

## 2017 FORMULA ONE SPORTING REGULATIONS

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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 may only be changed after [30 April 2016](#) with the unanimous agreement of all competitors entered in the [2017](#) Championship, save for changes made by the FIA for safety reasons which 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 at the scheduled time for scrutineering and sporting checks and including all practice and the race itself and ending at the later of the time for the lodging of a protest under the terms of the Code and the time when a technical or sporting certification has been carried out under the terms of the Code.
- 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 scrutineering 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 In accordance with Articles 31. 5 and 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 chequered flag, 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 chequered flag 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 :
- a) The distance of the race in Monaco shall be equal to the least number of complete laps which exceed a distance of 260km.
- b) 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.
- c) If the formation lap is started behind the safety car (see Article 39.16) 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 21, 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 Listed Parts set out in Appendix 6. The make of an engine or chassis is the name attributed to it by its constructor.

The obligation to design and use Listed Parts shall not prevent a constructor from outsourcing the design and/or manufacture of any Listed Parts to a third party in accordance with the provisions of Appendix 6.

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

- 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.
- 6.6 The drivers finishing first, second and third in the Championship must be present at the annual FIA Prize Giving ceremony.
- 6.7 A trophy will be awarded to the driver who sets the most pole positions during the championship season (see Article 35.2). In the event of a tie the holder of the greatest number of second places will be taken into account and, if there is still the tie, the holder of the greatest number of third places and so on until a winner emerges.

If this procedure fails to produce a result, the FIA will nominate the winner according to such criteria as it thinks fit.

## **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 :
- The holder of the greatest number of first places.
  - If the number of first places is the same, the holder of the greatest number of second places.
  - 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.
  - 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 30 November 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 :
- 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.
  - The name of the team (which must include the name of the chassis).
  - The make of the competing car.
  - The make of the engine.
  - The names of the drivers. A driver may be nominated subsequent to the application upon payment of a fee fixed by the FIA.
  - 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 30 November 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 each Event, any 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.

In order for drivers to be easily distinguished from one another whilst they are on the track, the crash helmet of each driver must, with the exception of one Event of the driver's choice, be presented in substantially the same livery at every Event during a Championship season. A change to helmet livery will also be permitted if a driver changes team during a Championship season.

- 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 AND WIND TUNNEL 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 [2016, 2017 or 2018](#) Formula One Technical Regulations. 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 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 and may only be carried between the end of the last Event of the Championship and the end of the calendar year. No such demonstration may 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 [2013, 2014 or 2015](#) Formula One Technical Regulations. 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.

In order that an FIA observer may be appointed, where possible competitors must inform the FIA of any planned TPC 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 [2012](#) Formula One Technical Regulations or earlier.

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** 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) Two tests, open to all competitors, of no more than four consecutive days' duration carried out between 1 February and ten days before the start of the first Event of the Championship.

One day from any of these two tests, no less than 20 days before the start of the first Event of the Championship, must be set aside for testing of wet-weather tyres. Arrangements for this day of testing will be made by the appointed tyre supplier in full consultation with all competitors and the FIA.

b) Two tests, open to all competitors, of no more than two consecutive days' duration carried out on circuits where an Event has just taken place, such tests commencing no less than 36 hours after the end of the relevant Events.

Each competitor must allocate at least two of the above days for drivers in possession of an International A Licence not having 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 the end of the first Event of the Championship 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.

d) One test, for the sole purpose of providing all competitors with the chance to test the tyre specifications to be used the following season, of two 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.

The above tests will be organised by the FIA in consultation with all competitors and the appointed tyre supplier. The test schedule will be finalised within 21 days of the first publication of the Championship calendar, changes may only be made after this date with the agreement of all competitors.

e) 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:

- 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.
- 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.
- 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.

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. In both cases each competitor may only use one car per day.

- 10.5** No competitor may carry out more than 15,000km of TCC during a calendar year.
- 10.6** 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.
- 10.7** During all Formula One TCC :
- a) Red flag and chequered flag procedures must be respected.
  - b) No other type of vehicle is permitted on the track.
  - c) Cars being driven by drivers who do not possess a Super Licence must be fitted with a green rear light which must be illuminated at all times the car is on the track.
  - d) 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.
- 10.8** 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.
- 10.9** Competitors must abide by the aerodynamic testing restrictions set out in Appendix 8.

## **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) Press delegate.
- And may nominate :
- e) A representative of the President of the FIA.



- f) An observer.
  - g) A safety car driver.
  - h) 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 will be responsible for scrutineering and will have 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 race director, the clerk of the course and the technical delegate must be present at the Event from 10.00 on the day of initial scrutineering and the stewards from 15.00 on the same day.
- 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. A breach of the provisions of the Code or these Sporting Regulations relating to the starting procedure, may result in the exclusion of the car and driver concerned from the Event.
- ## **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) or f), 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 31.5.
- d) Any decision taken by the stewards in relation to Article 35.1.
- e) Any penalty imposed under Articles 36.4 or 42.3.

## 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 press delegate will choose a maximum of five drivers who must attend a press conference in the media centre for a period of one hour at 15.00 on the day before first practice.

At Events taking place in North or South America this press conference will take place at 11.00. 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 press 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 press 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 at 16.00.

On a day suitable to the promoter's schedule 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 promoter and 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 press 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 and a half hours 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 press delegate.
- ii) [14 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 press 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 at 16.00 on the day before first practice and 17.00 on the first day of practice. 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 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) 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.
- d) 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 3.18 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 initial scrutineering 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 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](#). Similarly, one medical doctor, any reserve driver or team President, Chairman or Managing Director will not be included in the above figure.

A list of all operational, exempt 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 eight hour restricted periods which commence eleven 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 nine 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 time that two consecutive Events are separated by at least twenty four 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.
  - e) Any activity in relation to the power unit as defined in Article [23.3\(e\)](#).

## 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 exclude 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 stewards 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 car's rear light must be illuminated at all times when it is running on intermediate or wet-weather tyres. It shall be at the discretion of the race director to decide if a driver should be stopped because his rear light is not working. Should a car be stopped in this way it may re-join when the fault has been remedied.
- 22.13** Only six team members per participating car (all of whom shall have been issued with and wearing special identification) are allowed in the signalling area during practice and the race. People under 16 years of age are not allowed in the pit lane.
- 22.14** 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.
- 22.15** The organiser must make at least two fire extinguishers of 5kg capacity available to each competitor and ensure that they work properly.
- 22.16** 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 :
- a) The car concerned will not have to comply with the requirements of Article 34.
  - b) The car will be permitted to carry out one reconnaissance lap when the pit lane is opened for the race.
- 23.3**
- a) Unless he drives for more than one team (see [23.3\(f\)](#) below), and subject to the additions described in b) and c) below, each driver may use no more than four power units during a Championship season.
  - b) With the consent of (and at the sole discretion of) the FIA, the number in a) above will be increased by one for any driver using a power unit provided by a manufacturer or supplier taking part in their first Championship season.
  - c) If b) above [applies](#) the numbers in [d\)](#) and [e\)](#) below will be amended accordingly.
  - d) For the purposes of this Article [23.3](#), the power unit will be deemed to comprise six separate elements, the engine (ICE), the motor generator unit-kinetic (MGU-K), the motor generator unit-heat (MGU-H), the energy store (ES), turbocharger (TC) and control electronics (CE).

Each driver will therefore be permitted to use four of each of the above six components during a Championship season and any combination of them may be fitted to a car at any one time.

- e) Should a driver use more than four 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 a 5th of any of the elements is used.	Ten grid place penalty.
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The first time a 5th of any of the remaining elements is used.	Five grid place penalty.
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The first time a 6th of any of the elements is used.	Ten grid place penalty.
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The first time a 6th of any of the remaining elements is used, and so on.	Five grid place penalty.
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A power unit or any of the six 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.

- f) 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.
- g) After consultation with the relevant power unit supplier the FIA will attach seals to each of the relevant components within 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 one hour of the publication of the official race results exhaust blanking plates (with one 10mm diameter inspection hole per cylinder) and further seals will be applied to all used power unit components in order to ensure that they cannot be run or dismantled between Events.

Upon request to the FIA these additional seals will be removed after the start of initial scrutineering at the next Event at which the power units are required. All such power units 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.

- h) 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 2017-2020 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 2014-2020 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. 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 Article 24.1(b) and Article [24.4\(e\)](#), 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 set of tyres will be [defined as](#) two front and two rear tyres of the same specification.
- 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.

For the first five Events of the 2017 Championship season only, the above selection procedure will not be used. For these Events the Supplier will allocate two sets of the hardest compound specification, four sets of the medium compound specification and seven sets of the softest compound specification to each driver.

- 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 of the meeting), all tyres intended for use at an Event must be presented to the FIA technical delegate for allocation prior to the end of initial scrutineering.
- 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 exclusion 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 P1 or P2 are declared wet one additional set of intermediate tyres will be made available to all drivers. 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, 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 :

- i) 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.
  - ii) One further set must be electronically returned no later than two hours after the end of P1.
  - iii) 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.
  - iv) 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 which have a change of survival cell after the qualifying practice session, 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 exclusion 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 39.16), or 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) 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.
- b) 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 Between 10.00 and 16.00 three days before the race (four days in Monaco) initial scrutineering of all cars will take place in the garage assigned to each competitor.

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 it has been passed by the scrutineers.

25.4 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.

25.5 Any car that has a change of survival cell after being passed by the scrutineers must be re-presented for scrutineering approval.

Any such re-scrutineering may only take place with the consent of the stewards (following a written request from a competitor) and will be carried out the next morning.

- 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 after 16.00 on the day of scrutineering 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 before the end of initial scrutineering, 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.
- c) If one of the team's nominated drivers is unable to drive at some stage after the end of initial scrutineering, 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 lap permitted by Article 23.2(b), 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 the 15 minute signal has been given 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.

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 drying, sweeping or any tyre rubber left 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.
- 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.  
  
A reprimand will be imposed on any driver who fails to stop when signalled to do so, provided the car is then brought back to the FIA garage without delay and that the FIA technical delegate is satisfied the car has been brought back in exactly the same condition it was in when it was driven into the pits.  
  
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 required to start the race from the pit lane.
  - 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 excluded 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 exclude 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 [105kg](#) 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 of the meeting), any driver exceeding this limit will be excluded 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 The interval between the first and second free practice sessions, in addition to the interval between the third free practice session and the qualifying practice session, may never be less than two hours.
- 31.5 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.
- 31.6 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 31.5.
- 31.7 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 shall immediately reduce speed and proceed slowly back to the pit lane, and 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.
- 31.8 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** Free practice sessions will take place :

- a) The day after initial scrutineering from 10.00 to 11.30 (P1) and from 14.00 to 15.30 (P2).
- b) The day before the race from 11.00 to 12.00 (P3).

The interval between the scheduled start times of P1 and P3 may never be less than 24 hours.

### **33) QUALIFYING PRACTICE**

**33.1** The qualifying practice session will take place on the day before the race from 14.00 to 15.00.

The session will be run as follows :

- a) From 14.00 to 14.18 (Q1) all cars will be permitted on the track and at the end of this period the slowest eight cars will be prohibited from taking any further part in the session.

Lap times achieved by the eighteen remaining cars will then be deleted.

- b) From 14.25 to 14.40 (Q2) the eighteen remaining cars will be permitted on the track and at the end of this period the slowest eight 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) From 14.48 to 15.00 (Q3) the ten remaining cars will be permitted on the track.

The above procedure is based upon 26 cars being officially eligible to take part in the Event. If 24 cars are eligible seven will be excluded after Q1 and Q2, if 22 cars are eligible six cars will be excluded after Q1 and Q2, and so on if fewer 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. Any car which stops on the circuit during the qualifying session, and which is returned to the pits before the end of the session, will be held in parc fermé until the end of the session.

**33.3** At the end of qualifying practice the times achieved by each driver will be officially published.

### **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 returned to the parc fermé overnight, 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) Removal of the ERS energy storage devices which, once marked by the FIA technical delegate, may be retained overnight by the team.
- i) The main electrical battery and radio batteries may be changed.
- j) The brake system may be bled.
- k) Engine oil may be drained.
- l) Compressed gases may be drained or added.
- m) Fluids with a specific gravity less than 1.1 may be drained and/or replenished, however, fluids used for replenishment must conform to the same specification as the original fluid.
- n) The aerodynamic set up of the front wing may be adjusted using the existing parts. No parts may be added, removed or replaced.
- o) 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.
- p) Bodywork (excluding radiators) may be removed and/or cleaned.
- q) Cosmetic changes may be made to the bodywork and tape may be added.
- r) Any part of the car may be cleaned.
- s) On board cameras, marshalling system components, timing transponders and any associated equipment may be removed, refitted or checked.
- t) Any work required by the FIA technical delegate.
- u) 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.

- v) 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.
- w) Repair of genuine accident damage.
- x) 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 similar in design, 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 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 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.

## **35) THE GRID**

- 35.1** 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.

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 eight positions will be occupied by the cars eliminated during Q1, the fastest in 19th position.
  - ii) The next eight 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 less than 26 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\(f\)](#) 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 who incurs a penalty under Article [23.3\(f\)](#) 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 d) 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

Unless it is necessary to use the procedure set out in Article 39.16 the following procedure will be used.

- 36.1 30 minutes before the start of the formation lap the pit exit will be opened and cars will be permitted to leave the pit lane to cover a reconnaissance lap. At the end of this lap they will stop on the grid in starting order with their engines stopped.

Should they 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.

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 22 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.

20 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, the cars will 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 Article 39.16](#)), they will stop within their respective 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 two people from each team, 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 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** Either of the penalties under Articles 38.3c) or d) will be imposed for a false start judged using an FIA supplied transponder which must be fitted to the car as specified.

**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.

### 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.

- 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) Exclusion 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 garage 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 it may be started after the time penalty period has elapsed.
- e) Any breach or failure to comply with Articles 38.4 (b), (c) or (d) may result in the car being excluded.

### **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 39.16 below) 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 (a marshalling sector is defined as the section of track between each of the FIA light panels). In addition, any driver entering the pit lane whilst the safety car is deployed must be above the minimum time set by the FIA ECU at the first safety car line as he enters the pit lane.

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 first safety car line for the first time when the safety car is returning to the pits. However, if the safety car is still deployed at the beginning of the last lap, or is deployed during the last lap, Article 39.15 will apply.

The exceptions are :

- a) If a driver is signalled to do so from the safety car.
  - b) Under 39.12 or 39.16 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 yellow flags and SC boards will be withdrawn and, other than on the last lap of the race, replaced by waved green flags with green lights at the Line. These will be displayed until the last car crosses the Line.

- 39.14 Each lap completed while the safety car is deployed will be counted as a race lap, except the first lap when the procedure set out in 39.16 is followed (see also Article 5.3).
- 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 chequered flag as normal without overtaking.
- 39.16 If track conditions are considered unsuitable to start the race at the scheduled time the start of the formation lap will 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 as specified in Article 36.2. A penalty under Article 38.3(d) will be imposed on any driver who enters the pit lane under these circumstances and whose tyre(s) are changed for a different specification before leaving the pit lane.

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

- a) 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
- b) 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.

[Once the safety car has entered the pit lane all cars, with the exception of those required to start from the pit exit, must return to the grid, take up their grid positions and follow the procedures set out in Article 36.9 to 36.13. A penalty under Article 38.3\(d\) will be imposed on any driver who enters the pit lane at any time during the formation laps.](#)

[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.](#)

#### **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 (a marshalling sector is defined as the section of track between each of the FIA light panels). [In addition, any driver entering the pit lane whilst the VSC procedure is in use must be above the minimum time set by the FIA ECU at the first safety car line as he enters the pit lane.](#)

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.

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 must not impede the resumption of the race.
- c) Only team members and officials 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 Articles [24.4\(l\)](#) and 39.16 ([in the case of the latter there will however be no standing start](#)).
  - 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 may overtake to re-establish his original starting position provided he does so before he crosses the first safety car line. 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 pit exit.  
  
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.
  - 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.  
During this lap Articles 39.13, 39.14, 39.15 and 39.16 will apply.
- 42.8** 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** The end-of-race signal will be given 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 OF THE MEETING.
  - CLERK OF THE COURSE.
  - SECRETARY OF THE MEETING.
  - CHIEF NATIONAL SCRUTINEER.
  - CHIEF NATIONAL MEDICAL OFFICER.

**PART B.**

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



## APPENDIX 2

### FEDERATION INTERNATIONALE DE L'AUTOMOBILE

#### ENTRY FORM 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 6.2 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 13.2(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 13.2(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 30 November 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

**TO BE COMPLETED BY THE FIA**

Super Licence Number Driver n°1

Super licence Number Driver n°2

Date of Acceptance

## 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

### 2017-2020 POWER UNIT HOMOLOGATION

- 1) Any manufacturer intending to homologate a power unit for use by a team in a Championship during the 2017-2020 period must submit to the FIA a power unit homologation dossier on or before 28 February of the relevant year.
- 2) The homologation dossier must include:
  - a) Details of all the parts described as “INC” in the “App. 4 Sporting regs.” column of Appendix 2 of the F1 Technical Regulations.
  - b) All documents required in Article a) of Appendix 9 of these regulations.
- 3) 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.
- 4) The homologation will be valid for a maximum of one season only, starting on the date of approval by the FIA and ending on the start of the first Event of the following Championship.
- 5) Each manufacturer shall submit an homologation dossier for each team it intends to supply. There may only be one homologation dossier per team. The dossiers for the teams supplied by a manufacturer shall be identical, at any given time, 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 FIA will grant dispensation from this Article (i) should the difference(s) have no effect on the power unit price and (ii) should the team refuse such difference(s) proposed by its manufacturer.
- 6) A manufacturer may apply to the FIA 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 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.
- 7) Any new power unit manufacturer, intending to homologate a power unit during the 2017-2020 period must provide the FIA with preliminary details of the power unit on or before 1 January of the year of the requested homologation in addition to the homologation dossier as per Articles 1) and 2) above. In order to homologate the submitted power unit, the FIA must also be satisfied, at its absolute discretion, that such a power unit could fairly and equitably be allowed to compete with other homologated power units.
- 8) All power units must be delivered such that the seals required under Article 23.3 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, in its absolute discretion, to demonstrate that a power unit used at an Event 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

1. A competitor shall, in respect of the Listed Parts to be used in its cars in Formula One, only use Listed Parts which are designed by it.
2. The obligation to design and use Listed Parts shall not prevent a competitor from Outsourcing the design and/or manufacture of any Listed Parts to a third party (including an Associate of such competitor) provided that :
  - a) It retains the exclusive right to use the Listed Parts in Formula One so long as it competes in Formula One.
  - b) In the case of the Outsourcing of manufacture such third party shall not be a competitor.
  - c) In the case of the Outsourcing of design, such third party shall not be a competitor or a party that directly or indirectly designs Listed Parts for any competitor.
  - d) If part of an Outsourcing arrangement involves aerodynamic testing by a third party, this must be carried out and reported in accordance with Appendix 8 to these Sporting Regulations. For the avoidance of doubt, any related Restricted Wind Tunnel Testing and Restricted CFD Simulations must take place in the wind tunnel nominated by the relevant competitor in accordance with Paragraph 1.5 of Appendix 8 or using the CFD hardware nominated by the relevant competitor in accordance with Paragraph 2.5 of Appendix 8. Any such Testing or Simulations will be taken into account when assessing the relevant competitor's compliance with the usage limits defined in Section 3 of Appendix 8.
3.
  - a) A competitor may use non-Listed Parts designed by another competitor, if this is the case any aerodynamic testing related to the design of such Parts must be carried out and reported only by the competitor designing them in accordance with Appendix 8 to these Sporting Regulations.
  - b) In the case of a competitor Outsourcing the design of non-Listed Parts to a third party that is not a competitor, and such arrangement involves aerodynamic testing, this must be carried out and reported in accordance with Appendix 8 to these Sporting Regulations. For the avoidance of doubt, any related Restricted Wind Tunnel Testing and/or Restricted CFD Simulations must take place in the wind tunnel nominated by the relevant competitor in accordance with Paragraph 1.5 of Appendix 8 or using the CFD hardware nominated by the relevant competitor in accordance with Paragraph 2.5 of Appendix 8. Any such Testing or Simulations will be taken into account when assessing the relevant competitor's compliance with the usage limits defined in Section 3 of Appendix 8.
4. No competitor shall be entitled :
  - a) To pass on or receive any information on Listed Parts (including but not limited to data, designs or drawings) directly to or from another competitor or via an external entity or third party.
  - b) To receive or supply consultancy or any other kind of services from or to another competitor directly or via an external entity or third party in relation to Listed Parts.
5. Any information on non-Listed Parts passed on or received by a competitor or any consultancy or any other kind of services involving a competitor in relation to non-Listed Parts shall be strictly limited to the designs or drawings necessary for the integration of the non-Listed Parts into the design of the car and/or the data necessary for the correct operation of the non-Listed Parts on the car.

6. No competitor may use movement of personnel (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 Appendix.
7. Any reference to any competitor shall include any Associate of such competitor and 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.
8. An “Associate” means :
  - a) Any person (including any corporate or unincorporated body) in which such party directly or indirectly :
    - (i) Owns share capital or business assets; or
    - (ii) Has the power to exercise voting rights; or
    - (iii) Has the power to appoint members of the supervisory board, board of directors or bodies legally representing such a firm or body corporate or unincorporated; or
    - (iv) Has the right to manage the business of such firm or body corporate or unincorporated body; or
  - b) Its controller (where controller means any person who directly or indirectly has in or over any party the rights or powers listed in sub-clause (a) of the definition of Associate); or
  - c) Any person (including any corporate or unincorporated body) in which its controller directly or indirectly has the right or powers listed in sub-clause (a) above; or
  - d) Any agent, contractor (or sub-contractor) or any other person (including any corporate or unincorporated body) which is set up or used by a competitor to circumvent the requirements of this Appendix.
9. “Outsourcing” means to procure goods or services under contract with an outside supplier.

## LISTED PARTS

Survival cell as defined in Article 1.14 of the F1 Technical Regulations ( <a href="#">with the exception of a closing panel for the purpose of accessing the ES</a> )
Front impact structure <a href="#">as regulated by Article 15.4.3 of the F1 Technical Regulations</a>
Roll structures as regulated by Article 15.2 of the F1 Technical Regulations
Bodywork as defined in Article 1.4 of the F1 Technical Regulations and regulated by Article 3 of the F1 Technical Regulations with the exception of airboxes, engine exhausts and any prescribed bodywork geometries

## APPENDIX 7

### ENTRY FEES FOR THE [2017](#) FIA FORMULA ONE WORLD CHAMPIONSHIP

- i) The winner of the [2016](#) World Championship for Constructors will be required to pay a basic fee of US\$516,128<sup>1</sup> plus US\$6194<sup>1</sup> for each point gained in the [2016](#) World Championship for Constructors.
- ii) Every other competitor will be required to pay a basic fee of US\$516,128<sup>1</sup> plus US\$5161<sup>1</sup> for each point that competitor gained in the [2016](#) World Championship for Constructors.

In both cases the basic fee is due at the time of the application and the remainder by 30 November of the year prior to the year to which this application relates.

<sup>1</sup> Indexed by US CPI

## APPENDIX 8

### AERODYNAMIC TESTING RESTRICTIONS (ATR)

The [ATR](#), and the definitions and rules which will apply to aerodynamic testing, are as follows:

#### 1. Restricted Wind Tunnel Testing (RWTT)

1.1 In the context of this Appendix the words bodywork, sprung suspension and brake system air ducts will have the same definition as those provided by Articles 1.4, 1.13 and 11.4 of the F1 Technical Regulations respectively.

1.2 [RWTT](#) is the testing by a [competitor](#) or any [Associate of a competitor \(as defined in Section 8 of Appendix 6\)](#) 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 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. The only allowable exceptions from this definition are as follows:

- a) Wind tunnel testing which aims to develop components associated with cooling, 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](#), 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.

For the avoidance of doubt, any wind tunnel testing to develop bodywork parts other than as referred to in sub-paragraph (a) above even without aerodynamic force measurement is within the definition of [RWTT](#).

In some cases a testing rig which was devised to develop components associated with cooling or the running of the [power unit](#) could have the potential to offer secondary benefits for bodywork development. Specific examples of such rigs and the additional restrictions that apply to them are provided in [Section 5](#).

- b) Any aerodynamic test conducted by an F1 car at any Event.
- c) Any aerodynamic test conducted by an F1 car during and at [track testing](#) as [defined in Article 10 of](#) the F1 Sporting Regulations.

1.3 No [RWTT](#) may be carried out using a scale model which is greater than 60% of full size.

1.4 No [RWTT](#) may be carried out at a [wind tunnel](#) air speed exceeding 50m/s measured relative to the scale model referred to in Paragraph 1.3.

1.5 [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 to the FIA in writing.

[For the avoidance of doubt, any RWTT carried out on behalf of or for the benefit of the competitor by an Associate \(as defined in Section 8 of Appendix 6\), 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, with the exception of RWTT performed to collect the data necessary for the correct operation of non-Listed Parts supplied by another competitor as defined in Paragraph 3 of Appendix 6 and declared by that competitor.](#)

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 and the scale of model 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 significantly changed or upgraded then a new declaration must be submitted to the FIA within one month of the change.

- 1.6 The **RWTT** fluid must be air at atmospheric pressure.
- 1.7 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 when the **wind tunnel** air speed falls below 5m/s.
- 1.8 During **RWTT** only one model may be used per run and only one model change is permitted per **competitor** per 24 hour period. Compliance with this restriction will be determined upon the time elapsed between the wind **tunnel air** speed exceeding 5m/s with successive models, not upon the occupancy of the wind tunnel test section by successive models. For the avoidance of doubt, a model in this context is defined by its underlying spine, motors and sensors. Detail changes to the aerodynamic configuration of a given model remaining in the wind tunnel are permitted.
- 1.9 During **RWTT**, once the **wind tunnel** air speed rises above 5m/s the bodywork, sprung suspension and brake system air ducts of the **scale model** must remain fixed until the **wind tunnel** air speed returns below 1m/s with the exception of any freedom set out in **Section 6**.

## 2. **Restricted CFD (RCFD) simulations**

- 2.1 **RCFDs** are **Computational Fluid Dynamic (CFD)** simulations by a **competitor** or any **Associate of a competitor (as defined in Section 8 of Appendix 6) 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 representation of an F1 car or sub-component 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.
- 2.2 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 (as defined in Section 8 of Appendix 6), 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 representation of an F1 car or sub-component 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.
- 2.3 **RCFDs** refer to the solver part of the process (irrespective of the numerical scheme behind the simulation) plus any mesh adaptation included in a solver optimisation loop. Pre-processing, mesh creation and post processing of CFD simulations are **non-RCFDs**. Only the calculation part of the process, including message passing time during this phase, (iteration time) shall be included in the **RCFDs**.
- 2.4 Non-**RCFDs** can be made for the purpose of optimising CFD methodology, provided they use a rigid car geometry which has been simulated in CFD more than 30 months ago. This car geometry may not be changed, added to, removed from, morphed or modified.

Only 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 (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 and steer) are permitted. Dynamic attitude changes as well as front wing flap angle, rear wing upper most element position or tyre shape changes are not permitted. Modifications to surface and volume mesh resolution and type as well as the extent of the far field domain are allowed.

- 2.5 **RCFDs** may only be carried out using hardware that has been nominated by the **competitor** to the FIA. Each **competitor** must declare to the FIA in writing the computer resource that is employed for the purpose of **RCFDs**.

The declaration of the hardware by the **competitor** to the FIA **must** include:

- a) The computer/cluster identification, manufacturer, model and location and the manufacturer, name and full unique model number of the **processing units**.
- b) Number of **processing unit** cores in the computer/cluster.
- c) Peak number of double precision floating point calculations per cycle per core of the **processing unit**. MFPPC referred to in **Paragraph 2.6**.
- d) Further to **Paragraph 2.5(c)**, in the case of an Intel CPU with either the Sandybridge or Ivybridge chipset where the **competitor** chooses not to exploit the AVX feature; the **competitor** must explicitly declare and be able to demonstrate that they are **not** using the AVX feature in the CFD solve process. If the non-usage of the AVX feature is proven to the auditor, the Intel Sandybridge and Ivybridge chipset cores can be rated as 4 **FLOP/cycle/core** rather than as 8 **FLOP/cycle/core**. A **competitor** wishing to make use of this exception in their reporting should include supporting information from their hardware and/or software suppliers with their declaration.
- e) Further to **Paragraph 2.5(c)**, in the case of a **processing unit** without a double precision floating point operating capability the number of natural precision operations per cycle per core will be used instead. As an example, a single precision only GPU core will count the number of single precision floating point operations per cycle.
- f) Processor speed at which the **processing unit** is configured to run at 100% CPU load. CCF referred to in **Paragraph 2.6**.
- g) Details of any off load engines used within the cluster as referred to in **Paragraph 2.6**.
- h) Maximum Tera**FLOPs** (**FLOP** = double precision floating point operation) the system can use. This may exclude any AVX floating point operations if declared under **Paragraph 2.5(d)** or include natural precision operations under **Paragraph 2.5(e)**.

For the avoidance of doubt, any RCFD carried out on behalf of or for the benefit of the competitor by an Associate (as defined in Section 8 of Appendix 6), 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 be carried out using the hardware nominated by the competitor, with the exception of RCFD performed to collect the data necessary for the correct operation of non-Listed Parts supplied by another competitor as defined in Paragraph 3 of Appendix 6 and declared by that competitor.

If the hardware 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, change of location of any part of the hardware.

- 2.6 The calculation used for the declaration of the **eight** week Aerodynamic Testing Period (**ATP**) shall be carried out as below.

$$\text{TotFLOPs} = (\text{MFPPC} * \text{CCF} * \text{NCU} * \text{NSS}) / (604,800 * 8 * 1000)$$

Where :

- TotFLOPs = The total number of TeraFLOPs used per CFD solve run.
- MFPPC = Peak double precision floating point operations per cycle per core of the processing unit (excluding AVX if declared under [Paragraph 2.5\(d\)](#) or using natural precision operations under [Paragraph 2.5\(e\)](#) if the core is not double precision capable).
- 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 :
- The standard clock frequency value from the processing unit Manufacturer's specification sheet (if overclocking or enhanced modes are not used in the run).
  - The maximum "turbo", "HPC" or other enhanced mode frequency value.
  - The maximum overclocked frequency value.
- NCU = Number of processing unit cores used for the run.
- NSS = Number of solver wall clock seconds elapsed during the run. [The message](#) passing time during calculation must be included.

All information required for auditing should be present in the output from the run including the CCF value.

For the avoidance of doubt, any offload processing for example FPU, FPGA, GPU/GPGPU, VFP, softfp etc. should be included and calculated using the same method as above.

### 3. Combined [RWTT](#) and [RCFDs](#) Restriction

- 3.1 The usage limits for [RWTT](#) and [RCFDs](#) are expressed in terms of Wind On Time, number of runs, tunnel occupancy and CFD TeraFLOPs usage during an [ATP](#).
- 3.2 An [ATP](#) is an eight week period used for evaluation of these restrictions. As soon as one [ATP](#) finishes, a new one begins.
- 3.3 Wind On Time is defined as the amount of time (in hours) per week, averaged over the [ATP](#), where the wind tunnel air speed exceeds 15m/s for [RWTT](#). For the avoidance of doubt any [RWTT](#) performed for the [competitor](#) by any [Associate of the competitor \(as defined in Section 8 of Appendix 6\)](#) 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](#) must be included in this calculation as if the tests were performed by the [competitor](#).
- 3.4 CFD TeraFLOP usage is defined as the average number of TeraFLOPs of computing power used for the purpose of making [RCFDs](#) during the [ATP](#). For the avoidance of doubt, computer resource used for [RCFDs](#) that fail or are aborted by the user must still be included in the CFD TeraFLOP usage calculation. For the further avoidance of doubt any [RCFDs](#) performed for the [competitor](#) by any [Associate of the competitor \(as defined in Section 8 of Appendix 6\)](#) 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](#) must be included in this calculation as if the simulations were performed by the [competitor](#).
- 3.5 Each [competitor](#) must limit [RWTT](#) and [RCFDs](#) so that at the end of each [ATP](#) it can be demonstrated that the [competitor](#) has operated according to the Limit Line.
- 3.6 The Limit Line is defined as follows :

$$WT \leq WT\_limit (1 - CFD/CFD\_limit)$$



Where :

WT = Wind On Time

WT\_limit = 25 hours

CFD = CFD TeraFLOP usage

CFD\_limit = 25 TeraFLOPs

- 3.7 The limit in CFD simulation (“CFD\_limit” in the Limit Line) will be revised every three years, starting from 1st January 2014, to a new performance level to take account of changes to CFD hardware ownership and running costs.
- 3.8 Each competitor must also limit RWTT to a maximum of 65 runs per week and a maximum of 60 hours of tunnel occupancy per week both averaged over the ATP. Only two shifts of occupancy may be carried out in any one calendar day. At the end of each ATP it will also have to be demonstrated that the competitor has operated according to these limits.

For the avoidance of doubt any RWTT performed for the competitor by any Associate of the competitor (as defined in Section 8 of Appendix 6) 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 must be included in this calculation as if the tests were performed by the competitor.

- 3.9 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.
- 3.10 Any data acquired during RWTT and RCFD may only be available to the competitor that is assigned the Wind On Time or CFD TeraFLOP used to acquire it, with the exception of the data necessary for the correct operation of non-Listed Parts supplied to another competitor as defined in Paragraph 3 of Appendix 6.

#### 4. Reporting and Benchmarking

- 4.1 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 F1 Sporting Regulations.
- 4.2 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.

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 (described in Article 3.7.1 of the F1 Technical Regulations) and rear wing group (described in Article 3.10.1 of the F1 Technical Regulations) are fitted. In the case of other runs deemed to be non-RCFDs in the context of this Appendix, for example using an aerodynamic configuration greater than 12 months old, the images must also provide a clear visual reference to assist in verifying this aspect of the model.

- 4.3 In order to check on the hardware employed by the competitors and as a means of assuring common application of the restrictions set out in this Appendix, 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 Appendix.

- 4.4 a) The aerodynamic reporting periods [may be found in the Appendix to the F1 Sporting Regulations](#).
- b) [If an](#) Aerodynamic Reporting Period [occupies more than 8](#) calendar weeks in order to span the factory shutdown, Wind-on time, TeraFLOPs, occupancy and runs will be averaged over this reporting period, or any other period which duration may not be 8 weeks, by summing the total activity in the period and then averaging over the effective duration of the [ATP](#) exactly as for a normal reporting period.
- c) For a new entrant, the reporting will start as soon as it officially becomes a competitor. The start date of the first reporting period will be defined as the date at which it officially becomes a competitor and wind-on time, TeraFLOPs, occupancy and runs will be averaged over the duration of this reporting period.

## 5. Exceptions to definition of [RWTT](#)

- 5.1 Free testing is permitted (and therefore not within the definition of [RWTT](#)) for development of suspension and steering systems (Article 10 of the F1 Technical Regulations), brake systems (Article 11 of the F1 Technical Regulations), wheels and tyres (Article 12 of the F1 Technical Regulations) and for development and calibration of pressure sensing instrumentation (such as pitot tubes, multi-directional probes, Kiel tubes etc.), 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. During audit [competitors](#) may be requested to demonstrate compliance of any such testing through the production of supporting data.
- 5.2 Steady state and dynamic engine dynamometer work with an F1 car or subcomponent may be performed (and therefore not within the definition of [RWTT](#)) provided that :
- a) The bodywork used in the test has no front wing assembly (described in Article 3.7.1 of the F1 Technical Regulations) or rear wing assembly (described in Article 3.10.1 of the F1 Technical Regulations) present.
- b) No devices designed to measure directly or indirectly aerodynamic forces or flow field characteristics are installed in the facility used.
- c) 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 benchmarking inspection.
- d) 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).
- 5.3 Wind tunnel testing 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 therefore not within the definition of [RWTT](#)) subject to complying with either of the following restrictions :
- a) The front wing group (described in Article 3.7.1 of the F1 Technical Regulations) and the rear wing group (described in Article [3.9.1](#) of the F1 Technical Regulations) must be removed from the wind tunnel for the duration of the testing.
- b) A model of fixed aerodynamic configuration is used which is more than 12 months old, and that no modification is made to the previously tested geometry.

## 6. Bodywork Items that may be adjusted during a [RWTT run](#)

- 6.1 The following degrees of freedom are permitted during the course of a [RWTT run](#) :
- a) The flap angle of the front wing may be adjusted.
- b) The incidence of the rear most and uppermost element of the top rear wing may be adjusted.

6.2 For the avoidance of doubt, during [RWTTI](#), changes to the state of the model that reflect conditions encountered on the full size car while driving on the track (for example ride height, roll, steer, yaw, exhaust flow) are permitted.

## **[7. Movement of personnel](#)**

**[7.1](#)** 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 Appendix. In order that the FIA may be satisfied that any such movement of staff is compliant with this Appendix, 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 these Regulations and must demonstrate that they have implemented all reasonable measures to avoid the disclosure of information, data or design between the involved competitors.

## APPENDIX 9

### SUPPLY OF POWER UNITS FOR THE 2017-2020 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 6 May (or such other date as agreed in writing between all of the Power Unit Manufacturers and the FIA) [Note: 1 January in 2017] 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).

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<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)a) 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)a) 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 to this Appendix.

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.



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 the Appendix hereto shall be supplied to New Customer Teams at the Price.
- In case of a dispute about the determination of the Price in 2017, the FIA will be entitled to request the Power Unit Manufacturer to provide all the elements which have been taken into consideration in determining such price, subject to the FIA agreeing to comply with strict customary confidentiality obligations.
- The supply of additional goods or services not listed in the Appendix hereto (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 2014-2020 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** :

In 2017 :

- For a New Customer Team already supplied by the same Power Unit Manufacturer in 2016: equal to one million euros less than the price charged in 2016 all other things being equal ;
- For a New Customer Team which was not supplied by the Power Unit Manufacturer in 2016: equal to one million euros less than the lowest price charged by that Power Unit Manufacturer to an Existing Customer Team in 2016 all other things being equal; and

As from 2018 :

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

Regarding the amount of Price in 2017 season, in case certain Power Unit Manufacturer did not supply power unit to any team in 2016 other than factory/works team, the Price shall be equal to one million euros less than the price designated by Power Unit Manufacturer decided based on the usages and practices generally recognised and respected in the market for the supply of power units in the Championship.

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 above-mentioned prices will be reviewed by the Power Unit Manufacturers and the FIA in good faith and amended accordingly should the F1 governing bodies decide, after the 26<sup>th</sup> of April 2016, 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).

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The "Power Unit Technical and Sporting Regulations" (based on the current 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 FIA proposal
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	PU exhaust line from the engine exhaust flange up to but not including the turbine or wastegate exit tail-pipe.	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 26. 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	INCLUDED
11	MGUK excluding mechanical power transmission components and mounting accessories	INCLUDED
12	MGU-K mechanical power transmission components and mounting accessories	INCLUDED
13	MGUH excluding mechanical power transmission components and mounting accessories.	INCLUDED
14	MGU-H mechanical power transmission components and mounting accessories	INCLUDED
15	ES parts defined in article 5.4.3	INCLUDED
16	ES excluding parts defined in article 5.4.3	INCLUDED
17	Wiring between any ECU and phases of MGUK	INCLUDED
18	Wiring between any ECU and phases of MGUH	INCLUDED
19	Wiring between ECU and ES	INCLUDED
20	Any ECU or associated device containing programmable semiconductors or containing high power switching devices. This includes, but is not limited to, MGU-K control unit, MGU-H control unit, injector control unit, ignition control unit, voltage regulator, intelligent sensors and actuators containing complex electronics. This excludes associated brackets, supports, screws, nuts, dowels, washers or cables. Excludes Standard ECU and FIA sensors.	INCLUDED
21	Brackets, supports, screws, nuts, dowels, washers or cables associated to the parts listed in line 20.	INCLUDED
22	Standard ECU	EXCLUDED
23	Any actuators needed to make the PU function at all times (except specific exclusions)	INCLUDED
24	Intake upstream of compressor inlet up to and including the air filter.	EXCLUDED
25	Heat Shields and associated mounting hardware.	EXCLUDED
26	Water system accumulators	EXCLUDED
27	Heat exchangers and their associated accessories (included but not limited to tubes, hoses, supports, brackets and fasteners)	EXCLUDED
28	Hydraulic system (e.g. pumps, accumulators, manifolds, servo-valves, solenoids, actuators) other than servo valve(s) and actuator(s) for PU control.	EXCLUDED
29	Hydraulic system servo valve(s) and actuator(s) for PU control	INCLUDED
30	Fuel feed pumps delivering less than 10 bars and their associated accessories (included but not limited to tubes, hoses, supports, brackets and fasteners)	EXCLUDED
31	Any ancillary equipment associated with the PU air valve system such as hoses, regulators reservoirs or compressors.	EXCLUDED
32	Exhaust beyond turbine exit and WG exit and associated brackets, support, screws, nuts, dowels, washers or cables.	EXCLUDED

33	<u>Studs used to mount PU to chassis or gearbox</u>	EXCLUDED
34	<u>Flywheel, clutch and clutch actuation system between the PU and the gearbox</u>	EXCLUDED
35	<u>Liquids</u>	EXCLUDED
36	<u>Ballast mounted on the PU up to 2kg. This is permitted (subject to Article 4.2) but any in excess of 2kg will be removed before measuring PU weight.</u>	INCLUDED
37	<u>Ballast mounted on the PU in excess of 2kg.</u>	EXCLUDED
38	<u>Wiring harnesses which are not ordinarily part of a power unit</u>	EXCLUDED
	<u>_____</u>	
A	<u>PU and spares for all events in F1 World Championship plus 5000 km testing. Minimum number of PUs per team to be (1 + number of PUs per driver per season according to Sporting Regulations) x 2. 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</u>	INCLUDED
B	<u>Demo event Power Units</u>	EXCLUDED
C	<u>Transport of Power Units and support equipment from Manufacturers factory to event</u>	EXCLUDED
D	<u>Personnel to support Power Unit (5 people) at test and race events</u>	INCLUDED
E	<u>Travel, accommodation &amp; reasonable expenses for support personnel</u>	EXCLUDED
F	<u>Quantity of manufacturer specified fuel and oil</u>	EXCLUDED
G	<u>Garage equipment defined as compulsory by Manufacturer (e.g. battery management)</u>	INCLUDED
H	<u>Garage IT equipment, connection to factory, servers, telemetry, radio, team clothing</u>	EXCLUDED
I	<u>Dyno testing of installation components (Y hours or km )</u>	EXCLUDED

## APPENDIX 10

### CHANGES FOR 2018

#### Changes to Article 10.2

**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 2014, 2015 or 2016 Formula One Technical Regulations. 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.

In order that an FIA observer may be appointed, where possible competitors must inform the FIA of any planned TPC 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.

#### Changes to Article 23.3

**23.3** a) Unless he drives for more than one team (see 23.3(c) below), and subject to the additions described ~~in b) and c)~~ 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) and 2 motor generator units-kinetic (MGU-K) and four power units during a Championship season.

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

~~c)~~ ~~If b) above applies the numbers in d) and e) below will be amended accordingly.~~

~~d)~~ ~~For the purposes of this Article 23.3, the power unit will be deemed to comprise six separate elements, the engine (ICE), the motor generator unit-kinetic (MGU-K), the motor generator unit-heat (MGU-H), the energy store (ES), turbocharger (TC) and control electronics (CE). Each driver will therefore be permitted to use four of each of the above six components during a Championship season and any combination of them may be fitted to a car at any one time.~~

b) Should a driver use more than ~~four~~ 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 <del>a 5th of any of the</del> <u>an additional</u> element is used.	Ten grid place penalty.
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The first <u>next</u> times <del>a 5th of any of the</del> <u>remaining an additional</u> element is used.	Five grid place penalty.
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The first time a 6th of any of the elements is used.

Ten grid place penalty.

The first time a 6th of any of the remaining elements is used, and so on.

Five grid place penalty.

A power unit or **Any** of the six **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 components within 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 exhaust blanking plates (with one 10mm diameter inspection hole per cylinder) and further seals will be applied to all used power unit components in order to ensure that they cannot be run or dismantled between Events.

Upon request to the FIA these additional seals will be removed after the start of initial scrutineering at the next Event at which the power units are required. All such power units 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.

#### Changes to Article 24.2

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

- a) Except under Article 24.1(b) and Article **24.4(e)**, 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.

~~For the first five Events of the 2017 Championship season only, the above selection procedure will not be used. For these Events the Supplier will allocate two sets of the hardest compound specification, four sets of the medium compound specification and seven sets of the softest compound specification to each driver.~~

- 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.

#### Changes to Article 24.5

##### 24.5 Testing of tyres :

- a) From the time at which each competitor receives fitted tyres from the Supplier at 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.

#### Changes to Paragraph 1.4 of Appendix 8

- 1.4 No RWTT may be carried out at a wind tunnel air speed exceeding 50m/s measured relative to the scale model referred to in Paragraph 1.3. Furthermore, during restricted wind tunnel testing the magnitude of the average acceleration or deceleration of the wind tunnel air speed measured relative to the scale model referred to in Paragraph 1.3 must be less than 4.5m/s<sup>2</sup>. The average acceleration or deceleration will be measured at a minimum sampling frequency of 2Hz 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.

#### Paragraphs 2.5 and 2.6 added to Appendix 8

- 2.5 For each aerodynamic reporting period defined in the Appendix to the F1 Sporting Regulations, for each nominated computer/cluster, each competitor must use either 'Option A' in Paragraph 2.6 or 'Option B' in Paragraph 2.7 for declaring RCFDs. This will take effect from the first whole aerodynamic reporting period in 2018.
- 2.6 **RCFD simulations Option A :**
- 2.6.1 RCFD simulations declared using Option A may only be carried out using hardware that has been nominated by the competitor to the FIA. Each competitor must declare to the FIA in writing the computer resource that is employed for the purpose of RCFD simulations.

The declaration of the hardware by the competitor to the FIA must include :

- a) The computer/cluster identification, manufacturer, model and location and the manufacturer, name and full unique model number of the Processing Units.
- b) Number of Processing Unit cores in the computer/cluster.
- c) Processor speed at which the Processing Unit is configured to run at 100% CPU load. CCF referred to in paragraph 2.6.2.

If the hardware 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, change of location of any part of the hardware.

**2.6.2** The calculation used for the declaration of the 8 week Aerodynamic Testing Period shall be carried out as below.

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

Where :

AUh = The total number of Unit hours allocated to a CFD job. 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). For CPUs an Allocation Unit hour is equivalent to a core-hour.

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 :

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

NCU = Number of Processing Unit cores allocated for the run.

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

All information required for auditing should be present in the output from the run including the CCF value.

**2.6.3** RCFD simulations must only run on CPUs. The competitor must be able to demonstrate that they are not using any other type of processing unit in the CFD solve process.

**2.6.4** Each RCFD job must be wholly run on a set of homogeneous processing units.

Changes to Paragraph 2.7 (formerly 2.6) of Appendix 8

## **2.7 RCFD simulations Option B :**

**2.7.1** RCFDs declared using Option B may only be carried out using hardware that has originally been nominated by the competitor to the FIA on or before 1 January 2017. ~~Each competitor must declare to the FIA in writing the computer resource that is employed for the purpose of RCFDs.~~

The declaration of the hardware by the competitor to the FIA must include :

- a) The computer/cluster identification, manufacturer, model and location and the manufacturer, name and full unique model number of the processing units.

- b) Number of processing unit cores in the computer/cluster.
- c) Peak number of double precision floating point calculations per cycle per core of the processing unit. MFPPC referred to in Paragraph [2.7.2](#).
- d) Further to Paragraph [2.7.1\(c\)](#), in the case of an Intel CPU with either the Sandybridge or Ivybridge chipset where the competitor chooses not to exploit the AVX feature; the competitor must explicitly declare and be able to demonstrate that they are not using the AVX feature in the CFD solve process. If the non-usage of the AVX feature is proven to the auditor, the Intel Sandybridge and Ivybridge chipset cores can be rated as 4 FLOP/cycle/core rather than as 8 FLOP/cycle/core. A competitor wishing to make use of this exception in their reporting should include supporting information from their hardware and/or software suppliers with their declaration.
- e) Further to Paragraph [2.7.1\(c\)](#), in the case of a processing unit without a double precision floating point operating capability the number of natural precision operations per cycle per core will be used instead. As an example, a single precision only GPU core will count the number of single precision floating point operations per cycle.
- f) Processor speed at which the processing unit is configured to run at 100% CPU load. CCF referred to in Paragraph [2.7.2](#).
- g) Details of any off load engines used within the cluster as referred to in Paragraph [2.7.2](#).
- h) Maximum TeraFLOPs (FLOP = double precision floating point operation) the system can use. This may exclude any AVX floating point operations if declared under Paragraph [2.7.1\(d\)](#) or include natural precision operations under Paragraph [2.7.1\(e\)](#).

For the avoidance of doubt, any RCFD carried out on behalf of or for the benefit of the competitor by an Associate (as defined in Section 8 of Appendix 6), 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 be carried out using the hardware nominated by the competitor, with the exception of RCFD performed to collect the data necessary for the correct operation of non-Listed Parts supplied by another competitor as defined in Paragraph 3 of Appendix 6 and declared by that competitor.

If the hardware is changed ~~or upgraded~~ then a new [an updated](#) 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 hardware.

[2.7.2](#) The calculation used for the declaration of the eight week Aerodynamic Testing Period (ATP) shall be carried out as below.

$$\text{TotFLOPs} = (\text{MFPPC} * \text{CCF} * \text{NCU} * \text{NSS}) / (604,800 * 8 * 1000)$$

Where :

TotFLOPs = The total number of TeraFLOPs used per CFD solve run.

MFPPC = Peak double precision floating point operations per cycle per core of the processing unit (excluding AVX if declared under Paragraph [2.7.1\(d\)](#) or using natural precision operations under Paragraph [2.7.1\(e\)](#) if the core is not double precision capable).

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 :

- a) The standard clock frequency value from the processing unit Manufacturer's specification sheet (if overclocking or enhanced modes are not used in the run).



- b) The maximum “turbo”, “HPC” or other enhanced mode frequency value.
  - c) The maximum overclocked frequency value.
- NCU = Number of processing unit cores used for the run.
- NSS = Number of solver wall clock seconds elapsed during the run. The message passing time during calculation must be included.

All information required for auditing should be present in the output from the run including the CCF value.

For the avoidance of doubt, any offload processing for example FPU, FPGA, GPU/GPGPU, VFP, softfp etc. should be included and calculated using the same method as above.

Paragraph 2.8 added to Appendix 8

**2.8 Availability of Hardware**

Any hardware in use after 1 January 2018 must be available on a non-exclusive basis to all competitors.

Changes to Section 3 of Appendix 8

**3. Combined RWTT and RCFDs Restriction**

- 3.1 The usage limits for RWTT and RCFDs are expressed in terms of Wind On Time, number of runs, tunnel occupancy, CFD AUh usage and CFD TeraFLOPs usage during an ATP.
- 3.2 An ATP is an eight week period used for evaluation of these restrictions. As soon as one ATP finishes, a new one begins.
- 3.3 Wind On Time is defined as the amount of time (in hours) per week, averaged over the ATP, where the wind tunnel air speed exceeds 15m/s for RWTT. For the avoidance of doubt any RWTT performed for the competitor by any Associate of the competitor (as defined in Section 8 of Appendix 6) 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 must be included in this calculation as if the tests were performed by the competitor.
- 3.4 CFD AUh Usage is defined as the sum of the number of Allocation Unit hours used for the purpose of making RCFD simulations during the ATP. CFD TeraFLOP usage is defined as the average number of TeraFLOPs of computing power used for the purpose of making RCFDs during the ATP. For the avoidance of doubt, computer resource used for RCFDs that fail or are aborted by the user must still be included in the CFD AUh or CFD TeraFLOP usage calculation.

For the further avoidance of doubt any RCFDs performed for the competitor by any Associate of the competitor (as defined in Section 8 of Appendix 6) 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 must be included in this calculation as if the simulations were performed by the competitor.

- 3.5 Each competitor must limit RWTT and RCFDs so that at the end of each ATP it can be demonstrated that the competitor has operated according to the Limit Line.
- 3.6 The Limit Line is defined as follows :

$$WT \leq WT\_limit (1 - CFD_A / CFD\_A\_limit - CFD_B / CFD\_B\_limit)$$

Where:

WT = Wind On Time

WT\_limit = 25 hours

And for RCFD Simulations Option A :

$CFD_A = \text{CFD AUh Usage}$

$CFD_A \text{ limit} = \text{XX MAUh}$

And for RCFD Simulations Option B :

$CFD_B = \text{CFD TeraFLOP usage}$

$CFD_B \text{ limit} = 25 \text{ TeraFLOPs}$

**3.7** The value of XX for  $CFD_A$  limit in paragraph 3.6 will be defined by the FIA before 28<sup>st</sup> February 2017. This value will be set such that at this date the best in class CPU for CFD using RCFD Restrictions Option A has an equivalent CFD limit to computers/clusters using the AMD Opteron 6275 (Fangio) chipsets using RCFD Restrictions Option B.

**3.8** The limits in CFD simulation (" $CFD_A$  limit" and " $CFD_B$  limit" in the Limit Line) will be revised every three years, starting from 1st January 2018, to a new performance level to take account of changes to CFD hardware ownership and running costs.

**3.9** Each competitor must also limit RWTT to a maximum of 65 runs per week and a maximum of 60 hours of tunnel occupancy per week both averaged over the ATP. Only two shifts of occupancy may be carried out in any one calendar day. At the end of each ATP it will also have to be demonstrated that the competitor has operated according to these limits.

For the avoidance of doubt any RWTT performed for the competitor by any Associate of the competitor (as defined in Section 8 of Appendix 6) 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 must be included in this calculation as if the tests were performed by the competitor.

**3.10** 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.

**3.11** Any data acquired during RWTT and RCFD may only be available to the competitor that is assigned the Wind On Time or CFD TeraFLOP used to acquire it, with the exception of the data necessary for the correct operation of non-Listed Parts supplied to another competitor as defined in Paragraph 3 of Appendix 6.