



INVITATION TO TENDER FOR SOLE SUPPLY CONTRACT
CANCELS AND REPLACES THE VERSION PUBLISHED ON 19 JULY 2018

The objective is to select an exclusive supplier of tyres whose task it will be to ensure the production and delivery of the tyres to the competitors in the 2020, 2021, 2022 and 2023 FIA Formula One World Championship (hereafter “the Championship”).

Interested parties are hereby invited to tender to become the single supplier of tyres to the competitors in the Championship by submitting a proposal complying with the following procedure.

This tendering procedure will consist of three main phases:

- 1) The FIA will identify potential single suppliers on the basis of technical and safety requirements. The tenderers are therefore invited to confirm and demonstrate by filling in the form below (and providing all relevant documents) that they are capable of meeting the requirements set out below.
- 2) All tenders that meet the FIA’s technical and safety requirements (Approved Bidders) shall then be submitted to the commercial rights holder of the Championship which will conduct commercial negotiations with each Approved Bidder and make the final selection of the entity it proposes to be appointed by the FIA.
- 3) The FIA shall officially appoint the single supplier and contract with it in connection with the basis on which it will supply the competitors and any sporting considerations. The commercial rights holder of the Championship shall be solely entitled to contract with the appointed single supplier concerning any rights of association with the Championship to be conferred on the single supplier.

The FIA reserves the right to make amendments to this invitation to tender at any time and to issue a new invitation to tender.

The timeline of **phase 1** of this tendering procedure is the following:

Publication of invitation to tender:	3 August 2018
Tender submission date:	31 August 2018
Decision as to the compliance with the technical and safety requirements:	14 September 2018

The timelines applicable to phases 2 and 3 will be available after the completion of phase 1.

PHASE 1

The completed form is to be sent to tenderingprocedure@fia.com with each page of the document initialled (with all relevant documents and information) by any tyre manufacturer interested in supplying the tyres in the 2020, 2021, 2022 and 2023 FIA Formula One World Championship.

We, the undersigned are prepared to supply tyres respecting all the conditions set out below in the 2020, 2021, 2022 and 2023 FIA Formula One World Championship.

The tyres that we propose are:

.....
.....
.....
.....

The technical information regarding these tyres is appended hereto.

Provided that our tender is selected by the FIA after the completion of phases 1, 2 and 3, we undertake to enter into a contract with the FIA under, substantially, the terms and conditions stated in the present document as well as to comply with all sporting, technical and any other regulations applicable to the Championship.

Name:

Title:

Company:

In:

On:

Signature:

PART 1 - GENERAL CONDITIONS

RECITALS

- (A) The FIA is the sole body governing international motor sport and is recognised by its members as the sole authority having the sporting power with the right to organise international FIA championships, including the CHAMPIONSHIP.
- (B) The FIA has an absolute obligation conferred on it by its members to safeguard its authority over all safety, sporting, technical and disciplinary matters relating to the CHAMPIONSHIP, as well as traditional values.
- (C) The FIA is responsible for the publication of the GOVERNING RULES.
- (D) The FIA has determined that the interests of the CHAMPIONSHIP require that a single supplier of the PRODUCT should be appointed for a limited term.
- (E) It is intended that the FIA and the PROVIDER will enter into this CONTRACT pursuant to which the PROVIDER will be appointed as the sole supplier of PRODUCT to the CHAMPIONSHIP for the term set out herein.

1. APPOINTMENT AND SUPPLY

- 1.1 The FIA hereby appoints the PROVIDER to be the exclusive supplier of the PRODUCT to the COMPETITORS for the CHAMPIONSHIP and the PROVIDER hereby accepts this appointment and agrees to supply the PRODUCT to the COMPETITORS for the CHAMPIONSHIP in accordance with the terms of this CONTRACT.
- 1.2 Following from its appointment, the PROVIDER shall enter into a SUPPLY AGREEMENT with each COMPETITOR setting out the terms upon which the PRODUCT shall be supplied.
- 1.3 The PRODUCT that is supplied by the PROVIDER to the COMPETITORS shall be compliant with the TECHNICAL REGULATIONS and the technical specifications.

2. RELATIONS BETWEEN THE PROVIDER AND THE COMPETITORS

- 2.1 The PROVIDER shall treat all COMPETITORS in accordance with the PRINCIPLES OF SPORTING EQUALITY.
- 2.2 The PROVIDER shall supply the PRODUCT to all COMPETITORS on equivalent terms. It shall enter into a standard SUPPLY AGREEMENT with each COMPETITOR.
- 2.3 All SUPPLY AGREEMENTS shall be fully compliant with the PRINCIPLES OF SPORTING EQUALITY, the CONTRACT, the SPORTING REGULATIONS and the TECHNICAL REGULATIONS.
- 2.4 If requested by the FIA, the PROVIDER shall supply a copy of each SUPPLY AGREEMENT in order to demonstrate that the PRINCIPLES OF SPORTING EQUALITY are maintained. With respect to the FIA, the PROVIDER hereby waives and confirms that it shall not assert or seek to rely on any confidentiality provision in any SUPPLY AGREEMENT or other agreement relevant to the supply of the PRODUCT to prevent the FIA from reviewing relevant agreements or carrying out its regulatory functions (including ensuring that the PRINCIPLES OF SPORTING EQUALITY are maintained).

3. LIABILITY

3.1 Without prejudice to the other rights set out in the CONTRACT, the PROVIDER shall indemnify and hold harmless the INDEMNIFIED PERSONS from and against all reasonably foreseeable losses incurred by the INDEMNIFIED PERSONS as a direct result of the PROVIDER's:

- (a) failure to supply the PRODUCT of the requisite quantity;
- (b) failure to supply the PRODUCT of the requisite quality or type; and
- (c) negligence in the supply of the PRODUCT,

in each case that prevents a significant number of COMPETITORS from participating fully in a COMPETITION.

3.2 The PROVIDER represents and warrants that it is in a position to meet any liability that may arise under clause 3.1 of this CONTRACT and hereby covenants for the benefit of each INDEMNIFIED PERSON to maintain such position for the period of time during which the PROVIDER may be liable.

4. WARRANTIES

4.1 The PROVIDER represents and warrants that it has full power and authority to enter into and fully perform its obligations under the CONTRACT and the provisions of the CONTRACT, when executed, will constitute valid and binding obligations on the PROVIDER in accordance with its terms. The PROVIDER also represents and warrants that it has full power and authority to enter into and fully perform its obligations under the SUPPLY AGREEMENTS when executed.

4.2 The FIA represents and warrants that it has full power and authority to enter into and fully perform its obligations under the CONTRACT and the provisions of the CONTRACT, when executed, will constitute valid and binding obligations on the FIA in accordance with its terms.

5. TERMINATION

5.1 Notwithstanding any other provision hereof, either party may terminate the CONTRACT with immediate effect by written notice to the other if any of the following events occur:

- (a) the other party has committed a material breach of the CONTRACT which is not capable of remedy or, if remediable, has not remedied it within 30 days of the non-breaching party's written notice requiring the default to be remedied (for the avoidance of doubt, a breach by the PROVIDER of any of GENERAL CONDITIONS 1.2, 1.3, 2, 3 and 4.1 and any of SPECIAL CONDITIONS is acknowledged by the parties to be a material breach);
- (b) steps (including any steps analogous to those following) have been taken to wind up the other party or to place the other party into administration or to have a receiver appointed over any of its assets, other than as part of a scheme of solvent reconstruction or amalgamation; or
- (c) the other party shall cease or threaten to cease carrying on business or the other party shall make any composition or arrangement with its creditors or become

subject to any other insolvency process or proceeding (other than as part of a scheme of solvent reconstruction or amalgamation) or have all or any of its assets or undertakings seized by a government or governmental agency or authority (including any acts analogous to the above).

6. GOVERNING RULES

- 6.1 The GOVERNING RULES constitute the legal, administrative and technical framework of the CHAMPIONSHIP and the conditions set forth therein shall have binding force and prevail among the parties to the CONTRACT.
- 6.2 The CONTRACT shall in principle be interpreted in a manner that gives effect to the provisions of the GOVERNING RULES, the intention of the parties being to construe the provisions of the CONTRACT in the context of the more general framework of the GOVERNING RULES.
- 6.3 The PROVIDER acknowledges that the technical specifications and GOVERNING RULES are subject to amendment from time to time. The PROVIDER will be responsible (at its own cost) for all research and development associated with the manufacture of the PRODUCT, including the making of any changes to the PRODUCT to be supplied pursuant to the CONTRACT that may be necessitated by any amendment to the technical specifications or the GOVERNING RULES.
- 6.4 The PROVIDER acknowledges that the FIA may take decisions regarding the supply of the PRODUCT, this CONTRACT and any obligations accruing from the GOVERNING RULES through whatever structure it deems appropriate, including through its disciplinary structures. The PROVIDER shall not challenge the competence of the disciplinary body acting in accordance with the GOVERNING RULES.

7. GOVERNING LAW AND LANGUAGE

- 7.1 The language that shall prevail for the interpretation of the CONTRACT shall be English and the CONTRACT and all documents connected with the CONTRACT shall be written in English. In the event of any conflict between the language of the CONTRACT and any translation thereof, the language of the CONTRACT shall prevail. In the event of any conflict between the language of any document connected with the CONTRACT and any translation thereof, the language of the document connected with the CONTRACT shall prevail.
- 7.2 The governing law of the CONTRACT shall be French law.
- 7.3 The Tribunal de Grande Instance de Paris, France, shall have sole jurisdiction to settle any dispute that may arise between the FIA and the PROVIDER in connection with the CONTRACT, subject at all times to the provisions of clause 6.4.
- 7.4 The PROVIDER undertakes to strictly respect the Statutes and Code of Ethics of the FIA as well as the GOVERNING RULES. The PROVIDER hereby agrees to be subject to the internal judicial and disciplinary bodies of the FIA.
- 7.5 Each party undertakes to the other party that in the exercise of its rights and performance of its obligations under this CONTRACT, it shall comply with all applicable laws, including without limitation all applicable laws relating to anti-corruption measures. In particular and in accordance with such laws, each party undertakes to abstain (and to cause its

directors, employees and officers to abstain) from corruptly, directly or indirectly, offering, promising, giving, paying or accepting any Public Official's request for a gift, or authorising anyone to give or pay, directly or indirectly, any sums, other benefits or advantages or anything of value to or for a Public Official.

For the purpose of this clause:

"Public Official" shall mean (i) anyone who performs public functions in a legislative, judicial or administrative capacity; (ii) anyone acting in an official capacity for or on behalf of a Public Body; (iii) anyone in charge of providing a public service; or (iv) any other person, individual or entity at the suggestion, request or instruction or for the benefit of any of the persons or entities referred to in (i) to (iii) above; and

"Public Body" shall mean (i) a supranational, national, regional or local government, (ii) an agency, department or instrumentality of a supranational, national, regional or government-participated company, and/or (iii) a public international organisation.

8. GENERAL

- 8.1 Nothing in the CONTRACT guarantees or shall be construed as guaranteeing the solvency of a COMPETITOR. The FIA is not responsible for ensuring that the COMPETITORS satisfy the terms of the SUPPLY AGREEMENTS and the FIA shall not be liable for a failure by any COMPETITOR to satisfy the terms of a SUPPLY AGREEMENT.
- 8.2 No delay or omission or failure to exercise any right or remedy provided herein shall be deemed to be a waiver thereof.
- 8.3 The CONTRACT shall be binding on and enure to the benefit of the parties and their respective successors and permitted assigns. The PROVIDER shall not be entitled to assign or sub-contract its rights or obligations under the CONTRACT in whole or in part without the prior written consent of the FIA.
- 8.4 Any notice to be given under the CONTRACT shall be given in writing delivered to the other party by any one or more of the following methods:
- (a) personal delivery to one of its corporate officers, in which case notice shall be treated as having been given at the time of such personal delivery;
 - (b) first class registered post or courier delivery service (such as DHL or UPS) to the address mentioned above (or such other address as may be notified to the other party in writing from time to time), in which case notice shall be treated as having been given on the date of actual receipt at that address (or on the next local business day if delivered on a local non-business day or after 4.00 p.m. local time on a local business day), which shall rebuttably be presumed to be the second local business day after posting.
- 8.5 Any variations of the CONTRACT shall be ineffective unless agreed in writing and signed by the parties.
- 8.6 If any term, provision or condition of the CONTRACT is held by a court of competent jurisdiction to be invalid, void or unenforceable such invalidity, voidness or unenforceability shall not invalidate the remainder of the CONTRACT, all of which shall remain in full force and effect.

- 8.7 The CONTRACT may be executed in any number of counterparts (whether original or facsimile counterparts) and upon due execution of all such counterparts by all parties, each counterpart shall be deemed to be an original hereof.
- 8.8 GENERAL CONDITIONS 3, 7 and 8 shall survive expiry or termination of the CONTRACT for any reason (but shall terminate at the time expressly provided in the relevant GENERAL CONDITION, if any).

PART 2 - SPECIAL CONDITIONS

1. TECHNICAL MATTERS

- 1.1 The PROVIDER will, to the extent possible, ensure that all PRODUCTS of a given compound are of the same quality and composition and that the performance of the PRODUCT of a given compound remains consistent at all times.
- 1.2 The PROVIDER will liaise closely with the FIA on PRODUCT performance and make such adjustments as the FIA may require in order to keep car performance, particularly cornering speeds, within acceptable limits.
- 1.3 In accordance with expected changes to the Formula 1 Technical Regulations for 2021, PRODUCT dimensions will change for that season. Accordingly, the PRODUCT supplied shall comply with the following broad schedule:

SCHEDULE			
YEAR	FRONT TYRE SIZE	REAR TYRE SIZE	TYRE BLANKETS USED
2020	305/670-13	405/670-13	YES
2021	270/D1-18 ¹	405/D2-18	NO
2022	270/D1-18	405/D2-18	NO
2023	270/D1-18	405/D2-18	NO

[Where tyre diameters (D1, D2) are expected to be in the region of 700-720mm, the PROVIDER is expected to specify what dimension they feel is most appropriate].

- 1.4 The FIA will inform the PROVIDER of Technical Targets that affect the sporting spectacle and are related to degradation, durability, temperature working range or wear characteristics. These Technical Targets will be determined following consultation with the PROVIDER. An example of technical targets is available in the Appendix to the present CONTRACT".

2. SUPPLY OF THE PRODUCT

- 2.1 The PROVIDER will supply to each of the COMPETITORS:
- (i) All of the PRODUCTS needed for participation at each COMPETITION. Sufficient quantities (calculated by reference to the maximum number that each COMPETITOR is permitted to use under the SPORTING AND TECHNICAL REGULATIONS) must be made available to COMPETITORS at COMPETITIONS and PRODUCTS that are used and not used at COMPETITIONS must be collected by the PROVIDER at the end of the COMPETITION;
 - (ii) A maximum number of sets of new PRODUCTS per calendar year for OFFICIAL TESTING, as reasonably agreed by the Parties on the basis of the test days to be held in the relevant year.

1 Note: Tyre widths and aspect ratios (denoted by letters above) are nominal guidelines. Exact values to be established by the PROVIDER with the agreement of the FIA.

- (iii) A maximum of 12 (twelve) sets of the new PRODUCT per calendar year for wind tunnel testing. The PRODUCT for wind tunnel testing will be made available to the COMPETITORS in either 50% or 60% scale.
 - (iv) 5 (five) sets of the PRODUCT suitable for rig testing to each COMPETITOR per calendar year. These PRODUCTS must be an accurate representation of the rolling dry tyre dynamic characteristics but may not be of a compound utilised in the CHAMPIONSHIP. In the event that the construction of this PRODUCT is modified during the season, the PROVIDER will make available one additional prototype set of the new specification PRODUCT to the COMPETITORS, this prototype set not to be counted in the five sets yearly allocation.
 - (v) 10 (ten) sets of the PRODUCT suitable for promotional events to each COMPETITOR per calendar year;
 - (vi) 5 (five) sets of the PRODUCT suitable for use as travel tyres to each COMPETITOR per calendar year. This PRODUCT must be unsuitable for use on a circuit or a test rig.
 - (vii) 2 (two) sets of the prototype PRODUCT before the deadline established in Article 3.1 above;
 - (viii) A reasonable number of the PRODUCT for show cars. This PRODUCT must be unsuitable for use on a circuit or a test rig.
- 2.2 The PROVIDER will not supply any additional PRODUCTS to any COMPETITORS during the period of the CONTRACT, other than the PRODUCTS that are available on the market as defined in Articles 10.2 and 10.3 of the SPORTING REGULATIONS and the PRODUCTS for show cars.
- 2.3 The PROVIDER agrees to abide by whatever instructions or directions the FIA may give in relation to the supply.

3. PRODUCTION DATES AND DELIVERY AT COMPETITIONS

- 3.1 The PROVIDER must make available to each COMPETITOR, no later than 1 December of each year prior to a CHAMPIONSHIP, two prototype sets of PRODUCTS which will (unless specifically agreed with the FIA) be identical in all material respects to the PRODUCTS that will be supplied for use in that CHAMPIONSHIP.
- 3.2 For each CHAMPIONSHIP year where a new specification of PRODUCTS is used, the first issue of the wind tunnel PRODUCT will be supplied to the COMPETITORS by 1 January of the year preceding that CHAMPIONSHIP year, and subsequent updates will be provided on 30 April, 30 July and 30 November of the same year.

During every CHAMPIONSHIP year, updates will be required on 30 July and 30 November. If a wind tunnel PRODUCT is updated within a given calendar year, then the PROVIDER will make available up to a further 12 sets of the new specification PRODUCT to the COMPETITORS in exchange for the return of the old specification PRODUCT. All wind tunnel PRODUCTS supplied to the COMPETITORS must be returned to the PROVIDER by 31 December 2023.

- 3.3 The PROVIDER shall make the first PRODUCT for rig testing available on 1 January 2019. New PRODUCT specifications for rig testing will be made available at the latest on 1 January in each of the calendar years of the CONTRACT. All PRODUCTS for rig testing supplied to the COMPETITORS must be returned to the PROVIDER by 31 December 2023.
- 3.4 The PRODUCTS for each CHAMPIONSHIP year where a new specification of PRODUCTS is used must be available to the COMPETITORS for OFFICIAL TESTING in November of the previous year, at the latest.
- 3.5 The PROVIDER undertakes to respect any other deadline that the FIA would fix within the framework of production or delivery of the PRODUCT.
- 3.6 The PROVIDER shall ensure the transportation and delivery of the PRODUCT to the site of each COMPETITION and, when required, OFFICIAL TESTING, and shall provide all necessary personnel and equipment at each COMPETITION and, when required, OFFICIAL TESTING, to distribute (fit and service) such PRODUCT to the COMPETITORS.
- 3.7 The PROVIDER shall install one PRODUCT distribution centre within the precincts of the circuit at each COMPETITION and, when required, OFFICIAL TESTING. The PROVIDER shall ensure that each COMPETITOR shall have access to such distribution centre in accordance with the SPORTING REGULATIONS and TECHNICAL REGULATIONS and the PRINCIPLES OF SPORTING EQUALITY.
- 3.8 The PROVIDER will be required to be present and ready to fit PRODUCTS by 9.00 am on the day before the first practice day and remain available to do so throughout each COMPETITION.
- 3.9 The PROVIDER shall ensure that representatives of the PROVIDER are present on-site throughout the duration of each COMPETITION and, in addition, shall ensure that there shall be at least one appropriately qualified and senior representative of the PROVIDER available on-site throughout the duration of each COMPETITION.

4. OPERATIONAL ISSUES AND TECHNICAL COMMUNICATION

- 4.1 The PROVIDER shall supply PRODUCTS that are in conformity with the SPORTING AND TECHNICAL REGULATIONS (in particular Article 24 of the former and Article 12 of the latter), save that the FIA reserves the right to waive the requirement for the PROVIDER to provide three specifications of dry-weather PRODUCT (Article 24.1) and allow the PROVIDER to provide one specification of dry-weather PRODUCT only.
- 4.2 Before starting production, the PROVIDER shall submit a detailed technical study to the FIA ENGINEER for written approval and possible modifications according to the observations of the FIA ENGINEER. In the event that an amendment is made to the TECHNICAL REGULATIONS that requires an amendment to the PRODUCT supplied pursuant to the CONTRACT, the PROVIDER shall provide to the FIA a detailed technical study to be supplied pursuant to the CONTRACT to take account of such amendment.
- 4.3 All PRODUCTS provided by the PROVIDER for a given calendar year of the CONTRACT will be of the same construction, as agreed in writing with the FIA.
- 4.4 Subject to any FIA waiver (see Article 4.1 above), the PROVIDER will make available a maximum of three compound specifications at each COMPETITION.

- 4.5 The compound(s) chosen for a given COMPETITION will be proposed by the PROVIDER and previously agreed in writing by the FIA.
- 4.6 The PROVIDER may not make any change to the specification of the PRODUCTS during the CONTRACT without the express prior written agreement of the FIA.
- 4.7 The PROVIDER will make available to all COMPETITORS, on an equal basis, a centralised pool of Research and Development (R&D) Engineers that may answer technical questions raised by the COMPETITORS away from the track environment. If a question can only be answered by commissioning new experimentation or research, then the reply must be shared with all COMPETITORS.
- 4.8 The PROVIDER will convene a regular Tyre Working Group meeting comprising a representative from each COMPETITOR and selected technical staff of the PROVIDER as well as the FIA. This Working Group will meet every three months. Matters related to all PRODUCTS supplied by the PROVIDER and for all potential uses shall be included on the agenda of these meetings. The PROVIDER will be responsible for managing the agenda of the meeting and distribution of agreements and actions arising from the meeting.
- 4.9 The COMPETITORS will supply the PROVIDER with the car and simulation data that they have agreed upon to enable appropriate PRODUCTS for wind tunnel and track use to be specified and designed. This data exchange will be defined and executed during the Working Group meetings.
- 4.10 For each CHAMPIONSHIP year where a new specification of PRODUCTS is used, the PROVIDER will develop and supply to the COMPETITORS a Finite Element stress model to reflect the deformed shape of the PRODUCT under loading, including sidewall and contact patch shape. The first release will be by 1 January of the year preceding that CHAMPIONSHIP year. The PROVIDER will keep the model up to date with further releases as the PRODUCT evolves. As a minimum, it is envisaged that there will be further releases in June and November of the year preceding that CHAMPIONSHIP year. The Tyre Working Group will be tasked with defining details on this model.
- 4.11 For each CHAMPIONSHIP year where a new specification of PRODUCTS is used, the PROVIDER will develop and supply to the COMPETITORS a thermo mechanical tyre grip model. The model should be suitable for running in a real-time environment such as a driver-in-the-loop simulator. The first release will be by 1 January of the year preceding that CHAMPIONSHIP year. The PROVIDER will keep the model up to date with further releases as the PRODUCT evolves. As a minimum it is envisaged that there will be further releases every six months for the duration of the particular PRODUCT specification in order to capture either PRODUCT or model development. It is envisaged that a considerable part of this development will be done in close cooperation between the COMPETITORS and the PROVIDER. Model and implementation details will be agreed by the Tyre Working Group and by the FIA.
- 4.12 All PRODUCTS supplied under the CONTRACT must be suitable for use at all times during the COMPETITION.

4.13 For each CHAMPIONSHIP year, and in addition to the models described in Articles 4.10 and 4.11, the PROVIDER will supply the FIA and each COMPETITOR with technical information on all available PRODUCTS, including at a minimum:

Block 1 – first draft in January of the year preceding the CHAMPIONSHIP

- Static profile and dimensions when fitted and inflated at nominal pressure with no load;
- Static profile, contact patch shapes and dimensions when fitted and inflated at nominal pressure at static nominal load;
- Tyre profiles measured on flat track or rotating drum;
- Tyre weight and inertia (front and rear for dry / intermediate / wet);
- Loaded radius equations =fn (speed, Fx, Fy, Fz, inflation pressure, camber);
- Rolling radius equations =fn (speed, Fx, Fy, Fz, inflation pressure, camber);
- Force and moment tyre model – Pacejka format;
- Aligning torque.

Block 2 – First draft in March of the year preceding the CHAMPIONSHIP

- Tyre shape information at up to 20 loading conditions for design of floors, rear wing endplates, etc.;
- Contact patch shape on a rolling tyre at different speeds, camber, pressure and loads;
- Tyre bead details and preferred rim widths to confirm wheel rim design;
- Tyre valve details;
- Camber range;
- Minimum and maximum inner pressure;
- Compound data and characteristics

Block 3 – First draft June of the year preceding the CHAMPIONSHIP

- Rolling resistance as function of load and speed;
- Non-rolling tyre spring rate and damping over a range of vertical load and drive frequencies;
- Longitudinal and transverse stiffness as a function of speed, vertical load and pressure;
- Relaxation length;
- Overturning moment;
- Compound Data – Qualitative comparison of the stiffness of compounds and working ranges.

5. OFFICIAL TESTING

5.1 To facilitate OFFICIAL TESTING by COMPETITORS, the PROVIDER will be present at its own expense at all OFFICIAL TESTING days nominated by the FIA, with all necessary personnel and equipment to fit and service the PRODUCT. Each set of the PRODUCT used by a COMPETITOR during this OFFICIAL TESTING will be deducted from the allowance of 110 sets per COMPETITOR. OFFICIAL TESTING will be at a maximum of two locations in any given week. The testing schedule and locations will be in accordance with the FIA's Sporting Regulations.

5.2 The PROVIDER will treat all COMPETITORS equally with respect to anything which affects the performance of the cars.

PART 3 - DEFINITIONS

The following terms shall be understood to have the following meanings for the purposes of the "CONTRACT".

- 1.1 ASN** means a national automobile club or other national body recognised by the FIA as sole holder of sporting power in a country.
- 1.2 CHAMPIONSHIP** means the 2020, 2021, 2022 and 2023 FIA Formula One World Championship.
- 1.3 COMMERCIAL RIGHTS HOLDER** means the entity holding the commercial rights in the CHAMPIONSHIP, being Formula One World Championship Limited, a company incorporated under the laws of England with registered number 04174493.
- 1.4 COMPETITION** (referred to as EVENT in the FIA Formula One World Championship Regulations) means any race forming part of the CHAMPIONSHIP and entered on the International Sporting Calendar of the FIA. A COMPETITION is deemed to commence at the scheduled time for scrutineering and sporting checks and includes all practice, qualifying and the race itself and ends at the expiry of the deadline for the lodging of a protest under the terms of the International Sporting Code.
- 1.5 COMPETITORS** means the racing teams that have been accepted by the FIA to take part in the CHAMPIONSHIP.
- 1.6 CONTRACT** means the GENERAL CONDITIONS, the SPECIAL CONDITIONS and the DEFINITIONS.
- 1.7 DEFINITIONS** means the definitions set out in this Part 3 of the CONTRACT.
- 1.8 DRIVER** means a person driving a car in the CHAMPIONSHIP for a COMPETITOR.
- 1.9 FIA** means the Fédération Internationale de l'Automobile.
- 1.10 FIA ENGINEER** means the technician appointed by the FIA to carry out all technical checks and controls and to grant the necessary approval prior to the starting up of production.
- 1.11 GENERAL CONDITIONS** means the provisions contained in Part 1 of the CONTRACT.
- 1.12 GOVERNING RULES** means:
 - (a) the International Sporting Code and the Appendices thereto;
 - (b) the SPORTING REGULATIONS; and
 - (c) the TECHNICAL REGULATIONS.
- 1.13 INDEMNIFIED PERSONS** means the FIA, the COMMERCIAL RIGHTS HOLDER and each of its affiliates, each of the COMPETITORS, each of the DRIVERS, each of the PROMOTERS, each

of the ORGANISERS and each ASN together with, in each case, their respective directors, officers and employees.

- 1.14 OFFICIAL TESTING** means tests as defined in and authorised by Article 22 of the SPORTING REGULATIONS.
- 1.15 ORGANISER** means a person who has entered into an organisation agreement with the FIA and the applicable ASN in respect of a COMPETITION.
- 1.16 PRINCIPLES OF SPORTING EQUALITY** means the equal treatment by the PROVIDER of all COMPETITORS with respect to:
- (a) anything which may affect the performance of the PRODUCT;
 - (b) the terms on which the PRODUCT is supplied;
 - (c) the support, access and information made available to COMPETITORS in relation to the PRODUCT; and
 - (d) any other matter which affects or may have an effect, however minor, on sporting performance.
- 1.17 PRODUCT** means tyre, as such word is described in the SPORTING REGULATIONS and TECHNICAL REGULATIONS.
- 1.18 PROMOTER** means a person who has been appointed by the COMMERCIAL RIGHTS HOLDER to promote a COMPETITION.
- 1.19 PROVIDER** means [•].
- 1.20 PRODUCTION SITE** means the factory that will produce the PRODUCT supplied pursuant to the CONTRACT.
- 1.21 SPECIAL CONDITIONS** means the provisions contained in Part 2 of the CONTRACT.
- 1.22 SPORTING REGULATIONS** means the Sporting Regulations applicable to the CHAMPIONSHIP as published and amended by the FIA from time to time.
- 1.23 SUPPLY AGREEMENT (Appendix [•])** means any agreement, and all amendments thereto, between the PROVIDER and a COMPETITOR pursuant to which the PROVIDER shall supply the PRODUCT to the COMPETITOR.
- 1.24 TECHNICAL REGULATIONS** means the Technical Regulations applicable to the CHAMPIONSHIP as published and amended by the FIA from time to time.

APPENDIX: TECHNICAL TARGETS FOR THE 2020-2023 TYRE SUPPLY

• Introduction

The purpose of this Technical Target document is to define the desired characteristics and development path of tyres for the Formula One World Championship for the seasons 2020, 2021, 2022 and 2023 and to set the principles of the partnership between the FIA, the Teams, Formula 1™ and the official PROVIDER to ensure the successful fulfilment of these targets over the duration of the tyre supply period. It has been prepared by the FIA with significant input from the stakeholders.

The FIA will consult with the PROVIDER in order to determine the achievability of the parameters set in this document, and will use the PROVIDER's input in order to determine its final version.

The FIA will endeavour to help the PROVIDER reach the objectives below during the duration of the tyre supply period using all the means at its disposal and to get the teams to provide all the data and assistance that the PROVIDER will require.

This document is divided into three sections:

- Tyre geometry and technical evolution
- Objectives
- Commitment to data exchange in support of the Objectives

2. Tyre geometry and Technical Evolution

In keeping with the overall objectives for the evolution of the Formula 1 Technical Regulations in 2021, which aim (amongst other things) to improve the racing spectacle, significant changes to the tyre dimensions are planned for that season:

- Front tyres will be 270/D1-18
- Rear tyres will be 405/D2-18
- Tyres will no longer have tyre blankets

The tyres' diameters (D1 and D2) are expected to be between 700 and 720 mm.

3. Objectives

The overriding objectives (in descending order of priority) are:

- A. Improvement of the show
- B. Drivability characteristics
- C. Absolute performance
- D. Operating conditions

Note: safety is not specifically covered in this Appendix; it is implicitly a parameter of the highest priority.

A. Improvement of the show

The PROVIDER should commit to using their best endeavours to achieve these criteria in 75% of circuits in 2020, and to improve their performance with respect to this objective throughout the whole period of the tyre supply.

Target A1: The PROVIDER will make available three compounds at each race event, which, considering the nature of the circuit, will target the following performance and degradation characteristics:

- Hard compound: 2s degradation achieved at 22% race distance
Base lap time
- Medium compound: 2s degradation achieved at 18% race distance
1.2s/lap quicker than Hard compound
- Soft compound: 2s degradation achieved at 10% race distance
2.2s/lap quicker than Hard compound

The intent is to create the maximum number of race strategies yielding race times such that multi-stop strategies provide just enough potential of a beneficial outcome to encourage the greatest variety in the racing spectacle. For a typical circuit:

1x Medium Compound + 1x Hard Compound = 1-Stop Race

1x Soft Compound + 2x Medium Compound = 2-Stop Race

3x Soft Compound + 1x Medium Compound = 3-Stop Race

Note that the PROVIDER need not be constrained to a three compound range in order to achieve this target. It is perfectly acceptable for a named compound to be different at different circuits.

Target A2: Tyre performance life < wear life < durability

This is considered desirable both for its impact on race strategies and to ensure tyres are not run to a point of excessive wear. A non-linear performance gradient change (“cliff”) at a certain percentage of tyre wear would achieve this. It is suggested that an underlayer of low performance is designed below the tread compound to achieve this.

Target A3: Tyre stiffness versus temperature working range and useable working range

Tyre stiffness should vary monotonically with working range. In addition tyres with the highest compound stiffness should also have the highest working temperature range and the tyre temperature working range should reduce as the tyre compound stiffness reduces. The variation in working range between the compounds should not be excessive. Suggested values are shown below:

Compound	Optimum Bulk Temperature	Working Range
A (Hardest)	(X + 10 to 15) °C	Optimum Bulk Temperature ±15 °C
B	(X + 5 to 10) °C	
C	X °C	
D	(X – 5 to 10) °C	
E (Softest)	(X – 10 to 15) °C	

Where “working range” is defined as the temperatures above and below optimum at which grip is reduced by 5% on typical micro and macro roughness tracks and sliding velocities.

B. Driveability Characteristics

Target B1: Any additional tyre degradation (due to over-aggressive driving and/or close following) should only be temporary.

It is expected that aggressive driving or close following will incur higher tyre degradation per lap than gentle driving or driving in free air. Once a period of aggressive driving or close following ceases, the tyre should rapidly recover the lower level of degradation per lap associated with the more benign conditions.

It is anticipated that to achieve this, for any given compound, the deviation of grip under a particular condition of surface macro and micro roughness and at a typical slip velocity will not drop by more than 5% in a temperature range of ± 15 degrees centigrade from that which achieves peak grip. Furthermore the cross linking of the compound polymers must be robust enough to resist permanent damage due to high slip or surface temperature conditions.

Target B2: Balance of front/rear tyres cornering stiffness must remain similar in normal racing conditions

The actual value of cornering stiffness ratio front to rear for 2020 must remain similar to that of a set of new 2019 tyres. This is to ensure that the tyres will be compatible with the current longitudinal centre of gravity of the 2019 cars. For 2021 the ratio of cornering stiffness of the tyres should be compatible with a rearward shift of the longitudinal centre of gravity position of 3% from current values.

Furthermore the change in cornering stiffness ratio must remain a constant $\pm 2\%$ with respect to normal loads encountered during operation and must maintain these limits within the normal variations in tyre wear.

Target B3: Cornering force to slip angle targets

Peak cornering force in low speed corners should be achieved at 6 to 7 degrees of slip angle on the rear tyres and in high-speed corners at around 8 degrees of slip angle. Peak cornering force on the front tyres should be achieved at slightly lower slip angles.

C. Absolute Performance

In terms of absolute lap time, the performance of the tyres fitted to 18” wheels should, when at operating temperature, be at least as good as the 2019 tyres.

D. Operating conditions

Target D1: Range of acceptable EOS camber prescriptions

- $-4.0^\circ \leq \text{Front} \leq -2.5^\circ$
- $-2.5^\circ \leq \text{Rear} \leq -1.5^\circ$

Target D2: Maximum blanket temperatures for 13” wheel tyres (2020):

- Tread 110°C
- Sidewall 100°C

Target D3: Tyre warm-up without blankets

- Tyres should provide safe performance when leaving the pits cold. The glass transition temperature must be chosen so that the tyres are never in a 'glassy state' when either the ambient or the track temperature is above 10 degrees centigrade.
- For winter testing a specific low temperature tyre will be required. This will form the bulk of supply to the teams for European winter testing with a limited number of race compounds available.
- Wet and intermediate tyres should also be capable of running without the need for pre-heating.

Target D4: Tyre pressure

- Tyres must always provide peak performance at a pressure considerably in excess of their minimum safe working pressure. In addition, in order to stabilise at a pressure that provides peak performance, the tyres must be capable of commencing running at cold pressures compatible with achieving suitable stabilised pressures.

4. Commitment to data exchange in support of the Objectives

In order to allow the PROVIDER to reach the objectives defined in this document, the FIA will demand that the Teams provide a regular supply of tyre operating conditions (loads, cambers, speeds, etc.) to the PROVIDER.

The format will be specified by the PROVIDER and supplied identically by all Teams.

Forecast Horizon

In any current year n, the Teams will provide forecasts over two horizons:

- Forecast 1 - to the end of year n+1 (e.g. if n=2020, this will be to the end of 2021)
- Forecast 2 - to the end of year n (e.g. if n = 2020, this will be to the end of 2020)

Schedule of data exchange

The first exchange will be provided within two weeks of the finalisation of the 2020 Tyre Supply contract.

Subsequent forecasts will be provided throughout the tyre supply period as follows:

- 30 June: Forecast 1 + Forecast 2
- 10 December: Forecast 1

Mechanism of Exchange

The Teams will be required to make their submissions to the Tyre Supplier. The Tyre Supplier will investigate and filter the submitted data and inform the FIA if it finds potential anomalies.

For the avoidance of doubt, this data is provided in addition to the event-by-event data flow that is already in place during the Season.

For the further avoidance of doubt, it is the duty of the PROVIDER to provide an adequate safety margin against failure in anticipation of the fact that load/speed data supplied by the teams is based on simulation and prediction and is inevitably imprecise. It is the PROVIDER's responsibility to mitigate this uncertainty and not the responsibility of the teams.

Content of data

The shared data will be provided as full-lap simulation traces of agreed laps in an agreed format.

More specifically:

- Lap time simulations (not Driver-in-the-Loop simulations) will be provided for Barcelona, Spa, Silverstone, Suzuka and Monza. This small selection includes a mix of high and low downforce tracks (Barcelona and Monza) and tracks that are particularly severe for casings (Silverstone, Suzuka and Spa).
- For each of these tracks, simulations will be required for both the Qualifying (low fuel, DRS on, Full ERS release) and Race (Full fuel load, DRS off, Balanced ERS release, -5% grip level).

In addition, simulation data for all races of a particular CHAMPIONSHIP will be sent to the PROVIDER by the 10 December preceding that CHAMPIONSHIP. This will include a full season preview with an upper bound estimates of the sort of aero/power development that teams expect to achieve throughout the course of that season.

By the end of the same month, the PROVIDER will provide draft prescriptions for the year.

Furthermore, race-by-race data flow of recorded telemetry will continue to apply, as in previous years.