

# 2021 FORMULA ONE SPORTING REGULATIONS

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Art	CONTENTS	Page(s)	Art	CONTENTS	Page(s)
1	REGULATIONS	2	28	PIT ENTRY, PIT LANE AND PIT EXIT	23
2	GENERAL UNDERTAKING	2	29	WEIGHING	24
3	GENERAL CONDITIONS	2	30	REFUELLING	25
4	LICENCES	2	31	PRACTICE SESSIONS	25
5	CHAMPIONSHIP EVENTS	3	32	FREE PRACTICE	26
6	WORLD CHAMPIONSHIP	3	33	QUALIFYING PRACTICE	26
7	DEAD HEAT	4	34	PRE-RACE PARC FERMÉ	27
8	COMPETITORS APPLICATIONS	4	35	THE GRID	29
9	CAR LIVERY	5	36	STARTING PROCEDURE	30
10	TRACK RUNNING TIME OUTSIDE AN EVENT, WIND TUNNEL TESTING AND POWER UNIT BENCH TESTING	6	37	THE RACE	34
11	PROMOTER	9	38	INCIDENTS DURING THE RACE	34
12	ORGANISATION OF AN EVENT	9	39	SAFETY CAR	35
13	INSURANCE	9	40	VIRTUAL SAFETY CAR	37
14	FIA DELEGATES	9	41	SUSPENDING A RACE	38
15	OFFICIALS	10	42	RESUMING A RACE	39
16	INSTRUCTIONS AND COMMUNICATIONS TO COMPETITORS	10	43	FINISH	40
17	PROTESTS AND APPEALS	11	44	POST RACE PARC FERMÉ	41
18	SANCTIONS	11	45	CLASSIFICATION	41
19	PRESS CONFERENCES, MEDIA OPPORTUNITIES, DRIVERS PARADE AND NATIONAL ANTHEM	11	46	PODIUM CEREMONY AND POST EVENT PRESS CONFERENCE	41
20	MEETINGS	12		APPENDIX 1: INFORMATION REQUIRED BY THE FIA 90 DAYS BEFORE AN EVENT	42
21	GENERAL CAR AND PERSONNEL REQUIREMENTS	12		APPENDIX 2: ENTRY FORM	44
22	GENERAL SAFETY	15		APPENDIX 3: PODIUM CEREMONY	48
23	SPARE CARS, ENGINES AND GEARBOXES	16		APPENDIX 4: POWER UNIT HOMOLOGATION	51
24	SUPPLY OF TYRES IN THE CHAMPIONSHIP AND TYRE LIMITATION DURING THE EVENT	18		APPENDIX 5: REGULATIONS OF THE DRIVER CONTRACT RECOGNITION BOARD	54
25	SCRUTINEERING	21		APPENDIX 6: VOID	55
26	CHANGES OF DRIVER	22		APPENDIX 7: ENTRY FEES	56
27	DRIVING	23		APPENDIX 8: AERODYNAMIC TESTING RESTRICTIONS	57
				APPENDIX 9: SUPPLY OF POWER UNITS	67
				APPENDIX 9A: PU SUPPLY PERIMETER	73
				APPENDIX 10: PU TEST BENCH RESTRICTIONS	75

**Note:** All previously approved changes displayed in black text and approved deletions removed.  
**Pink text:** changes for 2021 approved by the WMSC on 19/06/2020, 18/08/2020 and 30/10/2020

The FIA will organise the FIA Formula One World Championship (the Championship) which is the property of the FIA and comprises two titles of World Champion, one for drivers and one for constructors. It consists of the Formula One Grand Prix races which are included in the Formula One calendar and in respect of which the ASNs and organisers have signed organisation agreements with the FIA. All the participating parties (FIA, ASNs, organisers, competitors and circuits) undertake to apply as well as observe the rules governing the Championship and must hold FIA Super Licences which are issued to drivers, competitors, officials, organisers and circuits.

## **1) REGULATIONS**

- 1.1 The final text of these Sporting Regulations shall be the English version which will be used should any dispute arise as to their interpretation. Headings in this document are for ease of reference only and do not form part of these Sporting Regulations.
- 1.2 These Sporting Regulations apply to the **whole** calendar year referred to in the title, **and to the Championship taking place within that calendar year** (“the Championship”). Any changes made by the FIA for safety reasons may come into effect without notice or delay.

## **2) GENERAL UNDERTAKING**

- 2.1 All drivers, competitors and officials participating in the Championship undertake, on behalf of themselves, their employees, agents and suppliers, to observe all the provisions as supplemented or amended of the International Sporting Code (the Code), the Formula One Technical Regulations (the Technical Regulations) and the present Sporting Regulations together referred to as “the Regulations”.
- 2.2 The Championship and each of its Events is governed by the FIA in accordance with the Regulations. Event means any event entered into the FIA Formula One Championship Calendar for any year commencing 24 hours before P1 is scheduled to take place and ending at the time for the lodging of a protest under the terms of the Code or the time when a technical or sporting certification has been carried out under the terms of the Code, whichever is the later.
- 2.3 Any special national regulations must be submitted to the FIA with the original application for inclusion of an Event on the international calendar. Only with the approval of the FIA can such special regulations come into force for an Event.

## **3) GENERAL CONDITIONS**

- 3.1 It is the competitor's responsibility to ensure that all persons concerned by his entry observe all the requirements of the Regulations. If a competitor is unable to be present in person at the Event, he must nominate his representative in writing. The person having charge of an entered car during any part of an Event is responsible jointly and severally with the competitor for ensuring that the requirements are observed.
- 3.2 Competitors must ensure that their cars comply with the conditions of eligibility and safety throughout practice and the race.
- 3.3 The presentation of a car for initial scrutineering (see Article 25.1 below) will be deemed an implicit statement of conformity.
- 3.4 All persons concerned in any way with an entered car or present in any other capacity whatsoever in the paddock, pit lane, or track must wear an appropriate pass at all times.
- 3.5 No pass may be issued or used other than with the agreement of the FIA. A pass may be used only by the person and for the purpose for which it was issued.

## **4) LICENCES**

- 4.1 All drivers, competitors and officials participating in the Championship must hold a FIA Super Licence. Applications for Super Licences must be made annually to the FIA through the applicant's ASN.
- 4.2 With the exception of a reprimand or fine, when a penalty is applied under the International Sporting Code or Article 38.3 the stewards may impose penalty points on a driver's Super Licence. If a driver accrues 12 penalty points his licence will be suspended for the following Event, following which 12 points will be removed from the licence.

Penalty points will remain on a driver's Super Licence for a period of 12 months after which they will be respectively removed on the 12 month anniversary of their imposition.

## 5) CHAMPIONSHIP EVENTS

- 5.1 Events are reserved for Formula One cars as defined in the Technical Regulations.
- 5.2 Each Event will have the status of an international restricted competition.
- 5.3 The distance of all races, from the start signal referred to in Article 36.9 to the end-of-race signal referred to in Article 43.1, shall be equal to the least number of complete laps which exceed a distance of 305km. However, should two hours' elapse before the scheduled race distance is completed, the leader will be shown the end-of-race signal when he crosses the control line (the Line) at the end of the lap following the lap during which the two hour period ended, provided this does not result in the scheduled number of laps being exceeded. Only under the circumstances below will any exception be made to the above:
- The distance of the race in Monaco shall be equal to the least number of complete laps which exceed a distance of 260km.
  - Should the race be suspended (see Article 41) the length of the suspension will be added to this period up to a maximum total race time of four hours.
  - If the formation lap is started behind the safety car (see Article 36.14(c)) the number of race laps will be reduced by the number of laps carried out by the safety car minus one.
- 5.4 The maximum number of Events in the Championship is 22, the minimum is 8.
- 5.5 The final list of Events is published by the FIA before 1 January each year.
- 5.6 An Event which is cancelled with less than three months' written notice to the FIA will not be considered for inclusion in the following year's Championship unless the FIA judges the cancellation to have been due to force majeure.
- 5.7 An Event may be cancelled if fewer than 12 cars are available for it.

## 6) WORLD CHAMPIONSHIP

- 6.1 The Formula One World Championship driver's title will be awarded to the driver who has scored the highest number of points, taking into consideration all the results obtained during the Events which have actually taken place.
- 6.2 The title of Formula One World Champion Constructor will be awarded to the competitor which has scored the highest number of points, results from both cars (see Article 8.6) being taken into account.
- 6.3 A constructor is the person (including any corporate or unincorporated body) which designs the LTCs as defined in Article 22.3 of the 2021 Technical Regulations. The make of an engine or chassis is the name attributed to it by its constructor.

The obligation to design and use LTCs set out in Article 22.3 of the 2021 Technical Regulations shall not prevent a constructor from outsourcing the design and/or manufacture of any LTC to a third party in accordance with the provisions of Article 22.3 of the 2021 Technical Regulations.

No Competitor may use LTCs whose design (including, for the avoidance of doubt, its three-dimensional shape and the evolution history leading to it, any preliminary designs, simulations, wind tunnel tests, and analysis) is based on reverse-engineering (as defined in Article 23.3 of the Technical Regulations) of any LTC of another Competitor. However, any LTC classified as 'Listed Parts' under Appendix 6 of the 2019 or 2020 Sporting Regulations that was used by a Competitor during an Event of the 2019 Championship or during the first completed Event of the 2020 Championship will be deemed to have been designed by the Competitor for purposes of this Article irrespective of its origin, and the Competitor may therefore use this LTC, or develop it subject to the constraints set out in Article 22.3 of the 2021 Technical Regulations.

If the make of the chassis is not the same as that of the engine, the title will be awarded to the former which shall always precede the latter in the name of the car.

- 6.4 Points for both titles will be awarded at each Event according to the following scale:

1st	:	25 points
2nd	:	18 points
3rd	:	15 points
4th	:	12 points
5th	:	10 points
6th	:	8 points
7th	:	6 points
8th	:	4 points
9th	:	2 points
10th	:	1 point

In addition to the above, one point will be awarded to the driver who achieved the fastest valid lap time of the race and to the constructor whose car he was driving, provided he was in the top ten positions of the final race classification (see Article 45). No point will be awarded if the fastest valid lap time is achieved by a driver who was classified outside the top ten positions.

- 6.5** If a race is suspended under Article 41, and cannot be resumed, no points will be awarded if the leader has completed two laps or less, half points will be awarded if the leader has completed more than two laps but less than 75% of the original race distance and full points will be awarded if the leader has completed 75% or more of the original race distance.

If the formation lap is started behind the safety car (see Article 36.14(c)), the original race distance will be deemed to be the distance calculated in accordance with Article 5.3(c). However, the maximum race time of four hours (see Article 5.3(b)) will commence at the scheduled race start time.

- 6.6** The drivers finishing first, second and third in the Championship must be present at the annual FIA Prize Giving ceremony.

## **7) DEAD HEAT**

- 7.1** Prizes and points awarded for all the positions of competitors who tie, will be added together and shared equally.

- 7.2** If two or more constructors or drivers finish the season with the same number of points, the higher place in the Championship (in either case) shall be awarded to:

- a) The holder of the greatest number of first places.
- b) If the number of first places is the same, the holder of the greatest number of second places.
- c) If the number of second places is the same, the holder of the greatest number of third places and so on until a winner emerges.
- d) If this procedure fails to produce a result, the FIA will nominate the winner according to such criteria as it thinks fit.

## **8) COMPETITORS APPLICATIONS**

- 8.1** Applications to compete in the Championship may be submitted to the FIA during the period 21 October to 1 November inclusive of the year prior to the year to which the application relates on an entry form as set out in Appendix 2 hereto accompanied by an undertaking to pay the entry fee, calculated in accordance with Appendix 7, to the FIA no later than 10 December of the year prior to the year to which the application relates. Applications at other times will only be considered if a place is available and on payment of a late entry fee to be fixed by the FIA. Entry forms will be made available by the FIA who will notify the applicant of the result of the application within thirty days of its receipt.

Successful applicants are automatically entered in all Events of the Championship and will be the only competitors at Events.

- 8.2** Applications shall include:
- a) Confirmation that the applicant has read and understood the Regulations and agrees, on its own behalf and on behalf of everyone associated with its participation in the Championship, to observe them.
  - b) The name of the team (which must include the name of the chassis).
  - c) The make of the competing car.
  - d) The make of the engine.
  - e) The names of the drivers. A driver may be nominated subsequent to the application upon payment of a fee fixed by the FIA.
  - f) An undertaking by the applicant to participate in every Event with the number of cars and drivers entered.
- 8.3** A competitor may change the make of engine at any time during the Championship. All points scored with an engine of different make to that which was first entered in the Championship may count (and will be aggregated) for the assessment of a commercial benefit, however such points will not count towards (nor be aggregated for) the FIA Formula One Constructors Championship. A major car manufacturer may not directly or indirectly supply engines for more than three teams of two cars each without the consent of the FIA. For the purposes of this Article 8.3, a major car manufacturer is a company whose shares are quoted on a recognised stock exchange or the subsidiary of such a company.
- 8.4** With the exception of those whose cars have scored points in the Championship of the previous year, applicants must supply information about the size of their company, their financial position and their ability to meet their prescribed obligations.
- 8.5** All applications will be studied by the FIA and accepted or rejected at its absolute discretion. The FIA will publish the list of cars and drivers accepted together with their race numbers on or before 15 December of the year prior to the year to which the applications relate, having first notified unsuccessful applicants as set out in Article 8.1. Out-of-time applications will be considered separately.
- 8.6** No more than 26 cars will be admitted to the Championship, two being entered by each competitor.
- 8.7** If in the opinion of the F1 Commission a competitor fails to operate his team in a manner compatible with the standards of the Championship or in any way brings the Championship into disrepute, the FIA may exclude such competitor from the Championship forthwith.

## **9) CAR LIVERY**

- 9.1** The provisions of the Code relating to national colours shall not apply to the Championship.
- Both cars entered by a competitor must be presented in substantially the same livery at every Event, any significant change to this livery during a Championship season may only be made with the agreement of the Formula One Commission.
- In order that the cars of each team may be easily distinguished from one another whilst they are on the track, the on-board cameras located above the principal roll structure of the first car must remain as it is supplied to the team and the second car must be predominantly fluorescent yellow.
- 9.2** Each car will carry the race number of its driver as published by the FIA at the beginning of the season or the race number that has been allocated to his replacement under Article 26.1(b)(iii). This number must be clearly visible from the front of the car and on the driver's crash helmet.
- Prior to the start of the 2014 World Championship season race numbers will be permanently allocated to drivers by ballot, such numbers must then be used by that driver during every Formula One World Championship Event he takes part in throughout his career in Formula 1. A driver's career in Formula 1 will be deemed to have ended if he does not participate in an Event for two entire consecutive Championship seasons.

Any new drivers, either at the start of or during a season, will also be allocated a permanent number in the same way.

The only exception to this allocation process will be for the reigning World Champion who will have the option to use the number one. The number that was previously allocated to him will be reserved for him in subsequent seasons if he does not retain the title of World Champion.

- 9.3 The name or the emblem of the make of the car must appear on the front of the nose of the car and in either case be at least 25mm in its largest dimension. The name of the driver must appear on the external bodywork and be clearly legible.

## **10) TRACK RUNNING TIME OUTSIDE AN EVENT, WIND TUNNEL TESTING AND POWER UNIT BENCH TESTING**

- 10.1 Testing of Current Cars (TCC) shall be defined as any track running time, not part of an Event, in which a competitor entered in the Championship participates (or in which a third party participates on behalf of a competitor or a supplier of a homologated power unit), using cars which were designed and built in order to comply with the Formula One Technical Regulations of the Championship, or those of the preceding year's or the following year's Championships. No competitor may sell or make available any such car of the current year to any third party without the prior authorisation of the FIA.

Each competitor will also be permitted to carry out two Promotional Events (PE) with the above cars which will not be considered TCC. A PE shall be defined as an event in which a competitor participates purely for marketing or promotional purposes. No such test may exceed 100km in length and only tyres manufactured specifically for this purpose by the appointed supplier may be used.

At the sole discretion of the FIA, and with the full knowledge of all competitors, each competitor will also be permitted to carry out:

- a) Two Demonstration Events (DE) with the above cars which will not be considered TCC. A DE shall be defined as an event in which a competitor participates purely for demonstration purposes.
- b) Other demonstration events organised by the Commercial Rights Holder.

No such demonstrations may take place on track configurations currently approved for use by Formula 1 cars nor exceed 15km in length, and only tyres manufactured specifically for this purpose by the appointed supplier may be used.

In order that an FIA observer may be appointed, competitors must inform the FIA of any planned TCC, PE or DE at least 72 hours before it is due to commence, the following information should be provided:

- i) The precise specification of the car(s) to be used.
  - ii) The name(s) of the driver(s) if known.
  - iii) The nature of the test.
  - iv) The date(s) and intended duration of the test.
  - v) The purpose of the test.
- 10.2 Testing of Previous Cars (TPC) shall be defined as any track running time, not part of an Event, in which a competitor entered in the Championship participates (or in which a third party participates on behalf of a competitor or a supplier of a homologated power unit), using cars which were designed and built in order to comply with the Formula One Technical Regulations of any of the three calendar years falling immediately prior to the calendar year preceding the Championship. No competitor may sell or make available any such car to any third party without the prior authorisation of the FIA.

TPC may only be carried out with cars built to the specification of the period and only tyres manufactured specifically for this purpose may be used.

Each competitor will also be permitted to carry out Demonstration Events (DE) with the above cars which will not be considered TPC. A DE shall be defined as an event in which a competitor participates purely for demonstration purposes.

No such demonstrations may exceed 50km in length and only tyres manufactured specifically for this purpose by the appointed supplier may be used. Should a competitor wish to run a DE in excess of 50km they must seek the consent of the FIA in writing prior to the event.

In order that an FIA observer may be appointed, where possible competitors must inform the FIA of any planned TPC or DE at least 72 hours before it is due to commence, the following information should be provided:

- i) The precise specification of the car(s) to be used.
- ii) The name(s) of the driver(s) if known.
- iii) The nature of the test.
- iv) The date(s) and intended duration of the test.
- v) The purpose of the test.

**10.3** Testing of Historic Cars (THC) shall be defined as any track running time, not part of an Event, in which a competitor entered in the Championship participates (or in which a third party participates on behalf of a competitor), using cars which were designed and built in order to comply with the Formula One Technical Regulations in force during the years preceding those referred to in 10.2 above.

THC may only be carried out with cars built to the specification of the period and only tyres manufactured specifically for this purpose, or tyres of the period, may be used.

**10.4** Competitors may only participate in TCC, TPC or PE using cars which:

- a) Have been subjected to, and fulfilled the requirements of the static and dynamic tests described in Articles 16, 17 and 18 of the F1 Technical Regulations of the relevant year.
- b) Comply with the requirements of Articles 13 and 14 of the F1 Technical Regulations of the relevant year (with the exception of Articles 13.1.1, 13.3.1 and 13.3.2 for the sole purpose of test sensor installations).

Any car used for TCC, TPC or PE must be fitted with the secondary side intrusion panels described in Article 15 of the F1 Technical Regulations and the Appendix to the Technical and Sporting Regulations of the relevant year.

**10.5** TCC may only take place on tracks currently approved for use by Formula 1 cars and located in Europe (unless agreed by the majority of the competitors and the FIA), may never occur whilst a Championship Event is taking place and shall be limited to:

- a) **One** test, open to all competitors, of three consecutive days' duration carried out between 1 February and ten days before the start of the first Event of the Championship. Each competitor may only use one car on each day.

During these tests, and between 09:00 and 18:00 of each day, the provisions of Article 21.4 will apply, with the following additional exceptions, when covers may be used:

- Anytime the floor of a car being used for testing is not fitted.
- During the recovery and repair of a car damaged during track running.

- b) One test of three consecutive days' duration carried out on the circuit at which the last Event of the Championship was held, such test commencing no less than 36 hours after the end of the Event. Each competitor may only use one car on each day.

Only cars that raced in the 2018, 2019, 2020 or 2021 Championships, appropriately modified, may be used for this test. In the event that a Competitor is unable to provide a car that is compatible with the tyres that will be used in the 2022 Formula 1 World Championship, they will not be allowed to participate in this test. Furthermore, with the exception of tyres, wheel rims and wheel rim covers, no car or subcomponent that is

intended to provide technical information for the 2022 Technical Regulations will be permitted.

- i. At least one day of this test must be completed by drivers who have participated in at least one race during the 2021 Formula 1 World Championship, and must be for the sole purpose of providing Competitors with the chance to test the tyre specifications to be used the following season.
  - ii. At least one day of this test must be for the sole purpose of providing Young Drivers with the opportunity to test current Formula 1 Cars. Drivers eligible for this purpose must:
    - Be in possession of an International A Licence
    - Not have competed in more than two F1 World Championship races during their career
- c) 25 car-days of testing for the sole purpose of providing the appointed tyre supplier with the chance to test improvements to the design of their tyres, carried out between 01 February 2021 and one week following the end of the last Event of the Championship, organised by the FIA in consultation with all competitors and the appointed tyre supplier.

Only cars that raced in the 2018, 2019 or 2020 Championships, appropriately modified, may be used for any such tests that get carried out before the first Event of the 2021 Championship. Furthermore, with the exception of tyres, wheel rims and wheel rim covers, no car or subcomponent that is intended to provide technical information for the 2022 Technical Regulations will be permitted.

Any such testing scheduled at a circuit hosting an Event of the Championship may only be carried out after that Event has taken place.

- d) One day, carried out between the start of a ten day period which precedes the start of the second Event and the last Event of the Championship, in case a competitor declares that one of its current race drivers is to be substituted by a driver who has not participated in an F1 World Championship race in the two previous calendar years. The following must be observed:
- i) Any such day may only be carried out by the new driver and may not take place on a circuit hosting a race in the current Championship year.
  - ii) Any such day may only take place within a period 14 days prior to the substitution and 14 days after the substitution has taken place.
  - iii) If a competitor, having declared the driver's substitution and performed the test, does not then enter an Event with the new driver, the competitor will be penalised by a reduction of one day from the pre-season TCC days available in the following year.
  - iv) Only one car may be used.

With the exception of any test being carried out at night, in which case a new test schedule lasting no more than nine hours will be arranged, running may only take place between 9:00 and 18:00.

**10.6** TPC may only take place on tracks currently holding an FIA Grade 1 or 1T licence.

**10.7** During all TCC and TPC cars must be fitted with the FIA ECU required by Article 8.2 of the FIA Formula One Technical Regulations.

**10.8** During all Formula One TCC:

- a) Red flag and end-of-session procedures must be respected.
- b) The fuel handling procedures set out in Article 30.4 must be respected.
- c) No other type of vehicle is permitted on the track.



- d) Cars being driven by drivers who do not qualify for a Super Licence must be fitted with a green main rear light which must be illuminated at all times the car is on the track.
  - e) Every reasonable effort should be made to ensure that the recommendations concerning emergency services detailed in Supplement 1 of Appendix H to the Code are followed.
- 10.9 If, after an incident during TCC and TPC, the Medical Warning Light signals that threshold forces have been exceeded the driver must present himself for examination in the circuit medical centre without delay.
- 10.10 Competitors must abide by the aerodynamic testing restrictions set out in Appendix 8.
- 10.11 PU manufacturers must abide by the Power Unit testing restrictions set out in Appendix 10.

## **11) PROMOTER**

- 11.1 An application to promote an Event must be made to the ASN of the country in which the Event is to take place, which will apply to the FIA. It must be accompanied by written evidence that the promoter has made arrangements to secure the participation of competitors, which arrangements are conditional only upon the FIA entering the Event on the Championship calendar.

## **12) ORGANISATION OF EVENTS**

- 12.1 An organiser is a body nominated by the ASN and appointed by the FIA. Upon deciding to grant an application to hold an Event, the FIA will invite the relevant ASN to organise it or to nominate an organiser. If the ASN is not in a position to do so, the FIA may itself appoint an organiser. The organiser must be a club or body acceptable to the FIA and must enter into an organisation agreement with the FIA when it applies to organise the Event.

## **13) INSURANCE**

- 13.1 The promoter of an Event must procure that all competitors, their personnel and drivers are covered by third party insurance in accordance with the FIA requirements.
- 13.2 Ninety days before the Event, the promoter must send the FIA details of the risks covered by the insurance policy which must comply with the national laws in force as well as the FIA requirements. Sight of the policy must be available to the competitors on demand.
- 13.3 Third party insurance arranged by the promoter shall be in addition and without prejudice to any personal insurance policy held by a competitor or any other participant in the Event.
- 13.4 Drivers taking part in the Event are not third parties with respect to one another.

## **14) FIA DELEGATES**

- 14.1 For each Event the FIA will nominate the following delegates:

- a) Safety delegate.
- b) Medical delegate.
- c) Technical delegate.
- d) Media delegate.

And may nominate:

- e) A representative of the President of the FIA.
- f) A Deputy Race Director.
- g) An observer.
- h) A safety car driver.

- i) A medical car driver.
- 14.2** The role of the FIA delegates is to help the officials of the Event in their duties, to see within their fields of competence that all the regulations governing the Championship are respected, to make any comments they judge necessary and to draw up any necessary reports concerning the Event.
- 14.3** The technical delegate nominated by the FIA is responsible for scrutineering. In this respect he may carry out, or have carried out by scrutineers, at his discretion, any checks to verify the compliance of the cars entered in the event, at any time until the end of the event, without prior request from the stewards or clerk of the course. The FIA technical delegate has full authority over the national scrutineers.

## **15) OFFICIALS**

- 15.1** From among holders of an FIA Super Licence the following officials will be nominated by the FIA:
- a) Three stewards one of whom will be appointed chairman.
  - b) A race director.
  - c) A permanent starter.
- 15.2** From among holders of an FIA Super Licence the following officials will be nominated by the ASN and their names sent to the FIA at the same time as the application to organise the Event:
- a) One steward from among the ASNs nationals.
  - b) The clerk of the course.
- 15.3** The clerk of the course shall work in permanent consultation with the race director. The race director shall have overriding authority in the following matters and the clerk of the course may give orders in respect of them only with his express agreement:
- a) The control of practice and the race, adherence to the timetable and, if he deems it necessary, the making of any proposal to the stewards to modify the timetable in accordance with the Code or Sporting Regulations.
  - b) The stopping of any car in accordance with the Code or Sporting Regulations.
  - c) The stopping of practice or suspension of the race in accordance with the Sporting Regulations if he deems it unsafe to continue and ensuring that the correct restart procedure is carried out.
  - d) The starting procedure.
  - e) The use of the safety car.
- 15.4** The stewards, the race director, the clerk of the course and the technical delegate must be present at the start of the Event.
- 15.5** The race director must be in radio contact with the clerk of the course and the chairman of the stewards at all times when cars are permitted to run on the track. Additionally, the clerk of the course must be in race control and in radio contact with all marshal's posts during these times.
- 15.6** The stewards may use any video or electronic means to assist them in reaching a decision. The stewards may overrule judges of fact.

## **16) INSTRUCTIONS AND COMMUNICATIONS TO COMPETITORS**

- 16.1** The stewards or race director may give instructions to competitors by means of special circulars in accordance with the Code. These circulars will be distributed to all competitors who must acknowledge receipt.
- 16.2** All classifications and results of practice and the race, as well as all decisions issued by the officials, will be published via the FIA document and messaging system.

16.3 Any decision or communication concerning a particular competitor should be given to him within twenty-five minutes of such decision, and receipt must be acknowledged.

## 17) PROTESTS AND APPEALS

17.1 Protests shall be made in accordance with the Code and accompanied by a fee of €2000.

17.2 Appeals may not be made against decision concerning the following:

- a) Penalties imposed under Articles 38.3a), b), c), d), e), f) or g), including those imposed during the last three laps or after the end of a race.
- b) Any drop of grid positions imposed under Article 23.
- c) Any penalty imposed under Article 31.4.
- d) Any decision taken by the stewards in relation to Article 35.1.
- e) Any penalty imposed under Articles 36.4 or 42.3.
- f) Any decision taken by the stewards under Article 4.2.

## 18) SANCTIONS

18.1 The stewards may inflict the penalties specifically set out in these Sporting Regulations in addition to or instead of any other penalties available to them under the Code.

18.2 Any driver who receives three reprimands in the same Championship season will, upon the imposition of the third, be given a ten grid place penalty at that Event. If the third reprimand is imposed following an Incident during a race the ten grid place penalty will be applied at the driver's next Event.

The ten grid place penalty will only be imposed if at least two of the reprimands were imposed for a driving infringement.

## 19) PRESS CONFERENCES, MEDIA OPPORTUNITIES, DRIVERS PARADE AND NATIONAL ANTHEM

19.1 Day before first practice:

The FIA Media delegate will choose a maximum of five drivers who must attend a press conference in the media centre for a period of one hour commencing 20 hours before the scheduled start of P1. However, at Events being held in North, Central or South America the press conference will commence one hour after the start of the Event.

These drivers' teams will be notified no less than 48 hours before the conference. In addition, a maximum of two team personalities may be chosen by the FIA Media delegate to attend this press conference.

19.2 First day of practice:

On the first day of practice, a minimum of three and a maximum of six drivers and/or team personalities, (other than those who attended the press conference on the previous day and subject to the consent of the team principal) will be chosen by ballot or rota by the FIA Media delegate during the Event and must make themselves available to the media for a press conference in the media centre for a period of one hour 30 minutes after the scheduled end of P1.

On a day suitable to the FIA and the Commercial Rights Holder, all drivers must be available for autograph signing. The time, place and procedure will be communicated to the teams by the FIA after agreement with the Commercial Rights Holder.

Drivers must be available at all reasonable times during an Event to talk to the media as required by the FIA Media delegate.

19.3 Second day of practice:

All drivers eliminated in Q1 or Q2 must make themselves available for media interviews immediately after the end of each session. In addition, all drivers who participated in Q3, and who are not required to take part in the post-qualifying press conference, must make themselves available for media interviews immediately after Q3.

Immediately after the qualifying practice session the first three drivers in the session will be required to make themselves available for television interviews in the unilateral room and then attend a press conference in the media centre for a maximum period of 30 minutes.

#### **19.4 Race day:**

- i) One hour and 40 minutes before the scheduled start of the formation lap all drivers must attend a drivers' parade. Competitors will be given details of the parade by the FIA Media delegate.
- ii) 16 minutes before the scheduled start of the formation lap all drivers must be present at the front of the grid for the playing of the national anthem. Competitors will be given details by the FIA Media delegate.
- iii) Any driver retiring before the end of the race must make himself available for media interviews after his return to the paddock.
- iv) All drivers who finish the race outside the top three must make themselves available immediately after the end of the race for media interviews.
- v) During the race every team must make at least one senior spokesperson available for interviews by officially accredited TV crews.

## **20) MEETINGS**

**20.1** Meetings, chaired by the race director, will take place 22 hours before the start of P1 and one and a half hours after the end of P2. The first must be attended by all team managers and the second by all drivers.

Should the race director consider another meeting necessary it will take place three hours before the start of the race. Competitors will be informed no later than three hours after the end of the qualifying practice session. All drivers and team managers must attend.

## **21) GENERAL CAR AND PERSONNEL REQUIREMENTS**

**21.1** Electromagnetic radiation between 2.0 and 2.7GHz is forbidden save with the written consent of the FIA.

**21.2** Accident data recording:

- a) Each car must be fitted with an FIA accident data recorder during each Event and during all tests which are attended by more than one team. Teams must use their best endeavours to ensure that the recorder is in working order at all times. The only purpose of these units is to monitor, record or control one or more of the following:
  - i) Data relevant to an accident or incident.
  - ii) A deceleration warning light on board the car.
  - iii) A lap trigger.
  - iv) The driver input signal used to initiate the propulsion of the car at the start of a race.
- b) For the purpose of accident analysis, each driver must wear in-ear accelerometers which have been manufactured by the FIA designated supplier to a specification determined by the FIA. These should be worn by the driver during each Event and all tests which are attended by more than one team, teams must use their best endeavours to ensure that they are in working order at all times.
- c) For the purpose of aiding driver rescue, each driver must wear a biometric glove which

has been manufactured by the FIA designated supplier to a specification determined by the FIA. These should be worn by the driver during each Event, and teams must use their best endeavours to ensure that the glove is in working order at all times.

- d) At any time following an accident or incident competitors must make the data recorder available and accessible to the FIA. A representative of the team concerned may be present when data relevant to an accident or incident is being uploaded from the recorder. A copy of the data will be made available to the team.
- e) Any conclusions as to the cause of an accident, or any data relevant to an accident, may only be published in the form of a report which has been agreed between the team concerned and the FIA.

**21.3** All cars must be fitted with a car positioning system which has been manufactured by the FIA designated supplier to a specification determined by the FIA. No other parts which, in the opinion of the FIA are capable of performing a similar function, may be fitted to any car.

**21.4** During the entire Event, no screen, cover or other obstruction which in any way obscures any part of a car will be allowed at any time in the paddock, garages, pit lane or grid, unless it is clear any such covers are needed solely for mechanical reasons, which could, for example, include protecting against fire.

In addition to the above the following are specifically not permitted:

- a) Engine, gearbox or radiator covers whilst engines are being changed or moved around the garage.
- b) Covers over spare wings when they are on a stand in the pit lane not being used.
- c) Parts such as (but not limited to) spare floors, fuel rigs or tool trolleys may not be used as an obstruction.

The following are permitted:

- d) Covers which are placed over damaged cars or components.
- e) A transparent tool tray, no more than 50mm deep, placed on top of the rear wing.
- f) Warming or heat retaining covers for the engine and gearbox on the grid.
- g) A rear wing cover designed specifically to protect a mechanic starting the car from fire.
- h) Tyre heating blankets.
- i) Covers over the tyre manufacturer's code numbers (not the FIA bar code numbers).
- j) A cover over the car in the parc fermé overnight.
- k) A cover over the car in the pit lane or grid if it is raining.

**21.5** Driver adjustable bodywork permitted by Article 3.6.8 of the F1 Technical Regulations:

- a) The adjustable bodywork may only be activated by the driver in any of the pre-determined activation zones around each circuit. In conditions of poor visibility however the race director may, at his absolute discretion, disable all such systems until conditions improve.

If the adjustable bodywork is disabled in this way at any time during any of the three periods of the qualifying practice session (Q1, Q2 or Q3) it will remain disabled for the remainder of the relevant period.

- b) For the sole purpose of improving overtaking opportunities during the race the adjustable bodywork may be activated by the driver after he has completed two laps after the race start or following a safety car period.

The driver may only activate the adjustable bodywork in the race when he has been notified via the control electronics (see Article 8.2 of the F1 Technical Regulations) that it is enabled. It will be enabled, and may only be used by the driver, if he is less than one second behind another at any of the pre-determined detection points around each circuit.

The system will be disabled by the control electronics the first time the driver uses the brakes after he has activated the system. In conditions of poor visibility, or if yellow flags are being shown in the activation zone, the race director may, at his absolute discretion, disable all such systems until conditions improve or yellow flags are withdrawn.

The FIA may, after consulting all competitors, adjust the above time proximity in order to ensure the stated purpose of the adjustable bodywork is met.

- c) In the event of a failure in the system which notifies the driver that he was within one second of the car in front, and is hence authorised to use the adjustable bodywork, the team concerned may ask the race director for permission to override the system. If permission is given in this way the onus will be upon the team concerned to ensure that their driver only uses the adjustable bodywork if he is within one second of the car in front of him.

If the failure in the system is rectified the driver may no longer use this override, the race director will notify the team if and when the fault has been remedied.

- 21.6** From the start of the Event until two hours after the start of the race no competitor may have more than a total of 60 team personnel who are associated in any way with the operation of the cars within the confines of the circuit. However, during the period starting 45 minutes before the start of the first formation lap until 15 minutes after the scheduled start of the race the number of such operational personnel is unlimited. For the avoidance of doubt staff whose duties are solely connected with hospitality, team motorhomes, sponsors, marketing, public relations, security or driving trucks to or from the Event are not considered operational personnel.

In addition to the 60 personnel described above each competitor will be allowed six individual exceptions during a Championship season for trainee personnel, however, no individual trainee may attend more than two Events in this capacity.

A list of all operational, exempt, trainee and single race personnel must be submitted to the FIA prior to each Event using the official template that may be found in the Appendix to these Sporting Regulations.

- 21.7** No team personnel who are associated in any way with the operation of the cars are permitted within the confines of the circuit during two nine hour restricted periods which commence twelve hours before the scheduled start times of P1 and P3. With the exception of Monaco, if the unrestricted time between the end of P2 and the start of the second restricted period exceeds seven and a half hours the excess will be added to the second restricted period.

Each team will be permitted two individual exceptions to the above during a Championship season, however, both of these exceptions may not be used during a single Event.

For the avoidance of doubt, personnel whose duties are solely connected with catering, media or marketing are exempt from the above requirements.

- 21.8** All competitors must observe a shutdown period of fourteen consecutive days during the months of July and/or August. If two consecutive Events during this period are separated by only seventeen days a shutdown period of thirteen consecutive days must be observed. In either case competitors should notify the FIA of their intended shutdown period within 30 days of the start of the championship season.

During the shutdown period no team or affiliate to a team may carry out or instruct a third party supplier to carry out any of the following activities for or on behalf of the team:

- a) Operation or use of any wind tunnel (excluding any service and maintenance activity).
- b) Operation or use of any computer resource for Restricted CFD Simulations (excluding any service and maintenance activity).
- c) Production or development of wind tunnel parts, car parts, test parts or tooling.
- d) Sub-assembly of car parts or assembly of cars.

- e) Any work activity by any employee, consultant or sub-contractor engaged in design, development or production (excluding any work activity to be undertaken at the race track in preparation for the Event immediately following the shutdown period).

Each competitor must notify its suppliers of the dates of its shutdown period and must not enter into any agreement or arrangement with the intention of circumventing the prohibition on the above activities.

**21.9** During the shutdown period the following activities will not be considered a breach of the above:

- a) Repairs carried out with the agreement of the FIA to a car seriously damaged during the Event preceding the shutdown period.
- b) The assembly and servicing of running or static show cars, none of which may entail the production, assembly or servicing of any current car parts.
- c) The operation and use of any wind tunnel or computer resource for Restricted CFD Simulations provided this is being carried out for projects with no direct relation to Formula One or for or on behalf of a competitor that is not at that time within its own shutdown period.
- d) Any activity the sole purpose of which is supporting projects unconnected to Formula One, subject to the written approval from the FIA.

**21.10** All Power Unit Manufacturers must observe the same shutdown period as the one described in article 21.8 with an exception for factories based in countries where law and/or unions impose a different closing week. In this case, these factories may replace one week out of two weeks of the shutdown period by the locally imposed week. PU manufacturers affected by this must make a declaration to the FIA that their staff will not be permitted to transfer to work in the country that isn't shutdown during these periods.

During the shutdown period no occupancy hours nor operations hours may be incremented.

**21.11** During the shutdown period, any activity the sole purpose of which is to support projects unconnected to Formula One will not be considered a breach of Article 21.10, subject to the written approval from the FIA.

## **22) GENERAL SAFETY**

**22.1** Official instructions will be given to drivers by means of the signals laid out in the Code. Competitors must not use flags or lights similar to these.

**22.2** Save where these Sporting Regulations require otherwise, pit lane and track discipline and safety measures will be the same for all practice sessions as for the race.

**22.3** Other than by driving on the track, Competitors are not permitted to attempt to alter the grip of any part of the track surface.

**22.4** If a car stops on the track it shall be the duty of the marshals to remove it as quickly as possible so that its presence does not constitute a danger or hinder other competitors. Under no circumstances may a driver stop his car on the track without justifiable reason.

If any mechanical assistance received during the race results in the car re-joining the stewards may disqualify him from the race (other than under Article 22.7(d)).

**22.5** A driver who abandons a car must leave it in neutral or with the clutch disengaged, with the ERS shut down and with the steering wheel in place.

**22.6** Save as specifically authorised by the Code or these Sporting Regulations, no one except the driver may touch a stopped car unless it is in the paddock, the team's designated garage area, the pit lane or on the starting grid.

**22.7** During the period commencing fifteen minutes prior to and ending five minutes after every practice session and the period between the commencement of the formation lap which immediately precedes the race and the time when the last car enters the parc fermé, no one is allowed on the track, the pit entry or the pit exit with the exception of :

- a) Marshals or other authorised personnel in the execution of their duty.
  - b) Drivers when driving or on foot, having first received permission to do so from a marshal.
  - c) Team personnel when either pushing a car or clearing equipment from the grid after all cars able to do so have left the grid on the formation lap.
  - d) Team personnel when assisting marshals to remove a car from the grid after the start of the race.
- 22.8** During a race, the engine may only be started with the starter except in the pit lane or the team's designated garage area where the use of an external starting device is allowed.
- 22.9** Drivers taking part in practice and the race must always wear the clothes, helmets and head and neck supports specified in the Code.
- 22.10** A speed limit of 80km/h will be imposed in the pit lane during the whole Event. However, this limit may be amended by the Race Director following a recommendation from the FIA F1 safety delegate.
- Any team whose driver exceeds the limit during any practice session will be fined €100 for each km/h above the limit, up to a maximum of €1000.
- However, in accordance with Article 18.1 the stewards may inflict an additional penalty if they suspect a driver was speeding in order to gain any sort of advantage.
- During the race the stewards may impose either of the penalties under Article 38.3a), b), c) or d) on any driver who exceeds the limit.
- 22.11** If a driver has serious mechanical difficulties, he must leave the track as soon as it is safe to do so.
- 22.12** The lights described in Article 14.5 of the Technical Regulations must be illuminated at all times when using intermediate or wet-weather tyres. It shall be at the discretion of the race director to decide whether or not a driver should be stopped if no rear light is working. Should a car be stopped in this way the driver may re-join when the fault has been remedied.
- 22.13** Only twelve team members per competitor are allowed in the signalling area during practice and the race.
- 22.14** Unless authorised by the FIA no one under the age of 16 is allowed in the pit lane at the following times:
- a) The period commencing fifteen minutes prior to and ending five minutes after every practice session.
  - b) The period commencing fifteen minutes before the pit exit is opened to allow cars to cover reconnaissance laps and the time when the last car enters the parc fermé after the race has ended.
- 22.15** The race director, the clerk of the course or the FIA medical delegate can require a driver to have a medical examination at any time during an Event.
- If, after an incident, the Medical Warning Light signals that threshold forces have been exceeded the driver must be examined by the Event medical service without delay, the FIA Medical Delegate will determine the most appropriate place for this examination.
- 22.16** The organiser must make at least two fire extinguishers of 5kg capacity available to each competitor and ensure that they work properly.
- 22.17** Animals, except those which may have been expressly authorised by the FIA for use by security services, are forbidden on the track, in the pit lane, in the paddock or in any spectator area.

## **23) SPARE CARS, ENGINES AND GEARBOXES**

- 23.1** Each competitor may have no more than two cars available for use at any one time during an Event.



**23.2** Any driver whose car has a change of survival cell following the start of the third free practice session (P3) must start the race from the pit lane following the procedures detailed in Article 36.2. Under these circumstances the car concerned will not have to comply with the requirements of Article 34.

**23.3** a) Unless he drives for more than one team (see 23.3(c) below), and subject to the additions described below, each driver may use no more than 3 engines (ICE), 3 motor generator units-heat (MGU-H), 3 turbochargers (TC), 2 energy stores (ES), 2 control electronics (CE), 3 motor generator units-kinetic (MGU-K) and 8 sets of Engine exhaust systems during a Championship season.

With the consent of (and at the sole discretion of) the FIA, the numbers above will be increased by one for any driver using a power unit provided by a new power unit manufacturer (as defined in Appendix 9) taking part in their first Championship season.

Should the number of races in the 2021 Championship Season drop to 19 or less, the permissible number of motor generator units-kinetic (MGU-K) will be reduced to 2.

b) Should a driver use more than the numbers set in a) above of any one of the elements during a Championship season, a grid place penalty will be imposed upon him at the first Event during which each additional element is used. Penalties will be applied according to the following table and will be cumulative:

The first time an additional element is used	Ten grid place penalty.
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The next times an additional element is used	Five grid place penalty.
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If a driver incurs a penalty exceeding 15 grid places he will be required to start the race from the back of the starting grid.

Any of the **seven** elements will be deemed to have been used once the car's timing transponder has shown that it has left the pit lane.

During any single Event, if a driver introduces more than one of the same power unit element which is subject to penalties, only the last element fitted may be used at subsequent Events without further penalty.

c) If a driver is replaced at any time during the Championship season his replacement will be deemed to be the original driver for the purposes of assessing power unit usage.

d) After consultation with the relevant power unit supplier the FIA will attach seals to each of the relevant elements of the power unit prior to them being used for the first time at an Event in order to ensure that no significant moving parts can be rebuilt or replaced.

Within two hours of the end of the post-race parc fermé additional seals will be applied to all used power unit elements in order to ensure that they cannot be run or dismantled between Events. The sealing method must be agreed with the FIA technical delegate.

Upon request to the FIA these additional seals will be removed after the start of the next Event at which the power unit elements are required. All such power unit elements must remain within the team's designated garage area when not fitted to a car and may not be started at any time during an Event other than when fitted to a car eligible to participate in the Event.

e) If any of the FIA seals are damaged or removed from the relevant components within the power unit after they have been used for the first time those parts may not be used again unless they were removed under FIA supervision.

**23.4** The only power units that may be used at an Event during the **2017-2021** Championship seasons are either:

a) A power unit which is constituted only of elements that were in conformity, at the date they were introduced in the race pool, with the latest submitted and approved homologation dossier as defined in Appendix 4 of these regulations, or

b) A power unit previously homologated during the **2014-2021** period. Any manufacturer who homologated a power unit during this period may apply to the FIA to re-use such a

power unit in a given team without going through the re-homologation process described in Appendix 4 of these regulations. Any such power units must be in conformity with the latest homologation dossier submitted to the FIA for that particular power unit for that season save for differences in parts agreed by the FIA at its absolute discretion to be solely associated with power unit installation with different teams, provided such differences have no significant effect on car performance. The homologation dossier must be updated with these differences. The FIA must be satisfied, at its absolute discretion, that such a power unit could fairly and equitably be allowed to compete with other homologated power units.

**23.5** For the purposes of this Article only, an Event will be deemed to comprise P3, the qualifying practice session and the race.

- a) Each driver may use no more than one gearbox for six consecutive Events in which his team competes. Should a driver use a replacement gearbox he will drop five places on the starting grid at that Event and an additional five places each time a further gearbox is used.

Any replacement gearbox will only be required to complete the remainder of the Event in question.

Unless the driver fails to finish the race (or is unable to start the race for reasons other than a penalty imposed by the stewards) the gearbox fitted to the car at the end of the Event must remain in it for the remainder of the six race sequence.

Any driver who failed to finish the race at the first, second, third, fourth or fifth of the six Events for reasons which the technical delegate accepts as being beyond the control of the team or driver, may start the following Event with a different gearbox without a penalty being incurred.

A gearbox will be deemed to have been used once the car's timing transponder has shown that it has left the pit lane.

- b) If a driver is replaced after the first, second, third, fourth or fifth Event of a six Event period, having finished the first, second, third, fourth and fifth Events, the replacement driver must use the gearbox which the original driver had been using.
- c) After consultation with the relevant team the FIA will attach seals to each gearbox prior to it being used for the first time at an Event in order to ensure that no significant moving parts can be rebuilt or replaced.
- d) Change gears and dog rings (excluding final drives or reduction gears) may be changed under supervision for others of identical specification at any time during an Event provided the FIA technical delegate is satisfied there is evident physical damage to the parts in question and that such changes are not being carried out on a systematic basis.
- e) Other than under d) above, a replacement gearbox will also be deemed to have been used if any of the FIA seals are damaged or removed from the original gearbox after it has been used for the first time.

## **24) SUPPLY OF TYRES IN THE CHAMPIONSHIP AND TYRE LIMITATION DURING THE EVENT**

**24.1** Supply of tyres:

The single tyre manufacturer (the Supplier) appointed by the FIA must undertake to provide:

- a) Three specifications of dry-weather tyre at each Event, each of which must be visibly distinguishable from one another when a car is on the track.
- b) At certain Events one additional specification of dry-weather tyre may be made available to all teams for evaluation purposes following a recommendation to the FIA from the Supplier. Teams will be informed about such an additional specification at least one week before the start of the relevant Event.
- c) One specification of intermediate tyre at each Event.

- d) One specification of wet-weather tyre at each Event.

#### 24.2 Quantity, selection and specification of tyres during an Event:

- a) Except under Articles 24.1(b), 24.4(e) and 24.4(f), no driver may use more than thirteen sets of dry-weather tyres, four sets of intermediate tyres and three sets of wet-weather tyres during an Event. A complete set of tyres will be deemed to comprise two front and two rear tyres all of which must be of the same specification and as allocated by the FIA, however, sets of the same specification may be mixed following the qualifying practice session.
- b) No less than nine weeks before the start of each Event held in Europe, and fifteen weeks before the start of each Event held outside Europe, the FIA will provide all competitors with the following information relevant to the Event in question:
  - i) Which tyre specifications will be made available by the Supplier.
  - ii) The mandatory dry-weather race tyre specification(s) (up to two).
  - iii) The mandatory dry-weather Q3 tyre specification (which will always be the softest of the three specifications).

Competitors must then inform the FIA, no less than eight weeks before the start of each Event held in Europe and fourteen weeks before the start of each Event held outside Europe, which specifications of dry-weather tyres they wish to use for each of their drivers at the Event. From the thirteen sets of dry-weather tyres available to each driver:

- i) At least two sets must be of the mandatory race tyre specification(s). For the avoidance of doubt, if there are two mandatory race tyre specifications, one of each must be chosen.
- ii) At least one set must be of the mandatory Q3 tyre specification.
- iii) The remaining sets may be chosen from the available tyre specifications.

Once the FIA has been provided with this information by all competitors the Supplier will be informed. If a competitor fails to provide the above information before the deadline the FIA will allocate tyre specifications to any driver concerned as it deems appropriate.

If any of the above deadlines fall within the shutdown period described in Article 21.8 the FIA, in consultation with the Supplier, will provide competitors with revised dates. In no case will any date be moved by more than two weeks.

- c) Once the above selections have been made the FIA technical delegate will allocate sets of tyres to each driver from among the stock of tyres the Supplier makes available for the Event.

#### 24.3 Control of tyres:

- a) The outer sidewall of all tyres which are to be used at an Event must be marked with a unique identification.
- b) Other than in cases of force majeure (accepted as such by the stewards), all tyres intended for use at an Event must be presented to the FIA technical delegate for allocation prior to the start of the Event.
- c) At any time during an Event, and at his absolute discretion, the FIA technical delegate may select alternative dry-weather tyres to be used by any team or driver from among the stock of tyres the appointed supplier has present at the Event.
- d) A competitor wishing to replace one unused tyre by another identical unused one must present both tyres to the FIA technical delegate.
- e) The use of tyres without appropriate identification may result in a grid position penalty or disqualification from the race.

#### 24.4 Use of tyres:

The official return of tyres will be made electronically in accordance with the procedure described within the Appendix to these Sporting Regulations. Any set of electronically returned tyres must also be physically returned to the Supplier before the start of the following session.

- a) All tyres must be operated in accordance with the prescriptions issued prior to each Event by the FIA and the procedures set out in the Appendix to these Sporting Regulations.
- b) The only sets of tyres which may be used during an Event are those which are defined in Article 24.2(a).

Any driver who uses a set of tyres of differing specifications during the race may not complete more than three laps on this set before changing them for a set of tyres of the same specification. A penalty under Article 38.3(d) will be imposed on any driver who does not change tyres within three laps. For the avoidance of doubt, a set of tyres of differing specifications will not be considered when assessing the number of specifications used during the race.

- c) Tyres will only be deemed to have been used once the car's timing transponder has shown that it has left the pit lane.
- d) If an additional driver is used (see Article 26.1(b)) he must use the tyres allocated to the nominated driver he replaced.
- e) If an additional specification of dry-weather tyre is made available in accordance with Article 24.1(b) two sets of these tyres will be allocated to each driver for use during P1 and P2. Any such tyres must be electronically returned no later than two hours after the end of P2.
- f) If either P1 or P2 are declared wet one additional set of intermediate tyres will be made available to any driver who used a set of intermediate tyres during either session. Under such circumstances, one used set of intermediate tyres must be electronically returned before the start of the qualifying practice session.

If neither P1 nor P2 are declared wet, but the likelihood of P3 being declared wet is deemed by the FIA to be high, one additional set of intermediate tyres will be made available to all drivers. Under such circumstances, one set of intermediate tyres must be electronically returned before the start of the qualifying practice session.

- g) From the thirteen sets of dry-weather tyres allocated to each driver under Article 24.2(c):
  - i) One set of the mandatory Q3 tyre specification may not be used nor returned before Q3 and, for the cars that qualified for Q3, one set of the same specification must be electronically returned no later than three and a half hours after the end of Q3.
  - ii) Two sets of the mandatory race specification(s) may not be returned before the race. For the avoidance of doubt, if there are two mandatory race tyre specifications, one set of each specification may not be returned before the race.

From the ten remaining sets:

- iii) One set, which each competitor must nominate prior to the start of P1 (or may re-nominate with the consent of the FIA technical delegate), may only be used during the first 40 minutes of the session. If the session is stopped during the first 40 minutes the length of the stoppage will be added to the 40-minute limit. If P1 is declared wet before the start of the session or during the first 40-minutes, use will be extended for the remainder of the session. The extended use for this set of tyres will only be available to drivers who have either exited the pit lane more than once and/or crossed the Line on the track on either intermediate or wet-weather tyres.
- iv) One further set must be electronically returned no later than two hours after the end of P1.
- v) Two further sets must be electronically returned no later than two hours after the end of P2 unless both P1 and P2 are either declared wet or cancelled, in which case

one of these sets may be retained by each driver but must be electronically returned no later than two hours after the end of P3.

- vi) Two further sets must be electronically returned no later than two hours after the end of P3.
- h) Once all tyres have been returned electronically after P2 and the qualifying practice session the Supplier will publish a list of the tyres which each driver has available to him for the remainder of the Event.
- i) Prior to the start of the qualifying practice session intermediate and wet-weather tyres may only be used after the track has been declared wet by the race director, following which intermediate, wet or dry-weather tyres may be used for the remainder of the session.
- j) With the exception of any cars that are required to start the race from the pitlane, at the start of the race each car which qualified for Q3 must be fitted with the tyres with which the driver set his fastest time during Q2. This will only be necessary for these cars if dry-weather tyres were used to set the fastest time in Q2 and if dry-weather tyres are used at the start of the race.

Any such tyres damaged during Q2 will be inspected by the FIA technical delegate who will decide, at his absolute discretion, whether any may be replaced and, if so, which tyres they should be replaced with.

A penalty under Article 38.3(d) will be imposed on any driver whose car is not fitted with the tyres with which he set his fastest time in Q2 (except if damaged tyres have been replaced with the approval of the FIA technical delegate).

- k) Unless he has used intermediate or wet-weather tyres during the race, each driver must use at least two different specifications of dry-weather tyres during the race, at least one of which must be a mandatory dry-weather race tyre specification as defined in Article 24.2(b). Unless a race is suspended and cannot be re-started, failure to comply with this requirement will result in the disqualification of the relevant driver from the race results.

If the race is suspended and cannot be re-started, thirty seconds will be added to the elapsed time of any driver who was unable to use at least two specifications of dry-weather tyre.

- l) If the formation lap is started behind the safety car because of heavy rain (see Article 36.14(c)), or the race resumed in accordance with Article 42.5(a), the use of wet-weather tyres until the safety car returns to the pits is compulsory.

A penalty under Article 38.3(d) will be imposed on any driver who does not use wet weather tyres whilst the safety car is on the track at such times.

#### 24.5 Testing of tyres:

- a) From the time at which each competitor receives fitted tyres from the Supplier at or before an Event these may not be used on any rig, simulator or vehicle, other than the F1 car for which they were intended.
- b) Tyres supplied to any competitor at any time may not be used on any rig or vehicle (other than an F1 car on an F1 approved track, at the exclusion of any kind of road simulator), either Team owned or rented, providing measurements of forces and/or moments produced by a rotating full size F1 tyre, other than uniquely vertical forces, tyre rolling resistance and aerodynamic drag.
- c) Tyres may be used on a test rig providing forces control and monitoring by F1 rim manufacturers for the sole purpose of proof testing their products.

## 25) SCRUTINEERING

- 25.1 Each competitor will be required to carry out initial scrutineering of his cars and submit the duly completed declaration no later than 18 hours before the start of P1.

The declaration form template may be found in the Appendix to these Sporting Regulations.

- 25.2** Unless a waiver is granted by the stewards, competitors who do not keep to these time limits will not be allowed to take part in the Event.
- 25.3** No car may take part in the Event until the declaration described in Article 25.1 above has been submitted, and the FIA technical delegate has confirmed to the competitor that he is satisfied it has been fully and correctly completed.
- 25.4** Any competitor whose car has a change of survival cell after initial scrutineering (see Article 25.1 above) must complete a new declaration for approval by the FIA technical delegate. However, any such car may not be used until the following day.
- 25.5** The scrutineers may:
- a) Check the eligibility of a car or of a competitor at any time during an Event.
  - b) Require a car to be dismantled by the competitor to make sure that the conditions of eligibility or conformity are fully satisfied.
  - c) Require a competitor to pay the reasonable expenses which exercise of the powers mentioned in this Article may entail.
  - d) Require a competitor to supply them with such parts or samples as they may deem necessary.
- 25.6** The race director or the clerk of the course may require that any car involved in an accident be stopped and checked.
- 25.7** Checks and scrutineering shall be carried out by duly appointed officials who shall also be responsible for the operation of the parc fermé and who alone are authorised to give instructions to the competitors.
- 25.8** The stewards will publish the findings of the scrutineers each time cars are checked during the Event. These results will not include any specific figure except when a car is found to be in breach of the Technical Regulations.

## **26) CHANGES OF DRIVER**

- 26.1** a) During a season each team will be permitted to use four drivers. Changes may be made at any time before the start of the qualifying practice session provided any change proposed less than 18 hours before the scheduled start of P1 receives the consent of the stewards.
- Additional changes for reasons of force majeure will be considered separately.
- Any new driver may score points in the Championship.
- b) In addition to the above each team will be permitted to run additional drivers during P1 and P2 provided:
- i) The stewards are informed which cars and drivers each team intends to use in each session no less than 18 hours before the scheduled start of P1, changes after this time may only be made with the consent of the stewards.
  - ii) No more than four drivers are used in any one session.
  - iii) They carry the race number that has been allocated to them.
  - iv) They use the engine and tyres which are allocated to the nominated driver.
  - v) They are in possession of a Super Licence or Friday Super Licence.
- c) If one of the team's nominated drivers is unable to drive at some stage after the end of initial scrutineering (18 hours before the scheduled start of P1), and the stewards consent to a change of driver, the replacement driver must use the engine, gearbox and tyres which were allocated to the original driver (see Articles 23.3, 23.5 and 24.4).

## **27) DRIVING**

- 27.1 The driver must drive the car alone and unaided.
- 27.2 Drivers must observe the provisions of the Code relating to driving behaviour on circuits at all times.
- 27.3 Drivers must make every reasonable effort to use the track at all times and may not deliberately leave the track without a justifiable reason.

Drivers will be judged to have left the track if no part of the car remains in contact with it and, for the avoidance of doubt, any white lines defining the track edges are considered to be part of the track but the kerbs are not.

Should a car leave the track the driver may re-join, however, this may only be done when it is safe to do so and without gaining any lasting advantage. At the absolute discretion of the race director a driver may be given the opportunity to give back the whole of any advantage he gained by leaving the track.

- 27.4 At no time may a car be driven unnecessarily slowly, erratically or in a manner which could be deemed potentially dangerous to other drivers or any other person.

## **28) PIT ENTRY, PIT LANE AND PIT EXIT**

- 28.1 The section of track between the first safety car line and the beginning of the pit lane will be designated the "pit entry".
- 28.2 The section of track between the end of the pit lane and the second safety car line will be designated the "pit exit".
- 28.3 At no time may a car be reversed in the pit lane under its own power.
- 28.4 The pit lane will be divided into two lanes, the lane closest to the pit wall will be designated the "fast lane" and may be no more than 3.5 metres wide, the lane closest to the garages will be designated the "inner lane".

Other than when cars are at the end of the pit lane under Articles 36.2 and 41, the inner lane is the only area where any work can be carried out on a car. However, no work may be carried out in the fast lane if it is likely to hinder other cars attempting to leave the pit lane.

- 28.5 The FIA will allocate garages and an area in the pit lane on a strictly equal basis where each team may work and, within each of these designated garage areas, one position where pit stops during both practice and the race may be carried out.
- 28.6 No powered device may be used to lift any part of a car in the pit lane during a race.
- 28.7 Unless a car is pushed from the grid at any time during the start procedure, cars may only be driven from the team's designated garage area to the end of the pit lane.

Any car(s) driven to the end of the pit lane prior to the start or re-start of a practice session must form up in a line in the fast lane and leave in the order they got there unless another car is unduly delayed.

- 28.8 With the exception of the reconnaissance laps permitted by Article 36.1, any driver that is required to start the race from the pit lane may not drive his car from his team's designated garage area until 30 minutes before the scheduled start of the formation lap and must stop in a line in the fast lane.

Under these circumstances working in the fast lane will be permitted but any such work is restricted to:

- a) Starting the engine and any directly associated preparation.
- b) The fitting or removal of permitted cooling and heating devices.
- c) Changes made for driver comfort.
- d) Changing wheels and tyres.

When cars are permitted to leave the pit lane they must do so in the order that was established under Article 36.2 unless another car is unduly delayed. At all times drivers must follow the directions of the marshals.

- 28.9 Other than by drying or sweeping, or by laying tyre rubber when cars leave their pit stop position, competitors may not attempt to enhance the grip of the surface in the pit lane unless a problem has been clearly identified and a solution agreed to by the FIA safety delegate.
- 28.10 Competitors must not paint lines on any part of the pit lane.
- 28.11 Other than under 28.8 above no equipment may be left in the fast lane.
- 28.12 Team personnel are only allowed in the pit lane immediately before they are required to work on a car and must withdraw as soon as the work is complete.

All team personnel carrying out any work on a car in the pit lane when the car is in its pit stop position during the qualifying practice session, or during a race pit stop, must be wearing helmets which meet or exceed the requirements of ECE 22.05 - European motorcycle road helmet, DOT - USA motorcycle road helmet or JIS T8133-2015, class 2 – JPN protective helmets for motor vehicle users. The use of appropriate eye protection is compulsory.

- 28.13 a) Cars must not be released from a garage or pit stop position in way that could endanger pit lane personnel or another driver.  

Competitors must provide a means of clearly establishing, when being viewed from both above and in the front of the car, when a car was released.
- b) If a car is deemed to have been released in an unsafe condition during any practice session, the stewards may drop the driver such number of grid positions as they consider appropriate.
- c) If a car is deemed to have been released in an unsafe condition during a race a penalty under Article 38.3(d) will be imposed on the driver concerned. However, if the driver retires from the race as a result of the car being released in an unsafe condition a fine may be imposed upon the team.
- d) An additional penalty will be imposed on any driver who, in the opinion of the stewards, continues to drive a car knowing it to have been released in an unsafe condition.

In all of the above cases, a car will be deemed to have been released either when it has been driven out of its designated garage area (when leaving from the garage) or after it has completely cleared its pit stop position following a pit stop.

- 28.14 Under exceptional circumstances the race director may ask for the pit entry to be closed during the race for safety reasons. At such times drivers may only enter the pit lane in order for essential and entirely evident repairs to be carried out to the car. A penalty under Article 38.3(d) will be imposed on any driver who, in the opinion of the stewards, entered the pit lane for any other reason whilst it was closed.

## 29) WEIGHING

- 29.1 a) After any free practice session or during the qualifying practice session cars will be weighed as follows:
  - i) When signalled to do so the driver will proceed directly to the FIA garage and stop his engine.  

Any driver who fails to stop when asked to do so, and then fails to bring the car back to the FIA garage, or if work is carried out on the car before it is returned to the FIA garage, will be referred to the stewards.
  - ii) At the end of the qualifying session all cars which took part in Q3 will be weighed. If a driver wishes to leave his car before it is weighed he must ask the technical delegate to weigh him in order that this weight may be added to that of the car.



- iii) If a car stops on the circuit during the qualifying session and the driver leaves the car, he must go to the FIA garage immediately on his return to the pit lane in order for his weight to be established.
  - b) After the race any classified car may be weighed. If a driver wishes to leave his car before it is weighed he must ask the technical delegate to weigh him in order that this weight may be added to that of the car.
  - c) The relevant car may be disqualified should its weight be less than that specified in Article 4.1 of the Technical Regulations when weighed under a) or b) above, save where the deficiency in weight results from the accidental loss of a component of the car.
  - d) No substance may be added to, placed on, or removed from a car after it has been selected for weighing or has finished the race or during the weighing procedure. (Except by a scrutineer when acting in his official capacity).
- 29.2** In the event of any breach of these provisions for the weighing of cars the stewards may drop the driver such number of grid positions as they consider appropriate or disqualify him from the race.

### **30) REFUELLING**

- 30.1**
- a) Refuelling is only permitted in the team's designated garages.
  - b) Fuel may not be added to nor removed from a car after it has left the pit lane to start the first reconnaissance lap permitted under Article 36.1.
  - c) Fuel may not be added to nor removed from a car during a race.
- 30.2** No car may be refuelled, nor may fuel be removed from a car, at a rate greater than 0.8 litres per second.
- 30.3** The driver may remain in his car throughout refuelling but the engine must be stopped.
- 30.4** During all refuelling or fuel handling operations:
- a) The relevant personnel must be wearing outer garments which are in compliance with either FIA Standard 8867-2016 or FIA Standard 8856-2000.
  - b) An assistant equipped with a suitable fire extinguisher of appropriate capacity must be present and must be wearing outer garments which are in compliance with either FIA Standard 8867-2016 or FIA Standard 8856-2000.
  - c) All cars, refuelling equipment and containers must be suitably grounded where necessary.
  - d) Any powered pumping system used to transfer fuel must be operated by a non-latching switch or be turned off automatically if the operator leaves.
- 30.5** No car is permitted to consume more than 110kg of fuel, from the time at which the signal to start the race is given to the time each car crosses the Line after the end-of-race signal has been given. Other than in cases of force majeure (accepted as such by the stewards), any driver exceeding this limit will be disqualified from the race results.

### **31) PRACTICE SESSIONS**

- 31.1** No driver may start in the race without taking part in at least one practice session.
- 31.2** During all practices there will be a green and a red light at the end of the pit lane. Cars may only leave the pit lane when the green light is on. Additionally, a blue flag and/or a flashing blue light will be shown in the pit exit to warn drivers leaving the pit lane if cars are approaching on the track.
- 31.3** Unless written permission has been given by the FIA to do otherwise, the circuit may only be used for purposes other than the Event after the last practice session on each day of practice and on the day of the race no less than one hour before the end of the pit lane is opened to allow cars to cover a reconnaissance lap.

- 31.4** In the event of a driving infringement during any practice session the Stewards may delete a driver's lap time (or lap times) or drop the driver such number of grid positions as they consider appropriate. Unless it is completely clear that a driver committed a driving infringement any such incident will normally be investigated after the relevant session.

Where appropriate, regard will also be given to the provisions of Article 18.1.

- 31.5** Any driver taking part in any practice session who, in the opinion of the stewards, stops unnecessarily on the circuit or unnecessarily impedes another driver shall be subject to the penalties referred to in Article 31.4.
- 31.6** Should it become necessary to stop any practice session because the circuit is blocked by an accident or because weather or other conditions make it dangerous to continue, the clerk of the course will order red flags to be shown at all marshal posts and the abort lights to be shown at the Line.

When the signal is given to stop all cars must immediately reduce speed and proceed slowly back to the pit lane. In order to ensure that drivers reduce speed sufficiently, from the time at which the "RED FLAG" message appears on the official messaging system until the time that each car crosses the first safety car line when entering the pit lane, drivers must stay above the minimum time set by the FIA ECU at least once in each marshalling sector (a marshalling sector is defined as the section of track between each of the FIA light panels).

All cars abandoned on the track will be removed to a safe place.

At the end of each practice session no driver may cross the Line more than once.

- 31.7** The clerk of the course may interrupt practice as often and for as long as he thinks necessary to clear the track or to allow the recovery of a car. However, only during qualifying practice will the session be extended as a result.

Should one or more sessions be thus interrupted, no protest can be accepted as to the possible effects of the interruption on the qualification of drivers admitted to start.

## **32) FREE PRACTICE**

- 32.1** a) Two free practice sessions (P1 and P2), each lasting one hour and separated by at least two and a half hours, will take place on the second day of the Event.
- b) A further free practice session (P3), lasting one hour and starting no less than eighteen and a half hours after the end of P2, will take place the day before the race.

## **33) QUALIFYING PRACTICE**

- 33.1** The qualifying practice session will take place on the day before the race and will start no less than two hours after the end of P3.

The session will be run as follows:

- a) For the first eighteen minutes of the session (Q1) all cars will be permitted on the track and at the end of this period the slowest five cars will be prohibited from taking any further part in the session.
- Lap times achieved by the fifteen remaining cars will then be deleted.
- b) After a seven-minute break the session will resume for fifteen minutes (Q2) and the fifteen remaining cars will be permitted on the track. At the end of this period the slowest five cars will be prohibited from taking any further part in the session.
- Lap times achieved by the ten remaining cars will then be deleted.
- c) After an eight-minute break the session will resume for twelve minutes (Q3) and the ten remaining cars will be permitted on the track.

The above procedure is based upon 20 cars being officially eligible to take part in the Event. If 22 cars are eligible six will be eliminated after Q1 and Q2, if 24 cars are eligible seven cars will be eliminated after Q1 and Q2, and so on if more cars are eligible.

- 33.2 Any driver whose car stops on the circuit during the qualifying session will not be permitted to take any further part in the session.
- 33.3 At the end of qualifying practice the times achieved by each driver will be officially published.
- 33.4 An AOT, as defined in F1 Technical Regulations, must be empty during the complete qualifying practice session.

#### **34) PRE-RACE PARC FERMÉ**

- 34.1 Every team must provide the FIA technical delegate with a suspension set-up sheet for both of their cars before each of them leaves the pit lane for the first time during qualifying practice session.
- 34.2 Each car will be deemed to be in parc fermé from the time at which it leaves the pit lane for the first time during qualifying practice until the start of the race. Any car which fails to leave the pit lane during qualifying practice will be deemed to be in parc fermé at the end of Q1.

Between these times, other than when cars are sealed overnight in accordance with 34.4 below, the following work may be carried out:

- a) Engines may be started.
- b) Fuel may be added or removed and a fuel breather fitted.
- c) Wheels, wheel fasteners and tyres may be removed, changed or rebalanced and tyre pressures checked.
- d) Spark plugs may be removed in order to carry out an internal engine inspection and cylinder compression checks.
- e) Permitted heating or cooling devices may be fitted.
- f) A jump battery may be connected and on board electrical units may be freely accessed via a physical connection to the car.
- g) Charging and / or discharging of the ERS energy storage devices.
- h) The brake system may be bled.
- i) Engine oil may be drained.
- j) Compressed gases may be drained or added.
- k) Fluids may be drained and/or replenished, however, fluids used for replenishment must conform to the same specification as the original fluid.
- l) The aerodynamic set up of the front wing may be adjusted using the existing parts. No parts may be added, removed or replaced.
- m) If the FIA technical delegate is satisfied that changes in climatic conditions necessitate alterations to the specification of a car, changes may be made to the air ducts around the front and rear brakes and radiator ducts. These changes may be made at any time after all teams have been sent the message "CHANGE IN CLIMATIC CONDITIONS" via the official messaging system. From this point onwards the choice of air ducts around the front and rear brakes and radiator ducts is free and pitot tubes may be covered or uncovered, subject always to compliance with the relevant Technical Regulations.
- n) Bodywork (excluding radiators) may be removed and/or cleaned.
- o) Cosmetic changes may be made to the bodywork and tape may be added.
- p) Any part of the car may be cleaned.

- q) On board cameras, marshalling system components, timing transponders and any associated equipment may be removed, refitted or checked.
- r) Any work required by the FIA technical delegate.
- s) Changes to improve the driver's comfort. In this context anything other than the adjustment of mirrors, seat belts and pedals may only be carried out with the specific permission of the FIA technical delegate.

Should ambient temperature change significantly, teams will be requested to change the head padding required by Article 14.6.1-6 of the Technical Regulations via the official messaging system.

The addition or removal of padding (or similar material) is also permitted but may only be carried out under supervision and, if required by the FIA technical delegate, must be removed before the post-race weighing procedure.

- t) Drinking fluid for the driver may be added at any time, however, the capacity of the container for any such fluid must not exceed 1.5 litres.
- u) Repair of genuine accident damage.
- v) Any parts which are removed from the car in order to carry out any work specifically permitted above, or any parts removed to carry out essential safety checks, must remain close to it and, at all times, be visible to the scrutineer assigned to the relevant car.

Furthermore, any parts removed from the car in order to carry out any such work must be refitted before the car leaves the pit lane.

Any work not listed above may only be undertaken with the approval of the FIA technical delegate following a written request from the team concerned. It must be clear that any replacement part a team wishes to fit is the same in design and similar in mass, inertia and function to the original. Any parts removed will be retained by the FIA.

However, if a team wishes to change a part during the qualifying session, between reconnaissance laps and/or on the grid before the start of the race, this may be done without first seeking the permission of the technical delegate, provided it is reasonable for the relevant team to believe permission would be given if there was time to ask and the broken or damaged part remains in full view of the scrutineer assigned to the car at all times.

**34.3** At the end of the qualifying practice at least six cars will be chosen at random to undergo further checks, once informed their car has been selected the team concerned must take the car to the parc fermé immediately.

**34.4** Within three and a half hours of the end of the qualifying practice session all cars used during the session (or which were intended for use but failed to leave the pit lane) must be covered and ready for FIA seals to be applied in order to ensure that they remain secure until the following day. For marketing purposes this deadline may be extended for one car from each competitor for a maximum of two hours by prior arrangement with the FIA technical delegate.

However, no work of any kind may be carried out on the car any later than three and a half hours after the end of the qualifying practice session.

Whilst cars are covered overnight they may be fitted with devices to keep them warm.

**34.5** Five hours and 10 minutes before the start of the formation lap the seals and covers may be removed but the cars will remain under parc fermé conditions until the start of the race.

**34.6** A competitor may not modify any part on the car or make changes to the set-up of the suspension whilst the car is being held under parc fermé conditions. In the case of a breach of this Article the relevant driver must start the race from the pit lane and follow the procedures laid out in Article 36.2.

In order that the scrutineers may be completely satisfied that no alterations have been made to the suspension systems or aerodynamic configuration of the car (with the exception of the front wing) whilst in pre-race parc fermé, it must be clear from physical inspection that changes cannot be made without the use of tools.

- 34.7 One scrutineer will be allocated to each car for the purpose of ensuring that no unauthorised work is carried out whilst cars are being held under parc fermé conditions.
- 34.8 A list of parts replaced with the specific agreement of the FIA technical delegate whilst cars are being held under parc fermé conditions will be published and distributed to all teams prior to the race.
- 34.9 The mass of oil contained in each oil tank, with the exception of the main oil tank, must be declared to the FIA one hour before the start of the race.

## 35) THE GRID

- 35.1 Unless the track was declared wet by the race director, any driver eliminated during Q1 whose best qualifying lap exceeds 107% of the fastest time set during that session, or who fails to set a time, will not be allowed to take part in the race. Under exceptional circumstances however, which may include setting a suitable lap time in a free practice session, the stewards may permit the car to start the race.

Any driver accepted in this manner will be placed at the back of the starting grid after any other penalties have been applied, and behind any driver penalised under Article 23.3(b).

Should there be more than one driver accepted in this manner they will be arranged on the grid in the order they were classified in P3.

- 35.2 a) The grid will be drawn up as follows:
- i) The last five positions will be occupied by the cars eliminated during Q1, the fastest in 16th position.
  - ii) The next five positions will be occupied by the cars eliminated during Q2, the fastest in 11th position.
  - iii) The top ten positions will be occupied by the cars which took part in Q3, the fastest from the position on the grid which was the pole position in the previous year or, on a new circuit, has been designated as such by the FIA safety delegate.

If two or more drivers set identical times during Q1, Q2 or Q3 priority will be given to the one who set it first.

If more than 20 cars are entered in the Championship appropriate amendments will be made to the above in accordance with Article 33.1.

- b) If more than one driver fails to set a time during Q2 or Q3 they will be arranged in the following order:
- i) Any driver who attempted to set a qualifying time by starting a flying lap.
  - ii) Any driver who failed to start a flying lap.
  - iii) Any driver who failed to leave the pits during the period.
- c) Once the grid has been established in accordance with a) and b) above, grid position penalties will be applied to the drivers in question in the order the offences were committed. If, following qualifying, more than one driver incurs a penalty under Article 23.3(e) or Article 23.5(a) preference will be given to the driver whose team first informed the technical delegate that a power unit or gearbox change will be carried out.
- d) Any driver required to start the race from the back of the grid after incurring a penalty under Article 23.3(b) will be arranged on the grid behind any driver penalised under c) above.

If more than one driver is required to start the race from the back of the grid they will be arranged in qualifying order.

- e) Any driver who incurs a penalty under Article 23.3(e) or Article 23.5(a) will take precedence over any driver whose qualifying times have been deleted for any reason.

If more than one driver falls into a single category in b) or e) above they will be arranged on the grid in the order they were classified in the previous period of qualifying or, in the case of Q1, the order they were classified in P3.

- 35.3** The starting grid will be published no less than four hours before the start of the formation lap. Any competitor whose car(s) is (are) unable to start for any reason whatsoever (or who has good reason to believe that their car(s) will not be ready to start) must inform the stewards accordingly at the earliest opportunity and, in any event, no later than one hour and fifteen minutes before the start of the formation lap. If one or more cars are withdrawn the grid will be closed up accordingly. The final starting grid will be published one hour before the start of the formation lap.
- 35.4** The grid will be in a staggered 1 x 1 formation and the rows on the grid will be separated by 16 metres.

## **36) STARTING PROCEDURE**

- 36.1** 40 minutes before the start of the formation lap the pit exit will be opened and all cars, including any that are required to start the race from the pit lane, will be permitted to leave the pit lane to cover a reconnaissance lap. Should any driver wish to cover more than one reconnaissance lap, this must be done by driving down the pit lane at greatly reduced speed between each of the laps. If a driver stops in his pit between reconnaissance laps the car may only re-join the track by being driven from the driver's garage and not from his pit stop position.

At the end of these laps all cars starting the race from the grid should stop on the grid in starting order with their engines stopped.

All drivers going to the pit exit at this time must do so at a constant speed and with constant throttle. This applies over the whole of the pit lane whether a driver is going to the pit exit from his garage or travelling through the pit lane between reconnaissance laps.

Any car which does not complete a reconnaissance lap and reach the grid under its own power will not be permitted to start the race from the grid.

- 36.2** 32 minutes before the scheduled start of the formation lap, a warning signal will be given indicating that the end of the pit lane will be closed in two minutes.

30 minutes before the scheduled start of the formation lap the end of the pit lane will be closed and a second warning signal will be given. Any car which is still in the pit lane can start from the end of the pit lane provided it got there under its own power. If more than one car is affected they must line up in the order in which they qualified. However, any car reaching the end of the pit lane after the five minute signal must start behind any car already at the pit exit.

All such cars may then join the race once the whole field has passed the end of the pit lane for the first time after the start.

- 36.3** The approach of the start will be announced by signals shown ten minutes, five minutes, three minutes, one-minute and fifteen seconds before the start of the formation lap, each of which will be accompanied by an audible warning.

When the ten minute signal is shown, everybody except drivers, officials and team technical staff must leave the grid.

- 36.4** When the three minute signal is shown all cars on the grid must have their wheels fitted, after this signal wheels may only be removed in the pit lane.

A penalty under Article 38.3(d) will be imposed on any driver whose car did not have all its wheels fully fitted at the three minute signal.

- 36.5** When the one minute signal is shown, engines should be started and all team personnel must leave the grid by the time the 15 second signal is given taking all equipment with them.

If any team personnel or team equipment remain on the grid after the 15 second signal has been shown the driver of the car concerned must start the race from the pit lane as specified in Article

36.2. A penalty under Article 38.3(d) will be imposed on any driver who fails to start the race from the pit lane.

If any driver needs assistance after the 15 second signal he must raise his arm and, when the remainder of the cars able to do so have left the grid, marshals will be instructed to push the car into the pit lane.

In either of the above cases, marshals with yellow flags will stand beside any car (or cars) concerned to warn drivers behind.

- 36.6** When the green lights are illuminated, all cars on the grid should begin the formation lap with the pole position driver leading.

When leaving the grid all drivers must respect the pit lane speed limit until they pass pole position.

Marshals will be instructed to push any car (or cars) which remain on the grid into the pit lane by the fastest route immediately after cars able to do so have left the grid. Any driver being pushed from the grid may not attempt to start the car and must follow the instructions of the marshals.

- 36.7** During the formation lap practice starts are forbidden and the formation must be kept as tight as possible.

- 36.8** Overtaking during the formation lap is only permitted if a car is delayed and cars behind cannot avoid passing it without unduly delaying the remainder of the field. In this case, drivers may only overtake to re-establish the original starting order. Any driver delayed in this way, and who is unable to re-establish the original starting order before he reaches the first safety car line, must enter the pit lane and start from the end of the pit lane as specified in Article 36.2.

A penalty under Article 38.3(d) will be imposed on any driver who fails to enter the pit lane if he has not re-established the original starting order before he reaches the first safety car line.

- 36.9** When the cars come back to the grid at the end of the formation lap (or laps, see Articles 36.14(c) and 42.5), they must stop within their respective starting grid positions, keeping their engines running.

There will be a standing start, the signal being given by means of lights activated by the permanent starter.

Once all the cars have come to a halt the five second light will appear followed by the four, three, two and one second lights. At any time after the one-second light appears, the race will be started by extinguishing all red lights.

- 36.10** Unless specifically authorised by the FIA safety delegate, during the start of a race the pit wall must be kept free of all persons with the exception of the team personnel permitted under Article 22.13, officials and fire marshals.

- 36.11** If, after returning to the starting grid at the end of the formation lap a problem arises, the following procedures shall apply:

- a) If a car develops a problem that could endanger the start the driver must immediately raise his hands above his head and the marshal responsible for that row must immediately wave a yellow flag. If the race director decides the start should be aborted the green lights will be illuminated two seconds after the abort lights are switched on, a board saying "EXTRA FORMATION LAP" will be displayed and all teams will be informed via the official messaging system. All cars able to do so must complete a further formation lap whilst the car which developed the problem is moved into the pit lane.

When leaving the grid to complete the extra formation lap all drivers must respect the pit lane speed limit until they pass pole position.

The team may then attempt to rectify the problem and, if successful, the car may then start from the end of the pit lane. Should there be more than one car involved their starting order will be determined by the order in which they reached the end of the pit lane.

Every time this happens the race will be shortened by one lap.

- b) If another problem arises which does not necessitate a delay to the start (see c) below), drivers will be asked to carry out an extra formation lap as set out in a) above. Any driver who caused the start to be aborted, and is then able to start the extra formation lap must enter the pit lane at the end of the lap and start the race as specified in Article 36.2. A penalty under Article 38.3(d) will be imposed on any driver who fails to start the race from the pit lane.
- c) If any other problem arises, and if the race director decides the start should be delayed, the following procedures shall apply:
  - i) If the race has not been started, the abort lights will be switched on, a board saying “DELAYED START” will be displayed, engines should be stopped and all teams will be informed of the likely delay via the official messaging system. Once the start time is known at least five minutes warning will be given.

Tyre changing on the grid is not permitted during such a delay.

Every time this happens the race will be shortened by one lap.
  - ii) If the race has been started the marshals alongside the grid will wave their yellow flags to inform the drivers that a car is stationary on the grid.
  - iii) If, after the start, a car is immobilised on the starting grid, it shall be the duty of the marshals to push it into the pit lane by the fastest route. Any driver being pushed from the grid may not attempt to start the car.
  - iv) Once the car is in the pit lane his mechanics may attempt to start it, if successful the driver may re-join the race. The driver and mechanics must follow the instructions of the track marshals at all times during such a procedure.

**36.12** Should Article 36.11 apply, the race will nevertheless count for the Championship no matter how often the procedure is repeated, or how much the race is shortened as a result.

**36.13** Any of the penalties under Articles 38.3 a), b), or c) will be imposed on any driver who is judged to have:

- a) Moved before the start signal is given, such judgement being made by an FIA approved and supplied transponder fitted to each car, or;
- b) Positioned his car on the starting grid in such a way that the transponder is unable to detect the moment at which the car first moved from its grid position after the start signal is given.

**36.14** Only in the following cases will any variation in the start procedure be allowed:

- a) If it starts to rain after the five minute signal but before the race is started and, in the opinion of the race director teams should be given the opportunity to change tyres, the abort lights will be shown on the Line and the starting procedure will begin again at the ten minute point.
- b) If the start of the race is imminent and, in the opinion of the race director, the volume of water on the track is such that it cannot be negotiated safely even on wet-weather tyres, the abort lights will be shown on the Line and all teams will be informed of the likely delay via the official messaging system. Once the start time is known at least ten minutes warning will be given.
- c) If track conditions are considered unsuitable to start the race at the scheduled time the start of the formation lap may take place behind the safety car. If this is the case, at the ten minute signal its orange lights will be illuminated, this being the signal to the drivers that the formation lap will be started behind the safety car. At the same time this will be confirmed to all teams via the official messaging system.

When the green lights are illuminated the safety car will leave the grid and all drivers must follow in grid order, no more than ten car lengths apart, and must respect the pit lane speed limit until they pass pole position. The safety car will continue until conditions are considered suitable for racing.



Any cars that were starting the race from the pit lane may join the formation lap once the whole field has passed the end of the pit lane for the first time. Any such cars may complete all formation laps but must enter the pit lane after the safety car returns to the pits and start the race from the end of the pit lane in the order they get there.

Any other car entering the pit lane during the formation laps may re-join the track but must enter the pit lane after the safety car returns to the pits and start the race from the end of the pit lane in the order they get there.

A penalty under Article 38.3(d) will be imposed on any driver whose tyre(s) are changed for a different specification before the start of the race.

Overtaking during the lap(s) behind the safety car is only permitted under the following circumstances:

- i) If a car is delayed when leaving the grid and cars behind cannot avoid passing it without unduly delaying the remainder of the field, or
- ii) If there is more than one car starting from the pit lane and one of them is unduly delayed.

In either case drivers may only overtake to re-establish the original starting order or the order the cars at the pit exit were in when the formation lap was started.

Any driver delayed in either way, and who is unable to re-establish the original starting order before he reaches the first safety car line on the lap the safety car returns to the pits, must enter the pit lane and may only join the race once the whole field has passed the end of the pit lane after the start of the race.

A penalty under Article 38.3(d) will be imposed on any driver who fails to enter the pit lane if he has not re-established the original starting order before he reaches the first safety car line on the lap the safety car returns to the pits.

When the clerk of the course decides it is safe to call in the safety car a message "STANDING START" will be sent to all teams via the official messaging system, all FIA light panels will display "SS" and the car's orange lights will be extinguished. This will be the signal to the teams and drivers that it will be entering the pit lane at the end of that lap.

At this point the first car in line behind the safety car may dictate the pace and, if necessary, fall more than ten car lengths behind it.

Once the safety car has entered the pit lane all cars, with the exception of those required to start from the pit lane, must return to the grid, take up their grid positions and follow the procedures set out in Article 36.9 to 36.13.

If, after several formation laps behind the safety car, track conditions are considered unsuitable to start the race from a standing start, the message "ROLLING START" will be sent to all teams via the official messaging system, all FIA light panels will display "RS" and the car's orange lights will be extinguished. This will be the signal to the teams and drivers that it will be entering the pit lane at the end of that lap.

At this point the first car in line behind the safety car may dictate the pace and, if necessary, fall more than ten car lengths behind it.

As the safety car is approaching the pit entry the FIA light panels will be extinguished and replaced by waved green flags with green lights at the Line.

No driver may overtake another car on the track until he passes the Line (see Article 5.3) for the first time after the safety car has returned to the pits. The race will be deemed to have started when the leading car crosses the Line after the safety car has returned to the pits.

If, after several formation laps behind the safety car, track conditions are considered unsuitable to start the race, the message "START PROCEDURE SUSPENDED" will be sent to all teams via the official messaging system and all cars must enter the pit lane behind the safety car. The procedures described in Articles 41 and 42 must then be followed and there will be no standing start.

### **37) THE RACE**

- 37.1** During the race, drivers leaving the pit lane may only do so when the light at the end of the pit lane is green and on their own responsibility. A marshal with a blue flag and/or a flashing blue light, will also warn the driver if cars are approaching on the track.

### **38) INCIDENTS DURING THE RACE**

- 38.1** The race director may report any on-track incident or suspected breach of these Sporting Regulations or the Code (an "Incident") to the stewards. After review it shall be at the discretion of the stewards to decide whether or not to proceed with an investigation.

The stewards may also investigate an Incident noted by themselves.

- 38.2** a) It shall be at the discretion of the stewards to decide if any driver involved in an Incident should be penalised.

Unless it is clear to the stewards that a driver was wholly or predominantly to blame for an Incident no penalty will be imposed.

- b) If an Incident is under investigation by the stewards a message informing all teams which driver or drivers are involved will be sent via the official messaging system.

Provided that such a message is displayed no later than 60 minutes after the race has finished the driver or drivers concerned may not leave the circuit without the consent of the stewards.

- 38.3** The stewards may impose any one of the penalties below on any driver involved in an Incident:

- a) A five second time penalty. The driver must enter the pit lane, stop in his pit stop position for at least five seconds and then re-join the race. The relevant driver may however elect not to stop, provided he carries out no further pit stop before the end of the race. In such cases five seconds will be added to the elapsed race time of the driver concerned.

- b) A ten second time penalty. The driver must enter the pit lane, stop in his pit stop position for at least ten seconds and then re-join the race. The relevant driver may however elect not to stop, provided he carries out no further pit stop before the end of the race. In such cases ten seconds will be added to the elapsed race time of the driver concerned.

In both of the above cases the driver concerned must carry out the penalty the next time he enters the pit lane and, for the avoidance of doubt, this includes any stop the driver makes whilst a VSC or safety car procedure is in use.

- c) A drive-through penalty. The driver must enter the pit lane and re-join the race without stopping.

- d) A ten second stop-and-go time penalty. The driver must enter the pit lane, stop in his pit stop position for at least ten seconds and then re-join the race.

If any of the four penalties above are imposed upon a driver, and that driver is unable to serve the penalty due to retirement from the race, the stewards may impose a grid place penalty on the driver at his next Event.

If any of the four penalties above are imposed during the last three laps, or after the end of a race, Article 38.4(b) below will not apply and five seconds will be added to the elapsed race time of the driver concerned in the case of (a) above, 10 seconds in the case of (b), 20 seconds in the case of (c) and 30 seconds in the case of (d).

- e) A time penalty.

- f) A reprimand.

- g) A drop of any number of grid positions at the driver's next Event.

If any of the seven penalties above are imposed they shall not be subject to appeal.

- h) Disqualification from the results.
  - i) Suspension from the driver's next Event.
- 38.4** Should the stewards decide to impose either of the penalties under Article 38.3(a), (b), (c) or (d), the following procedure will be followed:
- a) The stewards will give written notification of the penalty which has been imposed to the competitor concerned and will inform all teams via the official messaging system.
  - b) With the exception of Articles 38.3(a) and (b) above, from the time the team concerned is notified of the stewards' decision via the official messaging system the relevant driver may cross the Line on the track no more than twice before entering the pit lane and, in the case of a penalty under Article 38.3(d), proceeding to his pit stop position where he shall remain for the period of the time penalty.  
  
However, unless the driver was already in the pit entry for the purpose of serving his penalty, he may not carry out the penalty if the VSC procedure is in use or after the safety car has been deployed. The number of times the driver crosses the Line behind the safety car or during the VSC procedure will be added to the maximum number of times he may cross the Line on the track.
  - c) Whilst a car is stationary in the pit lane as a result of incurring a penalty under Articles 38.3(a) or (b) above it may not be worked on until the car has been stationary for the duration of the penalty.
  - d) Whilst a car is stationary in the pit lane as a result of incurring a time penalty under Article 38.3(d) above it may not be worked on. However, if the engine stops any work necessary to re-start it may be carried out after the time penalty period has elapsed. If the team is unable to start the engine the car may then only be worked on in the driver's garage.
  - e) Any breach or failure to comply with Articles 38.4 (b), (c) or (d) may result in the car being disqualified.

## **39) SAFETY CAR**

- 39.1** The FIA safety car will be driven by an FIA appointed driver and will carry an FIA observer capable of recognising all the competing cars who is in permanent radio contact with race control.
- 39.2** Fifty minutes before the start of the formation lap the safety car will leave the pit lane and take up position at the front of the grid and remain there until the five minute signal is given. At this point (except under Article 36.14(c)) it will cover a whole lap of the circuit and take up position.
- 39.3** The safety car may be brought into operation to neutralise a race upon the order of the clerk of the course.  
  
It will be used only if competitors or officials are in immediate physical danger on or near the track but the circumstances are not such as to necessitate suspending the race.
- 39.4** When the order is given to deploy the safety car the message "SAFETY CAR DEPLOYED" will be sent to all teams via the official messaging system, all FIA light panels will display "SC" and all marshal's posts will display waved yellow flags and "SC" boards for the duration of the intervention.
- 39.5** No car may be driven unnecessarily slowly, erratically or in a manner which could be deemed potentially dangerous to other drivers or any other person at any time whilst the safety car is deployed. This will apply whether any such car is being driven on the track, the pit entry or the pit lane.
- 39.6** The safety car will join the track with its orange lights illuminated and will do so regardless of where the race leader is.
- 39.7** All competing cars must reduce speed and form up in line behind the safety car no more than ten car lengths apart. In order to ensure that drivers reduce speed sufficiently, from the time at which all teams have been sent the "SAFETY CAR DEPLOYED" message via the official messaging system until the time that each car crosses the first safety car line for the second time, drivers

must stay above the minimum time set by the FIA ECU at least once in each marshalling sector and at both the first and second safety car lines (a marshalling sector is defined as the section of track between each of the FIA light panels).

The stewards may impose either of the penalties under Article 38.3a), b), c) or d) on any driver who fails to stay above the minimum time as required by the above.

- 39.8** With the exception of the cases listed under a) to h) below, no driver may overtake another car on the track, including the safety car, until he passes the Line (see Article 5.3) for the first time after the safety car has returned to the pits.

The exceptions are:

- a) If a driver is signalled to do so from the safety car.
  - b) Under 36.14(c) or 39.12 below.
  - c) When entering the pits a driver may pass another car remaining on the track, including the safety car, after he has reached the first safety car line.
  - d) When leaving the pits a driver may overtake, or be overtaken by, another car on the track before he reaches the second safety car line.
  - e) When the safety car is returning to the pits it may be overtaken by cars on the track once it has reached the first safety car line.
  - f) Whilst in the pit entry, pit lane or pit exit a driver may overtake another car which is also in one of these three areas.
  - g) Any car stopping in its designated garage area whilst the safety car is using the pit lane (see 39.11 below) may be overtaken.
  - h) If any car slows with an obvious problem.
- 39.9** When ordered to do so by the clerk of the course the observer in the car will use a green light to signal to any cars between it and the race leader that they should pass. These cars will continue at reduced speed and without overtaking until they reach the line of cars behind the safety car.
- 39.10** Except under 39.12 below, the safety car shall be used at least until the leader is behind it and all remaining cars are lined up behind him.

Once behind the safety car, the race leader must keep within ten car lengths of it (except under 39.13 below).

- 39.11** Under certain circumstances the clerk of the course may ask the cars and the safety car to use the pit lane. In these cases, a signal to use the pit lane will be displayed before the start of the pit entry and all teams will be informed via the official messaging system, all cars must then enter the pit lane, drive through it and re-join the track. Any car entering the pit lane under these circumstances may however stop at its designated garage area. A penalty under Article 38.3(c) will be imposed on any driver who fails to enter the pit lane when required to do so.

Other than when the cars and the safety car are required to use the pit lane, no car may enter the pits whilst the safety car is deployed unless it is for the purpose of changing tyres.

- 39.12** If the clerk of the course considers it safe to do so, and the message "LAPPED CARS MAY NOW OVERTAKE" has been sent to all teams via the official messaging system, any cars that have been lapped by the leader will be required to pass the cars on the lead lap and the safety car.

This will only apply to cars that were lapped at the time they crossed the Line at the end of the lap during which they crossed the first Safety Car line for the second time after the safety car was deployed.

Having overtaken the cars on the lead lap and the safety car these cars should then proceed around the track at an appropriate speed, without overtaking, and make every effort to take up position at the back of the line of cars behind the safety car. Whilst they are overtaking, and in order to ensure this may be carried out safely, the cars on the lead lap must always stay on the racing line unless deviating from it is unavoidable. Unless the clerk of the course considers the

presence of the safety car is still necessary, once the last lapped car has passed the leader the safety car will return to the pits at the end of the following lap.

If the clerk of the course considers track conditions are unsuitable for overtaking the message "OVERTAKING WILL NOT BE PERMITTED" will be sent to all teams via the official messaging system.

- 39.13** When the clerk of the course decides it is safe to call in the safety car the message "SAFETY CAR IN THIS LAP" will be sent to all teams via the official messaging system and the car's orange lights will be extinguished. This will be the signal to the teams and drivers that it will be entering the pit lane at the end of that lap.

At this point the first car in line behind the safety car may dictate the pace and, if necessary, fall more than ten car lengths behind it.

In order to avoid the likelihood of accidents before the safety car returns to the pits, from the point at which the lights on the car are turned out drivers must proceed at a pace which involves no erratic acceleration or braking nor any other manoeuvre which is likely to endanger other drivers or impede the restart.

As the safety car is approaching the pit entry the SC boards will be withdrawn and, other than on the last lap of the race, as the leader approaches the Line the yellow flags will be withdrawn and a green flag will be displayed at the Line.

- 39.14** Each lap completed while the safety car is deployed will be counted as a race lap. However, if the procedure set out in Article 36.14(c) is followed Article 5.3(c) will apply.

- 39.15** If the safety car is still deployed at the beginning of the last lap, or is deployed during the last lap, it will enter the pit lane at the end of the lap and the cars will take the end-of-race signal as normal without overtaking.

#### **40) VIRTUAL SAFETY CAR (VSC)**

- 40.1** The VSC procedure may be initiated to neutralise a practice session or a race upon the order of the clerk of the course.

It will normally be used when double waved yellow flags are needed on any section of track and competitors or officials may be in danger, but the circumstances are not such as to warrant use of the safety car itself.

- 40.2** When the order is given to initiate the VSC procedure a message "VSC DEPLOYED" will be sent to all teams via the official messaging system and all FIA light panels will display "VSC".

- 40.3** No car may be driven unnecessarily slowly, erratically or in a manner which could be deemed potentially dangerous to other drivers or any other person at any time whilst the VSC procedure is in use. This will apply whether any such car is being driven on the track, the pit entry or the pit lane.

- 40.4** When initiated during a race, no car may enter the pits whilst the VSC procedure is in use unless it is for the purpose of changing tyres.

- 40.5** All competing cars must reduce speed and stay above the minimum time set by the FIA ECU at least once in each marshalling sector and at both the first and second safety car lines (a marshalling sector is defined as the section of track between each of the FIA light panels).

All cars must also be above this minimum time when the FIA light panels change to green (see 40.7 below).

When initiated during a race, the stewards may impose either of the penalties under Article 38.3a), b), c) or d) on any driver who fails to stay above the minimum time as required by the above.

- 40.6** With the exception of the cases listed under a) to d) below, no driver may overtake another car on the track whilst the VSC procedure is in use.

The exceptions are:

- a) When entering the pits a driver may pass another car remaining on the track after he has reached the first safety car line.
  - b) When leaving the pits a driver may overtake, or be overtaken by, another car on the track before he reaches the second safety car line.
  - c) Whilst in the pit entry, pit lane or pit exit a driver may overtake another car which is also in one of these three areas.
  - d) If any car slows with an obvious problem.
- 40.7** When the clerk of the course decides it is safe to end the VSC procedure the message "VSC ENDING" will be sent to all teams via the official messaging system and, at any time between 10 and 15 seconds later, "VSC" on the FIA light panels will change to green and drivers may continue the session or continue racing immediately. After 30 seconds the green lights will be extinguished.
- 40.8** Each lap completed whilst the VSC procedure is in use during a race will be counted as a race lap.

#### **41) SUSPENDING A RACE**

- 41.1** If competitors or officials are placed in immediate physical danger by cars running on the track, and the clerk of the course deems circumstances are such that the track cannot be negotiated safely, even behind the safety car, the race will be suspended.

Should it become necessary to suspend the race, the clerk of the course will order red flags to be shown at all marshal posts and the abort lights to be shown at the Line.

- 41.2** When the signal is given overtaking is forbidden, the pit exit will be closed and all cars must proceed slowly into the pit lane. The first car to arrive in the pit lane should proceed directly to the pit exit staying in the fast lane, all the other cars should form up in a line behind the first car.

- 41.3** Any cars unable to return to the pit lane as a result of the track being blocked will be brought back when the track is cleared and will be arranged in the order they occupied before the race was suspended.

Additionally, any cars in the pit lane or pit entry at the time the race was suspended will be arranged in the order they occupied before the race was suspended. Any cars in their garage at the time the race was suspended will be arranged at the back of the line of cars in the fast lane in the order they got there. Any such cars will be permitted to leave the pit lane when the race is resumed but must re-enter the pit lane when the safety car returns and may join the race once the last car has passed the pit exit after the re-start (also see Article 42.8).

In all cases the order will be taken at the last point at which it was possible to determine the position of all cars. All such cars will then be permitted to resume the race.

The Safety Car will then be driven to the front of the line of cars in the fast lane.

- 41.4** Whilst the race is suspended:

- a) Neither the race nor the timekeeping system will stop, however, in accordance with Article 5.3 the length of the race suspension will be added to the maximum two hour period.
- b) Cars may be worked on once they have stopped in the fast lane but any such work is restricted to that listed in i) to ix) below and must not impede the resumption of the race.
  - i) Starting the engine and any directly associated preparation.
  - ii) The addition of compressed gases (see Article 4.5 of the F1 Technical Regulations).
  - iii) The fitting or removal of permitted cooling and heating devices.
  - iv) Changes to the air ducts around the front and rear brakes.
  - v) Changes to the radiator ducts.
  - vi) Changes made for driver comfort.

- vii) Changing wheels and tyres.
  - viii) Repair of genuine accident damage, including the replacement of assemblies containing such damaged parts.
  - ix) The aerodynamic set up of the front wing may be adjusted using the existing parts. No parts may be added, removed or replaced.
- c) Only team members, officials and duly accredited television cameramen will be permitted in the pit lane.

**41.5** Unless asked to do so by the FIA, cars may not be moved from the fast lane whilst the race is suspended. A penalty under Article 38.3(c) will be imposed on any driver whose car is moved from the fast lane to any other part of the pit lane.

At all times drivers must follow the directions of the marshals.

## **42) RESUMING A RACE**

**42.1** The delay will be kept as short as possible and as soon as a resumption time is known all teams will be informed via the official messaging system, in all cases at least ten minutes warning will be given.

**42.2** Signals will be shown ten minutes, five minutes, three minutes, one minute and fifteen seconds before the resumption and each of these will be accompanied by an audible warning.

**42.3** When the three minute signal is shown all cars must have their wheels fitted, after this signal wheels may only be removed if the car has been moved out of the fast lane or during a further race suspension.

A penalty under Article 38.3(d) will be imposed on any driver whose car did not have all its wheels fully fitted at the three minute signal or has any of its wheels changed before it leaves the pit lane after the race has been resumed.

At the two minute point any cars between the safety car and the leader, in addition to any cars that had been lapped by the leader at the time the race was suspended, will be allowed to leave the pit lane and complete a further lap, without overtaking, and join the line of cars behind the safety car which left the pit lane when the race was resumed.

**42.4** When the one minute signal is shown, engines should be started and all team personnel must leave the fast lane by the time the 15 second signal is given taking all equipment with them. If any driver needs assistance after the 15 second signal he must raise his arm and, when the remainder of the cars able to do so have left the pit lane, marshals will be instructed to push the car into the slow lane. In this case, marshals with yellow flags will stand beside any car (or cars) concerned to warn drivers behind. Drivers may leave the fast lane in order to pass any car unable to leave the pit lane.

**42.5** The race will be resumed behind the safety car when the green lights are illuminated. The safety car will enter the pits after one lap unless:

- a) The race is being resumed in wet conditions and the race director deems more than one lap necessary, in which case see Article 24.4(l).
- b) All cars are not yet in a line behind the safety car.
- c) A further incident occurs necessitating another intervention.

When the green lights are illuminated the safety car will leave the pit lane and all drivers must follow, no more than ten car lengths apart.

**42.6** Overtaking behind the safety car is only permitted in the following cases:

- a) Any driver who is delayed when leaving his position in the fast lane or during the lap(s) behind the safety car may overtake to re-establish his original starting position provided he does so before he crosses the first safety car line on the lap the safety car returns to the pits. Should he fail to do so he must re-enter the pit lane and may only re-join the race once the whole field has passed the end of the pit lane after the race has been resumed.

A penalty under Article 38.3(d) will be imposed on any driver who fails to re-enter the pit lane if he has not re-established the original starting order before he reaches the first safety car line on the lap the safety car returns to the pits.

- b) Drivers may leave the fast lane in order to overtake any car delayed when leaving its position in the fast lane.

Any driver whose car has been pushed from the fast lane, in accordance with Article 42.4 above, may not overtake in order to re-establish the order before the race was suspended.

**42.7** Either of the penalties under Article 38.3(c) or (d) will be imposed on any driver who, in the opinion of the stewards, unnecessarily overtook another car during the lap (or laps).

**42.8** When the clerk of the course decides it is safe to call in the safety car a message "STANDING START" will be sent to all teams via the official messaging system, all FIA light panels will display "SS" and the car's orange lights will be extinguished. This will be the signal to the teams and drivers that it will be entering the pit lane at the end of that lap.

At this point the first car in line behind the safety car may dictate the pace and, if necessary, fall more than ten car lengths behind it.

Once the safety car has entered the pit lane all cars, with the exception of those that were in their garage at the time the race was suspended (see Article 41.3), must return to the grid, take up their grid positions and follow the procedures set out in Article 36.9 to 36.13.

**42.9** If, after several laps behind the safety car, track conditions are considered unsuitable to start the race from a standing start, the message "ROLLING START" will be sent to all teams via the official messaging system, all FIA light panels will display "RS" and the car's orange lights will be extinguished. This will be the signal to the teams and drivers that it will be entering the pit lane at the end of that lap.

At this point the first car in line behind the safety car may dictate the pace and, if necessary, fall more than ten car lengths behind it.

As the safety car is approaching the pit entry the FIA light panels will be extinguished and replaced by waved green flags with green lights at the Line.

No driver may overtake another car on the track until he passes the Line (see Article 5.3) for the first time after the safety car has returned to the pits.

Each lap completed while the safety car is deployed will be counted as a race lap.

**42.10** If, after several laps behind the safety car, track conditions are considered unsuitable to resume racing at all, the message "RE-START PROCEDURE SUSPENDED" will be sent to all teams via the official messaging system and all cars must enter the pit lane behind the safety car. The procedures set out in Article 41 and Articles 42.1-42.7 must then be followed and there will be no standing start.

**42.11** If the race cannot be resumed the results will be taken at the end of the penultimate lap before the lap during which the signal to suspend the race was given.

### **43) FINISH**

**43.1** A chequered flag will be the end-of-race signal and will be shown at the Line as soon as the leading car has covered the full race distance in accordance with Article 5.3.

**43.2** Should for any reason the end-of-race signal be given before the leading car completes the scheduled number of laps, or the prescribed time has been completed, the race will be deemed to have finished when the leading car last crossed the Line before the signal was given.

Should the end-of-race signal be delayed for any reason, the race will be deemed to have finished when it should have finished.

**43.3** After receiving the end-of-race signal all cars must proceed on the circuit directly to the post-race parc fermé without any unnecessary delay, without receiving any object whatsoever and without any assistance (except that of the marshals if necessary).



An exception to Article 22.4 and to the above will be made for the winning driver who may perform an act of celebration before reaching parc fermé, provided any such act:

- a) Is performed safely and does not endanger other drivers or any officials.
- b) Does not call into question the legality of his car.
- c) Does not delay the podium ceremony.

Any classified car which cannot reach the post-race parc fermé under its own power will be placed under the exclusive control of the marshals who will take the car to the parc fermé.

#### **44) POST RACE PARC FERMÉ**

- 44.1 Only those officials charged with supervision may enter the post-race parc fermé. No intervention of any kind is allowed there unless authorised by such officials.
- 44.2 When the parc fermé is in use, parc fermé regulations will apply in the area between the Line and the parc fermé entrance.
- 44.3 The parc fermé shall be secured such that no unauthorised persons can gain access to it.

#### **45) CLASSIFICATION**

- 45.1 The car placed first will be the one having covered the scheduled distance in the shortest time, or, where appropriate, passed the Line in the lead at the end of two hours (or more under Article 5.3). All cars will be classified taking into account the number of complete laps they have covered, and for those which have completed the same number of laps, the order in which they crossed the Line.
- 45.2 Cars having covered less than 90% of the number of laps covered by the winner (rounded down to the nearest whole number of laps), will not be classified.
- 45.3 The official classification will be published after the race. It will be the only valid result subject to any amendments which may be made under the Code and these Sporting Regulations.

#### **46) PODIUM CEREMONY AND POST EVENT PRESS CONFERENCE**

- 46.1 The drivers finishing the race in 1st, 2nd and 3rd positions and a representative of the winning constructor must attend the prize-giving ceremony on the podium and abide by the podium procedure set out in Appendix 3 (except Monaco); and immediately thereafter make themselves available for a period of one hour and 30 minutes for the purpose of television unilateral interviews and the press conference in the media centre.

## APPENDIX 1

### INFORMATION REQUIRED BY THE FIA 90 DAYS BEFORE AN EVENT

#### PART A.

1. NAME AND ADDRESS OF THE NATIONAL SPORTING AUTHORITY (ASN).
2. NAME AND ADDRESS OF THE ORGANISER.
3. DATE AND PLACE OF THE EVENT.
4. START TIME OF THE RACE (AS AGREED WITH THE PERMANENT BUREAU OF THE FIA FORMULA ONE COMMISSION).
5. ADDRESS AND TELEPHONE, FAX AND TELEX NUMBERS TO WHICH ENQUIRIES CAN BE ADDRESSED.
6. DETAILS OF THE CIRCUIT, WHICH MUST INCLUDE:
  - LOCATION AND HOW TO GAIN ACCESS.
  - LENGTH OF ONE LAP.
  - NUMBER OF LAPS FOR RACE.
  - DIRECTION (CLOCKWISE OR ANTI-CLOCKWISE).
  - LOCATION OF END OF THE PIT LANE IN RELATION TO LINE.
7. PRECISE LOCATION AT THE CIRCUIT OF:
  - STEWARDS' OFFICE.
  - RACE DIRECTOR'S OFFICE.
  - FIA OFFICE.
  - PARC FERMÉ.
  - DRIVERS' AND COMPETITORS' BRIEFING.
  - WINNER'S PRESS CONFERENCE.
8. LIST OF ANY TROPHIES AND SPECIAL AWARDS.
9. THE NAMES OF THE FOLLOWING OFFICIALS OF THE EVENT APPOINTED BY THE ASN:
  - STEWARDS.
  - CLERK OF THE COURSE.
  - SECRETARY OF THE EVENT.
  - CHIEF NATIONAL SCRUTINEER.
  - CHIEF NATIONAL MEDICAL OFFICER.

## **PART B.**

1. FIA STEWARDS.
2. RACE DIRECTOR.
3. SAFETY DELEGATE.
4. PERMANENT STARTER.
5. MEDICAL DELEGATE.
6. TECHNICAL DELEGATE.
7. MEDIA DELEGATE.
8. STEWARD'S ADVISER.  
AND, IF APPROPRIATE.
9. A REPRESENTATIVE OF THE PRESIDENT OF THE FIA.
10. A DEPUTY RACE DIRECTOR
11. AN OBSERVER.
12. A SAFETY CAR DRIVER.
13. A MEDICAL CAR DRIVER.



APPENDIX 2

FEDERATION INTERNATIONALE DE L'AUTOMOBILE
ENTRY FORM FOR THE FIA FORMULA ONE WORLD CHAMPIONSHIP

Entry for the ..... FIA Formula One World Championship

THE APPLICANT

Full company name .....
Country of incorporation .....
Registration number .....
Date of incorporation .....
Country of residence .....
Registered office .....

Trading Address .....

Tel .....
Fax .....
E-mail .....
Directors .....

Team Principal .....

Team Manager .....

Authorised Representatives with sole power to bind the company

Title .....
Title .....
Title .....

**CONSTRUCTOR'S DETAILS OF ENTRY**

National Competitor Licence .....  
Issued By .....  
Number .....  
Team Name .....

(Which must include the name of the chassis)

We hereby apply to enter the ..... FIA Formula One World Championship and we undertake to participate in each and every Event:

- i) With the make of the car referred to below which we nominate for the purpose of Article 8.2 c) & d) of the Sporting Regulations

Name of the Chassis .....

Make of the Engine .....

- ii) With the drivers referred to below which we nominate for the purpose of Articles 8.2e) & 26.1 of the Sporting Regulations

Driver of the first car [or\*] .....

Licence Number ..... Issued By .....

Driver of the second car [or\*] .....

Licence Number ..... Issued By .....

(tick only if applicable)

[ ]\* We wish to nominate the name of the driver of the first car subsequent to this application. For this purpose we expressly agree to be bound by the provisions of Article 8.2(e) of the Sporting Regulations.

[ ]\* We wish to nominate the name of the driver of the second car subsequent to this application. For this purpose we expressly agree to be bound by the provisions of Article 8.2(e) of the Sporting Regulations.

We confirm that we have read and understand the provisions of the International Sporting Code, the Formula One Technical Regulations and the Formula One Sporting Regulations. We agree to be bound by them (as supplemented or amended) and further we agree on our own behalf and on behalf of everyone associated with our participation in the FIA Formula One World Championship to observe them.

We declare that we have examined this Entry Form and that the information given is true, correct and complete and we undertake to pay the entry fee, calculated in accordance with Appendix 7, to the FIA no later than 10 December of the year prior to the year to which this application relates. We understand and agree that any changes must be notified to the FIA in writing within 7 days of such change to allow reappraisal of the entry.

SIGNED BY (SIGNATURE)  
(PRINT NAME OF THE PERSON SIGNING)  
Being a person duly authorised to sign for and on behalf of  
(PRINT FULL NAME OF APPLICANT)

Date

**We confirm that we have read the Data Protection Notice at the end of this document and made this available to the individuals referred to in this document**

**TO BE COMPLETED BY THE FIA**

Super Licence Number Driver n°1

Super licence Number Driver n°2

Date of Acceptance

\*\*\*\*\*

**DATA PROTECTION NOTICE**

The security of your personal data is extremely important to the Fédération Internationale de l'Automobile of 8, place de la Concorde, 75008, Paris, France ("**FIA**", "**us**", "**we**", "**our**"). You may be aware of the General Data Protection Regulation ((EU) 2016/679) ("**GDPR**"), which now requires us to set out the following details regarding how we collect and use your personal data.

As part of your team's entry into the FIA Formula One World Championship (the "**Championship**"), you may provide to us, and we may collect from you, certain personal data (as defined in applicable data privacy laws, including the GDPR ("**Privacy Laws**")), including, without limitation the information set out in this form (being your name, contact details and driver's licence number, as applicable) and certain other information, including biographical information, such as your images.

We are the data controller in respect of your personal data and will handle your data in accordance with our obligations under the Privacy Laws. We will use this information solely in connection with administering the Championship and exploiting the rights granted to us pursuant to any separate agreement entered into with your team or otherwise. We are entitled to do so on the basis of our legitimate interests, namely to enable us to operate the Championship and promote and exploit your participation in the same.

We may share your personal data with FIA Switzerland in connection with these purposes (Switzerland being recognized by the European Commission as providing adequate levels of protection for data

protection). We may also be required to disclose your personal data if we are required to do so by law or pursuant to a binding regulatory request (in such circumstances, such disclosure will at all times be solely to the extent required by law or the applicable regulatory request).

We will retain your personal data on our systems only for as long as is strictly necessary for the purposes for which such data was originally collected (as referred to above), and thereafter for such longer period as may be required by law.

### **Your rights**

In certain situations, you are entitled to: (i) request access to your personal data; (ii) request that we correct your personal data; (iii) request that we erase your personal data; (iv) object to processing of your personal data where we are relying on a legitimate interest; (v) request the restriction of processing of your personal data; (vi) request the transfer of your personal data to a third party; or (vii) where you have provided your consent to certain of our processing activities, you may withdraw your consent at any time (but please note that we may continue to process such personal data if we have legitimate legal grounds for doing so).

To exercise these rights please contact: [dpo@fia.com](mailto:dpo@fia.com)

Please note that you also have a right to complain to the French or Swiss Data Protection Supervisory Authority (respectively, CNIL or FDPIC) if you are concerned about the way we are handling your personal data.

## APPENDIX 3

### PODIUM CEREMONY

#### 1. MASTER OF CEREMONIES

A master of ceremonies will be appointed by the FIA to conduct and take responsibility for the entire podium ceremony.

#### 2. PODIUM

##### a) ROSTRUM AND DAIS

The dimensions of the dais must follow those found in the FIA graphic design manual.

The distance between the edge of the winner's dais and the retaining barrier of the podium should be a minimum of 120cm to provide a walkway.

The place where each person presenting a trophy should stand must be marked on the floor of the podium.

Trophies must be laid out on a single table on one side of the podium. The champagne must be on the dais.

##### b) FLAGS

Olympic Games style "flat flags" should be used. There must be a minimum space of 50cm behind the podium structure for the flag men.

##### c) FLOOR

The podium and steps should be covered in green or dark blue carpet.

#### 3. ANTHEMS

a) The national anthem of the winning driver and winning team will be played. The Nationalities of the teams and drivers will be notified to the organiser by the FIA and will accord with Article 9.5.2 of the Code.

b) A suitable sound system should be installed to ensure that national anthems, (initiated by the master of ceremonies) are clearly heard with an audio link to the TV broadcast.

c) When the champagne shower begins, music should be played. This should not start until the presenters have left the podium.

d) A commentary of the podium ceremony should be broadcast to the general public from the platform erected for the TV cameras.

#### 4. TROPHIES

Only 4 trophies will be presented during the podium ceremony:

a) Winning driver.

b) A representative of the winning constructor.

c) Second driver.

d) Third driver.

The trophies, which must be in the form of traditional cups, will be provided by the ASN and must show:

a) The FIA Formula 1 World Championship official logo.



- b) The official name of the event.
- c) The driver's position.

The height of the trophies shall be:

- a) Winner's and constructor's trophies - no less than 50cm and no more than 65cm high.
- b) Second and third drivers' trophies - no less than 35cm and no more than 45cm high.

The maximum weight per trophy must not exceed 5kg. Trophies must be of a design that is capable of being handled and transported without damage.

#### **5. SCENARIO (See attached designs)**

- a) Only three persons should be on the podium to present the trophies. In exceptional circumstances, the master of ceremonies may increase this to four.
- b) No police, bodyguards or persons not authorised by the master of ceremonies are allowed on the podium.
- c) The master of ceremonies will inform the TV and public address commentator of the names of the persons presenting the trophies.
- d) The master of ceremonies must be on the side of the podium where the trophies are located. The persons presenting the trophies will be on the other side. The master of ceremonies will hand the trophies to those presenting them.

#### **6. TELEVISION**

The ideal position for the TV camera is immediately opposite the podium and at the same height. Under no circumstances must there be a TV camera man on the podium.

#### **7. PARC FERME**

The parc fermé must be positioned as close as possible to the podium, preferably immediately below, with direct access.

As soon as all the cars have crossed the Line, a course car must go round the track to collect any driver who has finished in the first three but is stranded on the circuit.

The drivers must not be delayed in the parc fermé. One person, nominated by the master of ceremonies and in radio contact with him, will be responsible for moving the drivers from the parc fermé to the podium without delay. Only persons authorised by the master of ceremonies may make contact with the drivers before the end of the TV unilateral interviews.

#### **8. UNILATERAL ROOM**

The unilateral room must be adjacent to the podium. The master of ceremonies will see that the drivers proceed there immediately after the podium ceremony. The room should be suitably ventilated (or air conditioned if the temperature is above 25°C).

#### **9. PRESS ROOM**

Immediately after the TV interviews, drivers must go to the press room for interviews.

#### **10. WATER + TOWELS**

3 bottles of water must be put in the parc fermé (no identification).

3 bottles of water must be put in the unilateral room (no identification).

3 towels must be available in the unilateral room.

No other drinks are permitted in the parc fermé or unilateral room.

## **11. PODIUM PROTOCOL (except for Monaco)**

The winning driver's award will be presented by the head of state or the prime minister of the host country or the FIA President. If such a person is not available, a comparable person within the host country, or a dignitary of international status should be invited. Should neither of these be available, the President of the ASN will be invited to present the winner's trophy.

The constructor's award must be presented by the official representative of the naming rights sponsor of the Event. In the absence of a naming rights sponsor, the master of ceremonies will select a suitable person.

The second and third drivers' awards must be presented by the President of the ASN, unless local circumstances require an additional dignitary to be present. In this case, the latter will present the second award and the ASN president the third. Should the ASN president be unavailable or presenting the winning driver's trophy, the master of ceremonies will select a suitable replacement.

An invitation will be issued to each person attending the podium ceremony, with clear instructions as to the procedure to follow.

## APPENDIX 4

### 2020-2025 POWER UNIT HOMOLOGATION

- 1) Any Power Unit Manufacturer intending to homologate a power unit for use by a team(s) in the 2020 to 2025 Championships must submit to the FIA a power unit homologation dossier on or before 28 February of the year in which it intends to supply such power unit for use during the Championship period indicated. Each Power Unit Manufacturer shall be permitted to present only one homologation dossier with respect to the period and the homologation granted will be valid until the end of the 2025 Championship.
- 2) The homologation dossier must include:
  - a) Details of all the parts described as “INC” in the “App. 4 PU homol.” column of Appendix 2 of F1 Technical Regulations.
  - b) All documents required in Article a) of Appendix 9 of these regulations.
- 3) The power unit supply perimeter listed in Appendix 9A of these Regulations shall be supplied at the maximum price of fifteen million euros. The supply of additional goods or services not listed in Appendix 9A (which shall be agreed between the manufacturer and the team) shall incur additional charges, the amount of which shall be based on the usages and practices generally recognised and respected in the market for the supply of parts and services in the Championship. In case of any alleged material breach or alleged material failure to comply with the provisions of this Article 3), the FIA shall be entitled to engage proceedings before the FIA International Tribunal against the manufacturer. In the case that, in accordance of the provisions of the Code and of the Judicial and Disciplinary Rules, the International Tribunal rules that the manufacturer has materially breached or materially failed to comply with this Paragraph 3), the International Tribunal may impose on the manufacturer concerned, [to the exclusion of any other sanction it may have the power to impose, a fine (the amount of which shall be no more than fifteen million euros] and shall be determined, on a case by case basis, depending on the merits and circumstances of the applicable case). During its first two Championship seasons (or part thereof), whether consecutive or not, within the [2014-2025] period, a manufacturer will not be required to comply with the maximum price as set out above.
- 4) A power unit will be homologated for the relevant team once a complete homologation dossier has been submitted by the relevant manufacturer and has been approved by the FIA, such approval to take place within 14 days from the submission of the homologation dossier.
- 5) With reference to Article 23.3 of the F1 Sporting Regulations, each manufacturer may supply only the maximum number of specifications of PU elements as set in the second table of Appendix 2 of F1 Technical Regulations during 2020 to 2025 Championships, except for any changes permitted by the FIA in accordance with the procedure set out in 6) below.

Any changes to the homologation dossier during the homologation period must be approved by the FIA before the first use of a new or modified homologated PU at an Event. Applications must be made to the FIA Technical department with all necessary supporting information. Wherever practical, the revised homologation dossier must be submitted at least 14 days before the requested date of homologation.

No changes to any of the elements listed above may have a significant impact on power unit installation in the car. Changes to any of the elements listed above that may have an impact on power unit installation in the car must be submitted to the FIA and approved by the FIA before the modifications are carried out.

An amendment to the published regulations that occurs after the start of the homologation may be used to modify components concerned by that amendment without this counting as a change of specification, but only if the modifications are directly linked to the amendment.

If the specification of any of the above elements is changed during the Championship seasons a manufacturer may revert to the previous specification for the sole purposes of reliability, subject to the agreement of the FIA Technical Department at its absolute discretion.

- 6) A manufacturer may apply to the FIA during the course of the homologation period to carry out modifications to the homologated power unit elements for the sole purposes of reliability, safety, cost saving, car installation and supply issues.

Applications must be made in writing to the FIA Technical Department and must provide all necessary supporting information. The FIA will circulate the correspondence to all manufacturers for comment. For modifications affecting car installation, a prerequisite is that the teams using this Power Unit will have obtained a permission to modify the components in question under the token system process defined in Article 22 of the Technical Regulations. Requests must follow the procedure detailed in the Appendixes to these regulations. If the FIA is satisfied, in its absolute discretion, that these changes are acceptable, they will confirm to the manufacturer concerned that they may be carried out.

- 7) No manufacturer may homologate more than the number of specifications of fuel and engine oil as set in the **second table** of Appendix 2 of F1 Technical Regulations during 2020 to 2025 Championships. If fuels and engine oils from an alternative supplier are preferred by a customer team the same number of additional specifications of engine oil and fuel may be homologated per customer team. A change of supplier is possible but this change will be considered as a change of specification.
- 8) The homologation will be valid for the 2020 to 2025 Championships only, starting on the date of approval by the FIA and ending on the start of the first Competition of the 2026 Championship.
- 9) Each manufacturer shall submit a homologation dossier for each team it intends to supply. There may only be one homologation dossier per team. With the exception of Power Unit wirings, and fuel specification and engine oil specification if an alternative supplier is preferred by the customer team, the dossier for each team supplied by a manufacturer must be identical at any given time.

All power units supplied by a single manufacturer must also be operated in the same way, they must therefore be:

- i) Identical according to the dossier for each team, and;

Unless a team informs the FIA Technical Department that they have declined any of the following, they must be:

- ii) Run with identical software for PU control and must be capable of being operated in precisely the same way.
- iii) Run with identical specifications of engine oil and fuel, unless an alternative supplier is preferred by a customer team (see paragraph 7) above).

- 10) Any power unit supplied to a team under Article 23.4 b) of the F1 Sporting Regulations will not be considered within the scope of Paragraph 9) above. Any such power unit will be operated as determined by the FIA Technical Department.
- 11) A manufacturer may apply to the FIA Technical Department during the course of the homologation period to carry out modifications to its homologated power unit.

Any changes to the homologation dossier during the homologation period must be approved by the FIA Technical Department before the first use of a new or modified homologated power unit at a Competition. Applications must be made to the FIA Technical Department with all necessary supporting information. Wherever practical, the revised homologation dossier must be submitted at least 14 days before the requested date of homologation.

With reference to Article 34.6 of F1 Sporting Regulations, if a power unit conforming to a revised dossier is subsequently replaced by a power unit conforming to a previous dossier after qualifying practice, the replacement power unit will not be considered similar in design, mass, inertia or function.

- 12) All power units must be delivered such that the seals required under Article 23.3 d) of F1 Sporting Regulations can be fitted. Both the manufacturer and users of a homologated power unit must take whatever steps are required at any time by the FIA Technical Department, in its absolute discretion, to demonstrate that a power unit used at a Competition is in conformity with the corresponding power unit homologation dossier.

## **APPENDIX 5**

### **REGULATIONS OF THE DRIVER CONTRACT RECOGNITION BOARD**

("Reserved for the exclusive use of competitors entered in the FIA Formula One World Championship")

## APPENDIX 6

-Void-

**NOTE: The previous function of Appendix 6 is replaced by Article 22 in the 2021 Technical Regulations.**

## APPENDIX 7

### ENTRY FEES FOR THE 2021 FIA FORMULA ONE WORLD CHAMPIONSHIP

- i) The winner of the 2020 World Championship for Constructors will be required to pay a basic fee of US\$556,509<sup>1</sup> plus US\$6,677<sup>1</sup> for each point gained in the 2020 World Championship for Constructors.
- ii) Every other competitor will be required to pay a basic fee of US\$556,509<sup>1</sup> plus US\$5,563<sup>1</sup> for each point that competitor gained in the 2020 World Championship for Constructors.

In both cases the basic fee is due at the time of the application and the remainder by 10 December of the year prior to the year to which this application relates.

<sup>1</sup> Indexed by US CPI (1.9%)



## APPENDIX 8

### AERODYNAMIC TESTING RESTRICTIONS (ATR)

The ATR, and the definitions and rules which will apply to aerodynamic testing, are as follows:

#### 1. General conditions

- a. Restricted Aerodynamic testing is the testing by a Competitor or any Associate of a competitor and/or by any contracted party of a competitor or of any Associate of a competitor or any external entity working on behalf of a competitor or for its own purposes and subsequently providing the results of its work to a competitor in a test environment or numerical simulation of a representation of an F1 car or sub-component in order to measure, observe or infer any forces, displacements, pressures or air flow direction resulting directly or indirectly from the incident air flow.
- b. A three-dimensional representation of an F1 car or sub-component subject to Restricted Aerodynamic testing, defined either physically or digitally, will be considered for the purposes of this Article as a Restricted Aerodynamic Test Geometry (RATG) and save for where specifically permitted by this Article may not be added to, removed from, morphed or modified. In order to prevent Restricted Aerodynamic testing methodologies intended to subvert any limits on the number or nature of RATGs permitted under the ATR the following will apply:
  - i. The purpose of a RATG is to allow aerodynamic assessment of a single new geometry, with aerodynamic dependency maintained throughout the simulated flow field. Any attempt to derive aerodynamically independent results for subcomponents of a RATG, either in the initial simulation or test, or by subsequent modification to the simulation or test conditions, is not permitted. Any attempt to use boundary conditions or similar to infer the effect of combining RATGs, without accruing a further RATG, is also not permitted. The use of boundary conditions cannot be exploited to simulate the effect on the fluid of a geometry which is different from the RATG in use.
  - ii. If the representation contains external bodywork surfaces on both sides of the centre plane of the car these must be symmetrical about this plane. Local exceptions for parts directly associated with the cooling of the power unit, or changes of car attitude allowed under section 3d (roll and steer) will be permitted.
  - iii. Excluding permitted degrees of freedom for RWTT and changes in RCFDs, the substitution or replacement of any part of a RATG with a non-F1 car geometry, or the placement of any physical or computational boundary condition or solver setting, that simulates or attempts to simulate a modification to this RATG will be considered as a new RATG.
  - iv. Sections (or sub-models) of a RATG which is used for RCFDs may be created by removing geometry from the parent RATG and placing boundary conditions of velocity or pressure profiles generated entirely from the same RATG to replicate the flow field resulting from the geometry that has been removed. This will not be considered as a new RATG provided any geometry within the section is identical to the parent RATG. Exceptionally where downstream portions of the RATG are removed these may be replaced with a single geometry approved for this purpose by the FIA.
  - v. Sections (or sub-models) of a RATG used for RCFDs and created by removing geometry from a parent RATG may not be subsequently geometrically modified without being considered as a new RATG. Any boundary conditions of velocity

or pressure profiles added in the process of creating the section (or sub-model) and used to represent the geometry that has been removed may not be changed to boundary condition or profiles other than those generated from the parent RATG without being considered a new RATG.

- vi. If the representation contains surfaces that represent components of more than one F1 car then it shall be construed as the equivalent number of RATGs. Excluding permitted degrees of freedom for RWTT and changes in RCFDs, any subsequent modification of the relative position of the representations of F1 cars will be considered as new RATGs equivalent to the number of F1 car representations.
  - vii. A baseline RATG is defined as a reference chosen from time to time that serves for comparison purposes.
- c. An Aerodynamic Testing Period (ATP) is a period of consecutive calendar weeks for the purposes of evaluation of the limits within this Article. As soon as one ATP ends a new one begins, with no gaps between them.

There will be 6 ATPs in any year. The dates of these periods will be as follows:

- i. Period 1 will start on 1 January and finish at the end of week 9.
- ii. Periods 2, 3 and 5 will run for exactly 8 weeks each.
- iii. Period 4 will run for 10 weeks, comprising the Summer Factory Shutdown described in Article 9.2
- iv. Period 6 will end on the 31 December

For the above definition, weeks are assumed to start on a Monday and week 1 is the first week of four days or more in the calendar year.

In exceptional circumstances the FIA may revise these ATP at its absolute discretion in accordance with changes or events likely to affect these restrictions.

- d. In the context of this Article the words bodywork, sprung suspension and brake system air ducts will have the same definition as those provided by Articles 1.4, 1.13, 11.4, 11.5 and 11.6 of the of the 2021 F1 Technical Regulations and Article 3 of the of the 2022 F1 Technical Regulations.

Any data acquired during Restricted Aerodynamic testing may only be available to the competitor that acquired it through use of the restricted aerodynamic testing available to it in accordance with the limits in this Article.

## **2. Restricted Wind Tunnel Testing (RWTT)**

RWTT may only be carried out in wind tunnels which have been nominated by the competitor to the FIA. Each competitor may nominate only one wind tunnel for use in any one twelve month period and declare it in writing to the FIA. For a new entrant, the nomination must be made no later than 7 days after the date on which it officially becomes a competitor. No re-nominations may be made for at least 12 months. Nominations should include the facility location, unique identification of the wind tunnel and the scale of model and RATG to be used. The FIA will consider, at its absolute discretion, earlier or temporary nominations if a wind tunnel already nominated by a team suffers a long term failure or for the purpose of evaluating alternative wind tunnels. If a different facility is to be used or if the existing facility is changed or upgraded, other than for routine maintenance or replacement, then a new declaration must be submitted to the FIA within one month of the change or at the time of submission of a testing period report whichever is earlier.

For the avoidance of doubt, any RWTT carried out on behalf of or for the benefit of the competitor by an Associate, a contracted party of the competitor or of any Associate of the

competitor or any external entity working on behalf of the competitor or for its own purposes and subsequently providing the results of its work to a competitor must take place in the wind tunnel nominated by the competitor.

- a. The limits for RWTT will be the number of runs of RWTT, the amount of wind tunnel occupancy time and wind tunnel wind-on time.
  - i. During RWTT a single run will be deemed to commence each time the wind tunnel air speed rises above 5m/s and will end the first time thereafter it falls below 5m/s.
  - ii. During RWTT, once the wind tunnel air speed rises above 5m/s the RATG must remain fixed and unmodified until the wind tunnel air speed returns below 1m/s.
  - iii. Between runs of RWTT detail changes to the RATG and model are permitted.
- b. Wind on time is defined as the amount of time in hours summed over the ATP, where the wind tunnel air speed exceeds 15m/s for RWTT.
- c. During RWTT, the first shift of occupancy will be deemed to commence the first time the wind tunnel air speed is above 5m/s on a given calendar day, and will end at a time, declared by the competitor, when the wind tunnel air speed falls below 5m/s on the same calendar day. A second shift of occupancy will be deemed to commence the first time the wind tunnel air speed is above 5m/s following the end of the first shift of occupancy (on the same calendar day) and will end, either when the wind tunnel air speed falls below 5m/s for the last time on the same calendar day or, at the end of the calendar day in the event a run is still in progress. Only two shifts of occupancy may be carried out in any one calendar day.
- d. In the event of a demonstrated wind tunnel failure or other Force Majeure the FIA will consider, at its absolute discretion, permitting additional occupancy to be used to compensate for that which is lost as a result.
- e. For the avoidance of doubt any RWTT performed for the competitor by any Associate of the competitor and/or by any contracted party of the competitor or of any Associate of the competitor or any external entity working on behalf of the competitor or for its own purposes and subsequently providing the results of its work to the competitor during an ATP will be subject to these same limits as if the tests were performed by the competitor.

### **3. RWTT Permitted technology**

The following restrictions apply during RWTT:

- a. Only wind tunnels that use air at atmospheric pressure as the test fluid are permitted. Other than rotations of the RATG and model or ground plane about the yaw axis, designs which attempt to create curved flow conditions relative to the RATG are not permitted. For closed section wind tunnels adaption of vertical walls and the ceiling to improve air flow uniformity is permitted.
- b. No RWTT may be carried out using a scale model and RATG which is greater than 60% of full size neither may it be carried out at a wind tunnel air speed exceeding 50m/s measured relative to the scale model and RATG. Furthermore, during restricted wind tunnel testing the magnitude of the rate of change of the wind tunnel air speed measured relative to the scale model and RATG must be less than  $4.5\text{m/s}^2$ . The rate of change of the wind tunnel air speed will be defined as the derivative of wind tunnel air speed and smoothed using a moving average filter, centred on each sample, of period 0.5 seconds during each wind tunnel air speed ramp up and ramp down phase. These phases are defined as the periods when the wind tunnel air speed is varying between 15m/s and 95% of the maximum wind tunnel air speed during a run.

- c. Only one model and RATG may be used per run. A maximum of two models may be used and a single model change made per Competitor per 24 hour period. For the avoidance of doubt, a model in this context is defined by its underlying spine, motors and sensors.
- d. The only permitted degrees of freedom of the model and RATG during a run of RWTT are:
  - i. Wheel rotation about the wheel axis
  - ii. Changes of ride height and roll angle relative to the ground plane and associated articulation of the elements representing the RATG suspension
  - iii. Changes of load applied to wheels through the elements representing the RATG suspension
  - iv. Steering of the front wheels
  - v. Changes of yaw angle relative to the incident air flow and/or ground plane
  - vi. Simulation of differing exhaust flow
  - vii. Adjustment of the flap angle of the front wing
  - viii. Adjustment of the incidence of the rearmost and uppermost element of the top rear wing
  - ix. Adjustment or operation of sensors
- e. Changes of attitude of the model and RATG may not occur at a rate that requires changes of ride height at the front or rear axle centreline greater than the scale equivalent of 0.033 m/s on the full size F1 car and/or rotation about the yaw or roll axes at a rate greater than 1.0 deg./s.
- f. Where non-rigid wind tunnel tyres are used for RWTT these may only be produced by the nominated tyre supplier. Furthermore, devices that actively modify the shape of the tyre during RWTT other than as a result of vertical and lateral loads reacted at the contact patch are not permitted. Tyre pressure control is permitted but the complete wheel must contain only a single fixed internal gas volume.

#### 4. Restricted CFD (RCFD) simulations

RCFDs are Computational Fluid Dynamics (CFD) simulations by a competitor or any Associate of a competitor and/or by any contracted party of a competitor or of any Associate of a competitor or any external entity working on behalf of a competitor or for its own purposes and subsequently providing the results of its work to a competitor of flows that are gaseous in the case of a F1 car and are not classified as power unit simulations. Any simulation of flows contained within the power unit cooling or lubrication systems, air, air/fuel mixtures, combustion process or products of combustion from a boundary commencing at the power unit's atmospheric air intake ducts, passing through the power unit and finishing at the exit of the exhaust system will be classified as a power unit simulation.

For the avoidance of doubt, if any CFD simulation (other than the power unit simulation defined above) reveals information to a competitor or to an Associate of the competitor whether directly, via a contracted party or via an external entity working on behalf of a competitor or for its own purposes and subsequently providing the results of its work to a competitor, about flows that are gaseous on a F1 car then it is a RCFD simulation. For example, any CFD simulations conducted at scales other than 1:1 or using non-gaseous fluids are still RCFDs as they reveal information about flows that are gaseous on the full size F1 car.

- a. A RCFDs refers to the pre-processing, the solver part or parts of the simulation process, and the post processing of the results of the simulation.
  - i. Pre-processing refers to the meshing, decomposition and setup of the simulation.

- ii. Solver refers to the program or programs that compute the solution of the equations describing the flow including any extension of the simulation or simulations involving additional numerical computation (for example but not limited, to adjoint computation).
- iii. Post processing refers to the generation of representations of the flow solution that require numerical processing, for example but not limited to the computation of pressure coefficients, velocity, shear stress, flow streamlines or vorticity. Generation of videos or images displaying this information and any form or application of machine learning, deep learning or artificial intelligence (AI) based on simulation results is included in this definition.

During or prior to RCFDs the only permitted changes to the RATG are its attitude (ride height, roll, yaw, steer and associated tyre shape or contact patch) and front wing flap angle or rear wing rearmost and uppermost element incidence. For avoidance of doubt, should any other changes be made to the RATG during any stage or pause in process ii. above (such as a morphing, or the addition or substitution of any boundary condition with the intent to replicate an alternative geometry) a new RATG must be counted each time a change occurs.

Only during the development of 2022 designs, changes to parts classified as LTC, TRC or OSC and contained entirely within the drum volume defined by article 3.13.2 and the scoop defined by article 3.13.3 of the 2022 F1 Technical Regulations and outboard of  $Y_w=0$  and only for the purpose of developing cooling are permitted.

Modifications to surface and volume mesh resolution and type provided they have the purpose of resolving and solving exactly the same geometry to a tolerance of 0.5mm scaled to a 1:1 car, as well as the extent of the far field domain, changing the simulation between a wind tunnel or track environment, initialisation, boundary conditions, solver settings and methodology are allowed. None of these modifications may be exploited to circumvent the requirements of the ATR by otherwise creating the effect of a change to the RATG. For the purposes of the ATR "far field" will be considered to be greater than 1m from any part of the F1 car or sub-component scaled to a 1:1 car.

A RATG may be used in RCFDs with geometry on only one side of the car centre plane, using a symmetric boundary condition on that plane, or with geometry on both sides of the car centre plane, subject to the geometric symmetry requirements of section 1.b.ii. Changing between these two representations will not be considered a new RATG.

The addition of non-gaseous computational regions (including but not limited to coupled structural solver elements and conjugate heat transfer solid models) are not considered changes to the RATG provided that no geometric changes to the RATG itself take place during or prior to RCFDs.

The solver part or parts of all RCFDs must only be carried out using a compute resource that contains a set of homogeneous processing units and that has been nominated by the competitor to the FIA. Each competitor must declare to the FIA in writing the compute resources that are employed for the purpose of the solver part or parts of RCFD simulations. Floating, fixed point and integer operations from the solver part or parts of RCFD simulations must only run on and may not be offloaded from these CPU cores.

- b. The declaration of a compute resource by the competitor to the FIA must include:
  - i. The computer or cluster identification, manufacturer, model and location and the manufacturer, name and full unique model number of the Processing Units.
  - ii. Number of processing unit cores in the compute resource.
  - iii. Processor speed at which each Processing Unit is configured to run at 100% CPU load (CCF). In order to prevent deliberate underclocking this value may not be

lower than the standard or base clock frequency given by the Manufacturer's specification.

Any specification of compute resource declared must be available on a non-exclusive basis to all competitors.

- c. If the compute resource is changed or upgraded then a new declaration must be submitted to the FIA within one month of the change or at the time of submission of a testing period report whichever is earlier. Such changes might include, but are not limited to, a change of the hardware specification, addition or removal of processing units or change of location of any part of the compute resource.
- d. The amount of compute resource used for the solve part or parts of all RCFDs shall be measured in Mega Allocation Unit hours (MAUh) and will be calculated as follows.

$$\text{AUh} = (\text{NCU} * \text{NSS} * \text{CCF}) / 3600$$

Where:

AUh = The total number of Unit hours allocated to a CFD solver run. An Allocation Unit hour represents the use of a unit of resource allocation for one hour (and 1 x MAUh = 1,000,000 x AUh). An Allocation Unit hour is equivalent to a core hour on a physical CPU core.

CCF = Peak Processing Unit clock frequency in GigaHertz achieved during the CFD solver run. This will be the peak frequency theoretically achievable during the run based on one of the following:

- i) The standard or base clock frequency value from the Processing Unit Manufacturer's specification (if overclocking or enhanced modes are not used in the run).
- ii) The maximum "turbo", "HPC" or other enhanced mode frequency value.
- iii) The maximum overclocked frequency value.

NCU = Number of Processing Unit cores used for the solver run. The effects of multi-threading, where simultaneous threads run on the same physical core will be ignored.

NSS = Number of solver wall clock seconds elapsed during the run. Message passing time during calculation must also be included.

All information required for auditing of this calculation must be present in the output from the run including the CCF value.

- e. Non-RCFDs can be made by a competitor for the purpose of optimising CFD methodology, provided:
  - i. They use a unique RATG which has been simulated in CFD more than 30 months ago or they use a FIA approved CAD geometry provided to all teams for this purpose.
  - ii. They are carried out using only the nominated compute resources described above.
  - iii. The unique RATG or FIA approved geometry is not changed, added to, removed from, morphed or modified. Exceptions to this are permitted for the replacement of elements of the RATG or FIA approved geometry, with boundary conditions for the purposes of developing CFD sub-modelling

methodology provided it does not attempt to simulate a modification to this RATG or FIA approved geometry.

For the avoidance of doubt, any Non-RCFDs carried out on behalf of or for the benefit of the competitor by an Associate, a contracted party of the competitor or of any Associate of the competitor or any external entity working on behalf of the competitor or for its own purposes and subsequently providing the results of its work to a competitor must also be carried out using a unique RATG which has been simulated in CFD by the competitor more than 30 months ago or an FIA approved geometry.

- f. In the case of Non-RCFDs using a unique RATG which has been simulated in CFD more than 30 months ago or Non-RCFDs using an FIA approved geometry, geometry manipulations (e.g. in CAD clean-up or meshing software) having the sole purpose of reproducing exactly the same geometry previously solved in CFD or represented in the FIA approved CAD model (to a tolerance of 1.5mm scaled to a 1:1 car) are allowed. This tolerance is introduced only to allow for unintentional and incidental changes in geometry detail caused by the revisions in software and process. For the avoidance of doubt, static changes to car attitude (ride height, roll, yaw, steer and associated tyre shape or contact patch) and front wing flap angle or rear wing rearmost and uppermost element incidence are permitted. Modifications to surface and volume mesh resolution and type as well as the extent of the far field domain including changing the simulation between a wind tunnel or track environment, are allowed.
- g. The limits for RCFDs will be revised periodically, to take account of advances in CFD simulations.

## 5. Exceptions to the Aerodynamic Testing Restrictions (ATR)

- a. Any aerodynamic test conducted by an F1 car at any Competition or any aerodynamic test conducted by an F1 car during and at track testing as defined by Article 10 of the F1 Sporting Regulations will not be considered as Restricted Aerodynamic testing.
- b. Wind tunnel testing solely for the development of power unit heat exchangers that reject heat to air, or the running of the power unit from a boundary commencing at the power unit air intake ducts, passing through the power unit and finishing at the exit of the exhaust system will not be considered as Restricted Aerodynamic testing, provided that there is no direct or indirect measurement of aerodynamic force during the test. In this context, pressure and flow measurements within a duct shall not be considered to be measurements of aerodynamic force.
- c. Steady state and dynamic engine dynamometer work with an F1 car or subcomponent will not be considered as Restricted Aerodynamic testing provided that:
  - i. The bodywork used in the test has no front wing assembly (for a car that substantially complies with the 2021 F1 Technical Regulations as described in Article 3.3 of the 2021 F1 Technical Regulations and for a car that is substantially derived from or compliant with the 2022 F1 Technical Regulations described in Article 3.9 of the 2022 F1 Technical Regulations) or rear wing assembly (for a car that substantially complies with the 2021 F1 Technical Regulations as described in Article 3.6.3 of the 2021 F1 Technical Regulations and for a car that is substantially derived from or compliant with the 2022 F1 Technical Regulations described in Article 3.10 of the F1 Technical Regulations) present.
  - ii. No devices designed to measure directly, or indirectly aerodynamic forces or flow field characteristics are installed in the facility used.
  - iii. No sensor installed on the car or subcomponent which are capable of measuring displacements, pressures or air flow direction of the external airstream resulting directly or indirectly from the incident air flow may be logged. Logging files have to be available, if required, during the independent audit inspection.

- iv. The gas flow exiting from the exhaust system is ducted away from the testing area before impacting on any bodywork component (other than the exhaust itself).
- d. Wind tunnel testing solely for the development of brake systems, wheels and tyres (Article 11 of the F1 Technical Regulations), and for development and calibration of pressure sensing instrumentation (such as pitot tubes, multi-directional probes and Kiel tubes), provided such tests do not concurrently test, or in any way provide incidental data or knowledge on, the performance or endurance of parts or systems classified as bodywork will not be considered as Restricted Aerodynamic testing.
- e. Wind tunnel testing that uses a RATG for the sole purpose of the conditioning of wind tunnel infrastructure or the development of wind tunnel infrastructure (including all of its sub-systems such as rolling road, model motion system, force balance, wind tunnel model spine, sensors etc.) and methodology may be performed and will not count towards the accumulation of runs, wind-on time, and occupancy subject to the testing complying with either of the following restrictions :
  - i. The front wing group and the rear wing group of the RATG must be removed from the wind tunnel for the duration of the testing or both must be fitted with bluff covers that have been approved for this purpose by the FIA. For a RATG that substantially complies with the 2021 F1 Technical Regulations, the front and rear wing groups will be considered to be bodywork described by Articles 3.3 and 3.6.3 of the 2021 F1 Technical Regulations respectively, whereas for a RATG that substantially complies with the 2022 F1 Technical Regulations, the front and rear wing groups will be considered to be bodywork described by Articles 3.9 and 3.10 of the 2022 F1 Technical Regulations respectively.
  - ii. A RATG is used which is more than 12 months old, or represents an FIA approved CAD geometry provided for this purpose and that no modification is made to this previously tested RATG or FIA approved geometry.

During audit competitors may be requested to demonstrate compliance of any such testing through the production of supporting data.

For the avoidance of doubt, any wind tunnel testing to develop bodywork parts other than as referred to above even without aerodynamic force measurement is within the definition of Restricted Aerodynamic testing.

## 6. Limits, Reporting, Inspection and Audit

- a. The limits for RWTT and RCFDs are as set out in the tables below where:
  - i. P is the Competitor's final position in the Constructors' Championship of the previous year for the period 1 January to 30 June, or the position in the current Constructors' Championship at the end of the day of 30 June, for the period 1 July to 31 December.
  - ii. C is the coefficient (expressed in percentage form) by which the various parameters need to be multiplied in order to obtain the individual RWTT and RCFD limits for each Competitor. For RWTT Runs and RATGs the result of the multiplication will be rounded up to the nearest integer.

### Wind tunnel limits for C=100%:

<b>RWTT Runs</b>	<b>#</b>	320
<b>RWTT Wind On Time</b>	<b>hours</b>	80

### CFD limits for C=100%:

<b>3D new RATGs used for solve or solve part of all RCFDs</b>	<b>#</b>	2000
<b>Compute used for solve part or parts of all RCFDs</b>	<b>MAUh</b>	6



RWTT Occupancy	hours	400
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**Coefficient C as a function of Championship position, P in 2021 and 2022-2025:**

Championship Classification	P	1	2	3	4	5	6	7	8	9	10+ or New Team
<b>Value of C for 2021</b>	%	90	92.5	95	97.5	100	102.5	105	107.5	110	112.5
<b>Value of C for 2022-2025</b>	%	70	75	80	85	90	95	100	105	110	115

- b. The change in ATR limits applicable to a team after the start of the first ATP will be applied pro-rata according to the time remaining in the ATP during which the change occurs. At its absolute discretion and following a request from the team the FIA may permit over or under use of available Restricted Aerodynamic testing in the ATP during which the change occurred to be amortised or absorbed over the subsequent ATP.
- c. In the event that the Championship order established at 30 June is subsequently changed following revisions to the results of a competition or competitions and therefore the limits applicable to certain competitors change, the FIA will require competitors to adjust Restricted Aerodynamic testing in order to comply with the revised limits from the start of the next ATP. At its absolute discretion the FIA may require or permit over or under use of available Restricted Aerodynamic testing in the ATP during which the change occurred to be amortised or absorbed before the end of the year.
- d. Each competitor shall report to the FIA details of its RWTT and RCFDs for the preceding ATP within 14 days of the end of that ATP. The data must be provided in the exact format specified by the FIA, details of which may be found in the Appendix to the Technical and Sporting Regulations.
- e. Digital wind tunnel image files in colour and with sufficient unobstructed field of view of the wind tunnel working section to include the entire model must be recorded, referenced to other data collected and a copy saved including a unique time stamp to at least one second accuracy for the start of each individual run.
- f. Should the FIA wish to access the images for inspection at any time they must be of adequate quality such that it is possible to use them to verify, for example, whether the front wing group (for 2021 described in Article 3.3 of the F1 Technical Regulations and for 2022 and beyond described in Article 3.9 of the F1 Technical Regulations) and rear wing group (for 2021 described in Article 3.6.3 of the F1 Technical Regulations and for 2022 and beyond described in Article 3.10 of the F1 Technical Regulations) are fitted. In the case of other runs deemed to be non-RWTT in the context of this Article, for example using a RATG greater than 12 months old, or using the approved wing covers, the images must also provide a clear visual reference to assist in verifying this aspect of the test.
- g. In order to permit RCFDs to continue across the end of an ATP an RATG that is used for solve or solve parts of RCFDs in an ATP may be used in any subsequent ATP subject to the requirements of Section 4. above, without being counted again.
- h. The complete surface mesh subject to the solver part or parts of each RCFD **and any non-RCFD that includes a representation of an F1 car** must be recorded and stored for a period of at least 24 months or until an earlier deletion is agreed by the FIA. **It must be** referenced to all data relating to the RCFDs **or non-RCFDs** including but not limited to solution monitoring data and **any boundary condition of velocity and pressure profiles applied to the far field or domain boundaries** and clearly and uniquely identifiable. It must be possible from these data to verify any changes made to the

RATG and identify each individual flow solution generated using it. It must be possible to trace RCFDs used to generate velocity or pressure profiles applied as boundary conditions in subsequent sections or sub-models of the RATG that have not been counted as new RATGs.

- i. A description correct at the start of the simulation or test of each RATG that is subject to RWTT or that is counted against the maximum permitted new RATGs for RCFDs in any ATP must be recorded with a clear description such that it is possible to easily identify the nature of the changes under evaluation. These descriptions will form part of the report required by Section 6. d) above.
- j. In order to verify the Restricted Aerodynamic testing facilities employed by the competitors and as a means of assuring common application of the restrictions set out in this Article, the FIA will arrange for independent benchmarking inspections of both wind tunnel and CFD activities to be carried out from time to time. Recommendations arising from these inspections will be incorporated into this Article.
- k. Failure to comply with the limits of the ATR by a competitor will result in a reduction of the limits that will apply to subsequent ATP or ATPs for that competitor at the FIA's absolute discretion but by a minimum reduction equivalent to 10 multiples of the amount by which the relevant limit or limits were exceeded without prejudice to further appropriate action. (For example, if a competitor carries out 325 restricted wind tunnel runs against a maximum of 320 in an ATP, that competitor shall only be permitted to make 270 restricted wind tunnel runs during the next ATP).

## **7. Movement of personnel**

No competitor may use movement of personnel involved in the development, design or testing of aerodynamic surfaces (whether employee, consultant, contractor, secondee or any other type of permanent or temporary personnel) with another competitor, either directly or via an external entity, for the purpose of circumventing the requirements of this Article. In order that the FIA may be satisfied that any such movement of staff is compliant with this Article, each competitor must inform the FIA of all relevant staff movements at the end of each ATP using the template which may be found in the Appendix to the Technical and Sporting Regulations and must demonstrate that they have implemented all reasonable measures to avoid the disclosure of information, data or designs between the competitors involved.

## APPENDIX 9

### SUPPLY OF POWER UNITS FOR THE 2021-2025 CHAMPIONSHIP SEASONS

**Preamble:** The FIA and the Commercial Rights Holder remain entitled to decide jointly that this Appendix being withdrawn at any time if the number of Power Unit Manufacturers supplying power units in a Championship season is less than 3 (three).

- a) As part of the homologation procedure of Appendix 4 of the Sporting Regulations, any Power Unit Manufacturer wishing to supply power units to a team must:
- i) notify in writing the FIA of its intention to do so no later than 1 January (or such other date as agreed in writing between all of the Power Unit Manufacturers and the FIA) preceding the year during which such power units will be supplied;
  - ii) agree to be bound by the provisions of the Code, the Technical Regulations, the Sporting Regulations, the Judicial and Disciplinary Rules and all other relevant and applicable FIA rules and/or regulations (as supplemented or amended from time to time) and further to observe them; and
  - iii) agree to be subject to the jurisdiction of the internal judicial and disciplinary bodies of the FIA.
- b) No power unit may be used in a given Championship season unless the Power Unit Manufacturer supplying such power unit accepts and adheres to the following conditions.

Each of the Power Unit Manufacturers of an homologated power unit must:

- i) provide the FIA, before 15 May (or such other date as agreed in writing between all the Power Unit Manufacturers and the FIA) of the season preceding that in which such power units are to be supplied, with the list of teams (clearly identifying the appointed “works/factory” team, if any) to which a supply agreement has been concluded for the given Championship season ;
- ii) if called upon to do so by the FIA before 1 June (or such other date as agreed in writing between all the Power Unit Manufacturers and the FIA) of the season preceding that in which such power units were to be supplied, supply at least a number of teams (“T”) equal to the following equation:

$$T = (11^1 - A) / (B - C)$$

- **A** = Total number of teams (including “works/factory” teams) having a supply agreement concluded for the given Championship season with a New Power Unit Manufacturer.
- **B** = Total number of manufacturers of homologated Power Units for the given Championship season.
- **C** = Total number of New Power Unit Manufacturers for the given Championship season.

provided that if the result contains a fraction then the fraction shall count as a full team (e.g. 11 teams divided by 4 manufacturers = 2.75, each manufacturer must, if called upon to do so by the FIA, supply at least 3 teams).

<sup>1</sup> This figure will be reviewed each year as the “total number of entered teams” will not be known until November preceding the Championship season. The figure of 11 covers supply of 12 teams or less in compliance with the calculation rule.

In doing so, the FIA will first allocate the power unit supply between the Power Unit Manufacturers that are supplying the fewest number of teams, provided that the teams without a supply agreement shall be allocated to the Power Unit Manufacturer(s) that supplies (supply) the lowest number of teams and so on. If there is more than one Power Unit Manufacturer supplying the fewest number of teams (i.e. in the same position) and/or more than one team requesting a supply the allocation between such Power Unit Manufacturers shall occur by ballot (which ballot shall be transparent and undertaken by the FIA in the presence of a representative of each of the Power Unit Manufacturer(s) and the new Customer Team concerned).

Any such allocation made by the FIA will have to be formalised by a supply agreement with the concerned team by 1 August at the latest (or such other date as agreed in writing between all the Power Unit Manufacturers and the FIA).

A New Power Unit Manufacturer will not be required to comply with this obligation of supply as set out above.

- c) The FIA shall be entitled to request a Power Unit Manufacturer to supply a team ("**New Customer Team**") with a power unit under the terms of this Appendix except if, at the date set out in Article b)i) above :
- Such team has entered into a supply agreement with a Power Unit Manufacturer for a given Championship season before the date set out in Article b)i) above, and
  - Such team has been granted a right, under a currently binding offer with a Power Unit Manufacturer, to be supplied with a power unit for such given Championship season.

Moreover, such Power Unit Manufacturer shall only be required to supply a New Customer Team if the following cumulative conditions are met. If such conditions are not met, then the Power Unit Manufacturer may, at its sole and exclusive discretion, decline the request to supply such New Customer Team and the decline of such request shall not be deemed to be a breach of the terms set out in this Appendix (however Article c) cannot be applied or interpreted by the Power Unit Manufacturer in a way which would deprive the obligation of supply as referred to in Article b) above of any effect and/or that would prevent the FIA from making and enforcing the provisions set out in Article b) above. The Power Unit Manufacturer undertakes to exercise in good faith the conditions referred to in paragraph 1 to 11 below). The teams and the Power Unit Manufacturers remain free to negotiate the terms of the supply agreement, subject to the fall-back positions set out below which shall apply should a team and a Power Unit Manufacturer fail to reach an agreement, despite negotiating in good faith.

1. For the purpose of this paragraph, supply contract only refers to the contract related to the FIA Supply Perimeter as per the Sporting and Technical Regulations and as set out in the Appendix 9A.
  - 1.1 Any supply contract entered into with the New Customer Team must be on substantially the same terms as those entered into between the Power Unit Manufacturer and the other customer teams (other than its appointed "works/factory" team) to whom it already supplies a power unit at the date of the FIA request ("**Existing Customer Team**"), other than the Price as referred to in paragraph 8 below. In particular, the Power Unit Manufacturer may impose and the team cannot refuse to sign up to any terms which at least one of its other Existing Customer Teams has agreed to and the Power Unit Manufacturer may refuse and the team cannot request the inclusion of terms which are not included in the supply agreements with other Existing Customer Teams.

- 1.2 In the event that a Power Unit Manufacturer has not supplied a power unit to any other Existing Customer Team, the Power Unit Manufacturer shall have the right to decide, at its sole and exclusive discretion, the payment terms and conditions (including the price of additional goods and services not included in the supply perimeters designated in Appendix 9A, but excluding the Price which shall be determined in compliance with the definition of Price below) applicable to the New Customer Team subject to the provisions of paragraph 8 below.
        - 1.3 In case of a dispute about the application or the interpretation of paragraph 1 hereto, the FIA will be entitled to request copies of the contracts being entered into by the Power Unit Manufacturer with any customer team, provided that such contracts are not disclosed to any new Customer Team and subject to the FIA agreeing to comply with strict customary confidentiality obligations.
2. The Power Unit Manufacturer shall determine, at its sole and exclusive discretion, the duration of the term of the power unit supply which:
  - 2.1 may not be lower than one Championship season; and
  - 2.2 shall not exceed three Championship seasons nor go beyond the end of the 2025 Championship season, unless jointly agreed by the Power Unit Manufacturer and the New Customer Team.
3. The Power Unit Manufacturer shall determine, at its sole and exclusive discretion, whether the New Customer Team shall use the name of the Power Unit Manufacturer or the New Customer Team shall operate under a white label/unbranded way and, for this purpose, use a different name:
  - 3.1 The use of this different name shall always be agreed in advance by the Power Unit Manufacturer, which agreement shall not be unreasonably withheld; and
  - 3.2 In the event that the white label/unbranded supply is required without being requested by the New Customer Team, this supply will not incur additional fees for the New Customer Team except if the use of the power unit name leads to the conclusion of a commercial agreement between the New Customer Team and any third party. In that case, the Power Unit Manufacturer and the New Customer Team shall enter into good faith negotiations and shall commonly agree on the fair and reasonable part of the revenues generated by the commercial agreement which could be considered as additional fees;
  - 3.3 In the event that the white label/unbranded supply is requested by the New Customer Team and agreed by the Power Unit Manufacturer, this supply may incur additional fees for the New Customer Team, such fees being determined at the sole and exclusive discretion of the Power Unit Manufacturer in a fair and reasonable manner.
4. The New Customer Team shall provide a warranty that it has no binding contracts or option(s) in place with another power unit manufacturer for future supply of power units. The New Customer Team shall be required to terminate any such contracts or option(s) which do exist in so far as they conflict with any part of the period of the contract being entered into with the Power Unit Manufacturer.
5. The New Customer Team shall not (unless the Power Unit Manufacturer agrees) be an Automotive Manufacturer or any of its affiliated companies which has been set up with the purpose amongst other things of participating in the Championship.
6. The New Customer Team shall not (unless the Power Unit Manufacturer agrees) have any sponsorship agreement in place with any entity, which is in competition with the Core Activities of an Automotive Manufacturer which are carried out by the Power Unit Manufacturer.

7. The New Customer Team and/or any senior executives, directors or beneficial shareholders of the New Customer Team should not at any time (i) be listed or included in the official EU and/or US published sanction lists; (ii) have been convicted of any indictable criminal offence; (iii) have been convicted by any government or government agency in connection with fraud, money laundering, racketeering or terrorism activities; and/or (iv) have been declared bankrupt; and/or (v) have committed other identified action which, in the reasonable opinion of the Power Unit Manufacturer, harms the reputation of such Power Unit Manufacturer. This clause shall also reciprocally apply to the Power Unit Manufacturer.
8. The Power Unit Supply Perimeter listed in Appendix 9A shall be supplied to New Customer Teams at the Price.

The supply of additional goods or services not listed in Appendix 9A (which shall be agreed between the Power Unit Manufacturer and the New Customer Team) shall incur additional charges, the amount of which shall be substantially the same as that applied by the Power Unit Manufacturer to its Existing Customer Team. In the event that a Power Unit Manufacturer has not supplied a power unit to any other Existing Customer Team, the Power Unit Manufacturer shall decide the price of the above-mentioned additional goods and services based on the usages and practices generally recognised and respected in the market for the supply of parts and services in the Championship.
9. The FIA shall confirm in writing to the Power Unit Manufacturer that, to the best of its knowledge, the New Customer Team, including its officers, directors and beneficial shareholders, has not been convicted of non-complying at all times with the FIA Code of Good Standing.
10. Payment of the fees (directly or indirectly through a payment guarantee) under the supply contract for each season shall as a fall-back position (unless otherwise agreed between the Power Unit Manufacturer and the New Customer Team) and, notwithstanding the terms of any contract with an Existing Customer Team or its own factory team, be made in four instalments :
  - 25% on the date of signature of the supply contract;
  - 25% on or before 30 October of the calendar year prior to the year of supply;
  - 30% before the start of the Championship season; and
  - The remaining 20% before the fifth Formula One Event of the Championship season.
- 10.1 In case of any delayed payment for an amount greater than €100,000, the Power Unit Manufacturer shall send the New Customer Team a written notice of the breach, with a copy to the FIA and the Commercial Rights Holder. Should the New Customer Team fail to resolve this breach to the satisfaction of the Power Unit Manufacturer (with or without the involvement of the FIA and the Commercial Rights Holder) within thirty days from the issuing of this notice the Power Unit Manufacturer shall be entitled to either terminate the supply contract immediately by serving written notice on the New Customer Team, with a copy to the FIA and the Commercial Rights Holder, or, suspend delivery of the power units to the New Customer Team.

- 10.2 In case of breach of the obligation to deliver the power units and/or to supply additional goods or services to the New Customer Team pursuant to the supply agreement, such New Customer Team may send the Power Unit Manufacturer a written notice of the breach (but only in the event that the New Customer Team is not itself in breach of contract including for non-payment except if that non-payment is justified by an alleged breach of the supply contract by the Power Unit Manufacturer), with a copy to the FIA and the Commercial Rights Holder. Should the Power Unit Manufacturer fail to resolve this breach to the satisfaction of the New Customer Team (with or without the involvement of the FIA and the Commercial Rights Holder) within thirty days from the issuing of this notice the New Customer Team shall be entitled to suspend payment of the fees to the Power Unit Manufacturer.
11. The New Customer Team and the Power Unit Manufacturer shall not, and will procure its affiliates and/or their respective senior executives, employees, directors and shareholders shall not take any action and/or make any omission, deceptive, misleading or disparaging or negative comments, which directly injures, damages or brings into disrepute the public reputation, goodwill or favourable name or image of the other party to the supply agreement.
- d) Notwithstanding the provisions of Article 8.3 of the Sporting Regulations, unless agreed otherwise by the FIA, each of the manufacturers of an homologated power unit may not directly or indirectly supply power units for more than (T+1) teams, with T as defined in Article (b). Such consent shall not be given if one or more of the other Power Unit Manufacturers are supplying less than T teams.
- e) Ceasing the supply of the power units.  
Any manufacturer of a homologated power unit wishing to cease the supply of power units must notify the FIA of its intention to do so no later than 1 January of the year preceding that in which such power units will no longer be supplied.
- f) In case of any alleged material breach or alleged material failure to comply with any of the obligations of the present Appendix, the FIA shall engage good faith and active discussions with the Power Unit Manufacturer and, in the absence of amicable solution within one month, be entitled to engage proceedings before the FIA International Tribunal against the Power Unit Manufacturer. In the case that, in accordance of the provisions of the Code and of the Judicial and Disciplinary Rules, the International Tribunal rules that the Power Unit Manufacturer has materially breached or materially failed to comply with Articles b) and/or d), the International Tribunal may impose on the Power Unit Manufacturer concerned, to the exclusion of any other sanction it may have the power to impose, a fine (the amount of which shall be no more than twelve million euros and shall be determined, on a case by case basis, depending on the merits and circumstances of the applicable case).

## DEFINITIONS

**New Power Unit Manufacturer:** During its first two Championship seasons (or part thereof), whether consecutive or not, within the 2014-2025 period, a power unit manufacturer will be considered as a New Power Unit Manufacturer within the meaning of this Appendix.

**Automotive Manufacturer:** Manufacturer of at least one model of automobile (as defined in the Code) produced at least 3'000 units during the past 12 months.

**Core Activities of an Automotive Manufacturer:** Design, production and sale of automobiles (as defined in the Code) by an Automotive Manufacturer.

### Price:

Fifteen million euros (unless agreed otherwise between the Power Unit Manufacturer and the New Customer Team).

Notwithstanding the above, the Price shall not be applicable to any customer team who is at any time in breach of its payment obligations to the Power Unit Manufacturer under any supply agreement.

The Price will be reviewed by the Power Unit Manufacturers and the FIA in good faith and amended accordingly should the F1 governing bodies decide any change to the Power Unit Technical and Sporting Regulations<sup>1</sup> that would materially affect the financial conditions concerning the supply of power units (except if the change is supported by at least 75% of the Power Unit Manufacturers which, at the date of the consultation, are supplying power units in the corresponding Championship season and have not officially announced their intention to stop supplying power units to teams in any subsequent Championship season).

The "Power Unit Technical and Sporting Regulations" (based on the 2016 F1 Technical and Sporting Regulations) comprise:

- F1 Technical Regulations: Articles 1.10 to 1.11 and 1.19 to 1.29, Article 5, Article 19, Appendices 2 to 4.
- F1 Sporting Regulations: Articles 10.1 to 10.2 and 23.3 to 23.4, Appendix 4.



## APPENDIX 9A

### POWER UNIT SUPPLY PERIMETER

No	List of PU functions/systems/components/ equipment/services	Financial Boundary
1	All Engine sub-assemblies sealed according to Article 23 of the F1 Sporting Regulations (e.g. engine components within cam-covers, cylinder heads, crankcase, any gear case)	INCLUDED
2	PU pressure charging components (e.g. compressor from inlet to outlet including wheel; turbine from inlet to outlet including wheel; shaft, bearings and housings)	INCLUDED
3	Wastegate, Pop-off valve or similar	INCLUDED
4	PU Engine air inlet system from plenum entry to cylinder head (e.g. plenum, trumpets, throttles)	INCLUDED
5	Engine exhaust system (excluding fasteners & seals)	EXCLUDED
6	PU mounted fuel system components: (e.g. High Pressure fuel hose, fuel rail, fuel injectors, accumulators)	INCLUDED
7	PU mounted electrical components (e.g. wiring loom within legality volume, sensors, actuators, ignition coils, alternator, spark plugs).	INCLUDED
8	All PU coolant pumps, oil pumps, scavenge pumps, oil air separators and fuel high pressure pumps (delivering more than 10bar) including any of the following associated components: motors, actuators, filters, brackets, supports, screws, nuts, dowels, washers, cables, oil or air seals. All tubes or hoses between components of the PU that are not described by line 28. Excludes hydraulic pumps and ERS parts described in line 9.	INCLUDED
9	Cooling pumps (and associated motors, actuators, associated filters, brackets, support, screws, nuts, dowels, washers, cables, tubes, hoses, oil or air seals) partly or wholly for ERS components not mandatorily included in the PU legality volume.	INCLUDED
10	Main PU oil tank, catch tanks, and any breather system connected to them and associated filters, brackets, support, screws, nuts, dowels, washers, cables, tubes, hoses, oil or air seals with the exception of parts described in line 11.	INCLUDED
11	Any breather system ducting between the PU and the orifice referenced in Article 5.1.13 of the F1 Technical Regulations.	EXCLUDED
12	MGU-K excluding mechanical power transmission components and mounting accessories	INCLUDED
13	MGU-K mechanical power transmission components and mounting accessories	INCLUDED
14	MGU-H excluding mechanical power transmission components and mounting accessories.	INCLUDED
15	MGU-H mechanical power transmission components and mounting accessories	INCLUDED
16	ES parts defined in article 5.4.3 of the F1 Technical Regulations	INCLUDED
17	ES excluding parts defined in article 5.4.3 of the F1 Technical Regulations	INCLUDED
18	Wiring between any ECU and phases of MGU-K	INCLUDED
19	Wiring between any ECU and phases of MGU-H	INCLUDED
20	Wiring between ECU and ES	INCLUDED
21	PU-CE excluding associated brackets, supports, screws, nuts, dowels, washers or cables.	INCLUDED
22	Brackets, supports, screws, nuts, dowels, washers or cables associated to the parts listed in line 20.	INCLUDED
23	FIA Standard ECU	EXCLUDED
24	Any actuators needed to make the PU function at all times (except specific exclusions)	INCLUDED
25	Intake upstream of compressor inlet up to and including the air filter.	EXCLUDED
26	Heat Shields and associated mounting hardware.	EXCLUDED
27	Water system accumulators	EXCLUDED
28	Heat exchangers and their associated accessories (included but not limited to tubes, hoses, supports, brackets and fasteners)	EXCLUDED

29	Hydraulic system (e.g. pumps, accumulators, manifolds, servo-valves, solenoids, actuators) other than servo valve(s) and actuator(s) for PU control.	EXCLUDED
30	Hydraulic system servo valve(s) and actuator(s) for PU control	INCLUDED
31	Fuel feed pumps delivering less than 10 bars and their associated accessories (included but not limited to tubes, hoses, supports, brackets and fasteners)	EXCLUDED
32	Any ancillary equipment associated with the PU air valve system such as hoses, regulators reservoirs or compressors.	EXCLUDED
33	Exhaust beyond turbine exit and WG exit and associated brackets, support, screws, nuts, dowels, washers or cables.	EXCLUDED
34	Studs used to mount PU to chassis or gearbox	EXCLUDED
35	Flywheel	INCLUDED
36	Clutch and clutch actuation system between the PU and the gearbox	EXCLUDED
37	Fuel	EXCLUDED
38	Engine oil.	EXCLUDED
39	Liquids other than Fuel and Engine oil.	EXCLUDED
40	Ballast mounted on the PU up to 2kg. This is permitted (subject to Article 4.4 of the F1 Technical Regulations) but any in excess of 2kg will be removed before measuring PU weight.	INCLUDED
41	Ballast mounted on the PU in excess of 2kg.	EXCLUDED
42	Wiring harnesses which are not ordinarily part of a power unit	EXCLUDED
A	PU and spares for all events in F1 World Championship plus 5000 km testing. Minimum number of PUs per team to be (number of PUs per driver per season according to F1 Sporting Regulations) x 2 + Necessary number of units to achieve 5000 km of testing. Additional PUs or spares required to replace units out of service due to accident damage or other cause induced by team will be outside the supply perimeter and will incur additional charges	INCLUDED
B	Demo event Power Units	EXCLUDED
C	Transport of Power Units and support equipment from Manufacturers factory to event	EXCLUDED
D	Personnel to support Power Unit (5 people) at test and race events	INCLUDED
E	Travel, accommodation & reasonable expenses for support personnel	EXCLUDED
F	Quantity of manufacturer specified fuel and oil	EXCLUDED
G	Garage equipment defined as compulsory by Manufacturer (e.g. battery management)	INCLUDED
H	Garage IT equipment, connection to factory, servers, telemetry, radio, team clothing	EXCLUDED
I	Dyno testing of installation components (Y hours or km)	EXCLUDED

## APPENDIX 10

### POWER UNIT TEST BENCH RESTRICTIONS

#### 1) Engine dyno test limitations

- a) Definitions:
- i) **Engine Test Bench:** An Engine test bench is either a power unit test bench and/or a power train test bench.
  - ii) **Power Unit Test Bench:** Test bench facility cell where a fired engine with more than 1 cylinder representative of a Formula One engine may be tested (whatever ancillaries fitted or not MGU-K, Energy Store, etc.).
  - iii) **Power Train Test Bench:** Test bench facility cell where a fired engine and transmission can be tested together (whatever ancillaries fitted or not MGU-K, Energy Store, etc.). This includes full car dynos.
  - iv) **Test Bench Occupancy Hours:** Time interval between first work in the bench and last work in the bench in any 24 hours calendar day. Work can be organized in shifts but only two shifts of occupancy may be carried out in any one calendar day. The first shift of occupancy will be deemed to commence the first time the engine speed is above 1000rpm on a given calendar day, or at the start of the calendar day if the engine speed is already above 1000rpm, and will end at a time, declared by the competitor, when the engine speed falls below 1000rpm on the same calendar day. A second shift of occupancy will be deemed to commence the first time the engine speed is above 1000rpm following the end of the first shift of occupancy (on the same calendar day) and will end, either when the engine speed falls below 1000rpm for the last time on the same calendar day or, at the end of the calendar day in the event a run is still in progress.
  - v) **Test Bench Operation Hours:** Time with engine speed > 7500 RPM.
  - vi) **Power Unit Testing:** Restricted Power Unit Testing is any testing by a PU manufacturer, or any Related Party of that PU manufacturer, or any agent or sub-contractor of the PU manufacturer or any of its Related Parties, in a test environment of a complete or incomplete F1 PU, but always including the engine, in order to measure the torque produced by this assembly or any parameters related to the function of this assembly.
  - vii) **Annual shutdown:** Period when no occupancy hours nor operations hours may be incremented.
  - viii) **Commissioning:** Dyno activity whose only purpose is to test the bench. A test can be considered as commissioning if the following criteria are met:
    - *Must be declared to FIA with a minimum of 4 weeks' notice*
    - *Must be approved by FIA*
    - *A 2 years or more old engine is used*

- b) Facility Limitations:
- i) Allowed Power Unit Test Benches are:
- Power Unit stationary in space, installed with horizontal crankshaft.
  - No more than one power take-off.
  - No chassis force actuators.
  - Test cell pressure +/-10mBar of ambient. Methods to mimic reduced ambient pressure at the engine air inlet and exhaust exits are permitted.
- ii) Allowed Power Train Test Benches are:
- Power Unit stationary in space, installed with horizontal crankshaft.
  - No chassis force actuators.
  - Test cell pressure +/-10mBar of ambient. Methods to mimic reduced ambient pressure at the engine air inlet and exhaust exits are permitted.
- c) Implementation:
- i) Yearly limit divided into 10 weeks periods.
- ii) The time limit for a 10 weeks period may be exceeded twice by up to 20% without being in breach if the time recorded for the complete year remains within the yearly limit.
- iii) One single limit for all bench types (One number of test benches limit, One Occupancy hour limit, one Operation hour limit).
- iv) Time monitoring based on declaration based on approved software measurement (Certified software application time counter, developed by the engine test bed automation supplier.)
- v) Number of Engine test benches:
- Before the 1<sup>st</sup> December of the preceding year: Declaration from the PU supplier of the number of Power Unit Test Bench and number of Power Train Test Bench to be used in a calendar year (and their identities (=Name, description, location)). This includes any bench whatever their location, ownership or duration of use during the calendar year. **Any modification must be declared to the FIA at least 2 weeks before the start of the 10-week period in which it will apply.**
  - In order to check on the hardware employed by the PU manufacturers and as a mean of assuring common application of the restrictions set out, the FIA will arrange for independent benchmarking inspections of dynos activities to be carried out from time to time.
- vi) Test bench occupancy:
- Sum of each individual bench occupancy hours:  
Total Occupancy hours: OCH
- $$OCH = \sum_{n=1}^{n=N} NOCHn$$

With:

- N = Number of test benches
- NOCHn= Number of occupancy hours during the period for bench number n
- Declaration 14 days after each 10 weeks period from PU manufacturers signed by top management.
- PU manufacturers must keep records of bench tests until 1 month after the end of the calendar year

vii) Test Bench Operation Hours:

- Sum of each individual bench operation hours.

Total Operation hours: OPH

$$OPH = \sum_{n=1}^{n=N} NOPHn$$

With:

- N = Number of test benches
- NOPHn= Number of operation hours during the period for bench number n
- Declaration 14 days after each 10 weeks period from PU manufacturers signed by top management
- PU manufacturers must keep records of bench tests until 1 month after the end of the calendar year

d) Limitations:

i) Base:

Year	2021	2022	2023	2024	2025
<b>Max test benches</b>	9	9	9	9	9
<b>Max Occupancy hours</b>	6400	6000	6000	5600	5600
<b>Max Operation hours</b>	800	750	750	700	700

This base dyno testing limitations includes the provision for any testing for a team for a calendar year (Including but not limited to gearbox, car systems, fuel and engine oil testing).

Should a PU supplier provide PU's to other teams who design their own gearbox, or exhaust, or have their own fuel or oil supplier, 30 additional operation hours will be allocated per calendar year and per additional customer team specifically and exclusively for approving these items subject to agreement with the PU supplier and the FIA technical department.

Should an additional customer team requests to its PU supplier and the FIA to be able to run with a fuel and/or an engine oil different to the one(s) that is(are) already homologated for use with their engine; and should the PU supplier

considers that this fuel and/or engine oil is(are) ready to be used in race events, the PU supplier may request approval of this(ese) fuel and/or engine oil. Once this(ese) fuel and/or engine oil are approved, an extra allocation of 30 operation hours may be given by FIA specifically and exclusively for endurance validation of this(ese) fuel and/or engine oil. This extra allocation can only happen a maximum of 2 times per championship season in 2020, 2021 and 2022 and 1 time per championship season from 2023 onwards.

In all cases, these additional hours must be jointly declared to FIA by the PU supplier and the customer team.

Additional occupancy hours to support the additional operation hours above will be granted at a ratio of 8:1

- e) Exceptions:
  - i) Commissioning activities are not counted either for occupancy or operation.

## 2) ERS dyno limitations

- a) Definitions:
  - i) **ERS Test Bench:** An ERS test bench is either an ES test bench, a Power Electronics test bench and/or an MGU test bench.
  - ii) **ES Test Bench:** Test bench facility cell where a complete ES representative of a Formula One ES may be tested. This excludes test bench falling into the Engine test bench definition.
  - iii) **MGU Test Bench:** Test bench facility cell where an MGU (MGU-H or MGU-K) representative of a Formula One part can be tested. This excludes test bench falling into the Engine test bench definition.
  - iv) **Power Electronics Test Bench:** Test bench facility cell where an ERS Control Unit, representative of a Formula One part can be tested. This excludes test bench falling into the Engine test bench definition.
  - v) **Test Bench Occupancy Hours:** Time interval between first work in the bench and last work in the bench in any 24 hours calendar day. Work can be organized in shifts but only two shifts of occupancy may be carried out in any one calendar day. The first shift of occupancy will be deemed to commence the first time the current in or out of the tested system is above 1 Amp or when MGU speed is above 100 rpm on a given calendar day, or at the start of the calendar day if these criteria are already met, and will end at a time, declared by the competitor, when these criteria are no more met on the same calendar day. A second shift of occupancy will be deemed to commence the first time the current in or out of the tested system is above 1 Amp or when MGU speed is above 100 rpm following the end of the first shift of occupancy (on the same calendar day) and will end, either when these criteria are no more met for the last time on the same calendar day or, at the end of the calendar day in the event a run is still in progress
  - vi) **Test Bench Operation Hours:** Time with current in or out of the tested system above 10 Amps or time with MGU speed above 1000 rpm.
  - vii) **ERS Testing:** Restricted ERS Testing is any testing by a PU manufacturer, or any Related Party of that PU manufacturer, or any agent or sub-contractor of the PU

manufacturer or any of its Related Parties, in a test environment of a complete or incomplete F1 ERS system, but always including at least 3 out of 5 of the main ERS components (ES, CU-H, CU-K, MGU-K, MGU-H) in order to measure any parameters related to the function of this assembly. Testing falling into the scope of the Engine dyno limitation are outside this restriction. Any sign off test or end of line test are included.

- viii) **Annual shutdown:** Period when no occupancy hours nor operations hours may be incremented.
- ix) **Commissioning:** Dyno activity whose only purpose is to test the bench. A test can be considered as commissioning if the following criteria are met:
- Must be declared to FIA with a minimum of 4 weeks notice
  - Must be approved by FIA
  - A 2 years or more old assembly is used
- b) Facility Limitations:
- i) Allowed ES Test Benches are:
- Any bench where an ES can be installed and run.
  - This includes the benches where other PU elements can be tested as, for example, the engine.
  - ES stationary in space.
- ii) Allowed MGU Test Benches are:
- Any bench where an MGU can be installed and run.
  - This includes the benches where other PU elements can be tested as, for example, the engine.
  - MGU stationary in space, installed with horizontal shaft.
  - *MGU-K and MGU-H can be tested simultaneously but no more than one MGU of the same type (i.e.: MGU-K or MGU-H) can be tested at the same time.*
  - *It is permissible to use MGU-K and MGU-H hardware that is at least two years old within the test bench solely as a dynamometers, and these may be controlled using CU's that are also at least two years old. These devices must be declared to the FIA*
  - No chassis force actuators.
- iii) Allowed Power Electronics Test Benches are:
- Any bench where an ERS Control Unit it can be installed and run.
  - This includes the benches where other PU elements can be tested as, for example, the engine.
  - CU stationary in space
- c) Implementation:
- i) Yearly limit divided into 10 weeks periods.

- ii) The time limit for a 10 weeks period may be exceeded twice by up to 20% without being in breach if the time recorded for the complete year remains within the yearly limit.
- iii) One single limit for all bench types (One number of test benches limit, one Occupancy hour limit, one Operation hour limit).
- iv) Time monitoring based on declaration based on approved software measurement (Certified software application time counter, developed by the ERS test bed automation supplier.)
- v) Number of ERS Test Benches:
  - Before the 1<sup>st</sup> December of the preceding year: Declaration from the PU supplier of the number of ERS test benches to be used in a calendar year (=Name, description, location)). This includes any bench whatever their location, ownership or duration of use during the calendar year. **Any modification must be declared to the FIA at least 2 weeks before the start of the 10-week period in which it will apply.**
  - In order to check on the hardware employed by the PU manufacturers and as a mean of assuring common application of the restrictions set out, the FIA will arrange for independent benchmarking inspections of dynos activities to be carried out from time to time.

vi) Test bench occupancy:

- Sum of each individual bench occupancy hours:

Total Occupancy hours: OCH

$$OCH = \sum_{n=1}^{n=N} NOCHn$$

With:

- N = Number of test benches
- NOCHn= Number of occupancy hours during the period for bench number n
- Declaration 14 days after each 10 weeks period from PU manufacturers signed by top management.
- PU manufacturers must keep records of bench tests until 1 month after the end of the calendar year

vii) Test Bench Operation Hours:

- Sum of each individual bench operation hours.

Total Operation hours: OPH

$$OPH = \sum_{n=1}^{n=N} NOPHn$$

With:

- N = Number of test benches



- NOPHn= Number of operation hours during the period for bench number n
- Declaration 14 days after each 10 weeks period from PU manufacturers signed by top management
- PU manufacturers must keep records of bench tests until 1 month after the end of the calendar year

d) Limitations:

<b>Year</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>Max test benches</b>	4	4	4	4	4
<b>Max Occupancy hours</b>	1600	1600	1600	1600	1600
<b>Max Operation hours</b>	400	400	400	400	400

e) Exceptions:

- Commissioning activities are not counted either for occupancy or operation.