



Technical Car Construction Regulations

Rule Changes for 2017 & Rule Clarifications

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Summary

- Driver representatives from the BriSCA F2 Drivers' Forum (BDF) met with BriSCA F2 promoters on Tuesday 27th September 2016 to discuss and agree technical car construction rule changes for the 2017 season and beyond.
 - This document details the agreements made at the meeting and subsequently ratified by both BriSCA F2 and the BDF, and is divided in to two primary sections:
 - Agreed changes for the 2017 season, based on proposals put forward by drivers, promoters, officials, and car constructors (effective from 1st January 2017 unless otherwise stated).
 - Details of clarifications issued for existing rules (effective immediately, unless otherwise stated).
 - A summary of areas requiring further analysis and more extensive consideration prior to any specific proposals being tabled will be published separately at a later date. Any such areas will NOT see changes for the 2017 season.
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Section 1 – Changes for 2017

Unless otherwise stated, ALL changes in this section come in to effect from **1st January 2017**.

1. CHANGE – Engine Cover

- **The requirement for the main engine cover/bonnet to be a minimum of 51% metal by external surface area will be REMOVED from the rulebook.**
- It will be permitted for the entire bonnet/cover to be constructed from any combination of metal, fibreglass, and Kevlar.
- The use of carbon-fibre is NOT permitted.
- ALL other bodywork panels, including but not limited to separate “above chassis rail” engine side panels, cab panel-work, and all panels below the main chassis rails MUST still be constructed of metal as per the current rulebook.

2. CHANGE – Headrest Bars

- **The requirement for the headrest bars to be strictly vertical, when viewed from the rear, will be REMOVED from the rulebook – this simply brings the rule up to date with current best practice.**
- The headrest bars MUST still be installed on ALL cars.
 - If a full integral racing seat is used, then the headrest bars MUST provide protection & support for the headrest of the seat.
 - If the seat does not incorporate a built-in headrest then the headrest bars MUST allow the mounting of the mandatory headrest plate (current rules 210.4.4 to 9).
- This change allows for the bars to be installed in a more suitable manner to protect/support the seat while allowing for the correct fitment of the driver’s safety harness.
- A minimum material specification will be considered as part of a longer term, wider ranging review of driver safety and roll-cage construction, but the installed bars MUST be “fit for purpose” to provide protection and support for the headrest as per current rule 210.4.1.

3. NEW – Roof Colours

- **The top surface of the roof plate of ALL cars MUST be painted in the driver’s correct grading colour.**
- This rule will apply to ALL cars, even those where the remainder of the roll-cage (above the waistline) is painted in a neutral colour.
- A maximum gap (border) of 1in (25mm) will be permitted between the required painted grading colour area and the outside edges of the roof/roll-cage.
- As an example, a star grade driver MUST paint the top surface of his/her roof-plate red, even if the rest of the roll-cage is black.
- All other existing roof/grade colour rules still apply.

4. NEW – Bumpers/Nerf-rails – Mandatory Capping

- **The ends of ALL hollow section material (SHS, CHS, OHS, RHS, etc) used in the construction of bumpers, bumper-hoops, and nerf-rails around the perimeter of the chassis MUST be capped with a fully-welded, closed, steel cap.**
- The use of “penny” washers is permitted on circular tube, provided that the hole in the washer is welded closed.

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5. NEW – Bumper Hoops

- **The joining of front bumper hoops, or addition of material to create extra hoops, resulting in “saloon-stock car style” bumpers is NOT permitted.**
- This includes, but is not limited to:
 - Joining the central lower hoop to the right-hand, fence-end, lower hoop
 - Adding material joining the central lower hoop up to the left-hand, infield end, of the bumper flat
 - Adding other hoops above and/or below the main bumper blade/face.

6. NEW - Wheel Machining

- **All wheels MUST remain as originally manufactured.**
- **The machining or modification of original Ford road wheel rims, changing them from their original manufactured design, is NOT permitted.**
- **The machining or modification (post retail purchase) of competition-type wheel rims, from their original design / manufacturer-supplied specification, is NOT permitted.**
- These machining/modification restrictions include, but are not limited to:
 - Radial machining to remove spoke material
 - Altering the shape/profile of the wheel
 - Changing any material thickness
 - Machining of the hub face to alter the original manufactured back-depth
- Nothing in the current rulebook provides for such modifications, so this rule just makes it explicitly clear.

7. CHANGE – Wheel-Nuts

Open Wheel Nuts

- **ALL threads of open wheel-nuts MUST engage with the wheel studs being used.**
- **The requirement for wheel studs to protrude through the face of open wheel-nuts will be REMOVED, but as above, ALL threads of the nut MUST engage with the threads of the stud.**
- ALL open wheel-nuts MUST be the correct fitment for the wheel design, and length of stud. (As per current rules)

Closed Wheel-Nuts

- The use of closed wheel-nuts is still permitted. (As per current rules)
- ALL closed wheel-nuts MUST be the correct fitment for the wheel design and length of stud, e.g. Revolution “tube” nuts, or original Ford wheel nuts. (As per current rules)

8. NEW – Brake Discs

- **ALL brake discs MUST be made of a ferrous material.**

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- **The MAXIMUM permitted brake-disc diameter is 260mm.**

10. CHANGE – Rear Axle Mounting Holes

- **The number of permitted mounting holes for the rear axle link bars and Panhard bar/Watts-Linkage will be free.**
- **The restriction on which link bars can be mounted in which holes will be REMOVED.**
- The 4-link design remains the ONLY permitted rear-axle mounting configuration.
- Rule 215.5.10 (changeable specification mounting components are NOT permitted) REMAINS in place. Therefore, designs requiring the removal and replacement of different length link bars to utilise alternative sets of mounting holes are NOT permitted.

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11. NEW – Exhaust Length

- **Current rule 224.5 will now apply to ALL exhaust systems, regardless of engine type:**
“It is NOT permitted for ANY part of the exhaust system to extend rearwards beyond the rear face of the roll-cage. For simplicity, the rear face of the roll-cage is defined as the vertical plane from the point at which the rear roll-cage pillars (pillars 3 and 4) meet the top (main) chassis rails.”

12. NEW – Exhaust Design – Main Pipe(s)

- The main single pipe of ALL exhaust systems, connecting the final collector to the mandated silencer, **MUST** be straight along its entire length on ALL cars.
- All pipes between collectors in a “4 in to 2 in to 1” design, **MUST** be straight along their entire length on ALL cars using such a system.
- The inclusion of bends in any of these pipes is NOT permitted.

13. NEW – Exhaust Design

- **From 1st January 2018**, the only permitted exhaust system on ALL cars will be a 4 in to 1 design with a single collector (collecting the 4 header-pipes in to a single main pipe). The use of “4 in to 2 in to 1” systems will **NOT** be permitted from this date.
- Further work will be carried out during the remainder of 2016, and during the 2017 season, looking at how the current Pinto and Zetec systems can be brought in to line under the same set of rules from 2018 (e.g. tube diameters, header lengths, collector sizes, etc.) with minimal impact to the vast majority of drivers.

14. NEW – Pinto Cylinder-Head – Ball Stud (Rocker Post) Repair

- A **MAXIMUM** of TWO threaded inserts may be used for the sole purpose of repairing broken cylinder-head castings for rocker post ball studs in the Pinto engine.
- The angle of the posts, relative to the cylinder head, and/or their location, must **NOT** be altered in any way.

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Section 2 – Clarifications

The following clarifications have been agreed, and, unless otherwise stated, are effective IMMEDIATELY.

15. CLARIFICATION – Rear Mudguards

- **Retro-style “mudguards/wheel-arches” are permitted, if so desired, providing they conform to the following, thus keeping within the spirit of an open-wheel stock car:**

Front Wheels

- Mudguards/wheel-arches are NOT permitted over the front wheels of the car.
- It IS permitted to attach a mudguard/splash-guard to the front part of the nerf rail(s) to protect the driver from water/shale being flicked up from the front tyre(s), providing any such device is securely attached and NO part of it extends any further forward than the rear-most point of the tyre (with the wheels facing straight forwards).

Rear Wheels

- Integral “retro-style” mudguards/wheel-arches over the rear wheels ARE permitted but they must cover NO more than one-quarter of the wheel when viewed from the side.
- Any mudguard/wheel-arch must NOT extend below the level of the main chassis rail.
- Any mudguard/wheel-arch must NOT extend rearwards beyond the vertical plane through the rotational centre of the wheel.
- Any mudguard/wheel-arch must NOT extend sideways beyond the outer edge of normal dry-running wheels.
- Any mudguard/wheel-arch must NOT extend sideways beyond the outer edge of the nerf-rails (excluding any wheel-guards).

16. CLARIFICATION – Wheel Protection Bars

- **The use of a SINGLE bar to connect the top of the front bumper, fence-end, upper hoop (on the right hand side of the car), over the right-front wheel, and back to the nerf-rail or main chassis rail on the right-hand side of the car IS permitted.**
- **The use of ANY protection bars over or around the left-front wheel, and/or the rear wheels is NOT permitted (with the exception of the mandated right-rear and optional left-rear wheel-guards).**

17. CLARIFICATION – Wheel-guards

- **The lightening and/or drilling of the rear wheel-guard(s) is NOT permitted, as per the current rulebook.**
- **Where an original leaf spring is used to form a wheel-guard, then any original mounting/location hole(s) in the leaf spring ARE permitted and should not be welded up (due to the heat of the welding process having a potentially adverse effect on the strength of the spring material).**

18. CLARIFICATION – Windscreen Mesh

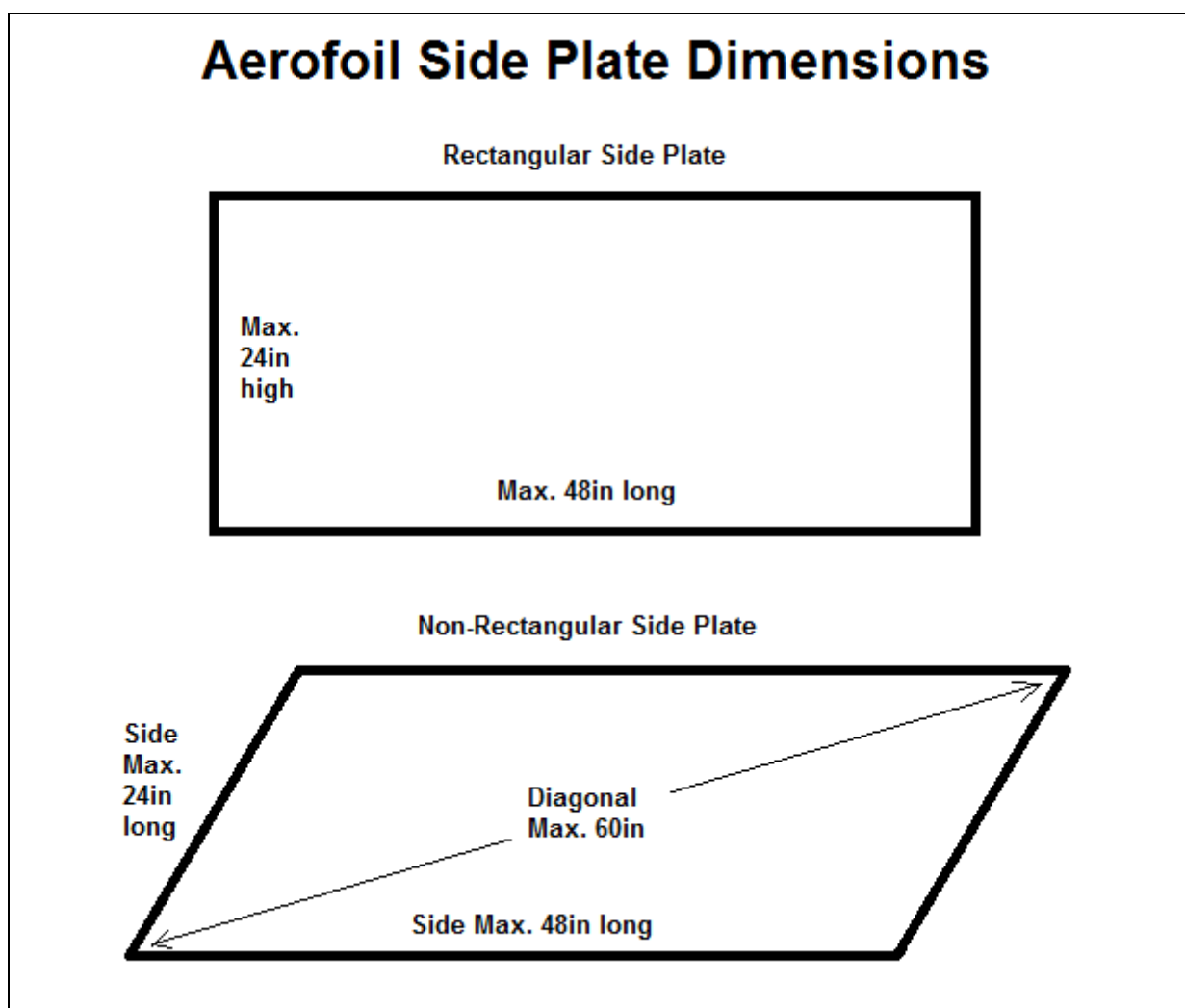
- **The use of cable-ties (whether metal or plastic) is NOT permitted for fixing the windscreen mesh to the car.**
- The windscreen mesh MUST be securely fitted by welding, or through the use of metal fixings such as nuts and bolts, “U”-bolts, or “Jubilee” clamps.
- If metal fixings are used then a MINIMUM of 4 fixings, 1 per corner of the mesh, are required.

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19. CLARIFICATION – Aerofoils

Traditional Design

- The use of non-rectangular aerofoil side plates **IS** permitted.
- ALL aerofoil side plates (for a top mounted aerofoil) **MUST** fulfil the following conditions:
 - Side plates **MUST** have 4 sides
 - The two opposing long sides must be **NO** longer than a **MAXIMUM** of 48-inches (1219mm) each in length.
 - The two opposing long sides must run from front to rear (they need not be parallel to the ground).
 - The two opposing short sides must be **NO** longer than a **MAXIMUM** of 24-inches (610mm) each in length.
 - The two opposing short sides must run top to bottom (they need not be vertical).
 - The length of the diagonal measurements (between opposing corners) must be **NO** longer than a **MAXIMUM** of 60in (1524mm).



One-Piece Wings

- A clarification on dimensions for the modern style wings made from a single sheet of metal (predominantly used on shale) will be issued, once further research has been undertaken to identify the sizes of wings currently in use, and whether they meet the dimensions or intention of the current rules.

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20. CLARIFICATION – Carburettor Needle Valves

- **Work is ongoing to clarify this rule in light of the production tolerance information that came to light during 2016.**
- Further information will be published in due course.

21. CLARIFICATION – Engine Sealing Holes

- **The rulebook will be updated with accurate information regarding the sealing of the three different engine types (2.0 Pinto, 1.8 Duratec and 2.0 Zetec).**

22. CLARIFICATION – Pinto Ignition

- **Work is ongoing to clarify which ignition devices may be used (Black-boxes, Coils, Distributors, Electronic Ignition, etc.).**
- Further information will be published in due course.
- Rule 231.2.1 currently states: *“Unless otherwise stated, ALL parts appertaining to the engine MUST be standard Ford 2.0-litre SOHC items, as fitted to the original engine type. Production tolerances are permitted.”*

23. CLARIFICATION – Zetec Cylinder Head Gaskets

- **The use of competition cylinder-head gaskets is NOT permitted.**

24. CLARIFICATION – Zetec Sump Capacity

- **The 5-litre Zetec sump capacity restriction will be removed from the rulebook, as per the statement issued on 26th May 2016.**

25. CLARIFICATION – Zetec Cylinder Head Bolts

- **The use of high-tensile, competition, and/or ARP cylinder-head bolts is NOT permitted.**

26. CLARIFICATION – Transponders

- **The rulebook will be updated to list the newer permitted transponder types that may be used.**
- The original “MyLaps 260 Direct Powered” unit, as currently specified in the 2016 rulebook, is no longer manufactured; so alternative currently available models will also be listed.
- Existing transponders currently in use will NOT need to be changed.

27. CLARIFICATION – Front Beam Axle

- **The use of a 2-piece front beam-axle design IS permitted, providing that the two pieces are SECURELY fastened together to prevent them coming apart.**

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