2017 TECHNICAL REGULATIONS

Revision Date: July 19, 2017

Series:

IMSA WEATHERTECH SPORTSCAR CHAMPIONSHIP

Class:

PROTOTYPE

Sanctioned by:

INTERNATIONAL MOTOR SPORTS ASSOCIATION

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ARTICLE 1. DEFINITIONS SPECIFIC TO THE TECHNICAL REGULATIONS

1.1.1. **Car** means a singular representation of a Car Model possessing a Technical Credential, 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. **Permissive** means modifications explicitly authorized by these Technical Regulations are permitted and modifications not explicitly authorized by these Technical Regulations are prohibited.

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

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

1.1.21. **Specific Technical Credential** means the Technical Credential specific to a particular Car Model.

1.1.22. **Technical Credential** means the concept of all things associated with IMSA approval via the Technical Credential Process.

1.1.23. **Technical Credential Documentation** means all files, documents, information, and communication associated with the Technical Credential Process.

1.1.24. **Technical Credential Identifier** means the unique identifier that serves as a reference to the Technical Credential granted by the IMSA. Example: IMSA GTLM 20170101 [GTE-0XX].
1.1.25. **Technical Credential Process** means all procedures associated with petitioning IMSA for approval that a Car Model is Technically Eligible.

1.1.26. **Technical Eligibility Form** means the form which documents the Specific Technical Credential.

1.1.27. **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. Car Models Technically Eligible for participation in IMSA Events are issued a Technical Credential Identifier.

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

2.1.3. To be issued a Technical Credential Identifier for participation in this Class, a Car Model must:

   a. Be a Car Model constructed by an IMSA-recognized Manufacturer Partner.

   b. Hold a valid Homologation conforming to the Homologation Regulations and Homologation Documentation specific to the Class, approved and issued by an IMSA-recognized Homologation Authority.

   c. Successfully complete the IMSA Technical Credential Process.

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

2.2. **Balance of Performance Adjustment**

2.2.1. To maintain competitive equivalency between Cars within the Class, and between Classes, IMSA uses the Balance of Performance process to mandate adjustments to the Specification.

2.3. **Changes**

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

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

**ARTICLE 3. USING THESE TECHNICAL REGULATIONS**

3.1. **Structure**

3.1.1. These Technical Regulations are structured to assist Manufacturers and Entrants in accurate interpretation of the technical expectations and enforcement of the IMSA Technical Philosophy.

   a. A brief description of each Article and its purpose follows:

<table>
<thead>
<tr>
<th>Article / Name</th>
<th>Description / Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Definitions Specific to the Technical Regulations</td>
<td>Standardized meanings for specific terms of these Technical Regulations.</td>
</tr>
<tr>
<td>2. Technical Philosophy</td>
<td>Guiding principles for these Technical Regulations.</td>
</tr>
<tr>
<td>3. Using These Technical Regulations</td>
<td>General structure, purpose, and clarifying statements for these Technical Regulations.</td>
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<td>4. Homologation</td>
<td>Pertinent topics related to Homologation.</td>
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<td>5. Technical Eligibility</td>
<td>Pertinent topics related to Technical Eligibility.</td>
</tr>
<tr>
<td>7. Safety</td>
<td>Regulatory requirements associated with mandatory safety systems.</td>
</tr>
<tr>
<td>8. Definition of Class</td>
<td>Statement of specific Class, Homologation, and Technical Eligibility requirements.</td>
</tr>
<tr>
<td>9. Series Required Electronics</td>
<td>Regulatory requirements associated with mandatory electronic systems.</td>
</tr>
<tr>
<td>11. Refueling System</td>
<td>Regulatory requirements associated with specified refueling system.</td>
</tr>
</tbody>
</table>
3.2. Conflict Resolution

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

3.3. Final Authority

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

ARTICLE 4. HOMOLOGATION

4.1. Homologation Regulations

4.1.1. Reference to the official Homologation Regulations defining the requirements applicable to these Technical Regulations is provided in ARTICLE 8. DEFINITION OF CLASS.

4.2. Homologation Process

4.2.1. The procedures of the Homologation Process are used to verify that the Car Model meets the necessary requirements and criteria defined by the official set of Homologation Regulations.

4.2.2. This process generally includes the following components or phases, which must be completed to the satisfaction of the Homologation Authority:

a. Homologation Files and Documentation
b. Homologation Inspection
c. Homologation Testing
d. Final Approval
e. Identification Assignment

4.2.3. Homologation Process fees may apply.

4.3. Homologation Files and Documentation

4.3.1. All files and documents required by the Homologation Authority to support the Homologation Process; including but not limited to:

a. Basic Homologation Form
b. Homologation Extension Form(s)
c. Data Sheet(s)
d. CAD Models and Drawings
e. Logged Vehicle Data
f. Homologation Testing Data

4.3.2. Basic Homologation Form: Documents how the Car Model complies with the Homologation Regulations; including photographs, drawings, descriptions, and measurements defining the characteristics, components, parameters, and/or dimensions and tolerances for:

a. General Vehicle
b. Specific Vehicle Systems
c. System Assemblies, Parts and Components
d. Modifications to the Original Series Production Car (if applicable)

4.3.3. Homologation Extension Forms: Describe all approved modifications made to the Basic Homologation Form, including but not limited to modifications for:

a. Correction of incorrect information
b. Safety reasons
c. Reliability reasons
d. Evolutions of type introduced on the original Car Model (if applicable)
e. Evolutions for new components and/or characteristics that cancel and replace those featured in the original Basic Homologation Form
f. Variant options, such as endurance packages
4.3.4. CAD Models and Drawings: As required by the Homologation Authority to support the Homologation Process; including but not limited to:
   a. Complete Vehicle CAD Models
   b. Specific Component CAD Models
   c. Specific Component Drawings
   d. Engine Air Intake Restrictor(s)

4.3.5. Homologation Testing Data: Information, documentation, data, and results from Homologation Testing.

4.4. Homologation Inspection

4.4.1. The inspection process for drawings, CAD models, any reference component, and the constructed Car Model by the Homologation Authority.
   a. These inspections confirm that a Car Model complies with the Homologation Regulations and are generally conducted as part of the following phases of the Homologation Process:
      i. Design
      ii. Construction
      iii. Final Approval

4.5. Homologation Testing

4.5.1. Any testing conducted by the Homologation Authority to support the Homologation Process; including, but not limited to:
   a. Straight-line Testing
   b. Wind Tunnel Testing
   c. Engine Dyno Testing
   d. Track Testing

4.6. Homologation Identifier

4.6.1. The Homologation Identifier is electronically stamped/associated with all information, documentation and files associated with the Homologation.

4.7. Conditions for Use of a Specific Homologation

4.7.1. At all times during IMSA-sanctioned Events it is the Entrant's responsibility to ensure the configuration of the Car Model represents the Homologation components of the Specification; including:
   a. As-Homologated Configuration
   b. As-Delivered Configuration
   c. Parts Manual
   d. Homologation Extension Form Configuration

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

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

4.7.4. The Parts Manual is the official parts catalogue for the Car Model 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.

4.7.5. To be eligible for use in any IMSA-sanctioned Event, modifications detailed in Homologation Extension Forms must:
   a. Comply with these Technical Regulations.
   b. Be approved by, or have initiated the process to obtain approval from, the Homologation Authority, and appended to the Car Model Homologation.
   c. Be approved by IMSA.
ARTICLE 5. TECHNICAL ELIGIBILITY

5.1. Technical Credential Process

5.1.1. Manufacturers may begin the Technical Credential Process for a Car Model provided the Car Model:

   a. Holds, or have initiated the process to obtain approval from, a valid Homologation as defined in these Technical Regulations.
   b. Is approved by IMSA.

5.1.2. The procedures of the Technical Credential Process are used to verify that the Car Model meets the necessary requirements and criteria defined by these Technical Regulations.

5.1.3. This process generally includes the following components or phases, which must be completed to the satisfaction of IMSA:

   a. Technical Credential Files and Documentation
   b. Technical Eligibility Testing
   c. Final Approval
   d. Identification Assignment

5.1.4. IMSA may request Manufacturers submit reference components to support the Technical Credential process.

   a. IMSA may retain these components without compensation.

5.1.5. IMSA may request Manufacturers submit reference tooling and/or templates to support the Technical Inspection process.

5.1.6. Technical Credential fees may apply.

5.2. Technical Credential Files and Documentation

5.2.1. All files and documents required by IMSA to support the Technical Credential Process; including but not limited to:

   a. Technical Eligibility Form
   b. Data Sheet(s)
   c. CAD Models and Drawings
   d. Logged Vehicle Data
   e. Electronic Controller Calibrations
   f. Technical Eligibility Testing Data

5.2.2. Technical Eligibility Form: Documents how the Car Model complies these Technical Regulations; including:

   a. List of all files and documentation associated with the Specific Homologation of the Car Model
   b. List of all files and documentation associated with the Specific Technical Credential of the Car Model
   c. All approved IMSA-Only Declarations

5.2.3. CAD Models and Drawings: As required by IMSA to support the Technical Credential Process; including but not limited to:

   a. Complete Vehicle CAD Models
   b. Specific Component CAD Models
   c. Specific Component Drawings
   d. Additional components requested by IMSA

5.2.4. Technical Eligibility Testing Data: Information, documentation, data, and results from Technical Eligibility Testing.

5.3. Technical Eligibility Testing

5.3.1. Any testing conducted by IMSA to support the Technical Credential Process; including, but not limited to:

   a. Restrictor Flow
   b. Engine Dyno
   c. Wind Tunnel
   d. On-track Testing
   e. Refueling Testing
5.4. **Technical Credential Identifier**

5.4.1. The Technical Credential Identifier is electronically stamped/associated with all information, documentation and files associated with the Technical Credential.

5.5. **Conditions for Use of Specific Technical Credential**

5.5.1. At all times during IMSA-sanctioned Events it is the Entrant’s responsibility to ensure the configuration of the Car Model represents the approved Technical Credential components of the Specification.

ARTICLE 6. **BALANCE OF PERFORMANCE**

6.1. **Balance of Performance**

6.1.1. IMSA may, at its discretion, utilize an adjustment method to maintain competitive equivalency between Cars within each Class, and between Classes.

6.1.2. All decisions by IMSA regarding Balance of Performance are Conclusive and not subject to protest or appeal.

6.1.3. Providing false or intentionally misleading information is a breach of these Technical Regulations.

6.2. **Criteria for Adjustments**

6.2.1. Performance is evaluated using observed performance data; including, but not limited to, the IMSA Scrutineering data logger and official Timing and Scoring.

a. IMSA may omit from consideration any data not indicative of the established performance of the Car Model.

6.3. **Adjustment Parameters**

6.3.1. The following adjustments may apply:

a. Minimum mass
b. Engine restrictor and/or boost ratio change
c. Maximum fuel cell capacity
d. Assigned refueling restrictor diameter
e. Aerodynamic elements and/or settings
f. Other parameters as designated by IMSA

6.4. **Release of Adjustments**

6.4.1. IMSA may release Balance of Performance adjustments at any time during the season.

6.4.2. All adjustments take effect seven (7) days after publication except in the case of Events on consecutive weekends.
ARTICLE 7. SAFETY

7.1. Driver Safety Harness System

7.1.1. Cars must be equipped with a minimum 6-point Driver safety harness with a valid label demonstrating compliance with one of the following standards:

a. FIA Standard 8853/98: FIA Safety Harnesses Standard
   i. FIA Technical List #24: Harnesses Homologated by the FIA according to the FIA Standards 8853/98 and 8854/98

b. FIA Standard 8853-2016: Safety Harnesses
   i. FIA Technical List #57: Harnesses Homologated according to the FIA Standard 8853-2016

c. SFI Specification 16.5: Stock Car Driver Restraint Assemblies
   i. Specification
   ii. Manufacturers

d. SFI Specification 16.6: Advanced Motorsport Driver Restraint Assemblies
   i. Specification
   ii. Manufacturers

7.1.2. Installation must be performed in accordance with instructions provided by the system supplier and/or manufacturer.

a. Belt components must be installed at each anchor point to prevent accidental release or opening.

b. Individual belt straps must be independent; any method or attempt to combine individual straps is prohibited.

c. Elastic retention straps are prohibited on shoulder belts.

7.1.3. Harnesses must be replaced at the request of IMSA, or whenever the following conditions occur:

a. Expiration:
   i. FIA Homologated: Immediately following December 31st of the year printed on the label.
   ii. SFI Certified (punched/cut label): Two years from the date as stated on label. If label is not properly “cut” by the manufacturer or their representative, the date for expiration shall be January 1st of the earliest year printed on the label + two years.
   iii. SFI Certified (non-punched label): On June 30th or December 31st: of the year identified as the date for expiration.

b. Damage:
   i. Following a severe collision.
   ii. Webbing is cut or frayed, or weakened due to actions of chemicals or sunlight.
   iii. Buckles are bent, deformed, rusted, or improperly functioning.

7.1.4. Entrants are responsible for ensuring the Driver safety harnesses and all associated components are properly labeled, installed, used, and maintained.

7.1.5. Belt components must be used as designed by the manufacturer and tested by SFI or FIA. It is prohibited to “mix” belt components to include:

a. Belt components from different manufacturers.

b. Belt components certified by SFI and FIA.

7.2. Seat

7.2.1. As homologated.
7.3. **Driver Containment Nets**

7.3.1. Not applicable.

7.4. **Protective Padding**

7.4.1. Not applicable.

7.5. **Protective Shielding**

7.5.1. Cars may be equipped with shielding to protect the Driver against contact with cockpit equipment in a collision.

7.5.2. Installation requirements:

   a. Installations must not impact cockpit exit.
   b. Installations of protective shielding must use fire-resistant materials and if impact padding is used it must comply with FIA 8857-2001, SFI 45.1 or SFI 45.2.
   c. Installations must be presented to and approved by IMSA at the time of technical inspection.

7.6. **Master Electrical Switches**

7.6.1. As homologated.

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

7.6.3. 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.

7.7. **Fire Suppression System**

7.7.1. Cars must be equipped with a fire extinguisher system with a valid label demonstrating compliance with one of the following standards:

      i. [FIA Technical List #16](#) Extinguisher Systems Homologated by the FIA
   b. FIA Standard 8865-2015: Plumbed-in and Hand-Held Fire Extinguisher Systems
      i. [FIA Technical List #52](#) Plumbed-in Fire Extinguisher Systems according to FIA Standard 8865-2015
   c. SFI Specification 17.1: On Board Fire Suppression Systems
      i. Specification
      ii. Manufacturers

7.7.2. Extinguishing media must be compatible with all aspects and accessories of the fire suppression system.

   a. IMSA recommends voluntary compliance with FIA 8865-2016.
      i. Mandatory compliance with FIA 8865-2016 is anticipated for 2018.
   b. All system components must be used and serviced per manufacturer specifications.

7.7.3. 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.

7.7.4. System must include an exterior activation mechanism proximal to the exterior master electrical switch at (or near) the base of the left side A-Pillar.

   a. Exterior activation mechanism must be located such that emergency responders may activate with a single action:
      i. Using a gloved finger, or tools such as a hook.
      ii. Unencumbered by bodywork, windscreen wipers, or any equipment that may require multiple actions.
b. A method for preventing activation of the exterior activation mechanism:
   i. May be enabled when the Car is in Technical Inspection, in the Paddock, or located near large crowds, such as during pre-Race activities.
   ii. Must be removed prior to participation in on-track activity.

7.7.5. 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.

7.7.6. 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 8. DEFINITION OF CLASS

8.1. Prototype (P)

8.1.1. Class Structure: Prototype Cars compete in the P Class of the IMSA WeatherTech Sportscar Championship (IWSC).

8.1.2. Eligibility Requirements: To be eligible for participation in the Class, a Car Model must respect the Specification defined by the Homologation and Technical Eligibility requirements:

   a. Homologation (LM P2):

<table>
<thead>
<tr>
<th>Homologation Authority:</th>
<th>Federation Internationale de l’Automobile (FIA) / Automobile Club de l’Ouest (ACO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homologation Specification:</td>
<td>FIA Le Mans Prototype 2 (LM P2)</td>
</tr>
<tr>
<td>Additional Documentation:</td>
<td></td>
</tr>
</tbody>
</table>

   b. Homologation (DPi):

<table>
<thead>
<tr>
<th>Homologation Authority:</th>
<th>International Motor Sports Association (IMSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homologation Specification:</td>
<td>IMSA DAYTONA PROTOTYPE international (DPi)</td>
</tr>
<tr>
<td>Additional Documentation:</td>
<td>2017 HOMOLOGATION FORM – DPI / LM P2 Variances</td>
</tr>
</tbody>
</table>

ARTICLE 9. VEHICLE SYSTEMS

9.1. General

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

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

9.2. Modifications to the Specification

9.2.1. Entrants may 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:
9.2.2. Manufacturers must make any declarations listed in these Technical Regulations in the Technical Eligibility Form.

9.2.3. 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. Approved updates to the IMSA Technical Eligibility Form

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

9.3. Servicing, Repair, and Replacement

9.3.1. 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.

9.3.2. Entrants may replace damaged or worn components provided these Technical Regulations are respected.

9.4. Dimensions

9.4.1. General

9.4.2. Reference Surface
   a. The flat floor reference surface of the Car is measured to the plane of the Technical Inspection surface plate.

9.4.3. Mass
   a. The minimum mass for all Car Models is defined via Balance of Performance Tables and associated Technical Bulletins.
   b. Car mass is measured as-raced minus Driver and Fuel using the IMSA scales during Technical Inspection.
   c. IMSA scales are the official scale of measurement.

9.4.4. Ballast
   a. **Entrants may add or remove ballast to achieve minimum mass:**
      i. Ballast must be in plate or panel form.
      ii. Addition or removal of ballast during the race is prohibited.
   b. **Entrants using Cars without specific Homologated locations must:**
      i. Locate all ballast inside the cockpit in the passenger’s location.
      ii. Secure all ballast per FIA Article 253-16 in both dimensions and characteristics of fixation methods.
      iii. Design fixations such that tools are required for its removal.
   c. Manufacturers and/or Constructors must place ballast in assigned locations when required by IMSA.

9.4.5. Ground Clearance

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

9.5. Chassis

9.5.1. General
   a. **Entrants may execute minimum modifications for the installation of components.**
      i. All modifications must be approved by IMSA.
9.6. Driver Interface

9.6.1. General

9.6.2. Steering Wheel
   a. **Entrants may add, and/or modify the shape of, steering wheel grips.**

9.6.3. Pedal Box
   a. **Entrants may apply non-slip adhesives to the surface of driver pedals.**

9.6.4. Shifting Mechanism

9.6.5. Driver Adjustable Components
   a. **Driver adjustable anti-roll bars are permitted.**

9.6.6. Driver Cooling Systems

9.7. Bodywork

9.7.1. General
   a. All bodywork must comply to the submitted homologated CAD and geometries tested at IMSA’s Windshear Test, within a tolerance of +/- 2 mm.
   b. No bodywork is permitted below the Reference Surface.
   c. Entrants may apply the following films to the front windscreen:
      i. Tear-offs
      ii. Anti-fog

9.7.2. Bodywork Seams
   a. **Entrants may apply tape over the body seams around refueling receptacles.**

9.7.3. Decals
   a. **Entrants may apply removable die cut sponsorship decals with the approval of IMSA.**

9.8. Aerodynamic Elements

9.8.1. General
   a. All aerodynamic elements must comply to the submitted homologated CAD and geometries tested at IMSA’s Windshear Test, within a tolerance of +/- 2 mm.
   b. No aerodynamic element is permitted below the Reference Surface.

9.8.2. Splitter
   a. As per Technical Bulletin.
   b. The lowest points on the splitter must be coplanar with the Reference Surface within a tolerance of +2 mm / -0 mm.

9.8.3. Dive Planes
   a. As per Technical Bulletin.

9.8.4. Body Gurney
   a. As per Technical Bulletin.

9.8.5. Wings
9.8.6. Rear Wing Gurney
   a. As per Technical Bulletin.

9.8.7. Floor
   a. As per Technical Bulletin.

9.8.8. Friction Blocks
   a. As per Technical Bulletin.

9.8.9. Diffuser
   a. As per Technical Bulletin.

9.9. Engine System

9.9.1. General

9.9.2. Engine

9.9.3. Lambda
   a. The minimum lambda value for all Car Models is defined via Balance of Performance Tables and associated Technical Bulletins.

9.9.4. Engine RPM
   a. The maximum engine RPM limits for all Car Models are defined via Balance of Performance Tables and associated Technical Bulletins.
   b. The RPM limit is considered exceeded when either of these conditions occur:
      i. Engine RPM exceeds RPM limit for >250 ms, and throttle >60% of the maximum
      ii. Engine RPM >1.0% over RPM limit for more than 100 ms, and throttle >60% of the maximum, i.e. an 8000 RPM limit means >8080 RPM for >100 ms.

9.9.5. Intake
   a. The assigned inlet air restrictor diameter(s) for all Car Models is defined via Balance of Performance Tables and associated Technical Bulletins.
      i. The assigned air restrictor diameter must be maintained at least 3 mm axially in the throat
      ii. The IMSA Restrictor Throat Pressure Sensor measurement tap must be 1 mm diameter and centered axially in the restrictor throat
      iii. All air entering the engine must pass through the restrictor.
   b. Intake air restrictors are sealed by IMSA Technical Officials during Pre-Event Technical Inspection.
      i. Entrants must receive approval from IMSA to remove seals following inspection, and seals must be replaced by IMSA Technical Officials prior to on-track activity.

9.9.6. Exhaust

9.9.7. Turbo

9.9.8. Engine Control Unit (ECU)

9.9.9. Engine Transportation Crate
   a. Entrant must have immediately available a crate sufficient to securely and safely package and ship an engine.
9.10. Boost Management

9.10.1. Maximum Boost Pressure

9.10.2. Boost Pressure Ratio

a. The table of maximum boost pressure ratio versus engine RPM for applicable Car Models is defined via Balance of Performance Tables and associated Technical Bulletins:
   i. All values between the tabulated set points defined via the table are interpolated linearly.

9.10.3. Boost Control Strategy Inputs

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>TB*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Boost Pressure Ratio (Max Pboost)</td>
<td>Curve of Maximum Boost Pressure Ratio as a function of Engine RPM</td>
<td>TB</td>
</tr>
<tr>
<td>Actual Boost Pressure (Pboost)</td>
<td>Intake manifold pressure measured in accordance with these Technical Regulations</td>
<td>TB</td>
</tr>
<tr>
<td>Filtered Boost Pressure (Pboost Filtered)</td>
<td>Exponentially weighted moving average of Actual Boost Pressure. Defined as: (Pboost Filtered)_n = (Pboost)<em>n * (CeFilt) + (Pboost Filtered)</em>{n-1} * (1 - CeFilt)</td>
<td>TB</td>
</tr>
<tr>
<td>Filter Coefficient (CeFilt)</td>
<td>Coefficient that defines weighting for Filtered Boost Pressure</td>
<td>TB</td>
</tr>
<tr>
<td>Barometric Pressure Reference</td>
<td>Absolute barometric pressure reading will be recorded by IMSA’s calibrated barometer at noon on setup day of a race event</td>
<td>TB</td>
</tr>
<tr>
<td>Actual RPM</td>
<td>Unfiltered RPM value measured in accordance with these Technical Regulations</td>
<td>TB</td>
</tr>
<tr>
<td>Actual Throttle</td>
<td>Engine throttle position measured in accordance with these Technical Regulations</td>
<td>TB</td>
</tr>
<tr>
<td>RPM Threshold</td>
<td>An RPM threshold which is used as a condition</td>
<td>TB</td>
</tr>
<tr>
<td>Resultant Boost</td>
<td>(Pboost Filtered) – (Barometric Pressure Reference) * (Max Pboost Ratio)</td>
<td>TB</td>
</tr>
<tr>
<td>Integral</td>
<td>Area under the Resultant Boost as a function of time curve in units of pressure-time</td>
<td>TB</td>
</tr>
<tr>
<td>Integral Time Step</td>
<td>Time step of the Integral</td>
<td>TB</td>
</tr>
<tr>
<td>Integral Decay</td>
<td>A value in units of pressure-time subtracted from the Integral when the integral is positive</td>
<td>TB</td>
</tr>
<tr>
<td>Low Overboost Level</td>
<td>A lower overboost limit in units of pressure time</td>
<td>TB</td>
</tr>
<tr>
<td>Lower Overboost Counter</td>
<td>A counter which is incremented when the Low Overboost Level is met or exceeded</td>
<td>TB</td>
</tr>
<tr>
<td>Low Overboost Counter Reset Condition</td>
<td>A time-based condition that will reset the Low Overboost Counter</td>
<td>TB</td>
</tr>
<tr>
<td>High Overboost Level</td>
<td>A maximum overboost limit in units of pressure-time that can never be met or exceeded</td>
<td>TB</td>
</tr>
</tbody>
</table>

* All parameters indicated with TB are defined via Technical Bulletin.

9.10.4. Calculation Method

a. Resultant Boost is integrated over time at each time step at a rate equal to Integral Time Step when:
   i. [(Actual RPM) >= (RPM Threshold)] AND [(Actual Throttle) >= (Throttle Threshold)] AND [(Resultant Boost) > 0]
   ii. The current Integral value is added to the initial Integral value

b. The Integral Decay is subtracted from the Integral when Resultant Boost < 0
   i. This value is always positive
   ii. (Integral) – (Integral Decay) >= 0

c. A Low Overboost Counter is incremented if:
   i. (Integral) >= (Low Overboost Level)
d. It is a violation of the boost regulations if either:
   i. The Low Overboost Counter Limit is exceeded
   ii. (Integral) >= (High Overboost Level)
e. The Integral is reset to zero (0) if:
      i. [(Actual RPM) <= (RPM Threshold)] OR [(Actual Throttle) <= (Throttle Threshold)]
f. The Integral value is held in memory as an initial condition for the next time step.

9.11. Drive System

9.11.1. General

9.11.2. Fluids & Lubricants
   a. **Unrestricted.**

9.11.3. Clutch

9.11.4. Gearbox

9.11.5. Gears
   a. **Manufacturers may declare three (3) final drive ratios via the Technical Eligibility Form.**
   b. **Change ratios are unrestricted.**
      i. Change gears must be sourced from the original homologated gearbox manufacturer.

9.11.6. Gearbox Control Unit

9.11.7. Differential

9.11.8. Axles

9.11.9. Uprights

9.12. Cooling System

9.12.1. General

9.12.2. Fluids
   a. **Entrants may utilize non-glycol based fluids.**

9.12.3. Inlet Blockers
   a. **Entrants may utilize the following methods for the sole purpose of blocking off portions of the cooling system inlet openings:**
      i. Opaque adhesive tape.
      ii. Panels made from carbon fiber and/or aluminum with associated fastener hardware.

9.12.4. Water System

9.12.5. Oil Cooling System

9.13. Fuel System

9.13.1. General

9.13.2. Fuel Types
   a. The approved fuel for the Class is IMSA E20C, as supplied by VP Fuels.
      i. IMSA may require a fuel sample for inspection via a gas chromatograph.
9.13.3. Fuel Cell
   a. Maximum Capacity
      i. The fuel cell maximum capacity for all Car Models is defined via Balance of Performance Tables and associated Technical Bulletins.
   b. **Entrants may use blocks or balls to achieve maximum fuel cell capacity:**
      i. Any device, system, or procedure designed to increase, even temporarily, the total fuel storage capacity beyond the maximum is prohibited.

9.13.4. Fuel Lines

9.13.5. Fuel Sample Port
   a. **Entrants must equip the Car with the approved self-sealing connector for extraction of fuel samples:**
      i. Approved Connector: Staubli P/N: CBI06.7251/IA/JKV.
      ii. Must be located immediately before the injector nozzles.
      iii. Installation must be approved by IMSA.

9.13.6. Refueling Receptacle


9.14.2. Fluids & Lubricants
   a. **Unrestricted.**

9.14.3. Bias Assembly
9.14.5. Brake Lines
9.14.6. Calipers
9.14.7. Rotors
   a. **Entrants may apply opaque adhesive tape to block off portions of the brake duct inlet openings.**


9.15. Steering System

9.15.1. General

9.15.2. Fluids & Lubricants
   a. **Unrestricted.**

9.16. Suspension System

9.16.1. General
9.16.2. Geometry Elements
9.16.3. Springs
   a. **Entrants may change primary spring rates:**
      i. The As-delivered number of springs per wheel must be respected.
9.16.4. Dampers
   a. **Entrants may change the damper internal build:**
      i. Inerter technology is prohibited.

9.16.5. Bump Rubbers and Packers
   a. **Unrestricted.**

9.16.6. Anti-Roll Bar
   a. **Each Constructor must declare a common anti-roll bar adjustment mechanism available to Entrants as part of the Technical Eligibility Form.**
   b. **Entrants may install the approved anti-roll bar adjustment mechanism.**

9.16.7. Third Elements
   a. **Entrants may change third element spring rates:**
      i. The As-delivered number of springs must be respected.

9.17. Wheels & Tires

9.17.1. General

9.17.2. Wheels

9.17.3. Wheel Attachment
   a. **Entrants may lengthen wheel lugs to facilitate wheel changes:**
      i. The lug type is unrestricted, i.e. bolt vs. stud.
      ii. The lug/nut assembly must not protrude beyond the outer plane of the wheel.

9.17.4. Tires
   a. The approved tire supplier for this Class is Continental Tire.

9.18. Electronics

9.18.1. General

9.18.2. Data Logger
   a. IMSA reserves the right to download and/or view all logged data at any time.

9.18.3. Telemetry
   a. **Entrants may utilize one-way telemetry systems for data acquisition purposes.**

9.18.4. Wiring Loom

9.18.5. Sensors

9.18.6. Radio
   a. **Entrants may install one (1) primary, and one (1) secondary, two-way voice communication radio with car-to-pit communication capability:**
      i. Radio(s) must comply with Series Sporting Regulations.
      ii. Secondary radio must not transmit or receive signals while primary radio is functional.

9.18.7. Rear View Camera

9.18.8. Auxiliary Power Sources

9.19. DPI

9.19.1. The following regulations are specific to the Daytona Prototype international formula.
   a. Where in conflict with the above, these DPI regulations take precedence.
9.19.2. **CHASSIS CONFIGURATION**

a. The fully homologated LM P2 chassis and running gear (suspension, brakes, dampers, gearbox, axles, etc.) must be used unmodified from the homologated configuration unless specifically authorized otherwise within these regulations. The modification, substitution or change in any way of homologated components is not permitted. What is not specifically permitted in writing in these regulations is prohibited. The complete 2017 LM P2 regulations are considered a required part of these regulations as APPENDIX A to the IMSA DPI regulations and as the complete regulations for LM P2. Each DPI variant specification must be submitted in advance using an IMSA approval document which must list and illustrate every component that is different from the homologated LM P2 version of the same chassis.

i. [FIA 2017 Technical Regulations for LM P2 Prototype](#)

b. Brakes - For both the DPI and LM P2 cars the homologated brake caliper must be used. The DPI manufacturer may specify an alternate brand of disc which must be of identical diameter and thickness as the homologated LM P2 item. This becomes the single approved disc for each example of a manufacturer branded DPI car.

c. Dampers - For both the DPI and LM P2 car the dampers must be the same model and brand as the FIA homologated items. Each DPI brand OE Manufacturer, in conjunction, with the constructor, may homologate one specific alternate brand and model of damper for the DPI branded car for use in IMSA. Once homologated this option is the only permitted brand of damper allowed on the specific OE Manufacturer branded car. The alternative homologated IMSA DPI damper must:

i. Be homologated by the Constructor, who would be responsible for ensuring damper installations are within compliance (damper displacement, loads).

ii. have all damper parts listed in the IMSA DPI variance homologation document.

iii. Install in the homologated LM P2 chassis with no modifications of any kind to the rockers, mounts and/or damper periphery, other than the replacement of the of the mounting bushes which may be a different type in order to accommodate a possible difference in damper ball joints.

iv. be in full compliance with the ACO/FIA LM P2 regulation including the following:

   (i) only one damper per wheel

   (ii) must be of conventional technology; Cambridge, 1-dampers, inerters, g-sensing, metallic or compressible fluids, electronically controlled or cross-connected dampers are prohibited.

   (iii) not be adjustable from inside the cockpit.

v. Any system, other than the suspension parts and whatever function they may have, whether activated by the driver or not, whose purpose is to modify the ground clearance is forbidden.

d. Gearbox - For DPI and LM P2 in IMSA Competition the Manufacturer may homologate three final drive ratios. Change gear ratios are free.

e. ARBs - Driver adjustable front and rear anti-roll bars are permitted for DPI and LM P2 cars participating in IMSA events. The adjustment mechanism may only consist of mechanically operated levers acting on “blade” type adjusters or connector links moving on the length of the anti-roll bar “leg” or “arm”. When used, anti-roll bars must be connected to the suspension by a solid link. Links may be adjustable in length but must be a constant fixed length during all on-track operation. The use of heim joints will be permitted.

f. Fuel Capacity - Fuel capacity carried on board all cars is limited to 75 liters. IMSA may adjust specific fuel capacity in DPI as required.

9.19.3. **BASIC CAR DIMENSIONS**

a. Overall length - 4750 mm maximum.

b. Overall width - 1900 mm maximum, 1800 mm minimum.

c. Maximum front overhang from front axle centerline to front of car – 1000 mm.

d. Minimum length from the forward face of the leg template to front of roll-over structure - 1540 mm.

e. Length of rear roll-over structure - 300 mm.

f. Maximum length of engine space - 640 mm (shorter engine applications must use a longer bell housing).

g. Minimum length of bell housing - 250 mm.

h. Minimum length from rear face of bell housing to rear differential centerline - 288 +/- 1 mm.

i. Minimum rear overhang from rear axle centerline to rear of car – 750 mm.

j. Minimum length of engine location from front of roll-over structure to front face of gearbox – 1190 +/- 1 mm.

k. Minimum engine crankshaft height - 106 mm.
9.19.4. WEIGHT
a. Minimum Weight = 930 kg.
b. IMSA may add ballast to the engine area within the mandated 640 mm engine space length (on the bell housing, engine itself or chassis components) in order to compensate for different engine weights.

9.19.5. ELECTRONICS
a. All cars will be required to run an IMSA spec scrutineering data logger ordered directly from the supplier which must be fully functional in every official on-track session at every IMSA sanctioned event. Engines must be fitted with an IMSA specified sensor kit in the homologated sensor locations as part of the test process and at all times in competition (per the Technical Regulations). Manufacturers must submit sensor locations for IMSA approval prior to testing. IMSA specified sensors must be on an isolated engine loom that is directly connected to the scrutineering logger. Additional engine parameters will be required over CAN bus using an IMSA specified CAN protocol.
b. All cars must mount two functional X2 transponders in the standard homologated location.
c. All cars must mount and have operational the IMSA approved and supplied leader light system on each side of the car.

9.19.6. ELIGIBILITY
a. DPI cars are specifically homologated in a specific configuration through an approved constructor and an OE Manufacturer partnership as an LM P2 based car using a styled OE body and a matching OE engine. No modifications or substitutions may be made to the original homologated car. Anything not expressly permitted in these DPI specific regulations is not permitted.

9.19.7. ENGINE
a. An alternative OE manufacturer branded engine is permitted in one of the four permitted constructor’s chassis (the cars) in 2017 only in conjunction with OE manufacturer branded and stylized bodywork per the DPI Manual for constructors and OE Manufacturers and these IMSA DPI regulations. This car/bodywork combination is for IMSA sanctioned competition exclusively.
b. Engines may be 2016 IMSA Prototype or FIA GT3 Homologated derived engines up to 6.2 liters in displacement.
c. Engines must be fitted to the chassis as a semi-stressed unit.
d. All engine types must use the approved fuel (“Official Fuel”). The only approved fuel for the Prototype class is IMSA E20C.
e. All engines must maintain the FIA or IMSA mechanical homologation specifications unless specific requirements are added to balance the performance (rpm, boost limits, air restrictors, alternative plumbing for installation, alternative components, etc.).
f. All cars will be required to run an IMSA spec scrutineering data logger ordered directly from the supplier which must be fully functional in every official on-track session at every IMSA sanctioned event. Engines must be fitted with an IMSA specified sensor kit in the homologated sensor locations as part of the test process and at all times in competition (per the Technical Regulations). Manufacturers must submit sensor locations for IMSA approval prior to testing. IMSA specified sensors must be on an isolated engine loom that is directly connected to the scrutineering logger. Additional engine parameters will be required over CAN bus using an IMSA specified CAN protocol.
g. Engine exhaust outlets may be as homologated in LM P2 out the side of the car or may be approved by IMSA to be upward through the deck lid in the area between the rear fender arches and the engine cover.
h. Once IMSA homologation of an engine is completed no modifications/substitutions of any kind are permitted.

9.19.8. BRANDING
a. Engine and bodywork branding and name must be the same.
b. The Manufacturer may name or brand their car and engine as they wish. The car/engine will be referred to in all official IMSA communication by the name of the OE Manufacturer brand.
c. The engine must have located on it, in a visible place, the name of the OE brand.

9.19.9. BODYWORK
a. DPI will require the 2017 LMP2 new wing-mirror sizes and position regulations as per Art: 17.4 (FIA LMP2). Mirrors may be incorporated into the bodywork so long as they comply with all other visibility requirements.
9.19.10. **WHEELS AND TIRES**

a. An OE Manufacturer may exclusively contract through their car constructor an alternative design of wheel for the purposes of styling in conjunction with the stylized DPI bodywork. The specifications of the alternate design of wheel must be equal to the original homologated wheel and may only be supplied by the constructor.

b. All cars must use the CONTINENTAL TIRE spec tire as delivered and serviced by the supplier at the race track with no modifications or alterations of any kind.

**SERIES REQUIRED ELECTRONICS**

9.20. **Series Scrutineering Data System**

9.20.1. Cars must be equipped with the IMSA Scrutineering Data System at all Events.

a. The manual for the Scrutineering Data System for the Class is the Bosch Scrutineering Systems Manual (BSSM), available on the IMSA Competitor site:

   i. Bosch Scrutineering Systems Manual version 1.0.2

b. Scrutineering system components must be purchased from, or supplied by, the approved sources listed in the BSSM.

9.20.2. The system consists of a combination of the following as specified by IMSA:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>F02U.V0U.249-01</td>
<td>Bosch DDU9</td>
</tr>
<tr>
<td>F02U.V0U.252-01</td>
<td>Bosch PBX90 PowerBox</td>
</tr>
<tr>
<td>F02U.B00.435-01</td>
<td>Bosch MM5.10 5-axis Inertial Measurement Unit</td>
</tr>
<tr>
<td>F02U.V0U.251-01</td>
<td>Bosch LT4 Sport Lambda Sensor Controller</td>
</tr>
<tr>
<td>F02U.V0U.203-01</td>
<td>GPS Unit</td>
</tr>
<tr>
<td>F02U.V0U.197-01</td>
<td>1 Bar Pressure Sensor</td>
</tr>
<tr>
<td>F02U.V0U.205-01</td>
<td>3.5 Bar Pressure Sensor</td>
</tr>
<tr>
<td>F02U.V0U.356-01</td>
<td>Temperature Sensor</td>
</tr>
<tr>
<td>F02U.V0U.264-01</td>
<td>Pitot Tube</td>
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<tr>
<td>F02U.V0U.342-01</td>
<td>USB Stick</td>
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<tr>
<td>F02U.002.996-01</td>
<td>USB Data Storage Device Port</td>
</tr>
<tr>
<td>AS112-35SM</td>
<td>MSA Diagnostic/Communication Port</td>
</tr>
<tr>
<td>0258.988.001</td>
<td>LSU 4.9 Lambda Sensor</td>
</tr>
<tr>
<td>Provided by IMSA</td>
<td>Leader Light System</td>
</tr>
<tr>
<td>Provided by IMSA</td>
<td>X2 Transponder</td>
</tr>
<tr>
<td>Provided by IMSA</td>
<td>Delphi Yellow Light System</td>
</tr>
<tr>
<td>Bosch Approved Supplier</td>
<td>Wiring Loom Hughes</td>
</tr>
</tbody>
</table>

a. The scrutineering system and all its components are:

   i. Standalone and intended for IMSA use.
   ii. Not shared with any other component.

b. All components of the Scrutineering System must remain powered during on-track sessions, and pit stops.

c. Entrants must submit a Sensor Declaration Form, per the BSSM, to an IMSA Technical Systems official:

   i. Prior to participation in the Series
   ii. Whenever a scrutineering sensor is replaced, or moved to a new location.
9.20.3. Scrutineering system components and sensors must be installed in the IMSA approved locations for the Car Model.
   a. All sensors must be installed per the IMSA-approved Sensor Declaration Form for each Car Model.
   b. Removable USB and MSA diagnostic/communication ports for data collection must be mounted:
      i. Clearly visible with locations marked.
      ii. Nearest the rearward side of the passenger door opening.
      iii. At an equivalent height to the lower edge of the passenger door window.
   c. Wiring loom must be:
      i. Built by a Bosch Motorsport approved dealer identified in the BSSM.
      ii. Independent of any other system.
      iii. Removable.
      iv. Meet or exceed standards identified in the BSSM.
      v. Verified, and serialized annually, per the Loom Certification outlined in the BSSM.
      vi. Available for additional testing when requested by IMSA.

9.20.4. CAN channels must be provided using a communication protocol respecting the BSSM.
   a. Entrants must provide CAN channels from the ECU, chassis logger, or equivalent device per the CAN specification detailed in the BSSM.
   b. CAN communication to the IMSA Scrutineering Logger must be transmitted directly from the device of origin, and not repeated through a 3rd party device.
      i. Example: Engine RPM must be transmitted directly from the ECU to the IMSA Scrutineering Logger, and not through the chassis logger.
   c. Scrutineering sensors take precedence over CAN provided values from the ECU or chassis logger.
   d. Scrutineering sensor outputs are provided to the Entrant over a Public CAN bus.

9.20.5. Series Scrutineering Data System inspection and data collection requirements are:
   a. Entrants must present all series mandated data collection media to the IMSA Technical Inspection trailer within thirty (30) minutes of the completion of each session.
   b. Series Scrutineering Data Logger must be installed and tested prior to Technical Inspection.
   c. Any repair to the looms must be approved by Bosch Motorsport and re-certification through Bosch Motorsport may be required.

9.20.6. Scrutineering system primary component units must have an IMSA Scrutineering Seal.
   a. Each device ordered through Bosch Motorsport NA using the order form found in the Scrutineering System Manual will be delivered with the seal in place.

9.21. Safety Light System

9.21.1. Cars must be equipped with the Delphi Yellow Light Kit to indicate active flag status.
9.21.2. The Safety Light system must be installed and functioning during on-track activity.
   a. Antenna Installation: The supplied antenna must be mounted:
      i. On the Car roof
      ii. Away from other antennae
      iii. Following the diagram below (a ground plane is not required):
9.21.3. An activating receiver is available from IMSA during Safety Checks at each Event and remains the property of IMSA.
   a. Entrants must surrender the receiver when required by IMSA.
   b. A lost or damaged receiver is subject to a replacement fee referenced in the IMSA Accessories form.

9.22. Driver ID System

9.22.1. Cars must be equipped with a Driver ID system to identify the active Driver piloting the Car.

9.22.2. Driver ID plugs must be installed and connected per the BSSM.

9.22.3. Transponder and plugs must be tested and operate to the satisfaction of the Timing and Scoring Officials.

9.23. X2 Transponder System

9.23.1. Cars must be equipped with the X2 Transponder System Kit to transmit scrutineering data from the car and serve as a backup to the primary Driver ID Transponder.
   a. Kit contains the following component(s):
      i. Transponder.
      ii. Isolation Mounts.
   b. Entrant must supply the following additional item(s):
      i. X2 Transponder Mounting Bracket (available for purchase as listed in the IMSA Accessories Order Form).
      ii. M4 Socket Head Cap Screw and Washer.

9.23.2. X2 transponder is provided by IMSA during Safety Checks at each Event, and:
   i. Remains the property of IMSA
   ii. Entrants must surrender the transponder when required by IMSA
   iii. Entrants is responsible for replacing a lost or damaged X2 transponder, per the IMSA Accessories Order Form.

9.23.3. Transponder system must be installed and functioning during Events.
   a. Transponder must be wired directly to the scrutineering system wiring loom per the BSSM.
   b. Transponder(s) must be tested and operate to the satisfaction of the Timing and Scoring Officials.
   c. Signal path between the transponder and track surface must be unobstructed by any conductive materials; including, but not limited to, suspension members, chassis materials, ballast, and/or electronics or wiring
   d. Outside interference must not exceed those levels commonly used in the automotive industry, as described in 95/54/EEG.
e. Transponder must be mounted using the mounting bracket:
   i. In a horizontal orientation
   ii. At a minimum of 50 mm above the track surface (measured at speed)
   iii. At a minimum of 50 mm away from cables or electronics
   iv. With appropriate thermal protection in an area where the temperature cannot exceed 50 ºC

9.24. Leader Light System


9.24.2. Leader light system must be installed and functioning during Events.
   a. Leader lights must be connected to the Scrutineering System loom per BSSM.

   b. Antenna must be affixed on the inside of the windshield, proximal to the top.
      i. It may be mounted behind the windshield banner so long as the banner is of a non-metallic material.
9.25. Back-lit Panel

9.25.1. Cars must be equipped with white light-emitting side number panels for Races taking place partly by night.
   a. Colored background must be cut out in the number shapes so they are illuminated during the night.

9.26. Pro-Am Light

9.26.1. Cars must be equipped with a Pro-Am light per the BSSM.

9.27. In-Car Camera

9.27.1. Cars may be required to carry In-Car-Cameras (ICC).
   a. Entrants must cooperate with the official broadcaster in the installation of the camera, including the provision of power for the equipment.
      i. May require a battery pack.
   b. Closed-cockpit Cars must mount an actual ICC, or the ICC replacement dummy unit, on their roof, and must:
      i. Be mounted opposite side of centerline of the Car from the Driver
      ii. 12.5” rearward of the trailing edge of the windshield
      iii. 4.5” off the centerline of the roof
      iv. Or as approved by IMSA
   c. Closed-cockpit Cars must mount on their roof an actual ICC or the ICC replacement dummy unit and must:
      i. Be mounted opposite side of centerline of the Car from the Driver
      ii. 12.5” rearward of the trailing edge of the windshield
      iii. 4.5” off the centerline of the roof
      iv. Or as approved by IMSA
   d. Closed-cockpit Cars must mount on their roof an actual ICC or the ICC replacement dummy unit and must:
      i. Be mounted opposite side of centerline of the Car from the Driver
      ii. 12.5” rearward of the trailing edge of the windshield
      iii. 4.5” off the centerline of the roof
      iv. Or as approved by IMSA
   e. Cars equipped with ICC must display the Car number in the ICC’s home position field of vision.
   f. ICC must not be removed or disabled by the Entrant for any Session.
   g. Closed-cockpit Cars must mount on their roof an actual ICC or the ICC replacement dummy unit and must:
      i. Be mounted opposite side of centerline of the Car from the Driver
      ii. 12.5” rearward of the trailing edge of the windshield
      iii. 4.5” off the centerline of the roof
      iv. Or as approved by IMSA

ARTICLE 10. REFUELING SYSTEM

10.1. Fuel Transfer

10.1.1. Fuel may be transferred from the autonomous supply tank to the Car using the equipment and methods defined in this Article.
   a. Approved equipment as defined herein must be:
      i. Unmodified.
      ii. Installed and operational.
   b. Approved method:
      i. Gravity.
10.2. Pit Tank

10.2.1. Construction of the Autonomous Supply Tank must:
   a. Comply with FIA Appendix J Drawing n° 252-7 with the exception of the top plate shape and dimensions.
   b. Have a simple cylindrical internal shape.
   c. Not have any additional internal parts that could improve flow.
   d. Have a tolerance on bottom flatness of less than 3 mm inside the tank.
   e. Have the flow restrictor top face at the level of the internal surface of the bottom of the supply tank.

10.2.2. Pit tanks are assigned a serial number by IMSA Technical Officials.
   a. IMSA Technical Officials will apply a non-removable official technical inspection serial number to pit tanks.

10.2.3. Refueling tank height is measured from the top surface of the vessel, not including vent, cover plate or fasteners, to the track surface where the refueling takes place.

10.2.4. Maximum refueling tank heights are:
   i. 2.0 meters for E10
   ii. 2.1 meters for E20C
   iii. 2.5 meters for approved Cars employing an offside refueling system

10.3. Peripheral Connections

10.3.1. Tanks must be equipped with the IMSA-specified peripheral connections between the tank outlet and the refueling hose.
   a. Parts must be purchased from RPXpress:

      | Part Number | Part                | Description                         |
      |-------------|---------------------|-------------------------------------|
      | BSR-FR FN40 | Restrictor Housing  | Bottom Tank 12-bolt housing         |
      | ATL-TF 147  | 12-Bolt Gasket      |                                     |
      | BSR-FR 1981 | Bottom 80 deg. Elbow| Female Camlock x 2” Male            |
      | BSR-FR R003 | Deadman Valve       | Stainless Deadman Valve             |
      | BSR-P5K56  | Adapter             | Adapter 2” Male to 1 ½“ Camlock     |
      | Also available: |                      |                                     |
      | BSR-FR-RXX | Individual Restrictors| XX indicates restrictor diameter in mm|

   b. FIA nut ring, as-supplied with original tank, must be used to secure the restrictor housing to the bottom of the supply tank.
   c. A 0.125 inch hole must be drilled in two adjacent bolts connecting restrictor housing and FIA nut ring.

10.3.2. Deadman valve and bottom 80 deg. elbow assembly must be securely braced to remain attached to the tank in the event of an incident.
   a. Mechanisms preventing normal operation of the deadman valve are prohibited.
   b. A 0.125 inch hole must be drilled in the two female camlock levers on the bottom 80 deg. elbow assembly 0.5 inches below pin in the locations indicated in yellow on the diagram below:

   ![Diagram of Deadman Valve and Elbow Assembly]

10.3.3. Hose Adapter:
   a. As per Technical Bulletin.
10.3.4. During refueling the air vent outlet must be connected using an appropriate coupling to the tank.

10.3.5. A sight glass may be installed to the outside of the supply tank, and must be equipped with isolating valves mounted as close as possible to the tank.

10.4. Refueling Hose

10.4.1. Refueling hose must have one end equipped with a self-sealing connector to fit the autonomous supply tank outlet.

10.4.2. Refueling hose maximum inside diameter must be less than 1.5 inches.

10.4.3. Refueling hose minimum length must be greater than 3.5 meters.
   a. Minimum length is measured from the most distant plane of the dry break/fuel probe to the most distant plane of the cutoff/deadman valve.
   b. Cars employing an approved offside refueling system, must have a refueling hose with a minimum length of six (6) meters, connectors included.

10.5. Trolley

10.5.1. The tank must be attached, through a tower, to a trolley meeting the following requirements:
   a. All tower components must be assembled without any degree of freedom in relation to the trolley.

10.5.2. The base of the trolley must:
   a. Have a surface area greater than two (2) square meters.
   b. Be installed with four (4) self-braking casters.
   c. Be ballasted with a weight exceeding that of the tank when filled with fuel.

10.5.3. A system for weighing the fuel may be applied by:
   a. Placing a weighing plate underneath tank.
   b. Ensuring the characteristics set out above are respected.

10.6. Boom

10.6.1. Entrants may attach a member (boom) to the trolley.
   a. Boom must be independent of the tank and the tower.
      i. Boom member must be permitted a degree of freedom in relation to the trolley (rotation following a vertical axis).
   b. Boom may support:
      i. Hose for a Car utilizing an approved offset vent or fuel filler.
      ii. Lighting for the illumination of the pit stop.
      iii. Download cable.

10.6.2. Boom must be identified with the Car number fixed to its outboard end, that must be:
   a. Visible from either direction
   b. A minimum of seven (7) inches high with a 1.25-inch stroke
10.6.3. Boom must respect the following dimensions:
   a. Must not exceed four (4) meters in length
   b. Must permit free passage of a height of two (2) meters over its entire length including hoses and/or accessories.

10.7. Refueling Restrictor

10.7.1. During refueling, all fuel entering the Car must pass through the refueling restrictor.

10.7.2. IMSA may adjust the refueling rig restrictor diameter and refueling rig height via Balance of Performance Tables and associated Technical Bulletins.

10.7.3. Refueling Restrictors are sealed by IMSA Technical Officials.
   a. Entrants must receive written approval from IMSA to remove seals following inspection, and seals must be replaced by IMSA Technical Officials prior to on-track activity.

10.8. Level Sensor System

10.8.1. Autonomous fuel supply tanks must be equipped with an IMSA Level Sensor Kit and wiring loom.

10.8.2. The level sensor kit and wiring loom are available for purchase from IMSA, and are listed on the IMSA Accessories Order Form.
   a. Level sensor kits include:
      i. Sensor Package
      ii. Gasket
      iii. Nut Plate
      iv. All other hardware required to install the sensor in the tank
   b. Replacement parts are listed on the IMSA Accessories Order Form.

10.8.3. Sensor package consists of the following sensors integrated into a single housing:
   a. Capacitive fluid level sensor
   b. Fuel temperature sensor
   c. Vent pressure sensor

10.8.4. Sensors packages are serialized, and assigned to a Car and Pit Tank.
   a. Sensors packages are calibrated to the assigned Pit Tank
      i. Sensor package must remain exclusive to the assigned Car and Pit Tank.
   b. Sensor packages are sealed by IMSA Technical Officials.
      i. Entrants must receive approval from IMSA to remove seals following inspection, and seals must be replaced by IMSA Technical Officials prior to on-track activity.

10.8.5. Wiring loom connects the sensor package to a dedicated port on the IMSA pit-lane network box.
   a. Wiring loom must be IMSA certified.

10.8.6. Entrant must ensure the level sensor system is functional.
   a. At the beginning of the Event, the Entrant must connect the loom to a specific pit-lane network box designated by IMSA.
   b. At the conclusion of the Event, the Entrant must remove the loom.

10.8.7. Sensor packages must be installed in the location and orientation as indicated in the following diagrams.
   a. Drilling templates and other dimensioned drawings that will assist in the modification of the tanks to accommodate the sensor installation are also included.
SENSOR ORIENTATION – Electrical connector must face Pit Wall

Top of tank

Tank

Fill plate

Vent

Sensor mounts on tank centerline

Ø 13.00

Ø 8.00

Ø 5.00

Ø 4.00

Ø 5.25

MTF-001

EC-012-03

A4

N/A

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A4

N/A

Specifications

Mounting Boss Drilling Template