

TECHNICAL REGULATIONS 488 Challenge EVO

1 Admitted cars

488 Challenge Evo (and related updates).

2 General Principles

This Technical Regulation is in compliance with the FIA document - Appendix J 2Art. 277 of Appendix J of the Free Formula Technical regulations (Group E) WMSC 6.12.2020 (CATII-SH).

Anything not expressly authorized by these Technical Regulations is prohibited.

The official Ferrari documentation, which includes:

- the Spares Parts Catalogue,
- the Wiring Diagrams,
- the Technical Manual,
- the Technical Bulletins
- The Technical Sheet SCT488-11/19

covers anything not expressly explained by the present Technical Regulations. Any Technical Bulletins that temporarily or permanently modify the Technical Regulation issued by Ferrari S.p.A. before an event and approved by the Stewards become an integral part of the regulations themselves.

The only work which may be done on the cars is normal maintenance or the replacement of parts damaged by wear and tear or in an accident. The permitted modifications and assembly limitations are specified in these Regulations. These aside, any part affected by wear and tear or accident may be replaced only by an original spare part. Any addition of a part or material is prohibited if not expressly authorized by the present regulations, the Technical Sheet or official Ferrari Technical documentation.

The Cars must always be identifiable by their:

- Technical Sheet SCT488-11/19
- Technical Manual
- Spares Parts Catalogue
- comparison with original production components
- updated project drawings
- updates as per Technical Bulletins

The Competitor is responsible of ensuring that both car and the spares fitted to it are compliant and he must thus ensure they are in order before each race.

3 Minimum weight / minimum height

MINIMUM WEIGHT (car + driver) = 1495 Kg

The minimum weight below specified must be considered as the sum of the car weight and the driver (helmet and HANS® device included).

The car must always have the nominal quantity of liquids and fluids required in operating condition, except for the fuel that is evaluated depending on the session as below explained.

QUALIFYING AND RACE:

The weight is checked on the cars in the condition in which they finish the session and with the fuel tank totally empty (the residual fuel will be drained from the dedicated plug with an external pump).

To reach the minimum weight it is mandatory to use solo the official ballast kit p/n 278804 and the ballast weights p/n 278805 (1,5 Kg) and/or p/n 278882 (3 Kg).

KERB WEIGHT: the minimum height of the car and of parts of the body has to be adjusted as follow:

FRONT minimum height
(both sides must be respected)
103 mm from Master Point to the ground

REAR minimum height
(both sides must be respected)
141mm from rear Master Point to the ground

Heights must be checked with the slick tyres of the car at the end of the session, adjusted at 1.5 bar.

In case the car closes the session with rain tyres, the height check will be carried out with the rain tyres with which the car finished the session.

4 Engine

The engine must be without exception a production engine in all its parts. To ensure this, seals will be applied by Ferrari directly to ensure that no further work is done on it. Any necessary engine maintenance work / engine replacement is the direct responsibility of the Ferrari Official Dealership and/or the Ferrari importer. They must declare the reason for the engine maintenance/replacement and declare in writing to the Technical Delegate of the Championship the new engine seal numbers following the instructions released by Ferrari S.p.A.

The Competitor will not be allowed to start the race if, during the pre-event technical scrutineering carried out by the Technical Scrutineers with technical support from Ferrari, the documentation and the number of the seals fail to comply with the regulations.

No part of the engine may be modified; No materials may be removed or added with the exception of those outlined in the present Regulations and/or the Technical Sheet SCT488 - 1119.

In the case of repairs made due to overheating and involving the dismantling of the cylinder heads, the team must inform the Technical Manager in writing prior to the commencement of any works. However, no leveling work is permitted. Abrasive materials must not be used to clean the heads.

The Technical Delegate reserves the right to pick the engine or other mechanical parts and send them to a Ferrari Australasia approved dealer for conformity checks.

The Technical Delegate reserves the right to replace the ECUs (engine control units) at any time during the Event.

5 Electrical system

The diagnostic OBD plug must be always in working order to guarantee the connection of the official diagnostic tool to all the electronic control units of the car, so that the checks that will be requested by the Technical Delegate can be performed.

No unoriginal or unauthorized device can be connected to the OBD diagnostic sockets and/or to any CAN bus line of the car.

The electrical equipment must always conform to the original and no part of the electrical system (cables, looms, connectors, etc.) can be changed or modified.

To carry out the checks on the conformity of the electrical system, the Technical Delegate and their authorised representatives can use any type of equipment, instrumentation and methods they deem appropriate.

The RCG electronic board (Race Connectivity System) must be present in the car, always working and always connected to the OBD plug.

If necessary, the Technical Delegate and Ferrari technical staff may request the transport of the vehicle at the manufacturer's premises for further checks.

6 Gearbox / transmission

The gearbox must be the standard and unmodified unit as provided by Ferrari and thus strictly stock in all its parts.

The Technical Delegate reserves the right to pick the transmission unit and send it to a Ferrari Australasia official dealer for conformity checks.

The Technical Delegate reserves the right to withdraw the transmission control unit from the car and replace it at any time during the event.

7 Wheels / tyres

Only slick or rain tyres supplied by Pirelli in the following sizes may be used:

Slick front	275/675 - 19" - DHB
Slick rear	315/705 - 19" - DHB
Rain front	275/675 - 19" - WH
Rain rear	315/705 - 19" - WH

Any chemical and/or thermal treatment of the tyres is prohibited.
Cleaning the tyres after track sessions is permitted.

The Technical Delegate and Pirelli staff is authorized to inspect the tyres (condition and pressure) at any time during the race weekend.

The wheel rims have the following sizes:

Front	9,5" x 19"
Rear	12" x 19"

The Technical Delegate and Pirelli staff is authorized to recall rims and to request the replacement of the valves if considered not suitable and adequate to run.

8 Suspensions and setup

Under no circumstances, the negative camber can exceed the following negative values (decimals):

Front	-4,4°
Rear	-3,3°

According with the different track layouts, the Technical Delegate, in collaboration with Pirelli, may communicate values of camber to respect different from the ones above mentioned.

Camber may be adjusted, within the permitted limits, by adding or removing the original Ferrari spacers between the suspension and the chassis, as described in the official Ferrari documentation and technical bulletins on the subject.

Original Ferrari spacers (1 mm, 2 mm, 3 mm, 4 mm, 5 mm – see official Technical Documentation) are admitted to adjust the shock absorber stroke.

It is possible to adjust the anti-roll bar end-link position between one of the two original holes.

It is not permitted to detach or remove the anti-roll bars.

Original suspension and springs permitted are:



Front damper (hard)	cod. 761878
Front damper (soft)	cod. 333567
Rear damper (hard)	cod. 761880
Rear damper (soft)	cod. 333581
Front spring K260	cod. 342080
Front spring K240	cod. 782584
Rear spring K220	cod. 342081
Rear spring K200	cod. 782303

9 Pipes / wiring / heat shields

The positioning of all of the cars various components must comply with the original layout as described in the technical information.

10 Frame and body

No part of the bodywork may be worked upon or modified. All parts must comply in terms of size, look and material to the original parts. The original position of any elements of the bodywork may not be modified in any way. Neither shall adhesive tape be applied to the profiles or bonnet, wheel arches, doors, etc.

It is not permitted to use rails, brackets and any kind of non-original material to change the seat position.

It is not permitted to carry out any strengthening work on the frame (welds, brackets, etc.) without the written authorisation of the Technical Delegate.

The maintenance operations to repair structural parts of the chassis must be carried out and supervised by personnel holding a certification of qualified aluminum welding to the standards requested by Ferrari.

11 Aerodynamics

Rear wing: The position of the rear wing must respect the following instructions (for more details please refer to Appendix 2)

Angle of attack of the wing: it must be included in the range $+6^\circ$ to $+12^\circ$ (limits included).

The car must have the original 488 Challenge EVO wing supports. For the correct adjustment of the angle of attack refer to the numbers and signs reported on these supports.

Wing height: with the car on a flat reference plane, the upper edge of the nolder of the wing must stay 10 ± 10 mm below the top of the roof, and this for any adjustment of the angle of attack within the range admitted.

Wing offset: with the car on a flat reference plane, the front upper edge of the nolder of the wing must be 1691 ± 10 mm far from the bend of the roof, and this for any adjustment of the angle of attack within the range admitted.

The wing height and the wing offset are checked in the conditions in which the car finishes the session.

The wing section profile must not be modified.

The two side winglets cannot be modified in profile and section, and they must be always installed on the wing respecting the correct adjustment with reference to the wing angle of attack wing (see Appendix 2).

The wing and its side winglets cannot be painted.

Adhesives can be applied only on the side winglets and only on the top of the wing avoiding the leading edge area.

Parts in carbon fibre can be repaired only if the damage extends to a maximum of 30% of the total envelope of the component. The total degree of damage must be in consultation with the Technical Delegate.

The aerodynamic wing underneath the side rear mirrors must not be modified or painted.

It is allowed to change the front aero using only with the following original configuration:

Low downforce configuration:

Right aerodynamic flap partialisation 92 % (p/n 964549)

Left aerodynamic flap partialisation 92 % (p/n 964550)

High downforce configuration:

Right aerodynamic flap partialisation 100 % (p/n 964553)

Left aerodynamic flap partialisation 100 % (p/n 964554)

From the commencement of any qualifying session, no modification or adjustments are permitted to any aerodynamic device on the car.

12 Cockpit

Pedals: it is forbidden to change the position of the pads for the brake and accelerator pedal. For the correct position please refer to the official technical manual.

No modification can be made to the pedal assembly.

Video recording systems: see article 18.

13 Windshield and side windows

Windshield: it is allowed to apply protective transparent films on the windshield. The layers applied must stay within the perimeter of the windshield and they cannot cover or close the outer edges between the windshield and the body.

Side window: it is allowed to apply air intakes on the side windows with the aim of reducing the temperature in the cockpit, with fitment to be pre-approved in writing by the Technical Delegate.

14 Fuel

It is compulsory for Competitors to use during Qualifying and Race only the fuel supplied by the official fuel supplier in an approved container at the racetrack. No other type of fuel or additives is permitted.

At the end of the Test and Free Practice sessions all the fuel must be drained from the car through the specific drain plug before filling up with official fuel.

Cooling of the fuel is prohibited in any form.

In case of a fuel check, it will be in accordance with Motorsport Australia Schedule G Section 9.

The sample must be taken from the specific plug.

It is mandatory to use the original devices with handles, Ferrari p/n 183914 for refueling operations.

15 Brake system

The correspondence between the serial number of the brake discs stamped on the brake bell and those inserted in the FBO unit and readable with both diagnostic tool and telemetry must be guaranteed at all times.

16 Lubricants

It is compulsory for competitors to use only:

Engine oil:	Shell Helix Ultra SAE 5W-40	
Gearbox oil:	Shell Spirax S5 ATE 75W-90	
Hydraulic oil:	Shell DCT-F3	
Brakes oil:	Brembo Racing LCF 600 plus	
Engine coolant:	Kemetyl Carix Premium Longlife	(50% dilution)
Power steering:	Pentosine CHF 11S	
Air cond. refrigerant:	R 1234yf	
Air cond. compressor:	PS-D1	

It is not permitted to use additives and to change the value of percentage in the aforementioned liquids/oils.

Samples of said lubricants and liquids will be taken in the course of the championship for testing.

17 Safety equipment

The following safety equipment is compulsory under current legislation:

- roll-bar and relative protections
- homologated 6-point safety harnesses
- fire extinguisher
- Tow hooks (front and rear)
- Electric circuit breaker – main battery switch
- FIA homologated seat
- Window-net and side-net
- Roll-cage predisposition to lift the car from the top/roof

All safety devices listed above must be original.

The original number and position of the fire extinguishers may not be changed.

Drivers, during track sessions, must wear a HANS® collar. The use of a compatible helmet which meets the FIA Standard as specified in the Chapter 3, Appendix L of the Code is compulsory.

For further details, please consult the “Guide and installation specification for HANS® devices in racing competition” available at: www.fia.com, under FIA Sport – Safety – Safety Equipment - Driver’s Equipment- Head Restraint.

18 Video recording equipment and loggers

The series requires the installation of a RaceLogic Video VBox HD2 system.

The installation of the video camera inside the cockpit is done under the direct responsibility of the Team.

Any connected device that needs to log car data must be connected to the car only through the specific connector placed behind the driver seat.

The connector supplies the power and a private CAN BUS line, separated from the car CAN line, providing the data most commonly used by the aforementioned devices.

Video cameras are prohibited if mounted outside the vehicle unless specifically authorized by the Technical Delegate

Any device connected to the car must still comply with the conditions specified in Article 5 and therefore no modification of the electrical system is permitted.

If requested by the Driving Standards Advisor or Technical Delegate, the supply of all relevant video and data from the car must be supplied.

19 Telemetry / diagnostic tools

Telemetry systems different from the original or which provide redundant data to the original system are not permitted. Diagnostics must be carried out only with the official diagnostics system and the original telemetry system. The official telemetry data and the data acquisition table must be those of the original system as well.

All the data (diagnosis, telemetry, video logger) must be always available to the Ferrari technical staff and to the Race Director.

The marshalling kit must always operate correctly for a car to be admitted to the official sessions.

If requested by the Driving Standards Advisor or Technical Delegate, the supply of all relevant data from the car must be supplied.

20 Team Organisation

Each team entered in our official events must be represented by an official Ferrari dealer.

The pairing between the team and the Official Dealer will have to be communicated and updated by the team entered at the Championship.

The team will have to address all the information requests to correctly manage the car to the Official Dealer.

The Official Dealer is responsible to support the team ensuring its work is executed correctly both on track and at the workshop.

**APPENDIX 1.1
Sponsor – Commercial Categories**

Partner	Category
2 Elle Engineering	Wheels
Adler	Soundproofing for vehicles and interior coverings
AHE (Azimut)	Investment Fund
Ansys	Engineering Simulation Software
AWS	AI, ML, Cloud
Bell	Helmets
Ceva	Logistics
Iveco	Trucks
L'OR (JDE Peets)	Coffee
Pernod Ricard	Spirits
Peroni	Beer
Pirelli	Tyres
Puma	Technical Apparel
Richard Mille	Watches
Sabelt	Automotive Belts
Shell	Fuel & Lubricants

**APPENDIX 1.2
Sponsor – Coordinated Advertising**

Yellow spaces are reserved to Ferrari Sponsors
Green Spaces can be used by teams, but Ferrari reserves the right to use them for additional partners during the season



APPENDIX 2
AERODYNAMICS SETUP

488 CHALLENGE EVO

