



EUROPEAN LE MANS SERIES COMMITTEE



TO: Teams Manufacturers

CATEGORY: LMP2 LMP2 Pro/Am LMP3 LMGT3

DECISION N°: ELMS_2024_D03_LMP2_LMP2_Pro_Am_Technical_updates_and_information_ **AMENDED**

DATE: 27/06/2024

FROM: The European Le Mans Series Committee

SUBJECT: Car specification / refuelling equivalence / cooling of the car / reference surface tolerance / rain lights / electronics information / bodywork deflection test

APPLICABLE REGULATION

- 2024 European Le Mans Series Sporting Regulations
- 2024 Technical Regulations for LMP2 Prototype Homologated in 2017

DECISION

CAR SPECIFICATIONS

In accordance with article 6.3.2 of the ELMS Sporting Regulations, and taking into account the specificities of ELMS, the following will apply for LMP2 and LMP2 Pro/Am categories:

- Refer to "GIBSON – LMP2 Engine Manual"
- Maximum onboard fuel volume to 75 liters
- Minimum car weight to 930 kg.

REFUELLING EQUIVALENCE

Each team must test and find the restrictor diameter (with a maximum of 38.1 mm) for the combination car/pit system to achieve, for a complete refuelling volume** minimum 40 seconds.

***complete refuelling volume: fuel tank volume as run by the competitor in race conditions, that should also fulfil the maximum onboard fuel volume.*

This should be achieved with the mandatory 2024 ELMS fuel specification at ambient conditions at each Competition.

If the refueling time is found faster than the time above, it will be reported to the Stewards (penalties to be clearly set before the start of the season).

For the purpose of the test of refueling time, the conditions will be:

- The car's fuel tank will be emptied with fuel bowser, leaving the rest of the fuel system charged.
- The fuel filling will be done with the autonomous tank completely full and the refuelling system as used by the competitor in race conditions.
- The car will be resting on its tyres on the ground.
- The fuel tank will be considered full as soon as fuel comes out of the vent line.

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Competitors are responsible of requesting the autonomous tank dead-man valve stop (if adjustable) to be sealed by ACO technical delegates no later than four hours before the start of the race.

On the complete opening range of the handle (from close stop to open stop), the valve inner opening may only reach its maximum diameter at the open stop. Control will be made with a calibrated ball that can never pass through the valve except if the full diameter is reached at open stop.

COOLING OF THE CAR

Brake cooling:

To adjust brake cooling, it will be allowed to blank partially or totally the brake cooling duct(s) with adhesive tape and/or flat rigid plates, if affixed directly on the louvers or wire netting.

Other cooling:

To adjust cooling, it will be allowed to blank partially or totally before and/or after the radiator(s) with adhesive tape and/or flat rigid plates.

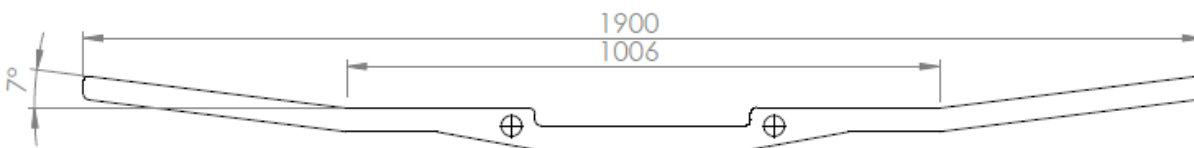
This blanking should be done directly in near proximity with the radiator(s) or on the wire netting if it is located at least 10mm behind the bodywork opening.

It will not be allowed to modify the bodywork.

REFERENCE SURFACE TOLERANCE

Regarding tolerances applicable to the reference surface and their use during Scrutineering, the following will be applied:

- Longitudinally: a maximum of 3mm gap between a straight bar lying longitudinally on the reference surface and the reference surface.
- Laterally: a maximum of 3mm gap between the following template lying laterally on the reference surface / lateral parts and the reference surface.



The tolerances for the lateral parts are already stipulated on drawing #1

RAIN LIGHTS

Two brightness modes must be implemented for the rain light:

- Level High - full brightness mode
- Level Low - reduced brightness

These two modes can be automatically linked to the high beam command, but the driver must be able to select if requested to (eg: heavy fog added to rain).

To implement the two modes, the technical requirements are:

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Level High – full brightness

- Keep the 50% duty cycle (125ms ON – 125ms OFF).

Level Low – reduced brightness

- Option 1 (preferred) is to use the inhibit input on the rain light.

Apply a PWM at 300Hz frequency on the inhibit input and use a duty cycle of 70% for high mode and 30% for low mode.

- Option 2 (alternative) is to modulate the duty cycle of the 4Hz flashing.

Apply a duty cycle of 20% (50ms ON – 200ms OFF). This modification replaces the fix duty cycle of 50% in art 10.3.2.c of the Technical Regulations.

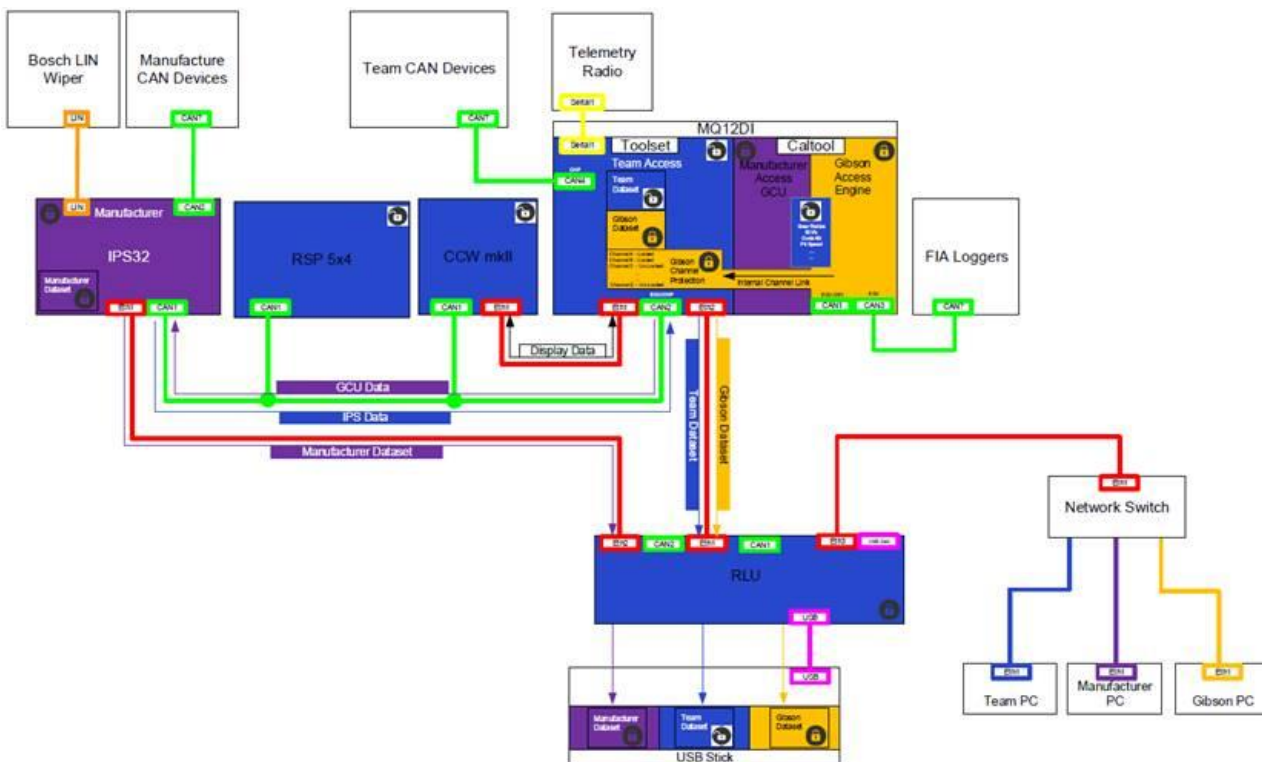
No sticker should be applied on the side of the light for an optimal heat transfer.

ELECTRONIC INFORMATION

Softwares:

As a reminder, please find below the responsibility dispatch for the electronics parts (*see drawing below*):

- All softwares of the common electronic package (MQ12Di, IPS32, CCW mk2, RSP20, RLU) will be checked at each race.
- Only the homologated software versions will be allowed. It is the responsibility of the team to ensure they use the good softwares and that these softwares are compliant.



CalTool dataset naming convention

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Reference: **VXXXXGaaaYYbbb_ZZcc.cds** (The entire dataset name should always have 19 characters excluding extension (.cds))

- **XXXX** – Version of the ECU code e.g. 12-33 □ 1233
- **aaa** – Gibson version number 00 – 999. Should also be written into parameter “Dataset Version A” in CalTool and then can be seen in channel “Dataset Version A” in the logged data.
- **YY** – Manufacturer’s abbreviation. Da = Dallara, On = Onroak, Or = Oreca, Ri = Riley
- **bbb** – Manufacturer’s version number 000-999. Should also be written into parameter “Dataset Version B” in CalTool and then can be seen in channel “Dataset Version B” in the logged data.
- **ZZ** – Car number 00-99.
- **cc** – Team’s version number 00-99.
- **ZZcc** - Should also be written into parameter “Dataset Version C” in CalTool and then can be seen in channel “Dataset Version C” in the logged data.

Examples:

- **“V1289WEC_G301Ri011_4301.cds”**
- **“V1289WEC_G301Or030_3101.cds”**

Traction Control Parameters:

The following parameters must be setup as:

GOODYEAR

- Front wheel diameter A: 677
- Front wheel diameter B: 677

- Rear left wheel diameter A: 699
- Rear left wheel diameter B: 699

- Rear right wheel diameter A: 699
- Rear right wheel diameter B: 699

BODYWORK DEFLECTION TEST

For scrutineering reasons, they must always have at the track the tools required to achieve all the deflection tests.

These tools should all have been previously tested-fitted to be perfectly operational:

DEFLECTION TEST	CONDITIONS	Article	TOOLS REQUIRED
Splitter	8000N // 15mm	3.5.4. b	8 x M5 eye + ref.frame (see #a)
Splitter flap trailing edge	100N // 5mm	-	Adapter (15mm)
Front skid block	2500N // 5mm	3.5.6. d	-
Rear skid block	5000N // 5mm	3.5.6. e	-
Bodywork gurney	100N // 5mm	3.6.2. c	Adapter (15mm)
Rear mainplane	200N // 3mm	3.6.3. a 6	Adapter (50mm)
Rear wing + trans.plates	2400N + 2x1000N // 15mm	3.6.3. c3	6 x Adaptor(200mm) + trans.plate adaptor + ref.frame
Rear flap	200N // 5mm(x) 10mm (z)	3.6.3. e	Adapter (15mm)
Rear flap gurney	200N // 4mm	3.6.3. f	Adapter (30mm)

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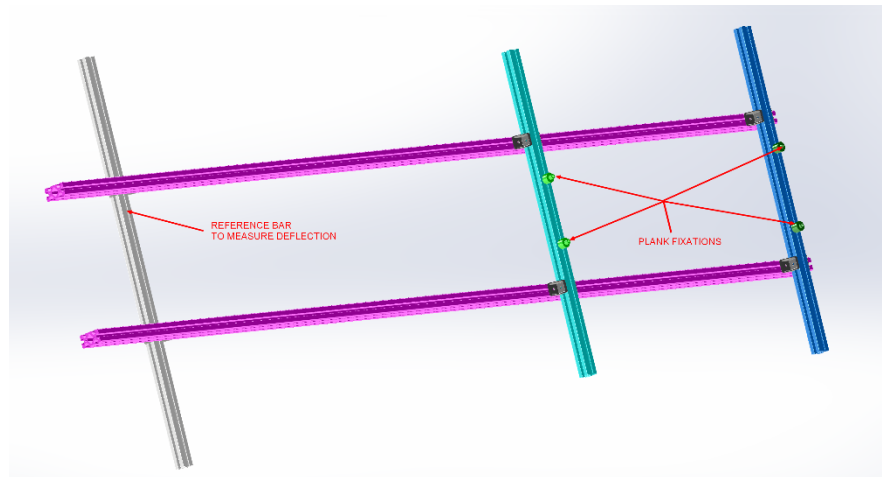
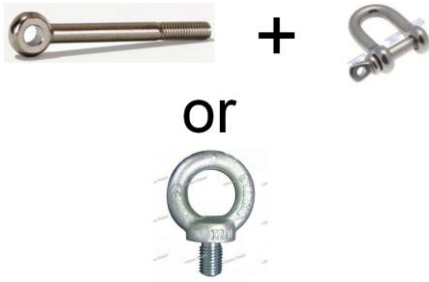
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Tools for splitter deflection test:



LMP2 FCY MONITORING

It is mandatory to use the following parameters in the LMP2 ECU Dataset:

Vehicle Speed Limit Speed Threshold (SZ/FCY Speed)	77.5 kph
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PERIOD OF VALIDITY/APPLICATION OF THE DECISION

This decision comes into effect:

- with immediate application
- from:

And is applicable:

- until further notice
- for the mentioned event(s) only