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Bennetts BSB BRITISH SUPERBIKES
IN ASSOCIATION WITH PIRELLI

TECHNICAL REGULATIONS **2024**

[TO BE READ IN CONJUNCTION WITH THE 2024 MCRCB YEARBOOK]

PLEASE NOTE: *The Promoter/Organiser reserves the right to issue amendments to this document from time to time.*

MSVR
MOTORSPORT VISION RACING

G.2.4 MCRCB BRITISH SUPERBIKE TECHNICAL SPECIFICATIONS (including MCRCB BSB PATHWAY)

The following rules are intended to give freedom to modify or replace some part in the interest of safety, research and development and improved competition between various motorcycle concepts.

EVERYTHING THAT IS NOT AUTHORISED AND PRESCRIBED IN THIS RULE IS STRICTLY FORBIDDEN

If a change to a part or system is not specifically allowed in any of the following articles, then it is forbidden.

MCRCB Superbike motorcycles require the relevant FIM or MCRCB homologation (see Homologation procedure). All machines must be normally aspirated. All motorcycles must comply in every respect with all the requirements for road racing as specified in these Technical Regulations.

Once a motorcycle has obtained the homologation, it may be used for racing in the corresponding class for a maximum period stated in (see Homologation art 1.4.4). Or until such time that the homologated motorcycle is disqualified by new rules or changes in the technical specifications of the corresponding class.

The appearance from the front, rear and the profile of Superbike motorcycles must (except when otherwise stated) conform in principle to the homologated shape (as originally produced by the manufacturer). The appearance of the exhaust system is excluded from this rule.

The MCRCB may accept any motorcycle model which appears on the FIM Superbike or Superstock homologation list for the relevant year. Exceptions for non FIM homologated models may be granted by the MCRCB. The list of eligible motorcycles will be published by the MCRCB by the 1st April. This may be updated during the season by way of Official Bulletin.

The following abbreviations will be used in this section:

i. SBK – British Superbike Specification Machines
ii. PW – British Superbike Pathway Specification Machines

2.4.1 Motorcycle specifications

All part and systems not specifically mentioned in the following Articles must remain as originally produced by the manufacturer for the homologated motorcycle.

2.4.2 Engine configurations and displacement capacities

The following engine configurations comprise the Superbike class.

Over 750cc up to 1000cc	4 stroke	3- and 4-cylinder
Over 850cc up to 1200cc	4 stroke	2-cylinder

The displacement capacity bore and stroke must remain at the homologated size.

2.4.2.1 Balancing various motorcycle concepts

MCRCB reserves the right to review the event results and to handicap any model(s) that have an identifiable performance advantage. This may be achieved by one or more of the following applications:
a) weight
b) air restrictors
c) electronic rev limit

A review of **event results and respective model performance** will take place after the **second, fourth, sixth and eighth** championship rounds between MSVR (the series promoters/organisers) and the BSB Team and Manufacturer Liaison Groups. MSVR will then present their recommendations to the MCRCB.

2.4.3.3 Rev limit

The manufacturer specific rev limit will be adjusted in increments of 250rpm (up or down).

The rev limit will be controlled by the control ECU supplier firmware.

British Superbike 2024 inc Pathway	
Overall Max	**Rev Limit**
All Bikes Maximum	**16000 rpm**
Machines over 79.5mm bore	
BMW	**15,500 rpm**
Ducati V4	**16,000 rpm**
Honda	**15,550 rpm**
Machines below 79.5mm bore	
Kawasaki	**15,300 rpm**
Yamaha	**15,100 rpm**

Machines Over 1000cc (+200)	
Aprilia	**13,800 rpm**

2.4.4 Minimum weight

All machines: 168 kg

a. At any time during the event, the weight of the whole motorcycle (including the tank and its contents) must not be less than the minimum weight.
b. There is no tolerance on the minimum weight of the motorcycle.
c. During the final technical inspection at the end of each race, the selected motorcycles will be weighed in the condition they finished the race, and the established weight limit must be met in this condition. Nothing may be added to the motorcycle. This includes all fluids.
d. During the practice and qualifying sessions, riders may be asked to submit their motorcycle to a weight control. In all cases, the rider must comply with this request.
e. The use of ballast is allowed to stay over the minimum weight limit and may be required due to the handicap system. The use of ballast and weight handicap must be declared to the MCRCB Chief Technical Officer at the technical checks.
f. The minimum weight includes all Championship contracted devices whether fitted or not, such as Transponder and on-board TV system.

2.4.5 Numbers and number plates

For Superbike the background colours and figures (numbers) for Superbike are free.
For Pathway the background colour is Yellow and the digits Black.

The size for each front digit is:	Minimum height:	140 mm
	Minimum width:	80 mm
	Minimum stroke:	25 mm
	Minimum space between numbers	10 mm
The sizes for each side digit is:	Minimum height:	120 mm
	Minimum width:	70 mm
	Minimum stroke:	20 mm
	Minimum space between numbers	10 mm

The allocated number (& plate) for the rider must be affixed on the motorcycle as follows:

a. The design of the numbers MUST be submitted to the Technical Director before the final pre-season test for approval (bsbtechnical@msvracing.co.uk)
b. Only single or double digit numbers will be allowed.
c. Numbers must be fitted:
    i. Once on the front, either in the centre of the fairing or slightly off to one side; the number must be centred on the white background with no advertising within 25mm in all directions.
    ii. Once on each side on the lower rear portion of the lower fairing. The number must be centred on the white background. Any change to this must be pre-approved a minimum of 2 weeks before the first race by the Technical Director.
d. All digits must be of standard form.
e. Any outlines must be of a contrasting colour and the maximum width of the outline is 3mm. The background colour must be clearly visible around all edges of the number (including outline). Reflective or mirror type numbers are not permitted.
f. **Digits cannot overlap.**
g. No machine may enter the circuit if it does not meet the above regulations. If the rider does enter the circuit then no lap times will be recorded and Race Direction will at their discretion black flag the rider.
h. The organisers will not be responsible or give dispensation to any competitor who is delayed or misses their practice session or race due to numbers not complying with the regulations. Nor will the timekeepers be responsible for not recording times. In addition a competitor may be fined or excluded by the Race Direction for non-compliance.

In case of a dispute concerning the legibility of numbers, the decision of the Technical Director will be final.

2.4.6 Fuel

The MCRCB Control Fuel must be used in every practice session and race. See F-Championship Conditions and any Bulletins issued by MSVR

2.4.7 Tyres

a. Only the control tyre smay be used. Further conditions will be stated in F - Championship Conditions and any Bulletins issued by MSVR.
b. **The 'regular' maximum number of dry tyres, available to each rider during the event will be 6 front tyres and 6 rear tyres.**
c. **A maximum of 3 new Rear (dry) tyres and 3 Front (dry) tyres may be used over the two Free Practice sessions and Qualifying (either Q1/Q2 or QP/Superpole format).**

d. **The remaining 3 new Rear (dry) tyres and 3 Front (dry) tyres may be used AFTER the Qualifying Practices. Any stickered tyre from the event allocation may be used for the Warm up session.**
e. Only the Race Direction, following consultation with the Technical Director and the official tyre supplier may alter the allocation during an event.
f. Every dry tyre used during the event must be marked with an adhesive sticker with a number allocated by the Technical Director. The front sticker will have white numbers and the rear stickers will have black numbers.
g. No tyre change is permitted during a dry race in a Red Flag interruption (including a dry race interrupted with less than 3 laps of its duration completed by the leader), other than when the race status is changed to "Wet" and/or authorisation to change tyres is announced by race control – see E 1.10. (Exception: Thruxton).
h. In the event of a exceptional tyre change authorised by the Chief Technical Official in the case of a proven tyre failure, the rider must start the re-start from the back of the grid or the pit lane exit.
i. Wet and Intermediate tyres will not need to be marked with a tyre sticker. They will not be considered in the total number of tyres available for use, however normal supplier allocation limits still apply.
j. The tyres used to ride to the grid during the sighting lap of normal start procedures do not need to be marked with a tyre sticker. Tyre stickers MUST be fitted to race tyres before the 5 minute board.
k. The tyre stickers will be collected by the teams in a sealed envelope after which the teams will be responsible for their use.
l. The stickers must be applied to the right hand sidewall of the tyre. Officials will check that all the motorcycles entering the track are fitted with tyres carrying the sticker with the exception of the cases mentioned above.
m. The use of motorcycles without the official stickers will be immediately reported to the Race Direction whom will take appropriate action.
n. At the discretion of the rider, intermediate or wet weather tyre (if allocated) may be used. Wet-weather tyres must be a fully moulded tyre. The use of hand cut tyres is not allowed. Wet-weather tyres must be marked "Not for Highway Use" or "NHS".
o. Any modification or treatment (cutting, grooving) is forbidden.
p. At the beginning of the event, the Official Supplier may be requested by the Technical Director to deliver to him four (4) samples of each type of tyre to be used at the event.
q. The allocation of individual tyres will be made on a random basis, with no involvement of any representative from the tyre supplier, teams or riders. Those tyres will be individually identified and may not be exchanged between riders, including between team mates, and may not be exchanged by the tyre supplier after the allocation, except with the permission of the Race Direction.
r. In exceptional cases, should the sticker be damaged or applied in the wrong way, an extra stickers may be provided at the sole discretion of the Technical Director. However, the damaged sticker must be returned to the

Technical Director and/or the tyre it was applied to, must be absolutely intact.

Tyre Limitations:

s. Minimum tyre pressure:

Minimum Tyre Pressure	
Period	Pressure
At all times	1.65bar
No tolerance	

t. At the 3 minute board the pressure will be checked on the grid for a minimum of three riders using the Pirelli approved tyre gauge. At the same time the TPMS data will be recorded for information only. If the tyre is below the minimum limit according to the Pirelli approved gauge then the machine will be removed from the grid to the pitlane to have the pressure corrected and the rider will start the warm up lap from the pitlane (and the race from the back of the grid).

2.4.8 Engine

a. The homologated engine design model cannot be changed.
b. The sequence in which the cylinders are ignited (i.e. 1-2-4-3), must remain as originally designed on the homologated model. ~~Simultaneous firing of 2 cylinders is also forbidden if not adopted on the homologated motorcycle.~~

2.4.8.1 Fuel injection system

a. The original homologated fuel injection system must be used without any modification.
b. The fuel injectors must be stock and unaltered from the original specification and manufacture.
c. Air funnels may be altered or replaced. The critical dimensions of the air funnels used by the nominated reference team must be supplied to the teams purchasing the eligible concession parts by the nominated concession part supplier.
d. Primary throttle valves cannot be changed or modified.
e. Variable intake tract devices cannot be added if they are not present on the homologated motorcycle and they must remain identical and operate in the same way as the homologated system. All the part of the variable intake tract device must remain exactly as homologated (excepting the air funnels). Variable intake tract devices may be replaced with fixed air funnels.
f. Air and air/fuel mixture must go to the combustion chamber exclusively through the throttle bodies.

g. If the variable intake tract actuation mechanism mount or fuel injector mount is an integrated part of the air funnel then those part alone may be redesigned maintaining the exact geometry of the original part

h. If the mechanism link arm interferes with the air funnels then the link may be redesigned for clearance maintaining the exact linkage geometry of the original part

2.4.8.2 Cylinder Head (SBK only unless stated)

The cylinder head must be the originally fitted and homologated part with the following modifications allowed:

a. The cylinder head must begin as a finished production part using homologated materials and castings. Material may only be added by epoxy or removed by machining. No machining or modification is allowed in the cam box / valve mechanism area.
b. The induction and exhaust system including the number of valves and or ports (intake and exhaust) must be as homologated.
c. Porting and polishing of the cylinder head normally associated with individual tuning such as gas flowing of the cylinder head, including the combustion chamber is allowed. Epoxy may be used to shape the ports.
d. The throttle body intake insulators may be modified.
e. The compression ratio is free.
f. The combustion chamber may be modified.
g. Valve seats can be modified or replaced for repair. The material must remain as homologated.
h. Valve guides must remain as homologated. Modifications in the port area are allowed by machining.
i. Valves must remain as homologated.
j. Valves must remain in the homologated location and at the same angle as the homologated valves.
k. Rocker arms (if any) must remain as homologated.
l. The exhaust air bleed system must be blocked and the external fittings on the cam cover(s) may be replaced by plates.
m. Valve springs may be altered or replaced. Their material must remain as homologated **(inc PW)**
n. Valve spring seats, collets and retainers may be modified or replaced. **(inc PW)**
o. Only the originally homologated or the eligible concession valve spring (or collet) retainers, collets, spring seats may be used.
p. Only the originally homologated or the eligible concession shim buckets / tappets may be used. The standard part may have their surface finish altered.

2.4.8.3 Camshaft (excludes PW)

a. **For motorcycles with a bore of 79.5mm or greater.**
    i. **Camshafts must be the originally fitted and homologated parts with no modification allowed.**
        a. **BMW:**
            - **Inlet: 1 641 059 (Shift Cam)**
            - **Exhaust: 7 924 100**
        b. **Ducati:**
            - **Inlet: 148.1.656.1A, 148.1.655.1A,**
            - **Exhaust 148.1.620.1°, 148.1.618.1A**
        c. **Honda:**
            - **Inlet: 14110-MKR –D10, 14110-MKR –DH0**
            - **Exhaust: 14210-MKR –D10, 14210-MKR –DH0**
b. For motorcycles with a bore of less than 79.5mm
    i. Only one camshaft design solution may be selected for the season.
    ii. **The chosen solution must be declared to MSVR technical control at the first event**. Should a team subsequently present a determinable engineering or other, unavoidable, proven hardware supply issue then a once only change of design solution may be authorised by the Chief Technical Official.
    iii. In the event of a team taking this once only option the rider(s) concerned must start the first race at the first event using the new solution with a +6 grid position penalty.
c. Offsetting the camshaft is not allowed. The camshaft must remain in the homologated location.
d. Pathway machines may only use the homologated Camshaft with no modification allowed.

2.4.8.4 Cam sprockets or cam gears

a. Camshaft sprockets, pulleys or gears may be altered or replaced to allow degreeing of the camshafts.
b. The cam chain or cam belt tensioning device(s) can be modified or changed.

2.4.8.5 Cylinders

a. Must be the originally fitted and homologated part with no modification allowed except as noted below.
b. The cylinder base gasket(s) may be changed.
c. The top face of the cylinder may be ground to adjust deck height.**(excludes PW)**

2.4.8.6 Pistons

Must be the originally fitted and homologated part with no modification allowed.

2.4.8.7 Piston rings

Must be the originally fitted and homologated part with no modification allowed.

2.4.8.8 Piston pins and clips

Must be the originally fitted and homologated part with no modification allowed.

2.4.8.9 Connecting rods (excludes PW)

a. The connecting rod must the originally fitted and homologated part with no modification allowed.
b. Connecting rod big end bolts may be changed but must be of the same weight or heavier, same material or of higher specific weight material.
c. The weight of the connecting rod assembly is the homologated weight (normally the weight of the middle weight rod) with a tolerance of +/- 3%.

2.4.8.10 Crankshaft (excludes PW)

Only the following modifications are allowed to the homologated crankshaft:

a. Bearing surfaces may be polished.
b. Surface treatments may be applied to the crankshaft.
c. Balancing is allowed but only by the same method as the homologated crankshaft. For example heavy metal, i.e.: Mallory metal inserts, are not permitted unless they are originally specified in the homologated crankshaft.
d. The addition or reduction in weight of the crankshaft in order to reach a racing balance can be no greater than 5% of the homologated weight excluding the tolerance as shown in the homologation documents of the crankshaft. (From 2025 – 3%)
e. The balancing must be performed by the original method i.e. drilling or machining and in the same position (i.e. edge of flywheels).
f. Polishing of the crankshaft is not allowed.
g. Balance shaft must remain as homologated. No modifications are allowed.

2.4.8.11.1 Crankcase / Gearbox housing (excludes PW)

a. Crankcases must be the originally fitted and homologated part with only the following modifications allowed:
    i. If the crankcases have an integral cylinder then the top face of the cylinder may be ground to adjust deck height. Oil Spray nozzles may be modified. No other modifications are allowed (including painting, polishing and lightening).

b. It is not allowed to add a pump used to create a vacuum in the crankcase. If a vacuum pump is installed on the homologated motorcycle then it may be used only as homologated.
c. Oil-pan (sump) and oil pick up is free. Note that the gasket is free and may form part of the mechanism for controlling oil flow in the sump area.
d. One thread may be altered or created to allow for oil pressure/temperature measurement. The sensor must be positioned so it cannot sustain impact in the case of a crash.
e. Oil breather cover must remain as homologated but the internal breather/damper plate can be modified or replaced.

2.4.8.11.1 Lateral covers and protection

a. Lateral (side) covers may be altered, modified or replaced (excluding pump covers). If altered or modified, the cover must have at least the same resistance to impact as the original one. If replaced, the cover must be made in material of same or higher specific weight and the total weight of the cover must not be less than the original one.
b. All lateral covers/engine cases containing oil and which could be in contact with the ground during a crash, must be protected by a second cover made from metal such as aluminium alloy, stainless steel, steel or titanium, composite covers are not permitted.
c. The secondary cover must cover a minimum of 1/3 of the original cover. It must have no sharp edges to damage the track surface.
d. Plates or crash bars from aluminium or steel also are permitted in addition to these covers. All of these devices must be designed to be resistant against sudden shocks, abrasions and crash damage.
e. Covers from the Authorised Parts List will be permitted without regard of the material or dimensions.
f. These covers must be fixed properly and securely with a minimum of three (3) case cover screws that also mount the original covers/engine cases to the crankcases.
g. Titanium bolts may be used to fasten lateral covers.
h. Oil containing engine covers cannot be secured with aluminium bolts.
i. The Technical Director has the right to refuse any cover not satisfying this safety purpose or that is proven to be ineffective.

2.4.8.12 Transmission / Gearbox (SBK)

a. Only one (1) set of gearbox ratios will be allowed for the whole season. The ratios can be freely chosen.
b. The ratios chosen by the team for the season (individually and separately for each and every entry) must be declared before the start of the first event (includes wildcard and one-event entries).
    i. Should a team subsequently present a determinable engineering or other, unavoidable, proven hardware supply issue then a once only

change of gearbox ratios may be authorised by the Chief Technical Official. In the event of a team taking this once only option the rider(s) concerned must start the first race at the first event using the new ratios with a +6 grid position penalty.

c. Only the homologated primary gear ratio may be used (see Art. 2.4.8.13)
d. The layout of the transmission shafts must be the same as on the homologated motorcycle.
e. The gear design and material are free.
f. The selector drum and complete gear index mechanism are free.
g. The selector forks may be changed. However, the forks must engage with the same gears and function in the same way as on the homologated motorcycle (i.e. no sliding dog ring boxes if not fitted as standard).
h. Countershaft sprocket, rear wheel sprocket, chain pitch and size may be changed.
i. The sprocket cover may be modified or eliminated.
j. An external neutral selection mechanism may be fitted.
k. Seamless shift gearboxes are not allowed. Should the homologated base model be originally fitted with a seamless shift gearbox then the complete homologated gearbox assembly may be used with no modifications allowed excepting surface finish.

2.4.8.13 Transmission / Gearbox (Pathway)

a. Must be the originally fitted and homologated parts (including but not limited to shafts, selector mechanism, gears and primary gears) with the following exceptions:.
b. Undercutting and re-shimming are allowed
c. The positive neutral selector mechanism may be removed.
d. Shift star/indexer, spring, roller and detent may be replaced or modified but must function as originally designed.
e. Polishing, surface treatment, and heat treatment of all gearbox components is allowed.
f. Countershaft sprocket, rear wheel sprocket, chain pitch and size may be changed.
g. The front sprocket cover may be modified or eliminated.
h. Chain guard as long as it is not incorporated in the rear fender may be removed.

2.4.8.13 Clutch

a. Aftermarket or modified clutches are permitted (including plates/springs etc).
b. Back torque limiter is permitted.

c. No power source (i.e. hydraulic or electric) can be used for clutch operation, if not installed in the homologated model for road use. Human power is excluded from the ban.
d. Clutch system (wet or dry type), type (multiplate) and method of operation (cable/hydraulic) must remain as homologated.
e. Clutch basket may be changed. If the clutch basket has the primary gear integrated then the primary gear must retain the original number of teeth and tooth form.

2.4.8.14 Oil pumps and oil lines

a. The originally fitted and homologated oil pump must be used. The following modifications are allowed:
    i. The oil pressure relief spring is free.
    ii. Blueprinting **(No longer allowed in 2025)**
    iii. Reducing gear and housing thickness but the external appearance must remain as homologated **(No longer allowed in 2025)**
b. Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of braided reinforced construction with swaged or threaded connectors.

2.4.8.15 Cooling System

a. The only liquid engine coolant permitted is water.
b. The internal parts of the water pump may be changed or modified. The drive ratio may be changed. The external appearance must remain as homologated.
c. From 2025: The water pump must remain as homologated.
d. The original radiator or oil cooler may be altered or replaced from those fitted to the homologated motorcycle.
e. Additional radiators or oil coolers may be added.
f. The original oil/water heat exchanger may be modified, replaced or removed.
g. The cooling system hoses and catch tanks may be changed.
h. Radiator fan and wiring may be changed, modified or removed.
i. The oil cooler must not be mounted on or above the rear mudguard.
j. The appearance from the front, rear and profile of the motorcycle must in principle conform to the homologated shape after the addition of additional radiators or oil coolers.

2.4.8.16 Airbox

a. The airbox must be the originally fitted and homologated part with the following modifications allowed:
b. If the homologated airbox is used to mount top type fuel injectors, then the airbox and the attached systems must remain as homologated.

c. Air funnels and Variable intake tract devices see Art 5.2.4.8.1.
d. Air filters, internal flap type valve, sensors and vacuum fittings may be removed, modified or replaced with aftermarket part Should any modification be required for the fitment of these part it will be at the discretion of the Technical Director.
e. Any holes in the airbox to the outside atmosphere resulting from the removal of components must be completely sealed.
f. The airbox drains must be sealed.
g. Ram air tubes or ducts running from the fairing to the airbox may be modified, replaced or removed. If tubes/ducts are utilized, they must be attached to the original, unmodified airbox inlets.
h. All motorcycles must have a closed breather system. All the oil breather lines must be connected, may pass through an oil catch tank and exclusively discharge in the airbox.
i. If the top of the airbox is formed by the bottom of the tank then that part of the tank will be considered as the airbox and must conform to its homologated shape excepting 2mm variance in corner radii and must be the same volume.
j. A dry break / quick release connector may be fitted. See Art. 5.2.4.8.17.
k. Additional heat shielding is allowed to be applied to lower face/side of the airbox (i.e. foil tape).

2.4.8.17 Fuel Supply

a. Fuel pump and fuel pressure regulator must be the originally fitted and homologated part with no modification allowed.
b. The fuel pressure must be as homologated. The pressure tolerance at the technical control is +5% in respect to the maximum pressure of the homologated motorcycle.
c. All motorcycles must have an approved fuel pressure sensor fitted.
d. All motorcycles must have a special device on the fuel line in accordance with FIM specifications for fuel pressure checks, or teams must provide a temporary adaptor to allow checks.
e. Fuel lines from the fuel tank up to the injectors (fuel hoses, delivery pipe assembly, joints, clamps, fuel canister) may be replaced and must be located in such a way that they are protected from crash damage.
f. Fuel level sensors may be removed or fixed in position.
g. Quick connectors or dry break connectors may be used.
h. Fuel vent lines may be replaced.
i. Fuel filters may be added.

2.4.8.18 Exhaust System

a. Exhaust pipes and silencers may be altered or replaced from those fitted to the homologated motorcycle.
b. Catalytic converters must be removed.

c. The number of the final exhaust silencer(s) must remain as homologated. The silencer(s) must be on the same side(s) as on the homologated model.
d. For safety reasons, the exposed edge(s) of the exhaust pipe(s) outlet(s) must be rounded to avoid any sharp edges.
e. Wrapping of exhaust systems is not allowed except in the area of the rider's foot or an area in contact with the fairing for protection from heat.
f. The noise limit for Superbikes will be 107dB/A (with a 3 dB/A tolerance after the race only).
g. The critical dimensions of the exhaust system used by the nominated reference team must be supplied to the teams purchasing the eligible concession part by the nominated concession part supplier.

2.4.9 Electronic Control System

a. Only the Electronic Control Units (ECU) supplied by the official supplier (MoTeC) are allowed. This ECU must remain unmodified in hardware and software as delivered by the official Supplier, with the exception of the normal tuning adjustments allowed only by the standard software 'Setting Tool' supplied as part of the BSB ECU solution.
b. Only dashboards/displays supplied by the official supplier (MoTeC) are allowed.
    i. **The dashboard must display compulsory flags and messages**
    ii. **2025:All shift lights must be only 'White'**
c. No additional electronics forming standalone control systems will be allowed (i.e. external igntion cut traction control systems, engine throttle blipper servo motors, ignition expanders or injector modules) however vehicle specific slave controllers may be added providing they receive official approval.
d. The use of the ECU team logging is optional, the ECU will include scrutineering logging which is fixed.
e. The following may be fitted:
    i. External ignition amplifier and lambda controller.
    ii. External quick shift sensors (load cells) are allowed and must be wired to an input of the control ECU and be approved by the official control ECU provider. See authorised parts list.
    iii. Vehicle specific Slave controllers (when authorised).
    iv. No other external controllers, traction control modules, blippers or other active expansion modules or calculation units may be fitted.
f. ECU may be relocated.
g. The Wiring Harness and connectors are free.
h. The download connector must conform to the published specification
i. Spark plugs, spark plug caps (not coils) and HT leads (if applicable) are free.
j. Battery type is free. The maximum capacity for a lithium type battery is 100Wh.
k. **2025: Only OEM sensors may be used**.

k. Engine sensors may be changed from the standard sensors. The chosen replacement must be approved by the control ECU supplier who will publish an approved list of sensors. Should you wish to use a non approved sensor a sample must be provided to the control ECU supplier for characterisation, the charge is £150/sensor and a minimum of three weeks for approval must be provided.

l. A standard sensor may be modified by fitting pigtails and or have the connectors changed on the standard cable.

m. The following sensors may be used: (Sensors listed that are not originally fitted to the standard machine may be substituted with alternative sensors);

1. Throttle position (multiple)
2. Map sensor, Map Sync (pressure sensor on the intake port used to synchronize the engine during the start.)
3. Airbox Pressure
4. Engine pick-ups (Cam, crank)
5. Lambda (per cylinder)
6. Twist grip position
7. Front speed
8. Rear Speed
9. Gear position
10. Shift selector shaft position if originally fitted only.
11. Gear shift load cell
12. Front brake pressure
13. Rear brake pressure
14. Oil pressure
15. Air pressure
16. Water temperature
17. Air temperature
18. IMU (only from Authorised parts list)
19. Transponder / Lap time signal
20. Fuel pressure
21. Oil temperature
22. Fork position
23. Shock position
24. Tilt / Tip-Over Switch
25. GPS Unit
26. Rear tyre temperature (External) (Multiple)
27. Rear TPMS Monitor (Temperature and Pressure) (Compulsory)*
28. Front TPMS Monitor (Temperature and Pressure)*
29. Front brake disc and caliper temperature (multiple, various types)
30. Front brake lever position

* Must be from the Authorised Parts List

n. Telemetry is not allowed (remote signals to or from the bike), except by compulsory championship devices.

o. No remote or wireless connection to the bike for any data exchange or setting is allowed whilst the engine is running or the bike is moving.
p. It is the responsibility of the teams to ensure that the following must be fitted and operating correctly at all times and MUST all be connected to the same CAN bus as the Dashboard.
    i. Any MCRCB mandated devices
q. The Chief Technical Officer may inspect all ECU hardware and software at any time, including access to all stored information. The Chief Technical Officer may require the team to change the ECU on any machine for another identical standard one at any time.
r. The Chief Technical Officer may inspect and access the scutineering datalogger system at any time, including the reading and downloading of data. MSVR reserve the right to publish all scrutineering data.

SPECIAL PROVISON FOR WILD CARDS AT SELECTED EVENTS

s. The Promoter may accept up to two wild cards at two selected events whereby an exemption is granted to using the series specified ECU. The manufacturers "kit ECU" may be used provided that is is verified (by MSVR and the series official ECU supplier) that the functionality does not exceed that of the series specified ECU. In all cases the machine must comply with all other MCRCB Superbike Technical Regulations and the team/rider will be ineligible to score championship points**.**
This provision may be withdrawn at anytime.

2.4.9.2 Generator, Alternator, Electric Starter

a. The rotor/stator/coil must be the originally fitted and homologated part with no modification allowed.
b. The starter motor gear system must be the originally fitted and homologated part Surface and hardening treatments are allowed.
c. During parc-fermé the starter must crank the engine at a suitable speed for starting for a minimum of 2 seconds without the use a boost battery. No boost battery may be connected to the machine after the end of the session. If the above is satisfied and the machine does not start for the noise test – then the boost battery may be used.
d. Motorcycles should self-start on the starting grid in neutral. Push-starting on the starting grid is not allowed, however start line Officials may push start the motorcycle if necessary (in gear).

2.4.10 Main Frame and Spare Motorcycle

During the entire duration of the event, each rider can only use one (1) complete motorcycle, as presented for Technical Control, with the frame clearly identified with a BSB Barcode. In case the frame needs to be replaced, the rider or the team must make a request to the Technical Director to use the spare frame.

The pre-assembled spare frame must be presented to the Technical Director to receive the permission to rebuild the motorcycle. The pre-assembly of the frame shall be strictly limited to:

- Main frame
- Bearings (steering pipe, swing-arm, etc)
- Swing-arm
- Rear suspension linkage and shock absorber
- Upper and lower triple clamps
- Wiring harness

The spare frame will not be allowed in the pit box or working area before the rider or the team has received authorisation from the Technical Director.

The rebuilt motorcycle must be inspected before its use by the technical stewards for safety checks and a new BSB Barcode will be placed on the motorcycle frame.

No complete spare machine may be at the track. If found penalties will be applied. For the remainder of the event the machine will be impounded and no part of that machine may be used for spare parts.

EXPLANATION OF THE PROCEDURES

Only one (1) complete motorcycle may be presented for the preliminary technical checks and it will be the only motorcycle allowed on the track and in the pit box during the practices, qualifying, warm up and race.

The frame of this motorcycle will be officially sealed by the Technical Director or by his appointed staff. The seal will be a BSB Barcode, which will be recorded. Any attempt made to remove the seal will damage it irreparably.

At any time during the event the technical stewards, under the direction of the Technical Director, may check the seal and verify that it conforms to the motorcycle and rider it was assigned to. For cross reference, every frame must have a unique number punched on it, preferably on the steering-head.

If the motorcycle is damaged in a crash or in any other incident, it is allowed to use the pre-assembled spare frame to rebuild the motorcycle.

The spare frame may be pre-assembled with the following items: main frame assembly, swing-arm, rear suspension linkage, shock-absorber, steering head bearings, upper and lower triple clamps and wiring harness.

When a team decides that a crashed or damaged motorcycle requires a change of frame, it must inform the Technical Director. Only once authorized may the pre-assembled spare frame be brought into the pit box or working area.

Parts may be transferred from the damaged motorcycle for the assembly of the replacement motorcycle.

Once the assembly of the replacement motorcycle is completed, the machine must undergo technical and safety checks and it will be officially sealed. The sealon the damaged motorcycle will be destroyed by the technical staff and the chassis of this motorcycle must not be used for the remainder of the event. The new BSB Barcode will be recorded by the Technical Director.

The replacement motorcycle may be used on the track only after the end of the practice and qualifying sessions or race in which the damage occurred. The damaged motorcycle must be removed from the pit box as soon as possible and put in storage outside the pit box.

After the pre-assembled spare part frame has been used, should it become necessary to replace the frame again because of a further crash or damage, the assembly work must be done using a bare frame with no components attached. The before work can start.

Any actions contrary to these procedures will result in a penalty as described in the Sporting Regulations

2.4.10.1 Frame body and sub-frame

a. The main frame must be the originally manufactured, fitted and homologated part. The main frame is considered to be any component that structurally connects the steering head pivot to the swingarm pivot and the Technical Directors decision is final.
b. The main frame may be altered by the addition of gussets, tubes or plates. The additions may be welded or bonded and their material is free. No gussets or tubes may be removed. **(excludes PW)**
c. Holes may be drilled on the frame only to fix approved components (i.e. fairing brackets, steering damper mount).
d. The homologated position (of engine, steering stem or pivots) is considered as the position in which the production motorcycle is supplied. (Fore and aft is considered along the bottom plane of the original bearing seat).
e. Suspension linkage mounting points on the frame must remain as homologated.

Engine Mounting Position:

f. If the original chassis includes adjustable inserts for the engine mounting position then:

i. The inserts are free BUT the chassis cannot be modified further (except as mentioned in b).
ii. There is no limit to the range of adjustment.

g. If the original chassis has fixed engine mounts then the engine must be mounted in the homologated position.

Steering Stem Position:

h. Steering angle changes are permitted by fitting inserts onto the bearing seats of the original steering head.
i. No part of the insert must protrude axially more than 3 mm. from the original steering head.
j. The chassis cannot be modified further.

Swingarm Pivot Position:

k. If the original chassis includes adjustable inserts for the swinging arm pivot axis then:
   i. Inserts/bushings are free
   ii. The chassis cannot be modified further (except as mentioned in b).
   iii. There is no limit to the range of adjustment.
l. If the original frame does not have swingarm pivot position adjusters then inserts maybe used (without frame modifications excepting previous points) to offset the pivot, in addition offset pivot (axles) may be used:
m. Should this pivot / axles pass through the crankcases then the relevant crankcase mounting hole may be machined larger, no welding or other modifications will be permitted. Crankcases may be machined for swingarm clearance only.

n. The original lock stops may be removed from the frame body by grinding or machining. However another form of lockstop must be fitted.
o. All motorcycles must display a vehicle identification number (QR code)
p. No polishing or surface refinishing is allowed but the paint scheme is not restricted.
q. Fairing brackets may be altered or replaced.
r. Front and rear sub frame may be changed altered or removed. **Material is free.**
s. Crash protectors may be fitted to the frame using existing points (max. length: 50 mm), or pressed into the ends of the wheel axles (max. length: 30mm).

2.4.10.2 Suspension - General

a. Participants in:
   a. Superbike class must only use units from the MCRCB Authorised Parts List for Superbikes

b. Pathway class must only use units from the MCRCB Authorised Parts List for Supersport/Superstock machines

b. The price limits are:
   i. SBK Fork: For the fork kit, including all parts such as but not limited to cartridge, springs (1 set), adjusters, fork caps, blanking inserts, seals, bushes but excepting oil and fitting the price limit is **€13000** excluding tax
   ii. SBK Shock Absorber/RCU: For the complete shock absorber / RCU including but not limited to spring (1 of), pre-load adjuster and length/ride height adjuster the price limit is €5000 excluding tax
   a. Pathway Fork: For the fork kit, including all parts such as but not limited to cartridge, springs (1 set), adjusters, fork caps, blanking inserts, seals, bushes but excepting oil and fitting the price limit is €2450 excluding tax
   b. Pathway Shock Absorber/RCU: For the complete shock absorber / RCU including but not limited to spring (1 of), pre-load adjuster and length/ride height adjuster the price limit is €2000 excluding tax
c. The eligible products from the suspension manufacturers must be available to all participants at least one month before the first round of the Championship, and remain available all season. The products must be available within 6 weeks of a confirmed order.
d. Setting parts and tuning parts must be provided by the suspension manufacturers to all customers/teams/participants using the manufacturer's products. These parts can be used by all participants during the season. These parts shall be available for immediate delivery to all teams/customers.
e. Teams may not modify any part of the forks or shock absorber; all setting parts must be supplied by the Suspension manufacturer and available to all teams/riders.
f. The suspension manufacturers are allowed to offer service contracts when the team is using the eligible suspension products. The suspension manufacturers cannot demand a service contract for a customer or participant in order to obtain a suspension product.
g. **Electronic suspension cannot be used.**
h. **Suspension lowering and locking devices (sometimes known as holeshot devices) are not allowed.**
i. **Titanium Springs are not allowed**

2.4.10.3 Front Suspension (SBK)

a. The front fork in whole or part may be changed but must be the same type homologated (leading link, telescopic, etc.). see 5.2.4.10.2.a
b. The upper and lower fork clamps (triple clamp, fork bridges) and stem may be changed or modified.
c. A steering damper may be added or replaced with an 'after-market' damper.
d. The steering damper cannot act as a steering lock limiting device.

e. Electronic controlled steering damper cannot be used if not installed in the homologated model for road use. However, it must be completely standard (any mechanical or electronic part must remain as homologated).

2.4.10.3P Front Suspension (Pathway)

a. Forks must be the originally fitted and homologated parts with the following modifications allowed:
b. Original internal parts of the homologated forks may be modified or changed.
c. Only aftermarket damper kits or valves from the MCRCB Authorised Parts List may be installed (5.2.5.10.2.a)
d. Fork springs may be modified or replaced.
e. Fork caps may be modified or replaced to allow external adjustment. They may extend the clamping area of the fork leg a maximum of 18mm above the standard fork tube. The fork 'drop' must never be set allowing the fork to be submerged in the top yoke/clamp. The full clamping area of the top yoke/clamp must be used.
f. The fork stroke will be a maximum of 125mm to the bump stop plus a maximum of 5mm bump stop stroke.
g. The fork kit manufacturer will be wholly responsible for ensuring the safe operation of the fork.
h. Dust seals may be modified, changed or removed if the fork is totally oil-sealed.
i. The original surface finish of the fork tubes (stanchions, fork pipes) may be changed. Additional surface treatments are allowed.
j. The front fender mounts integrated in the fork lower may be modified or removed and replaced.
k. Fittings for suspension stroke sensors (potentiometers) may be attached.
l. The axle bore in the fork lower cannot be modified. The front axle nut/sleeve may be added or modified and/or made captive.
m. The brake attachment point may be modified with prior approval of the technical director to facilitate the fitting of brake ducts, the addition of centring points and the addition of a bore for the bolt shank.

2.4.10.4 Swinging arm (Rear Fork) (SBK)

a. The rear fork may be altered or replaced from that fitted to the homologated motorcycle.
b. The price limit for eligibility is €10,000 for the bare swingarm. The limit for all the remaining part to complete the assembly including but not limited to bearings/spacers/inserts/chain-adjusters/chain sliders/ hugger/ chain-guard/ sharkfin is €2000. Any supplier must submit their part for authorisation. The part must be available to any team who wishes to purchase them
c. The use of carbon fibre or Kevlar® materials is not allowed if not homologated on the original motorcycle.

d. A solid protective cover (shark fin) shall be fixed to the swing-arm, and must always cover the opening between the lower chain run, swingarm and the rear wheel sprocket, irrespective of the position of the rear wheel.
e. Rear wheel stand brackets may be added to the rear fork by welding or by bolts.
a. **2025: Brackets/mounts for rear wheel stand bobbins may be added to the rear fork by welding or bolts. No fork style stand brackets are allowed, the stand must use forks and the swingarm use bobbins. (Will be reviewed through 2024)**
f. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed.
g. Swingarm spindle (pivot) may be modified or replaced.

2.4.10.4 Swinging arm (Rear Fork) (PW)

a. The rear fork (Swingarm) must be the originally fitted and homologated part with the following modifications allowed.
b. Swingarm rear machined section that includes the wheel axle slots and chain adjuster system may be modified or replaced in full. The replacement section may be welded to the original Swingarm spars (can be described as a Harris swingarm modification).
c. The wheel axle nut may be replaced and/or made captive.
d. Rear brake caliper hanger may be altered or replaced and the caliper may be repositioned (underslung)
e. An anchorage system or point(s) to keep the rear brake caliper (hanger) in place may be added to the rear swing-arm.
f. Wheel support rails/guides may be added to permit quick wheel changes.
g. A solid protective cover (shark fin) shall be fixed to the swing-arm, and must always cover the opening between the lower chain run, swingarm and the rear wheel sprocket, irrespective of the position of the rear wheel.
h. **Brackets/mounts for rear wheel stand bobbins may be added to the rear fork by welding or bolts. No fork style stand brackets are allowed, the stand must use forks and the swingarm use bobbins.**
i. The sides of the swing-arm may be protected by a thin vinyl cover only, no composite or structural covers are allowed.

2.4.10.5 Rear suspension unit

a. Rear suspension unit (shock absorber/RCU) may be changed.See art 5.2.4.10.2.a-b
b. The rear suspension linkage may be modified or replaced. (Price limit from 2025)
c. The original fixing points on the frame (if any) must be used to mount the shock absorber, linkage and rod assembly fulcrum (pivot points).

d. **Removable top shock mounts may be replaced. If replaced they must retain their homologated geometry.**

2.4.10.6 Wheels

a. Wheels may be replaced (see Art. 2.3.4) and associated part may be altered or replaced from those fitted to the homologated motorcycle.
b. Aftermarket wheels must be made from aluminium alloys.
c. The use of the following alloy materials for the wheels is not allowed: Beryllium (>=5%), Scandium (>=2%), Lithium (>=1%).
d. Each specific racing wheel model must be certified according to JASO (Japanese Automotive Standards Organization) T 203-85 where W (maximum design load) of Art. 11.1.3 is 195 kg for front wheel and 195 kg for rear wheel, K = 1.5 for front and rear wheels. Static radius of tyre: front 0.301 m, rear 0.331 m.
e. Wheel manufacturers must provide copy of the certificate for their wheel(s) as proof of compliance to the Technical Director when requested.
f. The homologated road bike wheel and sprocket carrier assembly may be used with no modification, irrespective of material. They must meet Art. 2.4.10.6.d/e. Bearings and spacers may be changed.
g. On motorcycles equipped with a double sided swing arm (rear fork), the rear sprocket must remain on the rear wheel when the wheel is removed.
h. Bearings, seals, and axles may be altered or replaced from those fitted to the homologated motorcycle. The use of titanium and light alloys is forbidden for wheel spindles (axles).
i. Wheel balance weights may be discarded, changed or added to.
j. **Angled aluminium or steel inflation valves are compulsory.**

Wheel rim diameter size (front and rear)	17 inches
Front wheel rim width :	3.50 inches
Rear wheel rim width :	6.00 inches

2.4.10.7 Brakes (including Pathway)

a. Participants in the Superbike season must only use front brake part (Calipers, master cylinders, brake discs) from the relevant MCRCB Authorised Parts List (SBK and PW). The price limits are:
    a. Caliper: Including all parts such but not limited to body, pistons, radiators, anti-drag system, anti knockback (mechanical) and boost systems but excepting dry break / quick connect systems, hoses and pads the price limit is **€2800** excluding tax. No optional parts will be allowed to be fitted to the calipers.
    b. Master Cylinder: For a complete master cylinder the price limit is **€1400** excluding tax

c. Brake Disc: For a complete brake disc assembly (each) the price limit is €TBC excluding tax

b. The authorised products from the manufacturers must be available to all participants at least one month before the first round of the Championship season, and remain available all season. The products must be available within **12** weeks of a confirmed order.
c. No part can be added to the Authorized Parts List during the current season. Performance related updates are not allowed. Any product changes due to manufacturing or material supply issues must be declared eligible in advance.
d. Front brake master cylinder may be altered or replaced from those fitted to the homologated motorcycle (see art 5.2.4.10.7.a)
e. Front brake calipers may be altered or replaced from those fitted to the homologated motorcycle. (see art 5.2.4.10.7.a)
f. Rear brake master cylinder may be altered or replaced from those fitted to the homologated motorcycle. (see art 5.2.4.10.7.a)
g. Rear brake calipers may be altered or replaced from those fitted to the homologated motorcycle.
h. Brake pads or shoes may be altered or replaced from those fitted to the homologated motorcycle.
i. Brake hoses and brake couplings may be altered or replaced from those fitted to the homologated motorcycle. The split of the front brake lines for both front brake calipers must be made above the lower fork bridge (lower triple clamp). Brake line hose fittings (including banjo bolts) can only be Steel or Titanium.
j. Hydraulic anti-knockback systems may be fitted to the brake lines/caliper.
k. Brake discs may be altered or replaced from those fitted to the homologated motorcycle. **Only Steel (max. carbon content 2.1 wgt.%) is allowed for brake discs**. Alloys containing beryllium are not allowed to be used for brake calipers.
l. **Brake disc dimension maximum's:**
    a. **Superbike: Diameter Max: 340mm, Thickness Max 7.1mm**
    b. **Pathway: Diameter Max: 330mm, Thickness Max 6.5mm**
m. ABS systems cannot be used.
n. Motorcycles must be equipped with brake lever protection, intended to protect the handlebar brake lever from being accidentally activated in case of collision with another motorcycle. **Composite guards are not permitted unless on the Authorised parts list.** The Technical Director has the right to refuse any guard not satisfying this safety purpose.
o. Front brake system cooling ducts are allowed and the Technical Directors decision on their suitability and safety is final.

2.4.10.8 Handlebars and hand controls

a. Handlebars, hand controls (Subject to Art. 2.4.8.1) and cables may be altered or replaced from those fitted to the homologated motorcycle.

b. **Cable operated throttles (grip assembly) must be equipped with both an opening and a closing cable including when actuating a remote drive by wire grip/demand sensor.**
c. Motorcycles must be equipped with a functional ignition kill switch or button mounted on the right hand handlebar (within reach of the hand while on the hand grips) that is capable of stopping a running engine. **The button or switch must be RED.**

2.4.10.9 Foot rest and foot controls

a. Foot rests, hangers/brackets and hardware may be replaced and relocated but the hangers/brackets must be mounted to their original frame mounting points.
b. Foot controls; gear shift must remain operated manually by foot.
c. Foot rests may be rigidly mounted or a folding type which must incorporate a device to return them to the normal position.
d. The end of the foot rest must have at least an 8mm solid spherical radius. (See diagram A & C).
e. Non folding footrests must have an end (plug) which is permanently fixed, made of aluminium, plastic, Teflon® or equivalent type of material (min. radius of 8mm). The plug surface must be designed to reach the widest possible area of the footrest. The Technical Director has the right to refuse any plug not satisfying this safety purpose.

2.4.10.10 Fuel tank

a. The fuel tank must conform in principle to the homologated appearance and location of the original tank; however its actual shape can be slightly changed to suit the rider's preference and increased fuel volume. The tank may also be modified below the upper frame line and under the seat.
The tank may be replaced by a fuel cell and a structural cover.
b. The material of construction of the fuel tank may be altered from the one of the tank fitted to the homologated motorcycle.
c. All fuel tanks must be filled with fire retardant material (i.e. fuel cell foam, Explosafe), or be fitted with a fuel cell bladder.
d. Fuel tanks made of composite materials (carbon fibre, aramid fibre, glass fibre, etc.) must be lined with a fuel cell bladder.
e. All fuel bladders must conform to the FIA Standard FT3.5-1999, specifically for the chapters 2 (Fuel bladder lifetime), 3 (General requirements), 4 (Fittings and connections), 5 (Sampling and pre-treatment), 6 (Testing) and 7 (Performance requirements).
This includes also that, as stated in 3, all fuel bladders should be supplied with a suitable fuel resistant polyurethane foam baffling, conforming to Mil Spec MIL-B-83054, SAE-AIR-4170 or equivalent. This foam shall fill a minimum of 80 % of the volume of the fuel bladder. Where rapid refuelling

is expected, an anti-static foam conforming to Mil-Spec MIL-F-87260 (USAF) should be employed.

f. The fuel tank must be fixed to the frame from the front and the rear with a crash-proof assembly system. Bayonet style couplings cannot be used, nor may the tank be fixed to any part of the streamlining (fairing) or any plastic part. The Chief technical Official has the right to refuse a motorcycle if he is of the opinion that the fuel tank fixation is not safe.
g. Any lower areas of the tank exposed to potential tyre/wheel debris (e.g. outside the frame or subframe) must have a layer of secondary protection.
h. The maximum capacity of the tank is 24 litres.
i. A cross over line between each side of the tank is allowed (maximum inside diameter 10 mm).
j. Fuel tanks with tank breather pipes must be fitted with non-return valves which discharge into a catch tank with a minimum volume of 250 cc made of a suitable material.
k. Fuel tank filler caps may be altered or replaced from those fitted to the homologated motorcycle, and when closed, must be leak proof. Additionally, they must be secured to prevent accidental opening at any time.
l. The same size fuel tank used in practice must be used during the entire event.

2.4.10.11 Fairing / Bodywork

a. The fairing, mudguards and body work must conform in principle to the homologated shape as originally produced by the manufacturer, irrespective of the model year to encourage the most up to date visual impression. Headlights shape must be included even when considered external.
b. The fairing has a tolerance of +/-15mm from the original homologated road fairing, respecting the design and features of the homologated fairing, with the exception of the oil containing portion of the lower fairing, seat area and the area supporting the screen.
c. The front upper fairing section (cowling) above the area of the front wheel cavity (front view) may have its frontal are increased in width by up to 30mm per side (60mm overall). It must still conform to the style of the original machine (scaled +/-15mm planar) incorporating all included design features, however it may not exceed the homologated maximum width of the fairing side panels (excluding wings).
The decision of the Technical Director will be final.
d. The windscreen may be replaced.
e. The ram-air intake must maintain the originally homologated shape and dimensions.
f. The original air ducts running between the fairing to the airbox may be altered or replaced from those fitted to the homologated motorcycle.

Particle grilles or “wire-meshes” originally installed in the openings for the air ducts may be removed.

g. The lower fairing has to be constructed to hold, in case of an engine breakdown, at least half of the total oil and engine coolant capacity used in the engine (min. 5 litres). The lower edge of openings in the fairing must be positioned at least 70 mm above the bottom of the fairing.

h. There cannot be exit air vents in the front half of the lower fairing below a line 40mm below the centreline of the wheel axles of the machine. The Technical Director may give permission for the lower fairing to have additional vents added if vents have been filled to meet the these and the oil containment requirements.
Any added vents will not allow the exit of air in the front half of the fairing lower if they are behind a water or oil radiator.

i. Exceptions may be made to Art. 2.4.10.11.g with the sole agreement of the Technical Director if a manufacturer produced and authorised close fitting, oil containing engine shroud is fitted in addition to the bellypan. In this case OEM shaped air vents will be allowed in the front lower half of the fairing.

j. Any vents in the fairing lower must have their inner surface finish in-line with their outer surface or overlap to reduce the risk of liquid spraying from the machine.

k. The lower fairing must incorporate one hole of 25 mm in the bottom of the front lower area. This hole must remain closed in dry conditions and must be opened only in wet race conditions, as declared by the Race Director.

l. A feature may be built into the shape of the bellypan on its rear lower section. It may not extend around the tyre. The maximum dimensions when viewed from below (normally z-minus axis) are 120mm front to rear and 200mm in width. The feature may project 30mm from the bottom of the original bellypan shape. The feature must have rounded edges and must not create a ‘plough’ action (for safety and to stop issues in the gravel traps). The only aerodynamic effect must be to redirect the airflow laterally around the rear tyre. No downforce may be created. If there is any doubt about the aerodynamic effects then a CFD run of the whole machine (with rider) must be submitted to the Technical Director with and without the feature indicating the resultant forces. The Technical Director’s decision on suitability is final.

m. Bellypan must have minimum of 100mm ground clearance at 1G static ride height.

n. Minimal changes are allowed in the fairing to permit the use of an elevator (stand) for wheel changes and to add plastic protective cones to the frame or the engine.

o. Holes may be drilled or cut in the fairing or bodywork to allow additional increased intake air to the oil cooler. Holes bigger than 10mm must be covered with a particle grill or fine wire mesh. Grill/mesh must be painted to match the surrounding material.

p. Original openings for cooling in the lateral fairing/bodywork sections may be partially closed only to accommodate sponsors' logos/lettering. Such

modification shall be made using wire mesh or perforated plate. The material is free but the distance between all opening centres, circle centres and their diameters must be constant. Holes or perforations must have an open area ratio > 60%.

q. If the upper fairing has a rear edge/section that returns to the frame, reducing airflow between the fairing and frame (or sealing the fairing to the frame) then slots/notches may be removed from that area only. No material can be removed from the lateral (side) surfaces of the fairing. A maximum of 50% of the rear face may be removed.
r. A Gurney flap (lip/deflector) may be fitted at the edge of the lateral air vents or the rear edge of the fairing to increase vent effectiveness. The gurney flap may project a maximum of 4mm from the lateral surface of the fairing and must have a rounded end. It should be formed from the same material and be a moulded part of the fairing. The Technical Directors decision on suitability is final.
s. Holes may be drilled in the front mudguard to allow additional cooling. Holes bigger than 10mm must be covered with metal gauze or fine mesh. Mesh must be painted to match the surrounding material.
t. A rear hugger type mudguard may be added or removed, it may not project vertically down below the level of the rear bottom of the belly pan at 1G static ride height. It may not extend rearward past a line drawn vertically through the rear axle.
u. Material of construction of the front mudguard, rear mudguard and fairing is free.

Wings and Aerodynamic Aids

a. Wings and other aerodynamic aids will only be considered legal if originally fitted to the homologated road specification machine in all of Europe, Japan and North America. See Section A – above.
b. For race use the wings must follow the dimensions, profiles and positions of the homologated shapes exactly (+-1mm). For copies of the OEM parts the leading edges (including end plates) must have a minimum circumference of 4mm and must have a rounded end (8mm radius) or be enclosed/integrated into the fairing.
c. The OEM parts may be used “as is” with the exception that the wing root and 10mm from the end face may be modified to allow mounting to the (race) fairing. This may not be in the form of an extension and the size of the wing will be measured with reference to the face of the wing root.
d. The wing must be fitted in the same “relative” position (accepting the tolerance allowed for the fairing) and the angle of attack must be within +/- 4° of the original angle of attack relative to the chassis.
e. For active or dynamic aerodynamic parts ONLY the standard homologated mechanism may be used. The range of movement must be the same as that used by the homoolgated road machine in normal use – not the mechanical maximum.

2.4.10.12 Seat

a. Seat may be altered or replaced from those fitted to the homologated motorcycle. The appearance from front, rear and profile must conform in principle to the homologated shape.
b. The top portion of the rear body work around the seat may be modified to a solo seat.
c. Holes may be drilled in the seat or rear cowl to allow additional cooling. Holes which are bigger than 10mm must be covered with metal gauze or fine mesh. Mesh must be painted to match the surrounding material.
d. Material of construction of the seat is free.
e. All exposed edges must be rounded.

2.4.10.13 Rear Safety Light

All motorcycles must have a functioning red light mounted at the rear of the machine. This light must be switched on any time the motorcycle is on the track or being ridden in the pitlane and the session is declared WET. All lights must comply with the following:

a. Lighting direction must be parallel to the machine centre line (motorcycle running direction), and be clearly visible from the rear at least 15 degrees to both left and right sides of the machine centre line.
b. The rear light must be mounted near the end of the seat/rear bodywork and approximately on the machine centre line, in a position approved by the Technical Director. In case of dispute over the mounting position or visibility, the decision of the Technical Director will be final.
c. Power output/luminosity equivalent to approximately: 10 – 15 (incandescent), 0.6 – 1.8 W (LED).
d. The output must be continuous - no flashing safety light whilst on track, flashing is allowed in the pit lane when pit limiter is active.
e. Safety light power supply may be separated from the motorcycle**.**
f. The Technical Director has the right to refuse any light system not satisfying this safety purpose.

2.4.11 The following items MAY BE altered or replaced from those fitted to the homologated motorcycle.

a. Any type of lubrication, brake or suspension fluid may be used.
b. Gaskets and gasket material.
c. Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used.
d. Fasteners (nuts, bolts, screws, etc.), but internal engine bolts must remain of standard homologated materials or materials of higher specific weight.
e. Thread repair using inserts of different material such as helicoils and timeserts.
f. External surface finishes and decals.

2.4.12 The following items MAY BE removed

a. Instrument and instrument bracket and associated cables.
b. Tachometer.
c. Speedometer and associated wheel spacers.
d. Chain guard.

2.4.13 The Following Items MUST BE Removed

a. Headlamp, rear lamp and turn signal indicators (when not incorporated in the fairing). Openings must be covered by suitable materials.
b. Rear-view mirrors.
c. Horn.
d. License plate bracket.
e. Tool box.
f. Helmet hooks and luggage carrier hooks
g. Passenger foot rests.
h. Passenger grab rails.
i. Safety bars, centre and side stand brackets welded to the main frame may be removed.
j. Catalytic convertors