Any restriction device placed in the air intake system must be clearly identified as such and marked to indicate its dimensions.

For compliance testing, the dynamometer operator and the Super Touring Director or NASA Official will determine the dynamometer testing procedures and how many test runs will be performed for any given car being tested in order to obtain accurate test data. Prior to the dynamometer inspection the competitor may top off any fluids needed to ensure the engine and drivetrain are not damaged during testing. The fluids must be added with a NASA Official present. No other modifications or adjustments may be made to the car. To ensure fairness, a NASA Official, or an individual appointed by a NASA Official, will operate any cars being inspected on the dynamometer. SAE correction with a smoothing factor of five (5) will be used. Any run that results in an erratic or non-reproducible result may be dismissed by Super Touring officials.

NASA is actively conducting research on the use of in-car GPS monitoring units as an alternate method of compliance testing of horsepower output. Traqmate GPS data acquisition monitoring will be used in 2012 as an additional method of non-invasive compliance testing, but not as the sole reason for disqualification. If NASA elects to begin compliance testing with GPS units without Dyno testing confirmation, competitors will be given adequate notice prior to their use, including details of the units to be used, so that they may do their own testing if desired.

10 Forms, Inspection, Protests, Penalties

All aspects of NASA CCR Section 17.0 Vehicle Legality Inspection shall be enforced except as defined below.

10.1 Car Classification Forms

All ST competitors will submit a completed Super Touring Car Classification Form and certified Dyno report to the Regional ST Director or Race Director (if there is no ST Director) prior to the first qualifying session of a race day. Once a Form has been submitted during a season, if there are no modifications to the vehicle that would change the form, a new form does not need to be submitted at subsequent races. Forms can be downloaded here: http://www.nasaproracing.com/rules.html. Super Unlimited (SU) competitors do not need to submit any classification forms or certified Dyno reports.

Any ST or STR competitor who has not submitted a completed ST (or STR) Car Classification Form and certified Dyno report prior to competition will be subject to one or more of the following penalties at the discretion of the Race Director in consultation with the ST Director: 1) Disqualification from the competition session; 2) Transfer to the Super Unlimited Class; 3) Loss of one position place for race results, or move to the back of the pre-grid after a qualifying session.

A driver may choose to compete at any time in a higher level class than would be dictated by the "Adjusted" Wt./Hp Ratio. A car may be modified an unlimited number of times, and substitute vehicles may be used provided they comply with all ST/SU rules. Substitution of a vehicle after qualifying sessions are completed will result in the new vehicle being placed at the back of its class in pre-grid.

10.2 Vehicle Inspection

All completed ST Car Classification Forms will be available from the ST Director (or Race Director if there is no Regional ST Director) for review by any competing driver by request (at the track). Super Touring vehicles are subject to detailed inspection by any NASA Technical Inspector and visual inspection by Super Touring competitors at any time when the car is at the track or at prearranged mutually agreed upon times when the car is not at the track. Super Touring Directors retain the right to request any disassembly or other procedure required to verify vehicle compliance. At random times or at the discretion of the Super Touring Series Directors, any car may be ordered to report for rules compliance on a chassis dynamometer. All Super Touring competitors have the option to be present for official chassis dynamometer testing; however, the results of Dyno testing are the property of NASA, and will only be shown to Super Touring Officials, who will let the competitor know whether or not the vehicle was compliant, and may show the competitor the results at their discretion. As well, competitors may have GPS accelerometers placed in/on their vehicles at any time by Super Touring Officials to help verify rules compliance. And, as stated above in Section 9, GPS monitoring may become an acceptable substitute for Dyno testing in the future (and would be announced with adequate notice given prior to such use).

At any event where dynamometer testing (or GPS compliance testing once it is approved) is not available, Super Touring Officials will use the maximum chassis Dyno horsepower level from the certified Dyno report submitted with the ST Car Classification Form along with the actual vehicle weight after competition to calculate the "Adjusted" Weight/Power Ratio for that vehicle. Alternatively, at their discretion, Super Touring Officials may have the vehicle sealed and transported for off-site Dyno testing at a later date. At events where Dyno testing (or GPS compliance testing once it is approved) is available, Super Touring Officials at their option will use either: a) the maximum chassis Dyno horsepower level from the certified Dyno report submitted with the ST Car Classification Form along with the actual vehicle weight after competition to calculate the "Adjusted" Weight/Power Ratio for that vehicle; or b) the results of Dyno testing either requested by Super Touring Officials or performed due to a protest at the track to calculate the "Adjusted" Weight/Power Ratio.

10.3 Protests

Protests of another competitor's vehicle, for good cause, may be filed up to 30 minutes after the completion of a race or qualifying session, with the Race Director. A specific part does not need

to be specified in the protest, but an explanation of why the vehicle is being protested is required. Any protest requesting a Dyno test of a competitor's vehicle will require the protesting competitor to submit a cash deposit in the amount necessary for NASA to obtain the Dyno test. If the protest is found to be valid, the deposit shall be returned to the protesting party, and the competitor that was found to be non-compliant will be required to pay for the Dyno test. If the vehicle is found to be compliant, the protesting party will forfeit the deposit, and it will be used to pay for the Dyno test. Frivolous and "nuisance" protests may result in some type of action against the protesting party.

10.4 Penalties

Cheating and non-compliance are not welcome and will be subject to harsh penalties. Penalties will be assessed as follows, although the Race Director may choose to assess more severe penalties.
Any car exceding the minimum "Adjusted" Weight/Power Ratio for its declared class, or otherwise found to be non-compliant with the rules for its declared class, will be penalized in accordance with the NASA CCR and these rules. The Regional penalty for competing with a vehicle in a class lower than that dictated by the Super Touring Classification system or an otherwise non-compliant vehicle, regardless of driver/owner intentions, will be a two race disqualification for the previous two races in that region for the first offense. A second offense in the same region will result in a loss of half of the season points, a two race suspension, and disqualification from the race. At third offense in the same region , there will be a loss of all season points and a four race suspension. Any Regional disqualification or suspension will result in zero points that cannot be dropped.

Either the Regional ST Director or the Regional Race Director will report by e-mail all disqualifications under the above paragraph to the National ST Director, who will maintain a log of all disqualifications for non-compliance with classing rules. The National penalty for any driver disqualified three times in one season (regardless of Region) will be revocation of eligibility to compete in the NASA Championships (in any series). The fourth offense in two seasons (regardless of Region) will result in permanent ejection from the ST (and PT & TT) series.

Any decision made by a NASA Official at an event can be appealed per the NASA CCR.

Appendix A—Technical Bulletins, Approvals, Assessments for Specific Car Models

All ST1 and ST2 Vehicles—Floorpan Modifications:
1) Removal of the spare tire floor section of the rear hatch space and either replacement with a sheet metal cover or placement of a fuel cell is permitted without an additional Modification Factor.

2) The transmission tunnel may be modified for the purpose of installing a competition driver seat. The floor pan must remain in its original position.

3) Vehicles with OEM wood floors may have the wood removed and substitute metal flooring in the same location as the OEM wood floors with an additional Modification Factor of -0.2. It is

not permitted to raise or lower the floor from the OEM height compared to the rest of the body/chassis. If the wood flooring is left intact, metal plating may be placed over the wood, inside the cockpit, without an additional Modification Factor.

Allison Legacy's, Baby Grands, Legends, Pro Challenge, Thunder Roadsters:
When competing in STR, any of the above vehicles with a Competition Weight lighter than 1851 lbs (with driver) will use the following schedule for assessing Weight Modification Factors, instead of using the table in Section 7.4.4:
Equal to or less than 1850 lbs: -0.7
Equal to or less than 1750 lbs: -0.75
Equal to or less than 1650 lbs: -0.8
Equal to or less than 1550 lbs: -0.85
Equal to or less than 1450 lbs: -0.9
(note: this is the same schedule as in Section 7.4.2 for ST cars)

Factory Five Roadster and Backdraft Cobra:
No Modification Factor for FF Challenge "standard front air dam" or exact replica built with different material.

Ford Mustang and BMW E-36 M3:
"Upper subframe connectors" that penetrate and modify the floorpan will be assessed a -0.2 Modification Factor (seen commonly in American Iron Mustangs).

~~**Pro Challenge Road Race Car:**~~
~~Pro Challenge Road Race Car Specs for ST1, ST2, TTS, TTU~~
~~modification factor: -0.2~~
~~maximum tire width: 225mm if using DOT approved tires~~
~~9.6 inches if using non-DOT approved slicks~~
~~wheels: 13" or 15" (model open)~~
~~alignment: open to adjustment~~
~~ride height/corner balance: open via coilover adjustment~~
~~suspension: Bilstein non-adjustable shocks~~
~~body/aero/cage: Fiberglass with race wing--as built by Pro Challenge~~
~~length: 14 feet~~
~~height: 48 inches~~
~~chassis: 1.5" reinforced steel tube frame~~
~~engine: open~~
~~transmission: sequential~~
~~differential: Winters quick-change or Toyota (locked)~~
~~brakes: 4 piston, up to 12" vented rotors front~~
~~Wilwood 2 piston, 10" solid rotors rear~~
~~(note: Pro Challenge Cars may compete in STR1 & STR2 without the above restrictions.)~~

VRL and GAC Hoosier Tires:

Viper Racing League and Grand Am Cup Continental Spec. Tires are exempt from the -0.75 Modification Factor for Non-DOT approved tires.