

24H SERIES

The only worldwide endurance racing championship for real gentlemen

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Balance of Performance Publication

Date: 21.09.2020

COPPA FLORIO 12H Sicily 2020

To Sporting & Technical Regulations 24H SERIES powered by Hankook 2020
(version 11 July 2019 with KNAF permit nr. 0314.19.292)

Dear Teams and Drivers

In this BOP-publication you will find:

- Balance of Performance (BOP)
- SP-BOP-CAT (Theoretical best lap times).

This BOP and other figures are in force with immediate application and replaces the figures of appendix 11 of the Sporting & Technical regulations and eventually previously published BOP-publications.

Notes on boost control:

Control of Pboost strategy as per document attached (Appendix: Control of Pboost strategy is updated), for all cars of which Pboost max is specified, unless explicit otherwise specified.

Approved:
Creventic

Creventic B.V.
P.O. Box 40
6590 AA GENNEP (NL)
Tel. +31 (0) 485 471166
Email: info@creventic.com

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Class TC: Touring Cars

Brand & Type	Cylinder capacity	Turbo	Minimum Weight	Max Refuelling amount	Remarks
BMW M240i Racing Cup	3000 cc	Twin Turbo	1440 kg	120L @ Green 120L @ Code60	According to BMW M240i Cup regulations 2020 Car height minimum 100mm Note: Fuel tank capacity is 85L. Max fuel sticker: 120/120 just for practical reasons, so max refuelling will be <ul style="list-style-type: none">• 85L@Green• 85L@Code60
BMW E46 M3	3200 cc	No	1200 kg	120 L	

Please note: Art. 4.1 of Appendix 1 of the Sporting & Technical regulations
Your (TC) car not listed here? Please make an individual request to info@creventic.com

Class TCX: Special Touring Cars

Brand & Type	Cylinder capacity	Turbo	Minimum Weight	Max Refuelling amount	Remarks
Ligier JS2 R	3700 cc	No	1050 kg	110 L	
Ginetta G55	3700 cc	No	1100 kg	110 L	
Porsche Cayman GT4 Club Sport	3800 cc	No	1325 kg	110 L	
BMW M240i Racing Cup	3000 cc	Twin Turbo	1440 kg	120L @ Green 120L @ Code60	Technical Regulations according Class TCX Car ride height is free
BMW M240i	3000 cc	Twin Turbo	1330 kg	120 L	
BMW M3 F80	3000 cc	Turbo	1300 kg	120 L	
BMW 330D E46	3000 cc	Diesel	1200 kg	120 L	
Opel Astra OPC Cup	2000 cc	Turbo	1200 kg	120 L	
SEAT LEON CUP RACER DSG	2000 cc	Turbo	1200 kg	120 L	

Please note: Art. 3.5 of Appendix 4 of the Sporting & Technical regulations
Your (TCX) car not listed here? Please make an individual request to info@creventic.com

Class TCR BOP and ECU-software version

Brand & Type	Minimum Weight	Max Refuel amount	Ride height	TCR Technical form	Power level (%)	SW Name ECU-software version	SW Identification (Checksum or ID)	Max Pboost* & Rev limiter	Correct (mbar/C)
ALFA ROMEO GIULIETTA RF TCR	1245 kg	100 L	70mm	22	TCR ECU-software MUST be according TCR Technical Bulletin no. 12 / 2020-09-10				
AUDI RS3 LMS SEQ	1245 kg	100 L	60mm	10					
AUDI RS3 LMS DSG	1250 kg	100 L	70mm	9					
CUPRA TCR SEQ	1245 kg	100 L	60mm	35					
CUPRA TCR DSG	1240 kg	100 L	70mm	43					
CUPRA Leon Competicion TCR	1270 kg	100 L	70mm	169					
HONDA CIVIC FK7 TCR SEQ (2018)	1270 kg	100L	70mm	33					
HONDA CIVIC FK2 TCR SEQ (2017)	1250 kg	100L	70mm	11					
HYUNDAI i30 N TCR	1270 kg	100 L	90mm	27					
HYUNDAI Veloster N TCR	1275 kg	100L	90mm	97					
KIA CEE'D TCR	1245 kg	100 L	70mm	24					
Lynk&Co 03 TCR	1280 kg	100 L	80mm	101					
MG6 XPOWER TCR	1250 kg	100 L	80mm	139					
OPEL ASTRA TCR	1255 kg	100 L	70mm	5					
PEUGEOT 308 TCR	1245 kg	100 L	70mm	37					
RENAULT MEGANE RS TCR	1245 kg	100 L	60mm	121					
SUBARU STi TCR	1245 kg	100 L	70mm	7					
VOLKSWAGEN GOLF GTI TCR SEQ	1245 kg	100 L	60mm	14					
VOLKSWAGEN GOLF GTI TCR DSG	1240 kg	100 L	70mm	12					
SEAT LCR TCR V3 DSG	1240 kg	100 L	70mm	15		102.5	5F6906259L	CVN	See CUPRA DSG
Your (TCR) car not listed here? Please make an individual request to info@creventic.com									

*Boost pressure will be monitored according to: TCR Turbocharger Boost Monitoring Method, dated: 2020-08-11

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Class GT4: GT4 Grand Touring Cars

Brand & Type	Cylinder capacity	Minimum Weight	Max Refuelling amount	Restrictor	Remarks *
ASTON MARTIN V8 VANTAGE GT4	4700cc/8cyl	1350 kg	100 L	NA	ECU BOP 2016
ASTON MARTIN VANTAGE AMR GT4	4000cc/8cyl Turbo	1450 kg	105 L	NA	Max Pboost bar 1670mbar
Audi R8 LMS GT4 (Evo 2019)	5200cc/10cyl	1470 kg	110 L	2x42mm	Restrictor thickness 5mm. Acc. Audi R8 GT4 restrictor drawing ECU BOP 2018
Audi R8 LMS GT4 (Evo 2020)	5200cc/10cyl	1490 kg	110 L	2x42mm	Restrictor thickness 5mm. Acc. Audi R8 GT4 restrictor drawing ECU BOP 2018
BMW M3 GT4		1350 kg	110 L	NA	ECU BOP 2015
BMW M4 GT4	3000cc/6cyl Turbo	1460 kg	110 L	2017 USB Powerstick "Silver" (Max Engine power: 440Hp)	
CHEVROLET CAMARO GT4		1450 kg	100 L	60mm	FIA-restrictor design ECU BOP 2018
GINETTA G55 GT4 Evo 2015	3700cc/6cyl	1080 kg	120 L	NA	ECU BOP 2015
GINETTA G55 GT4 Evo 2017/2018	3700cc/6cyl	1100 kg	95 L	68mm	Restrictor: G55-E0398 FIA-restrictor design
KTM X-BOW GT4	2000cc/4cyl Turbo	1130 kg	70 L	Max Pboost 2,0 bar Max rpm 7000 rpm (at all gears)	
LOTUS EVORA GT4		Tba	Tba	Tba	
MCLAREN 570S GT4	3800cc/8cyl Turbo	1450 kg	110 L	2019 MAP ECU BOP 2020	
MERCEDES AMG GT4	4000cc/8cyl Turbo	1460 kg	100 L	Max Pboost 1,63 bar (Power Level 3) (Max Engine power: 295kW)	
NISSAN 370Z GT4	3800cc/6cyl	1250 kg	100 L	Tba	ECU BOP 2016/2017
PORSCHE 997 CUP GT4	3800cc/6cyl	1250 kg	95 L	NA	ECU BOP 2014
PORSCHE CAYMAN GT4 CLUPSPORT MR	3800cc/6cyl	1272 kg	100 L	ECU 2018 BOP	
PORSCHE 718 CAYMAN GT4 CS MR	3800cc/6cyl	1315 kg	100 L	ECU MAP BOP 2020	
SIN R1 GT4	6200cc/8cyl	1250 kg	100 L	NA	Max 43,5% Throttle opening and 6000 rpm MAX

Your (GT) car not listed here? Please make an individual request to info@creventic.com

* Specified Max Pboost pressure are absolute pressure at ambient of 1010mbar.

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Class 991: Porsche 991 Cup classes (Generation I and II) Including BOP- table class 991-PRO & 991-AM

Type	BOP**	Minimum Weight	Max Refuelling amount	Remarks
Cup 991-I (3800cc)	BOP-AM	1220 kg	120L@Green 120L@Code60	Models 2013 .. 2016 NO Restrictor-Blende *Note: Fuel tank capacity is 100L. Max fuel sticker: 120/120 just for practical reasons, so max refuelling will be <ul style="list-style-type: none"> • 100L@Green • 100L@Code60
Cup 991-I (3800cc)	BOP-PRO	1220 kg	120L	Models 2013 .. 2016 NO Restrictor-Blende *Note: Fuel tank capacity is 100L. Max fuel sticker: 120L just for practical reasons, so max refuelling will be <ul style="list-style-type: none"> • 100L @green • 60L@Code60
Cup 991-II (4000cc)	BOP-AM	1230 kg	100L	Models 2017 .. 2019 NO Restrictor-Blende
Cup 991-II (4000cc)	BOP-PRO	1230 kg	90L	Models 2017 .. 2019 *Restrictor-Blende: 65 mm

* Restrictor Blende must be according "Manthey TZN" drawing, see 24H Series regulations, appendix 9

** Class and corresponding BOP is determined by Team composition (Drivers categories)

Please note: In case Class 991-AM and 991-PRO is combined to one Class 991, the BOP, 991-AM-BOP or 991-PRO-BOP is still applicable determined by Team composition (Drivers categories)

Class GT3-BOP-TABLE

BOP- table class GT3-PRO & GT3-AM

Class*	BOP	Balance of Performance**	
		Weight	Refuelling
GT3-PRO	BOP-Pro	+ 30 kg	-/- 5 L
GT3-AM	BOP-Neutral	+/- 0 kg	+/- 0 L
	BOP-Advantage	-/- 50 kg	120 L

* Class and corresponding BOP is determined by Team composition (Drivers categories)

Please note: In case Class GT3-AM and GT3-PRO is combined to one Class GT3:

the BOP, GT3-AM-BOP or GT3-PRO-BOP is still applicable determined by Team composition (Drivers categories)

** BOP adjusted (+/-) ballast weight and refuelling amount, referred to initial value

specified in Appendix 11 (See BOP-publication of the specific event)

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GT cars (Mainly GT cars, also American GT's are eligible)

Class GT3-Am & Class GT3-Pro

Brand & Type	Minimum Weight	Max Refuel amount	Restrictor	Remarks *
ASTON MARTIN V12 VANTAGE GT3	1280 kg	110 L	2x41,5mm	FIA-restrictor design
AUDI R8 LMS Ultra	1245 kg	110 L	2x47,2mm	up to and incl. 2014
AUDI R8 LMS GT3 (GT3-038) Evo 2018	1260 kg	100 L	2x39,0mm	Or AM-advantage only: 1310kg/2x40mm FIA-restrictor design
AUDI R8 LMS GT3 (GT3-038) Evo 2019	1270 kg	100 L	2x40,0mm	Or AM-advantage only: 1320kg/2x42mm FIA-restrictor design
BENTLEY CONTINENTAL GT3	1295 kg	110 L	N/A	Max Pboost ratio/rpm 1,86/4000 1,78/4500 1,68/5000 1,62/5500 1,56/6000 1,47//6500 1,39/7000 1,28/>7250
BMW M6 GT3	1310	105 L	N/A	Max Pboost ratio/rpm 1,78/4000 1,86/4500 1,92/5000 1,94/5500 1,89/6000 1,73/6500 1,65/7000
CHEVROLET CORVETTE C6-ZR1	1200 kg	105 L	2x32,1mm	LMGTE-2-04
FERRARI 488 GT3	1300 kg	97 L	N/A	Max Pboost ratio/rpm 1,47/4000 1,51/4500 1,56/5000 1,60/5500 1,63/6000 1,59//6500 1,54/7000 1,49/>7250
LAMBORGHINI HURACAN GT3 Evo2018	1280 kg	100 L	2x39,0mm	FIA-restrictor design
LAMBORGHINI HURACAN GT3 Evo2019	1310 kg	100 L	2x39,0mm	FIA-restrictor design
McLaren MP4-12C GT3	1255 kg	115 L	2x36,0mm	Max Pboost ratio/rpm 1,82/4000 1,80/4500 1,78/5000 1,76/5000 1,72/6000 1,65//6500 1,59/7000 1,53/>7500
MERCEDES SLS AMG GT3	1330 kg	105 L	2x38,0mm	FIA-restrictor design
MERCEDES AMG GT3 (2019)	1330 kg	105 L	2x35,0mm	Or AM-advantage only: 1380kg/2x36mm FIA-restrictor design
MERCEDES AMG GT3 (EVO2020)	1330 kg	105 L	2x35,0mm	Or AM-advantage only: Or 1380kg/2x36mm FIA-restrictor design
NISSAN GT-R Nismo GT3 2018 (GT3-048)	1300 kg	110 L	N/A	Max Pboost ratio/rpm 2,00/4000 2,00/4500 2,00/5000 1,95/5500 1,95/6000 1,95/6500 1,90/6900 1,70/7000
PORSCHE 911 GT3 R (991 I & 991 II)	1240 kg	97 L	2x41,5mm	Or AM-advantage only: Or 1290kg/2x43mm FIA-restrictor design
RADICAL SPORTSCARS RXC TURBO GT3	Tba	Tba	Tba	Max Boost Tba
RENAULT SPORT RS01 Configuration BOP GT3	1200 kg	110L	Tba	Max Pboost ratio/rpm 1,95 (at all rpm) See also appendix Renault RS01 aerodynamics
SCG 003C	1280 kg	115 L	2x35,0mm	Max Pboost ratio/rpm 1,85 (at all rpm) (acc. Technical form SP-X 010 2018 & modified air-inlet)

* Values are boost pressure ratio and need to be multiplied by the ambient pressure to get the Pboost limit. Competitors must adjust boost pressure relative to ambient pressure at each event. Pboost limits linear interpolation approach.

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Class GTX Special GT cars

Brand & Type	Cylinder capacity	Minimum Weight	Max Refuelling amount	BOP	Remarks
Lamborghini Huracán Super Trofeo	5200 cc	1300 kg	110 L	2 x 41mm	Datalogger AIM Evo 4 or Evo5 mandatory In case car will be amalgamated to class GT3. Initial BOP will be: 1275kg / 110 L / 2x 42mm
Lotus Exige V6 Cup R	3500 cc Turbo	1000 kg	120 L @ Green 120L @ Code60	Pboost: TBA	Datalogger AIM Evo 4 or Evo5 mandatory
MARC II V8	5200 cc	1150 kg	120 L	NA	NA
Mercedes AMG GTX	4000 cc Turbo	1350 kg	120 L	Max Pboost 2.4 bar	Datalogger AIM Evo 4 or Evo5 mandatory
Vortex Light V8	6200 cc	950 kg	120 L	NA	NA
BMW M4 Silhouette	3400 cc	1050 kg	120 L	NA	NA
Wolf GB08 Tornado	1600 cc	570 kg	100 L	NA	NA
KTM GTX Concept	2500 cc Turbo	1050 kg	90 L	2,0bar (independent of Pamb), max rpm 7000	Datalogger AIM Evo 4 or Evo5 mandatory

Please note: Art. 3.3 of Appendix 7 of the Sporting & Technical regulations

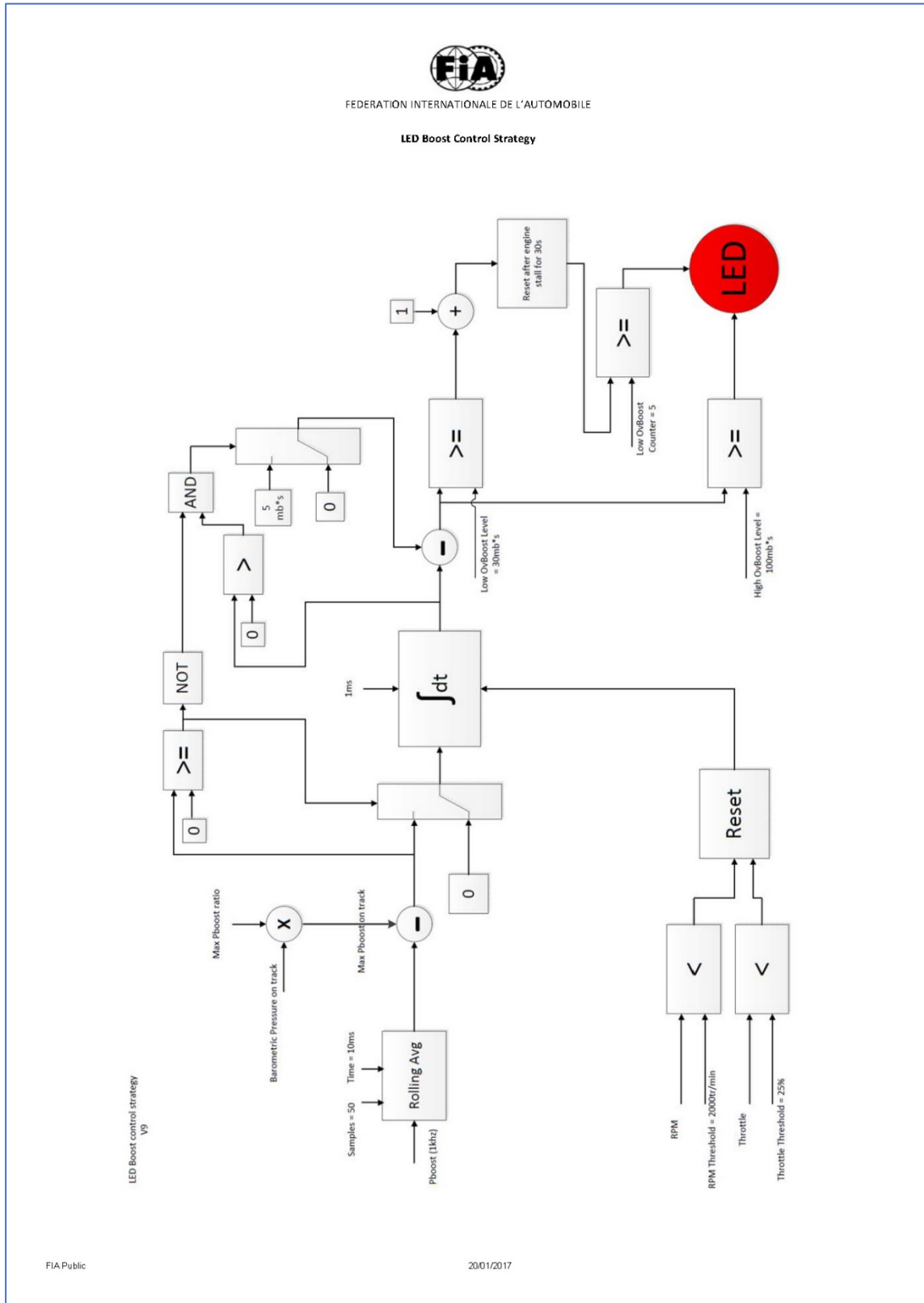
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Appendix: Control of Pboost strategy



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Appendix: Renault RS01 aerodynamics



PHOTO N° 01

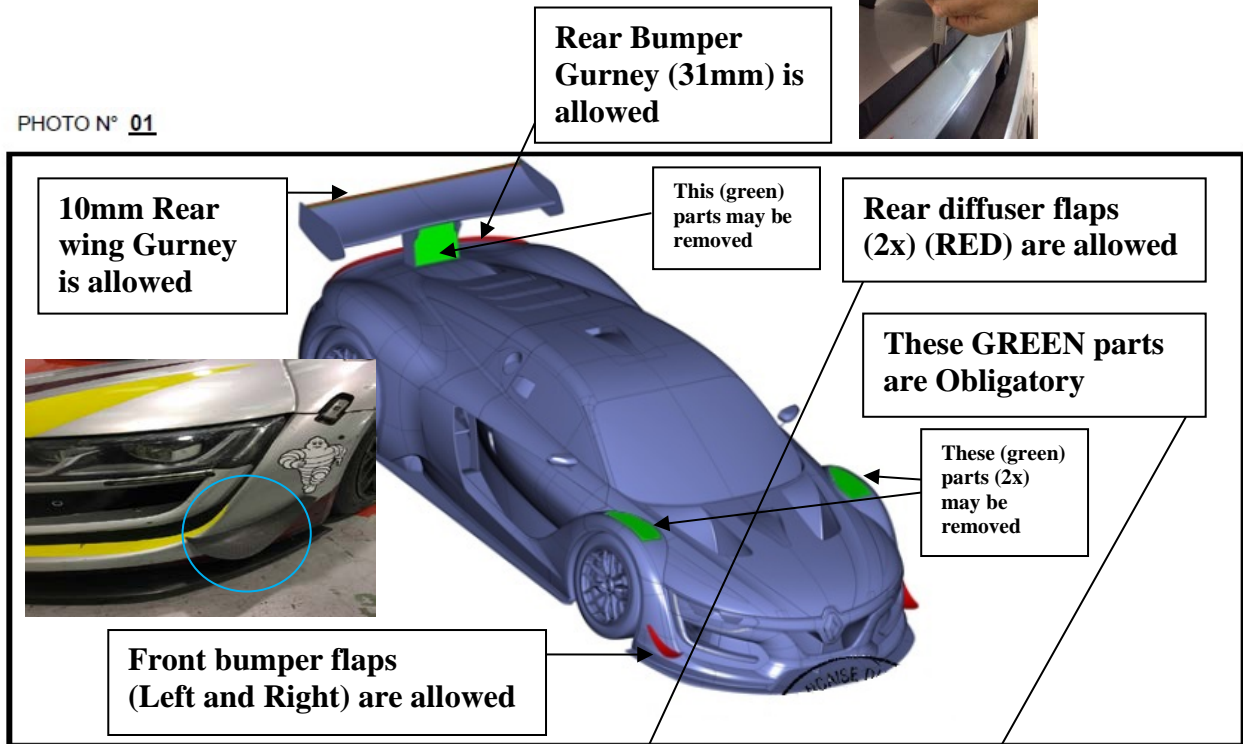


PHOTO N° 02

