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## IMSA TECHNICAL BULLETIN IWSC #17-20

To: All IMSA WeatherTech SportsCar Championship Competitors  
From: IMSA Competition  
Date: 9 March 2017  
Re: 2017 WeatherTech Championship Technical Regulations Updates

IMSA has published updates to the 2017 WeatherTech Championship Technical Regulations for the P, GTLM and GTD classes:

### P

- Redline: [2017 IMSA Technical Regulations P 20170309 Redline.pdf](#)
- Blackline: [2017 IMSA Technical Regulations P 20170309 Blackline.pdf](#)

### GTLM

- Redline: [2017 IMSA Technical Regulations GTLM 20170309 Redline.pdf](#)
- Blackline: [2017 IMSA Technical Regulations GTLM 20170309 Blackline.pdf](#)

### GTD

- Redline: [2017 IMSA Technical Regulations GTD 20170309 Redline.pdf](#)
- Blackline: [2017 IMSA Technical Regulations GTD 20170309 Blackline.pdf](#)

### Summary of Changes

## Prototype Technical Regulations Changes

### 7.1. Driver Safety Harness System

- 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. [\[20170309\]](#) 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. [\[20170309\]](#) Expiration
    - i. FIA Homologated: Immediately following December 31<sup>st</sup> of the year printed on the label.
    - ii. SFI Certified (punched/cut label): ~~Immediately following December 31<sup>st</sup> two (2) years after the year of Manufacture.~~ 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 1<sup>st</sup> of the earliest year printed on the label + two years
    - iii. SFI Certified (non-punched label): On June 30<sup>th</sup> or December 31<sup>st</sup>: of the year identified as the date for expiration

- 7.1.5. [20170309] 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. [20170309] Seat

- 7.2.1. As homologated.
- ~~7.2.2. Cars must be equipped with a seat with a valid label demonstrating compliance with one of the following standards:~~
- ~~a. FIA Standard 8862-2009: Advanced Racing Seat
    - ~~i. FIA Technical List #40: Advanced Racing Seats Homologated according to the FIA Standard 8862-2009~~~~
  - ~~b. FIA Standard 8855-1999: FIA Standard for Competition Seats
    - ~~i. FIA Technical List #12: Seats Homologated on the Basis of the FIA Standard 8855-1999~~~~
- ~~7.2.3. Seat manufacturer written approval is required for seat modification.~~
- ~~7.2.4. Seats must be replaced at the request of IMSA, or prior to December 31<sup>st</sup> of the expiration year printed on the label.~~

## 7.5. Protective Shielding

- 7.5.2. [20170309] 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 ~~approved by~~ presented to and approved by IMSA at the time of technical inspection.

## 7.6. [20170309] 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. ~~Master electrical switches must be spark proof, and when activated must:~~
- ~~i. De-energize all electrical circuits.~~
  - ~~ii. Stop the engine.~~
- ~~7.6.4. Cars must be equipped with interior and exterior master electrical switches.~~
- ~~7.6.5. Master electrical switches must be spark proof, and when activated must:~~
- ~~i. De-energize all electrical circuits.~~
  - ~~ii. Stop the engine.~~

~~7.6.6.—The interior master switch must be installed within the cockpit, and located so the driver may activate the switch when seated in a normal position with safety belts fastened and steering wheel in place.~~

~~7.6.7.—The exterior master switch must be installed proximal to the fire suppression control at (or near) the base of the left side A-Pillar.~~

~~a. Exterior master switch 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.~~

## 7.7. Fire Suppression System

### 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.

~~b. [20170309] The interior fire activation switch, located in cockpit, must be marked with an appropriately sized decal of a red "E" inside a white circle.~~

## 9.10. Boost Management

### 9.10.3 [20170309] Boost Control Strategy Inputs

Parameter	Description	TB*
Maximum Boost Pressure Ratio (Max Pboost Ratio)	Curve of Maximum Boost Pressure Ratio as a function of Engine RPM	TB
Actual Boost Pressure (Pboost)	Intake manifold pressure measured in accordance with these Technical Regulations In case of two separate intake manifolds, the average of the two manifold pressure sensors will be referenced	
Filtered Boost Pressure (Pboost Filtered)	Exponentially weighted moving average of Actual Boost Pressure. Defined as: $(P_{\text{boost Filtered}})_n = (P_{\text{boost}})_n * (C_{e_{\text{Fit}}}) + (P_{\text{boost Filtered}})_{n-1} * (1 - C_{e_{\text{Fit}}})$	
Filter Coefficient (CeFit)	Coefficient that defines weighting for Filtered Boost Pressure	TB
Barometric Pressure Reference	Absolute barometric pressure reading will be recorded by IMSA's calibrated barometer at noon on setup day of a race event The official reading will be promptly released in a Technical Bulletin and is in effect for the remainder of the event	TB
Actual RPM	Unfiltered RPM value measured in accordance with these Technical Regulations	
Actual Throttle	Engine throttle position measured in accordance with these Technical Regulations In case of two engine throttles, the maximum value of the two throttle positions is referenced	
RPM Threshold	An RPM threshold which is used as a condition	TB
Resultant Boost	$(P_{\text{boost Filtered}}) - (\text{Barometric Pressure Reference}) * (\text{Max Pboost Ratio})$	
Integral	Area under the Resultant Boost as a function of time curve in units of pressure-time	
Integral Time Step	Time step of the Integral	TB
Integral Decay	A value in units of pressure-time subtracted from the Integral when the integral is positive	TB
Low Overboost Level	A lower overboost limit in units of pressure time	TB
Lower Overboost Counter	A counter which is incremented when the Low Overboost Level is met or exceeded Low Overboost Counter limits must never be exceeded	TB
Low Overboost Counter Reset Condition	A time-based condition that will reset the Low Overboost Counter	TB
High Overboost Level	A maximum overboost limit in units of pressure-time that can never be met or exceeded	

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

## 10.1 Series Scrutineering Data System

- 10.1.1. 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:
  - b. [20170309] Bosch Scrutineering System Manual version ~~4.0.4~~ 1.0.1

## GTLM Technical Regulations Changes

### 7.1. Driver Safety Harness System

- 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. [20170309] 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. [20170309] Expiration
    - i. FIA Homologated: Immediately following December 31<sup>st</sup> of the year printed on the label
    - ii. SFI Certified (punched/cut label): ~~Immediately following December 31<sup>st</sup> two (2) years after the year of—~~ ~~Manufacture.~~ 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 1<sup>st</sup> of the earliest year printed on the label + two years
    - iii. SFI Certified (non-punched label): On June 30<sup>th</sup> or December 31<sup>st</sup>: of the year identified as the date for expiration
- 7.1.5. [20170309] 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. [20170309] Seat

- 7.2.1. As homologated.
- ~~7.2.2. Cars must be equipped with a seat with a valid label demonstrating compliance with one of the following standards:~~
  - ~~a. FIA Standard 8862-2009: Advanced Racing Seat~~
    - ~~i. FIA Technical List #40: Advanced Racing Seats Homologated according to the FIA Standard 8862-2009~~
  - ~~b. FIA Standard 8855-1999: FIA Standard for Competition Seats~~
    - ~~i. FIA Technical List #12: Seats Homologated on the Basis of the FIA Standard 8855-1999~~
- ~~7.2.3. Seat manufacturer written approval is required for seat modification.~~

~~7.2.4. — Seats must be replaced at the request of IMSA, or prior to December 31<sup>st</sup> of the expiration year printed on the label.~~

### 7.3. Driver Containment Nets

7.3.3. [20170309] Containment nets must be replaced prior to the expiration date:

- a. FIA Homologated: Immediately following December 31<sup>st</sup> of the year printed on the label.
- b. SFI Certified (punched/cut label): ~~Immediately following December 31<sup>st</sup> two (2) years after the year of Manufacture.~~ 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 1<sup>st</sup> of the earliest year printed on the label + two year.
- c. SFI Certified (non-punched label): On June 30<sup>th</sup> or December 31<sup>st</sup>: of the year identified as the date for expiration.

### 7.5. Protective Shielding

7.5.2. [20170309] 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 ~~approved by~~ presented to and approved by IMSA at the time of technical inspection.

### 7.6. [20170309] 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.

~~7.6.4. — Cars must be equipped with interior and exterior master electrical switches.~~

~~7.6.5. — Master electrical switches must be spark proof, and when activated must:~~

- ~~i. — De-energize all electrical circuits.~~
- ~~ii. — Stop the engine.~~

~~7.6.6. — The interior master switch must be installed within the cockpit, and located so the driver may activate the switch when seated in a normal position with safety belts fastened and steering wheel in place.~~

~~7.6.7. — The exterior master switch must be installed proximal to the fire suppression control at (or near) the base of the left side A-Pillar.~~

~~a. Exterior master switch 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.~~

## 7.7. Fire Suppression System

### 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.
- b. [20170309] The interior fire activation switch, located in cockpit, must be marked with an appropriately sized decal of a red "E" inside a white circle.

## 9.7. Bodywork

### 9.7.4. [20170309] Headlights

- a. Cars Must have yellow headlight lenses.

## 9.10. Boost Management

### 9.10.3 [20170309] Boost Control Strategy Inputs

Parameter	Description	TB*
Maximum Boost Pressure Ratio (Max Pboost Ratio)	Curve of Maximum Boost Pressure Ratio as a function of Engine RPM	TB
Actual Boost Pressure (Pboost)	Intake manifold pressure measured in accordance with these Technical Regulations In case of two separate intake manifolds, the average of the two manifold pressure sensors will be referenced	
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\* All parameters indicated with TB are defined via Technical Bulletin.

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- 10.1.1. 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:
  - b. [20170309] Bosch Scrutineering System Manual version ~~1.3.4~~ 1.3.5

## GTD Technical Regulations Changes

### 7.1. Driver Safety Harness System

- 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. [20170309] Elastic retention straps are prohibited **on shoulder belts.**
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~~7.2.3. — Seat manufacturer written approval is required for seat modification.~~

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## 7.7. Fire Suppression System

### 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.

b. [20170309] The interior fire activation switch, located in cockpit, must be marked with an appropriately sized decal of a red "E" inside a white circle.

## 9.6 Driver Interface

### 9.6.6. Driver Cooling Systems

#### **a. Entrants may install a maximum of two (2) Driver Cooling Systems, i.e. Cool Suits.**

- i. Evaporative-loss Freon cool suits are prohibited.
- b. Installations must be approved by IMSA and 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 containers must be securely mounted
  - iv. The use of hook and loop fasteners (Velcro) is prohibited

#### **c. [20170309] Entrants may install Driver Ventilation Ducts**

- i. A NACA duct may 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
- vii. All installations must be approved by IMSA in writing and added to the Technical eligibility credential on file

## 9.7. Bodywork

### 9.7.4. [20170309] Headlights

#### **a. Cars Must have yellow headlight lenses.**

## 9.10. Boost Management

### 9.10.3 [20170309] Boost Control Strategy Inputs

Parameter	Description	TB*
Maximum Boost Pressure Ratio (Max Pboost Ratio)	Curve of Maximum Boost Pressure Ratio as a function of Engine RPM	TB
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Lower Overboost Counter	A counter which is incremented when the Low Overboost Level is met or exceeded Low Overboost Counter limits must never be exceeded	TB
Low Overboost Counter Reset Condition	A time-based condition that will reset the Low Overboost Counter	TB
High Overboost Level	A maximum overboost limit in units of pressure-time that can never be met or exceeded	

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

## 9.12. Cooling System

### 9.12.3. [20170309] Inlet Blockers

a. Entrants may apply opaque adhesive tape to block off portions of the cooling system inlet openings. 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

## 10.1 Series Scrutineering Data System

10.1.1. 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:

b. [20170309] Bosch Scrutineering System Manual version ~~1.3.4~~ 1.3.5