



Technical Car Construction Regulations Update and Changes for 2020

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Summary

- Following the BriSCA F2 Promoters' Meeting held on 20th November 2019, and summary information previously published in the Drivers' Newsletter, this document lists important information (in more detail) regarding the BriSCA F2 Technical Car Construction Regulations for the 2020 season.
- There have been two primary aims in arriving at the decisions/information outlined below:
 1. To maintain a period of stability in car construction regulations
 2. To react appropriately to any safety concerns and legislate accordingly to reduce risk to drivers, officials, and/or spectators.
- This document is divided in to 5 primary sections:

<ol style="list-style-type: none"> 1. New Changes for 2020 2. Previously Agreed Changes 3. Rejected Proposals (Info only) 4. Further Research (Info only) 5. ORCi Referrals (Info only) 	<p>New changes to be implemented for the 2020 season.</p> <p>These are already documented in the “2019 Technical Car Construction Regulations” to take effect in 2020.</p> <p>Confirmation of previously published proposals that are NOT being implemented.</p> <p>Items for further research and possible future introduction.</p> <p>Items being referred to, or already under consideration by, the ORCi due to their wider impact/applicability in oval racing.</p>
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- Any changes resulting from the ORCi's work may impact BriSCA F2 and other formulas in the future, and will be notified as appropriate.
- Despite extensive input to these regulation changes by driver representatives from the BDF, it is recognised that there may be some feedback / questions generated from the wider driver population. Any feedback / questions should be directed to the following:
 - Individual BDF members
 - The BDF group via the contact section of the BriSCA F2 website:
<http://www.briscaf2.com/information/contact-drivers-forum.ashx>
 - Adrian Blackwell, BriSCA F2 Chief Technical Consultant, directly, or via email to:
BriSCAF2Tech@outlook.com

1 New Changes For 2020

The items in this section are a small number of new regulation changes for 2020 that were not included in the 2019 Technical Car Construction Regulations, and are either Safety or Cost-Saving related.

Safety – Wheel-guards

- **Wheel-guard Mounting Bolts**
 - It is RECOMMENDED that for the 2020 season bolts of a minimum 16mm diameter are used for the mounting of rear wheel-guards where the bolt is installed in a horizontal orientation.
 - Currently a minimum of 12mm is mandated.
 - It is RECOMMENDED that for the 2020 season bolts of a minimum 12mm diameter are used for the mounting of rear wheel-guards where the bolt is in a vertical orientation with double-shear brackets.
 - Currently a minimum of 10mm is mandated.
 - It is intended these recommendations will become MANDATORY from the start of the 2021 season.
- **Wheel-guard Mounting Bolt Protection**
 - It is RECOMMENDED that appropriate protection is fabricated, designed to prevent mounting bolt-heads from being sheared off under impact.
- This change is the result of incidents observed during the 2019 season, resulting in a significant number of loose and/or detached wheel-guards, and following feedback from the BDF group.

Safety – Prop-shaft Protection

- ALL cars will require a MANDATORY prop-shaft protection tunnel from 1st January 2020.
- The current "Venray-Only" regulation will be extended to ALL cars/tracks.
- The current "Venray-Only" regulation will be modified to mandate a MINIMUM material thickness of 1mm if a metal cover is being installed in conjunction with prop-shaft retention hoops.
- The current "Venray-Only" regulation will be modified to MANDATE that where a metal cover is being installed in conjunction with prop-shaft retention hoops, the cover must be installed INSIDE/UNDERNEATH the retention hoop(s) to ensure scrutineering teams are easily able to observe the required retention hoop(s) during pre-meeting safety checks.
- This change is the result of a serious incident during the season in which a driver's race-suit caught in a rotating prop-shaft, causing significant damage to the suit and injury to the driver's leg.

Safety – Wheel-Balance Weights

- Wheel-balance weights are not permitted, and must be removed from any wheels in use.
- This change is to prevent any such weights from becoming projectiles likely to cause injury.

Safety – Fuel Tank Protection

- To clarify the existing regulation... Fuel tanks must be protected against intrusion from BOTH the side (e.g. another car's bumper coming in between the front and rear wheels, and underneath (e.g. on-track debris, or the top of a fence post).
- The existing regulations with regard to the material specification required for the protection remain unchanged.
- This clarification is the result of incidents observed during the 2019 season, resulting in punctured fuel tanks, fuel-leaks, and in at least one case a fire – and is really only a clarification of the existing regulation.

Repairs – Zetec Inlet Manifolds

- Repair of the threads for studs/bolts used for the mounting of the carburettor on the standard BriSCA/SSCA Zetec inlet manifold will be permitted, e.g. through the use of heli-coils. The stud/bolt thread holes must remain in their original locations.
- This change is to reduce cost through a permitted repair, rather than replacement, of a damaged manifold.

2 Previously Agreed/Published Changes

The changes documented in this section were agreed in 2018/19, and published in the "BriSCA F2 2019 Car Construction Regulations and Drivers' Information" book. These are NOT new changes.

Inlet Manifold

- From 1st January 2020, the painting, coating, or other protection of the inlet manifold is NOT permitted.

Pinto – Oil Pump

- High-capacity oil pumps are expressly prohibited with effect from 1st January 2020, giving a run-out period of the 2019 season.

Bumper Corners

- Nipping off one or more corners of either bumper is NOT permitted.
 - Where a bumper corner has been "nipped" off, providing that the missing section measures LESS than 50mm in both the horizontal and vertical plane when viewed from the front or the rear, then a run-out period is given until 31st December 2019 before enforcement of this regulation.



Cylinder Head Gaskets

- From 1st January 2020, BriSCA F2 will mandate a list of approved cylinder head gaskets for both Pinto and Zetec engine types.
 - A list of approved part numbers, to the original UK specification, from the following six manufacturers will be published: Ford, Victor Reinz, Elring, Goetze, Glaser, Payen.
 - No other cylinder head gasket will be permitted.
 - Cylinder head gaskets must retain their original part number. Removal of the part number will NOT be permitted.
 - In the event of more than half of the approved components becoming unavailable, BriSCA F2 will approve appropriate alternatives.

Note: This is DEFERRED to 1st January 2021

Pinto – Ignition Coils

- From 1st January 2020, the only permitted coils will be from an approved list published by BriSCA F2. Such coils will be commonly available over the counter from parts suppliers nationwide, and be equivalent to Ford's original specifications.

Note: This is DEFERRED to 1st January 2021

3 Non-Implemented Proposals (For Info Only)

A number of potential change proposals were put forward for consideration, which, following constructive discussion between BriSCA F2 promoters and the BDF representatives, are NOT being implemented in 2020.

This section simply confirms, for drivers' peace of mind, those items that have been discussed, but are NOT being changed at this time.

Tyres

- Tyre regulations will be UNCHANGED for the 2020 season.
- The Delivery Star RY818 will continue to be used on the Right-Rear ONLY, with the A021R on BOTH front wheels, and the Left-Rear.

Wheel-guard – Construction/Dimensions

- With the exception of mounting bolts, wheel-guard construction regulations will be UNCHANGED for the 2020 season.
- Additional construction regulations will NOT be introduced for the 2020 season.

Exhausts

- A MINIMUM exhaust system header-pipe length will NOT be introduced for the 2020 season.
 - Extensive research in to the impact of making such a change has been undertaken, which has looked at variations in both current commercially available systems, and other older systems in use by drivers, as well as understanding the impact on drivers/cars (especially in the lower grades, lower budget racers, and shale cars).
 - Header-pipe lengths will continue to be observed / reviewed during the 2020 season.
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4 Future Research

Research is being conducted in a number of areas with a view to possible future regulation changes beneficial to BriSCA F2.

Wheel-guards – NZ/V8 Style

- Following proposals from a number of drivers concerned about the safety of using sprung steel for wheel-guards, BriSCA F2 wish to invite a small number of drivers/constructors to apply for permission to design, construct, test, and provide feedback during 2020 on the possible use of V8-HotStox/NZ-Superstock style wheel-guards (constructed from SHS/RHS).
 - Only a small number of applications will be accepted.
 - Approved applicants will need to document their designs, construction issues, performance/usage experiences, and implications for existing regulations as part of the trial process.

Tyres

- The current contract with Yokohama for the supply of tyres to BriSCA F2 runs out at the end of 2020.
- The testing of potential replacements for the current mixture of A021R and RY818 tyres continues.
- The process of testing tyres will be completed sufficiently early in 2020 for an announcement to be made in good time regarding the tyre contract for 2021-onwards.

Zetec Engine – 1.8-litre

- Following proposals from drivers, BriSCA F2 is investigating the potential use of the 1.8-litre variant of the Zetec engine alongside the current 2.0-litre.
- Initial experimentation has been positive; giving an indication that further testing could result in a viable alternate competitive engine.
- Any driver wishing to be involved in testing a 1.8-litre Zetec engine should register their interest via:
 - Adrian Blackwell (BriSCA F2 Chief Technical Consultant)
Website: <http://briscaf2.com/information/contactform.ashx>
Email: briscaf2tech@outlook.com

Zetec Engine – 2.0-litre Replacement Components

- **Valves** – Work is progressing to source a BriSCA F2 approved valve for use as a replacement for the original Ford component currently mandated.
 - Further information will be provided when this work is concluded, but the original Ford components must continue to be used until such time.
 - Any approved replacement may be introduced during the course of the season, if appropriate, as it would not be a mandatory change, merely an option to anyone needing to replace such components.
- **Pistons** – Work is progressing to source BriSCA F2 approved pistons to allow the over-boring/reclamation of cylinder blocks.
 - Further information will be provided when this work is concluded, but the original Ford components must continue to be used, and cylinder blocks must remain unmodified until such time.
 - Any approved replacement may be introduced during the course of the season, if appropriate, as it would not be a mandatory change, merely an option to anyone needing to replace such components.

Wiring Looms

- Current regulations prohibit the modification of original OMEX wiring looms (unless explicitly stated) for BOTH the Pinto and Zetec engines.
 - Following discussions with the BDF, BriSCA F2 is researching a possible repair service in conjunction with OMEX. Further details will be announced when appropriate.
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5 ORCi

The following items are under review, or have been put forward for consideration by the ORCi.

Wheel Nuts / Studs

- Inconsistent regulations across ORCi formulas lead to confusion amongst drivers and scrutineering teams. The ORCi will review and issue cross-formula regulations as appropriate.

Radio Receivers

- The ORCi will introduce the mandatory use of one-way "Race-control to driver" radio communication in ALL formulas (except Bangers) for the 2020 season.
- Further details will be released by the ORCi in due course.

Helmets

- Existing ORCi regulations state that the FIA 8860-2004 and Snell SA 2005 standards will no longer be permitted for use from 1st January 2020.
 - The ORCi is commencing a review of helmet regulations to ensure that safety levels are/remain appropriate for the type of racing under its governance.
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