2024 TECHNICAL REGULATIONS

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Series:

FORD MUSTANG CHALLENGE

Sanctioned by:

INTERNATIONAL MOTOR SPORTS ASSOCIATION

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Foreword:

For all Members, the IMSA RULES of the International Motor Sports Association establish the foundation for the organization and conduct of all IMSA Sanctioned Events. The IMSA RULES take effect immediately upon publication.

The purpose of the RULES is to: (i) promote safety, the sport of automobile Competition and IMSA, (ii) enhance Competition, (iii) ensure the quality, fairness and integrity of the IMSA programs and operations and (iv) achieve prompt finality in the Competition results ("Purpose").

ALL MEMBERS ARE REQUIRED TO REVIEW THESE IMSA RULES CAREFULLY.

The IMSA RULES consist of following three (3) sections and the Event Supplementary Regulations (SR):

- The Technical Regulations, which outline the rules and regulations for the specific cars and equipment. The Technical Regulations may be modified or changed at any time by the publication of a Technical Bulletin, amending the Technical Regulations.

- The IMSA Sporting Regulations (ISR), which concern Competitor and Event procedures, as well as guidelines for the safe and uniform operation of the sport. The ISR may be modified or changed at any time by the publication of a Competition Bulletin, amending the ISR.

- The Series Supplementary Regulations (SSR) that provides Series-specific information about each IMSA Series. The SSR is integrated into the ISR and are designated with "(SSR)" next to the Paragraph title. The SSR may be modified or changed at any time by the publication of a Competition Bulletin, amending the SSR.

Any portion of the RULES may be modified though Bulletins (Competition Bulletins and Technical Bulletins, respectively) and takes force when published. Once published, the Bulletin shall take precedence over the applicable portion of the RULES. Additionally, the RULES may be modified for an Event by the Race Director through the mandatory briefing instructions.

HOW TO READ THE RULES

IMSA Technical Regulations follow a common philosophy across all Classes. The IMSA Technical Regulation philosophy can be summed in the following concepts:

- Cars are constructed and regulated to a controlled standard, the vehicle Homologation.
- Modifications to the Car are not permitted unless specifically stated in the applicable class's Technical Regulations.
- The Car, at all times, must adhere to:
    - The current Homologation Document(s) and valid extension documents (e.g., EVO).
    - The Manufacturer's or Constructor's Parts Manual.
    - Manufacturer submitted and IMSA approved declarations (where applicable).
    - The IMSA Technical Regulations for the Class
- Normal adjustment of the Car is permitted as defined by the applicable Car's Homologation and Class's Technical Regulations.
- Repair of the Car, parts, and components is permitted, provided it serves no additional purpose other than the repair itself. All such repairs must meet all Constructor / Manufacturer specifications and regulatory requirements.

(cont.)

Modifications by an Entrant to parts, systems, and/or components of the Car is not permitted for any reason. An Entrant wishing to perform any modification(s) must present modification(s) to the applicable Manufacturer or Constructor for formal approval from the applicable Homologating Authority for the Class. Entrants are not permitted to work directly with a Homologating Authority(s).

Entrants must have a current copy of the applicable Homologation for their Car Model at all times, as well as full access to the Manufacturer's / Constructor's Part Manual. Both of these documents together clearly identify the compliant specification of the Car and will be used as reference materials for both the Entrant and IMSA. A copy of the Homologation may be provided by the applicable Manufacturer / Constructor or purchased from the Homologating Authority.

IMSA's regulations work in conjunction with Homologation regulations from a Homologating Authority. This sometimes creates conflicts across the various regulation sets. Often the Homologating Authority has a combined set of Technical and Homologation regulations.

The hierarchy of these various regulations applies in descending order is as follows:

1. IMSA Class Technical Regulations and Bulletins
2. These IMSA Technical Regulations shall govern in any case where a conflict exists with the Homologation Regulations and Documentation.
3. Homologation Authority Technical Regulations and corresponding Homologation Form & Parts Book

Example 1: Incorrect process

A Team has found that a suspension part of the Car is prone to failure when going over large bumps. The Team chooses to resolve the problem on their own and modifies the part with components made in their own shop, which are not in the Homologation or Parts Manual of the Car. IMSA Technical Staff find this modification during a post-Race inspection. IMSA finds that the car is not in the approved configuration and the Entrant is penalized.

Example 2: Correct process

A Team suspects a part on the Car may be prone to failure during longer races. The Team therefore informs their Manufacturer or Constructor representative of their concern. The Manufacturer or Constructor agrees that a modification or redesign is appropriate and submits a written proposal with supporting documentation to the Homologating Authority for review. Upon approval the Homologation documents are updated and distributed for equitable customer awareness and part implementation.

Homologation Authority for the Class:

Class	Homologating Authority
ALL	FORD

EXECUTIVE LEADERSHIP MASTHEAD

John Bishop* / Bill France, Sr.*	Founders – IMSA
Dr. Don Panoz*	Legacy Vice Chairman
Jim France	Chairman
Lesa Kennedy	Director
Ed Bennett	Chief Executive Officer
John Doonan	President
Amanda Oliver	Senior Vice President & Legal Counsel
David Pettit	Senior Vice President, Marketing
Simon Hodgson	Vice President, Competition
Brandon Huddleston	Vice President, Partnership Marketing and Business Development

*Deceased

ARTICLE 1. DEFINITIONS SPECIFIC TO THE TECHNICAL REGULATIONS

1.1.1. **Car** means a singular representation of a Car Model, entered by an Entrant in an Event.

1.1.2. **Car Model** means a specific model of a vehicle constructed by an IMSA-recognized Manufacturer Partner, and intended for Competition.

1.1.3. **Class** means a category for Cars sharing a common set of Homologation Regulations and differentiated from others by type of Car Model.

1.1.4. **Competition** means a contest of competitive nature in which a Car takes part during an Event and results of which Competition are published.

1.1.5. **Constructor** means an entity that designs and builds race car chassis.

1.1.6. **Entrant** means an entity or person who has entered a Car that has been accepted for Competition and holds an IMSA Membership in the capacity of an Entrant or Entrant/Driver.

1.1.7. **Event** means an IMSA Sanctioned motorsport activity. It includes the designated Race as well as all periods for registration, inspections, practice Sessions, qualifying Sessions, racing, pre- and post-Race activities and inspections, and rain or postponed dates related thereto.

1.1.8. **Homologate** means to execute the Homologation Process.

1.1.9. **Homologated** means a Car Model approved through the Homologation Process.

1.1.10. **Homologation** means the concept of all things associated with Homologation Authority approval via the Homologation Process.

1.1.11. **Homologation Authority** means an entity with the authority to Homologate**.**

1.1.12. **Homologation Documentation** means all files, documents, information, and communication associated with the issuance of official approval of Homologation.

1.1.13. **Homologation Identifier** means the unique identifier (generally including a string of characters identifying the Category or Class of Homologation followed by a sequential number assigned to the Car Model) serving as a reference to the official approval of Homologation, assigned by the Homologation Authority.

1.1.14. **Homologation Process** means all procedures associated with petitioning a Homologation Authority for approval that a Car Model complies with the Homologation Regulations.

1.1.15. **Homologation Regulations** means a set of technical requirements and criteria used to design, construct, and document a Car Model intended for racing in a specific category or class of racing.

1.1.16. **Manufacturer** means a Manufacturer Partner constructing an approved Car Model.

1.1.17. **Manufacturer Partner** means a recognized IMSA Official Automotive Partner.

1.1.18. **Specification** means all technical characteristics of the Car Model defined by the Homologation and Technical Catalog.

1.1.19. **Specific Homologation** means the Homologation specific to a particular Car Model.

1.1.20. **Technical Catalog** means IMSA's collection of data and documents supporting a Car Model.

1.1.21. **Technically Eligible** means conforms to all technical requirements and criteria defined by these Technical Regulations.

ARTICLE 2. TECHNICAL PHILOSOPHY

2.1. Technical Eligibility

2.1.1. Cars representing a Car Model must always respect the Specification.

2.1.2. IMSA is the sole authority to define the Technical Eligibility of a Car Model and issue the Technical Credential.

2.2. Changes

2.2.1. Changes to the Specification are prohibited, unless explicitly authorized by IMSA.

2.2.2. Manufacturers alone are permitted to petition IMSA to change the Specification; requests by Entrants are not recognized.

2.3. Conflict Resolution

2.3.1. These IMSA Technical Regulations shall govern in any case where a conflict exists with the Homologation Regulations and Documentation.

2.4. Final Authority

2.4.1. IMSA is the Final Authority with respect to these Technical Regulations.

2.5. Conditions for Use of a Specific Homologation

2.5.1. At all times during IMSA-sanctioned Events it is the Entrant's responsibility to ensure the configuration of the Car represents the Homologated components of the Specification; including:

a. As-Homologated Configuration
b. As-Delivered Configuration
c. Parts Manual
d. Homologation Extension Form Configuration

2.5.2. The original, As-Homologated Configuration of the Car must not be modified unless permitted by these Technical Regulations.

2.5.3. The As-Delivered Configuration of a Car must respect the as-received configuration from the Car Model Manufacturer, unless permitted by these Technical Regulations.

2.5.4. The Parts Manual is the official parts catalog for the Car as defined by the Car Model Manufacturer or Constructor:

a. Specific parts listed in the Parts Manual must be used on all representations of a Car Model unless permitted by these Technical Regulations.

ARTICLE 3. TECHNICAL TESTING AND VERIFICATION

Not Applicable

ARTICLE 4. BALANCE OF PERFORMANCE

Not Applicable

ARTICLE 5. SAFETY

5.1. Driver Safety Harness System

5.1.1. As Homologated

5.2. Seat

5.2.1. As Homologated

5.3. Driver Containment Nets

5.3.1. As Homologated

5.3.2. Installation requirements:

a. Supplier and/or manufacturer installation instructions must be respected.
b. Horizontal webbing must be oriented towards the Driver.
c. When secured at anchor points, nets must be:

i. Oriented parallel to the Car centerline.
ii. Located with minimal gap to the Driver's helmet.

d. Signage or equipment may not be attached to nets.

5.3.3. Containment nets must be replaced prior to the expiration date:

a. FIA Homologated nets: Immediately following December 31st of the year printed on the label.

5.4. Protective Padding

5.4.1. As Homologated

5.5. Master Electrical Switches

5.5.1. As Homologated

5.5.2. Systems must remain functional during any on-track activity or at the request of IMSA.

5.5.3. Interior and exterior master switches must be clearly identified by a self-reflective symbol of a red spark surrounded by a white-edged, blue triangle with a base greater than 30 mm.

5.6. Fire Suppression System

5.6.1. As Homologated

5.6.2. System must be securely mounted.

a. The following must be visible without the use of photography, tools, or seat removal:

i. Pressure gauge (if present)
ii. Date of manufacture
iii. Next required service date

b. Nozzles must not point directly at the Driver's face.

5.6.3. Identification

a. Exterior activation mechanism must be marked with a self-reflective symbol with a red edge surrounding a red "E" inside a white circle at least 100 mm in diameter.

5.6.4. Inspection

a. IMSA may require removal of the fire bottle for Technical Inspection.
b. Entrant is responsible to demonstrate proper system function of the interior and exterior fire suppression activation mechanisms, using the "test" mode if present.

ARTICLE 6. DEFINITION OF CLASS

6.1. Class Names

6.1.1. Class Structure:

a. Dark Horse
b. Dark Horse Legends

Homologation Authority:	Ford Motor Company

ARTICLE 7. VEHICLE SYSTEMS

7.1. General

7.1.1. All Vehicle Systems and associated sub-systems are listed in this Article.

a. Where change to the Homologated Vehicle Systems is permitted, regulatory text is **bold and underlined**.
b. Where change to the Homologated Vehicle Systems is prohibited, regulatory text is light grey.
c. Advisory statements are in normal text.

7.2. Modifications to the Specification

7.2.1. Entrants are permitted to execute the following changes to parameters defined by the Homologation component of the Car Model Specification, provided these Technical Regulations, all current Technical Bulletins, and the Technical Credential are fully respected:

a. Adjust component settings defined as adjustable.
b. Replace components with parts defined as optional.

7.2.2. Manufacturers must make any declarations listed in these Technical Regulations in the Technical Eligibility Form.

7.2.3. Further authorization to modify the Specification and/or As-Delivered Condition is granted via the following formal communication methods:

a. Published IMSA Technical Bulletin
b. IMSA Technical Committee Bulletin

7.2.4. Informal and/or verbal communication is not considered valid authorization.

7.3. Servicing, Repair, and Replacement

7.3.1. All servicing or repair must be made in good faith to restore the Car and all components to their originally intended form and function as defined by the Specification.

7.3.2. Entrants are permitted to replace damaged or worn components provided these Technical Regulations are respected.

7.4. Dimensions

7.4.1. General

a. IMSA's calibrated measurement instruments are the official measurement instruments.

b. Scrutineering measurement(s) are taken with the applicable dry-type tire set installed.
   i. Tire compound per the applicable Event SR.

c. Tire pressure shall be set at 40.0 psi (±0.5 psi) for scrutineering measurement(s).

7.4.2. Reference Surface

7.4.3. Mass

a. The minimum mass for the Car is: ~~**3650**~~ **3630 lbs**
b. Car mass is measured as-raced minus Driver and Fuel using the IMSA scales during Technical Inspection.

7.4.4. Ballast

a. Entrants are permitted to add or remove ballast to achieve minimum mass in the Homologated location:

i. Ballast must be in plate or panel form.
ii. Addition or removal of ballast during the race is prohibited.

7.4.5. Minimum Ride Height

a. The minimum ride height: **95 mm**
b. Ride Height is measured at the points specified in the Homologation Document during Technical Inspection.

7.4.6. Overall Dimensions

a. Length
b. Width
c. Height
d. Wheelbase
e. Track
f. Overhang
g. Width

7.5. Chassis

7.5.1. General

a. Entrants are permitted to execute minimum modifications for the installation of approved components.

i. All modifications must be approved by IMSA.

7.5.2. Air Jack System

a. Entrants are permitted to install the optional Homologated air jack system.

i. If installed, system must be installed per Homologation.

7.6. Driver Interface

7.6.1. General

a. Entrants are permitted to install up to two (2) defogging fans and associated ducts

i. Installations must be approved by IMSA
ii. System must not serve any additional purpose
iii. System must not inhibit visibility or cockpit ingress/egress

7.6.2. Steering Wheel

7.6.3. Pedal Box

a. Entrants are permitted to apply non-slip adhesives to the surface of driver pedals.

7.6.4. Shifting Mechanism

7.6.5. Driver Adjustable Components

7.6.6. Driver Cooling Systems

a. Entrants are permitted to install a maximum of two (2) Driver Cooling Systems, i.e. Cool Suits.

i. Driver cooling systems must use non-flammable refrigerant (e.g. R134a, water).

b. Installations must meet the following conditions:

i. The mounting location and installation for the primary system is unrestricted provided it serves no purpose other than retaining the cooling system in the event of a collision.
ii. Any secondary driver cooling system must be mounted on the top of the ballast box.
iii. All driver cooling system components must be securely mounted.
iv. The use of hook and loop fasteners (Velcro) is prohibited.

c. Entrants are permitted to install Driver Ventilation Ducts

i. A NACA duct are permitted to be installed on the side window, rear quarter window, OR the rear window for the purpose of cooling the driver
ii. Maximum of 1 per side with 2 ducts permitted per car
iii. Maximum cutout area of 26 cm x 16 cm
iv. No duct shall break the outward plane of the surface on which it is installed
v. Ducts must be translucent
vi. Duct and/or hoses must not impede cockpit exit or driver's visibility

7.7. Bodywork

7.7.1. General

a. The following films are permitted to be added to the front windscreen:

i. Tear-off
ii. Anti-fog

7.7.2. Bodywork Seams

a. As homologated.

7.7.3. Decals

a. Entrants are permitted to apply removable die cut sponsorship decals with the approval of IMSA.
b. Windows must remain free of decals and/or tint unless required by IMSA

7.8. Aerodynamic Elements

7.8.1. General
7.8.2. Splitter
7.8.3. Dive Planes
7.8.4. Body Gurney
7.8.5. Wings
7.8.6. Rear Wing Gurney
7.8.7. Floor
7.8.8. Friction Blocks
7.8.9. Diffuser

7.9. Engine System

7.9.1. General

a. Manufacturer seals must be respected

7.9.2. Engine
7.9.3. Oiling System
7.9.4. Lambda

7.9.5. Engine RPM

7.9.6. Intake

7.9.7. Exhaust

7.9.8. Turbo

7.9.9. Engine Control Unit (ECU)

7.10. Boost Management

7.10.1. Not Applicable

7.11. Drive System

7.11.1. General

a. Manufacturer Seals must remain intact.

7.11.2. Fluids & Lubricants

a. Unrestricted.

7.11.3. Clutch

7.11.4. Gearbox

7.11.5. Gears

7.11.6. Gearbox Control Unit

7.11.7. Differential

7.11.8. Axles

7.11.9. Uprights

7.12. Cooling System

7.12.1. General

7.12.2. Fluids

a. Entrants are permitted to utilize the following approved cooling fluids:

i. Water
ii. Air
iii. Non-glycol based fluids

7.12.3. Inlet Blockers

7.12.4. Water System

7.12.5. Oil Cooling System

7.13. Fuel System

7.13.1. General

7.13.2. Fuel Types

a. The approved fuel for the Class is IMSA E10, as supplied by VP Fuels.

i. IMSA may require a fuel sample for inspection via a gas chromatograph.

7.13.3. Fuel Cell

7.13.4. Fuel Lines

7.13.5. Fuel Sample Port

7.13.6. Refueling Receptacle

7.14. Brake System

7.14.1. General

7.14.2. Fluids & Lubricants

a. <u>Unrestricted.</u>

7.14.3. Bias Assembly

7.14.4. Master Cylinders

7.14.5. Brake Lines

7.14.6. Calipers

7.14.7. Rotors

7.14.8. Pads

7.14.9. Ducting

7.14.10. Brake Duct Inlet Blockers

a. **<u>Entrants permitted to utilize the following approved methods for the sole purpose of blocking off portions of the brake duct inlet openings:</u>**

i. Opaque adhesive tape.

7.14.11. Anti-Lock Braking System

7.15. Steering System

7.15.1. General

7.15.2. Fluids & Lubricants

7.16. Suspension System

7.16.1. General

7.16.2. Geometry Elements

7.16.3. Springs

a. Homologated front and Homologated rear spring sets are permitted to be used independently.

i. Front spring sets are permitted to be used on the front.
ii. Rear spring sets are permitted to be used on the rear.

b. Spring sets are defined as two (2) matching front springs or two (2) matching rear springs.

7.16.4. Dampers

7.16.5. Bump Rubbers and Packers

7.16.6. Anti-Roll Bar

7.16.7. Third Elements

7.17. Wheels & Tires

7.17.1. General

7.17.2. Wheels

7.17.3. Wheel Attachment

7.17.4. Tires

a. The approved tire supplier for this Class is Michelin.
b. Tires must be used in accordance with SSR Attachment 3.

7.18. Electronics

7.18.1. General

7.18.2. Data Logger

7.18.3. Telemetry

Not Applicable

7.18.4. Wiring Loom

7.18.5. Sensors

7.18.6. Radio

a. **Entrants are permitted to install a single two-way voice radio in the Homologated location with car-to-pit communication capability in compliance with the corresponding Series Sporting Regulations.**

7.18.7. Rear View Camera

7.18.8. Tire Pressure Monitoring System (TPMS)

Not applicable

7.18.9. Auxiliary Power Sources

7.18.10. Team Camera System

a. **Entrants are permitted to install a Homologated Camera System**

i. Must be installed as Homologated.

ARTICLE 8. SERIES REQUIRED ELECTRONICS

8.1. General

8.1.1. All Series required electronics must be installed per the applicable Homologation and/or Declaration.

8.1.2. Entrant is responsible for the operation, maintenance, and care of Series required electronics.

8.2. Series Scrutineering Data

8.2.1. Cars must utilize the Homologated data logger as the Series Scrutineering Logger

i. System must be operational during on-track activity

8.3. Yellow Flag Warning System

8.3.1. Cars must be equipped with the MSE Yellow Light Kit to indicate active flag status and must be installed as Homologated.

a. The Kit contains the following components:

i. Yellow Indicator Light
ii. Mounting Bracket
iii. Antenna
iv. Wiring Loom and Instructions

b. The Kit must be purchased through the following link

i. https://www.gomuchfaster.com/products/ford-mustang-challenge-full-car-kit

8.3.2. The Safety Light system must be installed and functioning during on-track activity.

8.4. Driver ID System

Not Required

8.5. Transponder System

8.5.1. Installation of the TR2 Go Transponder system must be as Homologated.

8.5.2. Transponder must be purchased via the following link:

a. https://www.gomuchfaster.com/products/ford-mustang-challenge-full-car-kit

8.5.3. Transponder must operate to the satisfaction of the Timing and Scoring Officials.

8.6. Leader Light System

Not Applicable

8.7. Back-lit Panel

Not Applicable

8.8. Pro-Am Light

Not Applicable

8.9. In-Car Television Camera

Not Applicable

8.10. Incident Data Recorder

8.10.1. Entrants must utilize the FIA Impact Data Recorder (IDR)

a. Must be installed as Homologated.
b. IDR must be installed and functional for all on-track activity.
c. IMSA provides the IDR to the Entrant.
d. Data collected by the IDR is property of IMSA.
e. IDR must be surrendered upon request by IMSA.

ARTICLE 9. REFUELING SYSTEM

9.1. Scrutineering Fuel Collection

9.1.1. Fuel Collection Vessel must:

a. Be non-opaque.
b. Be free of any carriage or trolley system.
c. Have a flat bottom.
d. Rest without assistance on the IMSA scale for weight measurement before and after defueling the Car.

9.1.2. Fuel Pump Out Hoses

a. Entrant must utilize 2 separate hoses for defueling activities:
   i. Fuel drain
   ii. Vent return
b. Both hoses must connect the Car to the collection vessel.
c. Drain line must utilize dry-break connections to the Car and fixed (sealed) connections to the fuel collection vessel.
d. Vent line must utilize either a temporary or dry-break connection to the Car and fixed (sealed) connections to the fuel collection vessel
e. Fuel drain hose must have a clear section of no less than 250 mm near the collection vessel.