2017 MotoAmerica Technical Regulations

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2. TECHNICAL REGULATIONS

Amendments to the technical regulations may be made by the MotoAmerica Permanent Bureau at any time.

During practices: If a motorcycle is found not to be in conformity with the technical regulations during or after the practices, its rider will be given a penalty for the event such as a ride-through, a drop of any number of grid positions for the next race, suspension and/or withdrawal of Championship or Cup points.

After a Race: If a motorcycle is found not to be in conformity with the technical regulations after a race, its rider will be given a penalty such as a time penalty, or disqualification

2.1 INTRODUCTION

Motorcycles for the MotoAmerica Superbike Championships must be motorcycles with a valid road homologation in one of the following areas: USA, EU or Japan.

These motorcycles must be available for sale to the public in the shops and the dealerships representing the manufacturer in at least one of the above areas before the third event of the current Championship to be allowed to be used in the remaining Championship events.

2.2 CLASSES

2.2.1 The production based racing classes will be designated by engine capacity and level of technical freedom.

2.3 GENERAL ITEMS

2.3.1 Materials

The use of titanium in the construction of the frame, the front forks, the handlebars, the swing arms, the swing arm spindles and the wheel spindles is forbidden. For wheel spindles, the use of light alloys is also forbidden. The use of titanium alloy nuts and bolts is allowed.

a. Titanium test to be performed on the track: Magnetic test (titanium is not magnetic).

b. The 3 % nitric acid test (titanium does not react. If metal is steel, the drop will leave a black spot).
c. Specific weight of titanium alloys is between 4.5 and 5.0 kg/dm³ vs. over 7.48 kg/dm³ of steel and can be ascertained by weighing the part and measuring its volume in a calibrated glass filled with water (intake

valve, rocker, connecting rod, etc.)

d. In case of doubt, the test must take place at a Materials Testing Laboratory.

2.3.2 Handlebars

Exposed handlebar ends must be plugged with a solid material or rubber covered.

The minimum angle of rotation of the steering on each side of the centre line or mid position must be of 15° for all motorcycles.

Whatever the position of the handlebars, the front wheel, tire and the mudguard must maintain a minimum gap of 10 mm.

Solid stops, (other than steering dampers) must be fitted to ensure a minimum clearance of 30 mm between the handlebar with levers and the tank, frame or other bodywork when on full lock to prevent trapping the rider's fingers (see diagrams A, B, C).

Repair by welding of light alloy handlebars is prohibited.

Composite handlebars are not allowed in any class.

2.3.3 Control levers

All handlebar levers (clutch, brake, etc.) must be ball ended (diameter of this ball to be at least 16 mm). This ball can also be flattened, but in any case the edges must be rounded (minimum thickness of this flattened part 14 mm). These ends must be permanently fixed and form an integral part of the lever.

Each control lever (hand and foot levers) must be mounted on an independent pivot.

The brake lever, if pivoted on the footrest axis, must work under all circumstances, such as the footrest being bent or deformed.

2.3.4 Wheel and rims

1) Any modification to the rim or spokes of an integral wheel (cast, moulded, riveted) as supplied by the manufacturer or of a traditional detachable rim other than for spokes, valve or security bolts is prohibited, except for tire retention screws sometimes used to prevent tire movement relative to the rim. If the rim is modified for these purposes bolts, screws etc., must be fitted.

2) The distance between the rim walls is measured inside the flange walls in accordance with ETRTO.

2.3.5 Tires

Tires may be replaced from those fitted to the homologated motorcycle.

The tread pattern must be made exclusively by the manufacturer when producing the tire.

As a safe minimum, the depth of the tire tread over the whole pattern at pre-race control must be at least 2.5 mm.

Tires which at the preliminary examination have a tread depth of less than 1.5 mm are considered as non-treaded tires and the restrictions applying to slick tires will then apply to them.

The surface of a slick tire must contain three or more hollows at 120° intervals or less, indicating the limit of wear on the centre and muster areas of the tire. The rider shall not enter the track if at least 2 of these indicator hollows are worn on different parts of the periphery.

2.3.6 The use of tire warmers is allowed.

2.3.7 Use of tires

The competitors shall only use tires distributed by the Official Supplier during the event.

For each event, all tires must be made of the same quality and shall be strictly identical.

All tires to be used must be easily identifiable with a colour marking or a numerical system, to be applied by the Official Supplier at the time of manufacturing.

The Official Supplier shall provide the Technical Director with a written description of the markings and the general characteristics of the different types of tires.

The Technical Director may ask the Official Supplier to deliver tire samples to him the day prior to the start of the official practice. Any modification of the tread pattern by the Official Supplier is not permitted after the start of the practices.

During free practices, qualifying practices, Superpole for Superbike, warm up session and races, front and rear tires are required to be marked with tire stickers (see Art. 2.4.7/ 2.5.7/ 2.6.7/ 2.7.7/ 2.8.7).

The Technical Director may, at his discretion, require the exchange of one (1) or more competitors' tires for a tire sample under his control. The tires exchanged remain under his control and he can exchange them for the tires of another

competitor.

An appropriate identification will be applied on the left side of each tire by the entrant.

No tires marked for one event may be used during another event.

2.3.7.1 Tire allocations per class

The MotoAmerica technical director has the ability to modify the tire allotments based on the official schedule, this modification will be noted in the event supplementary regulations. During a normally scheduled two race platform event the tire allotments will be as follows:

Class	Front	Rear
Superbike	**7**	**9**
Superstock 1000	**5**	**6**
Supersport	**6**	**8**
Superstock 600	**4**	**5**
KTM RC Cup	**2**	**2**

2.3.7.1.1 <u>Superpole Participants</u>

Superbike and Superstock 1000 Only. The 12 competitors that are eligible to participate in Superpole will be allowed to use one (1) qualifying tire which will be marked by a tire sticker separate from the rider's standard allocation. The Superpole qualifying tire sticker will be distributed and recorded by tire control staff before Superpole begins. The qualifying tire does not count toward the rider's allocation.

2.3.8 Ballast

The use of ballast is allowed to stay over the minimum weight limit. The use of ballast must be declared to the Technical Director at the preliminary checks.

The ballast must be made of solid metallic piece/s, firmly and securely connected, either through an adapter or directly to the main frame or engine, with a minimum of 2 steel bolts (min. 8 mm diameter, 8.8 grade or over). Other equivalent technical solutions must be submitted to the MotoAmerica Technical Director for his approval.

Fuel in the fuel tank can be used as ballast. Nevertheless, the verified weight may never fall below the required minimum weight.

2.3.9 Timekeeping instruments

All motorcycles must have a correctly positioned timekeeping transponder. The transponder must be approved by the official Timekeeper. It must be fitted avoiding being shielded by carbon bodywork. It is the team’s responsibility to ensure that the transponder is working properly and any machine without a working transponder is not allowed on the circuit.

Correct attachment of the transponder bracket consists of a minimum of tie-wraps, but preferably by screws or rivets. Any transponder retaining clip must also be secured by a tie-wrap. Velcro or adhesive alone will not be accepted. The transponder must be working at all times during practices and races, also when the engine is switched off.

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2.4 SUPERBIKE TECHNICAL SPECIFICATIONS

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

EVERYTHING THAT IS NOT AUTHORIZED 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.

Superbike motorcycles require an FIM homologation (see FIM Homologation procedure for Superstock, Supersport and Superbike motorcycles). 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, unless they are already equipped as such on the homologated model.

Once a motorcycle has obtained the homologation, it may be used for racing in the corresponding class for a maximum period of 8 years (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.

2.4.1 Motorcycle specifications

All parts 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. Modifying the bore and stroke to reach class limits is not allowed.

2.4.3 Balancing various motorcycle concepts

In order to equalize the performance of motorcycles with different engine configurations, an air restrictor may be applied according to their respective racing performances.

This handicap is applied only to the '1200cc 2-cylinder' motorcycles.

A new 2-cylinder entry will not be included in the 'Balancing various motorcycle concepts' rules until the performance is proven during the first two years of use in the MotoAmerica Superbike Championship. In the case that a new 2-cylinder entry wins a race in the Dry in the first year, restrictors will be applied from the start of the second year.

A new 2 cylinder entry is considered an entry by a new manufacturer to the Championship – not a new model of machine from an existing manufacturer.

The air restrictor handicap will be applied according to the relevant provisions described in Art 2.4.3.3: the size of the intake ports will be changed by means of air restrictors. These changes to the size of the air restrictor diameter will be applied in 2 mm steps.

Each racing season will begin with the same balancing level as the preceding season finished.

The MotoAmerica Permanent Bureau can at any time modify the handicap system to ensure fair competition.

2.4.3.2 Balancing Calculation

1. After three events, the best manufacturers of the 1000cc 4 cylinders and 1200cc 2 cylinders will be selected according to the sum of the points of the best two riders for each manufacturer.

2. By taking the race points of the riders of the selected 1000cc 4 cylinder manufacturer and of the selected 1200cc 2 cylinder manufacturer in each race, an average will be calculated after every event, the *'event average'*.

   If in any of the races there is only one finisher from one of the selected manufacturers, the *'event average'* will be calculated from the first rider of each selected manufacturer in each race.

   No *'event average'* points will be calculated if one of the selected manufacturers has no finishers. The *'event average'* will then be calculated based on the results of the other race from the same event.

   If neither race has any finishers from one of the selected manufacturers,

the event will not be considered.

3. ‘Wet’ races (as declared by the Race Direction) are not taken in account for the calculation of an ‘event average’.

2.4.3.3 Air restrictors for 1200cc 2 cylinders

Application: Only the 1200cc 2-cylinder engines may be fitted with air restrictor. Should a restrictor be required then the first restrictor size to be installed will be equivalent to a Ø52mm circular area. Air restrictor size will be adjusted in steps equivalent to a change of 2mm in diameter, between Ø52mm and to a minimum of Ø46mm (None <> Ø52mm <> Ø50mm <> Ø48mm <> Ø46mm), if needed during the Championship, as described below in Art. 2.4.3.4

Definition: An air restrictor is a metallic device with a tract of constant controlled section and which is placed in the induction tract between the throttle body and the cylinder head. The length of the controlled tract must be at least 3 mm. No air and/or air-fuel mixture to the engine must by-pass the restrictor. No part of the fuel injection system (injector, needle, slide, etc.) shall extend through the restrictor.

The Manufacturer must supply the FIM/MotoAmerica with 10 sets of plug-calibers (-gauges) to check the diameter of the air restrictor when using one of the prescribed sizes (Ø 52, Ø 50, Ø 48, Ø 46 mm).

A Manufacturer may have a non-circular air restrictor, provided that the area of this restrictor is equivalent to the area of a nominal circular restrictor. In this case, the Manufacturer must supply the FIM/MotoAmerica with 10 sets of plug-calibers (-gauges) for measuring the restrictor during the technical verifications.

The FIM/MotoAmerica may also request the Manufacturer to supply a cut section of the air restrictor(s) in each of the prescribed sizes.

2.4.3.4 Air restrictor adjustment

The minimum air restrictor size is increased or decreased in 2 mm steps in diameter of equivalent circular area, according to following procedure:

1. If the gap in the average value of ‘event averages’, calculated as described in Art. 2.4.3.2 is more than 5 points in favor of the 1000cc 4- cylinder manufacturer, **and**

   If a rider of a 1000cc 4-cylinder motorcycle is leading the riders’ MotoAmerica Superbike Championship standings at that time, **then**

The initial air restrictor size of all the 1200cc 2-cylinder motorcycles will be increased by one size, or as a last step, the air restrictor will be withdrawn.

2. If the resulting gap of the average value of 'event averages', calculated as described in Art. 2.4.3.2, is more than 5 points in favor of the 1200cc 2- cylinder manufacturer, **and**

   If a rider of a 1200cc 2-cylinder motorcycle is leading the riders' MotoAmerica Superbike Championship standings at that time, **then**

   The initial air restrictor size of the 1200cc 2-cylinder manufacturers will be reduced by one size, as last step, to a minimum of Ø46 mm (or the equivalent area 1661.9 mm^2).

If the air restrictor size is not updated, then the results of three more events will be considered and the best manufacturers for each engine configuration will be updated considering the sum of points of the best two riders from each selected manufacturer over six events, and updated every third event. A new average value of the *'event averages'* will be calculated over six events, until the points gap of the average value of the '*event averages'* from the last minimum weight update is higher than 5.

The MotoAmerica Technical Director will inform all the teams about the possible air restrictor size adjustments, within 24 hours from the end of the last event, where the average value of the 'event averages' was calculated. The new air restrictor size adjustments must be applied from the first following event.

2.4.4 Minimum weight

All machines	168kg (370.5lbs)

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.

There is no tolerance on the minimum weight of the motorcycle.

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.

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.

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 MotoAmerica Technical Director at the preliminary checks.

2.4.5 Numbers and number plates

Numbers must be easily legible, in a clear simple font and contrast strongly with the background color. Backgrounds must be of one single color over an area large enough to provide a minimum clear area of 25 mm around the numbers.

The sizes for all the front numbers are:	Minimum height:	140 mm
	Minimum width:	80 mm
	Minimum stroke:	25 mm
	Minimum space between numbers	10 mm
The sizes for all the side numbers are:	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. Once on the front, either in the center of the fairing or slightly off to one side; the number must be on a strongly contrasting background - no advertising within 25mm in all directions.
b. Once on both sides of the lower rear portion of the lower fairing. The number must be on a strongly contrasting background with no advertising within 25mm in all directions.
c. Any outlines must be of a contrasting color and the maximum width of the outline is 3mm. The background color must be clearly visible around all edges of the number (including outline). Reflective or mirror type numbers are not permitted.
d. Numbers cannot overlap.

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

2.4.6 Fuel

Please refer to Article: 2.9

2.4.7 Tires

a. The maximum number of tires, of any type, available to each rider during the event will be **specified in Article: 2.3.7**
b. A maximum of 11 tires per rider can be mounted at any time.
c. Every tire used during the event must be marked with an adhesive sticker with a number allocated by the MotoAmerica Technical Director. The sticker will be a different color front and rear.
d. For both Superbike races only, wet and intermediate tires will not need to be marked with a tire sticker. They will not be considered in the total number of tires available for use; however normal allocation limits still apply.
e. The tire stickers will be delivered to the teams in a sealed envelope, on the day before the first practice after which the teams will be responsible for their use.
f. The use of motorcycles without the official stickers will be immediately reported to the Race Direction whom will take appropriate action.
g. After the third free practice session, the tire supplier will allocate one (1) rear 'qualifying tire' to all riders that will participate in Superpole.
h. Qualifying tires can only be used during Superpole.
i. If the qualifying tire is used during any session (excluding Superpole), the rider will lose his qualifying time and must start from the back of the grid.
j. Any modification or treatment (cutting, grooving) is forbidden.
k. At the beginning of the event, the Official Supplier may be requested by the MotoAmerica Technical Director to deliver to him four (4) samples of each type of tire to be used at the event.
l. The allocation of individual tires will be made on a random basis, with no involvement of any representative from the tire supplier, teams or riders. Those tires will be individually identified and may not be exchanged between riders, including between team mates, and may not be exchanged by the tire supplier after the allocation, except with the permission of the Race Direction.
m. In exceptional cases, should the sticker be damaged or applied in the wrong way, up to 2 extra stickers may be provided at the sole discretion of the MotoAmerica Technical Director. However, the damaged sticker must be returned to the MotoAmerica Technical Director and/or the tire it was applied to and must be absolutely intact.

2.4.8 Engine

The following engine specifications and components may not be altered from the homologated motorcycle except as noted:

a. The homologated engine design model cannot be changed.
b. The method of cam drive must remain as homologated.
c. The method of valve retention must remain as the homologated model. No pneumatic valve retention devices are allowed unless fitted to the homologated model.
d. 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. Up to 5 degrees firing difference in 2 cylinders is regarded as 'simultaneous' firing.

2.4.8.1 Fuel injection systems

'Fuel injection systems' refers to throttle bodies, fuel injectors, variable length intake tract devices, fuel-pump and fuel pressure regulator.

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.
d. Primary throttle valves cannot be changed or modified.
e. Secondary throttle valves and shafts may be removed or fixed in the open position and the electronics may be disconnected or removed.
f. 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 parts 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.
g. Air and air/fuel mixture must go to the combustion chamber exclusively through the throttle body valves.
h. Electronically controlled throttle valves, known as 'ride-by-wire', may be only used if the homologated model is equipped with the same system.
i. If the variable intake tract actuation mechanism mounts or fuel injector mount is an integrated part of the air funnel, then those parts alone may be redesigned maintaining the exact geometry of the original parts

2.4.8.2 Cylinder Head

Cylinder head must be the originally fitted and homologated part. The following modifications are 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. Valves must remain as homologated.
h. Valve seats can be modified or replaced for repair. The material must remain as homologated.
i. Valve guides must remain as homologated. Modifications in the port area are allowed by machining.
j. Valve springs may be altered or replaced, their material must remain as homologated. An additional spring may be added or the spring may be removed.
k. Valve spring retainers, collets, spring seats may be altered or replaced.
l. Valves must remain in the homologated location and at the same angle as the homologated valves.
m. Rocker arms (if any) must remain as homologated.
n. The exhaust air bleed system must be blocked and the external fittings on the cam cover(s) may be replaced by plates.
o. The shim buckets / tappets may be replaced but must be the same height, diameter, material type, surface finish and shim to top surface dimension as the homologated part. The weight must be equal to or greater than the homologated part.
p. The homologated cylinder head / cam cover may be replaced by a cosmetic replica of higher specific weight material (i.e. replace magnesium part with aluminum)

2.4.8.3 Camshaft

a. Camshafts may be altered or replaced from those fitted to the homologated motorcycle (see also Art. 2.4.8).
b. Offsetting the camshaft is not allowed. The camshaft must remain in the homologated location.

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 (see also Art. 2.4.8).
b. The cam chain or cam belt tensioning device(s) can be modified or changed.
c. The cam chain may be altered or replaced but must remain the same

type.

2.4.8.5 Cylinders

a. Must be the originally fitted and homologated part with no modification allowed.
b. The cylinder base gasket(s) may be changed.

2.4.8.6 Pistons

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

2.4.8.7 Piston rings

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

2.4.8.8 Piston pins and clips

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

2.4.8.9 Connecting rods

a. Connecting rod may be altered or replaced from those fitted to the homologated motorcycle. The weight must be the same or greater than the original homologated part.
b. The material must be the same type as the homologated item. (i.e. steel, titanium, alloy) or steel.
c. If the original connecting rod is fitted with a little end insert, then the replacement connecting rods may also have an insert of the same material as fitted in the original homologated connecting rod.
d. If the original homologated connecting rod is not fitted with a little end insert, then the replacement connecting rods may be fitted with an insert of any material.
e. **From 2018**: If the original homologated connecting rod is not fitted with a little end insert then the replacement connecting rods may be fitted with an insert of the same material as the connecting rod or steel.
f. The center to center (little end to big end) length of the rod must be the same as the original homologated item.
g. Connecting rod bolts are free.

2.4.8.10 Crankshaft

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), is not permitted unless 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 higher than **5%** of the homologated weight without the tolerance as shown on the homologation specification of the crankshaft.
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 Crankcase / Gearbox housing

a. Crankcases must be the originally fitted and homologated part with no modification allowed. 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) may be altered or replaced and oil pick up may be altered or replaced.
d. One thread may be altered for direct oil pressure/temperature sensor fitting in the crankcases or engine covers.
e. See 2.4.10.1 g.
f. 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. Titanium bolts may be used to fasten lateral covers.
c. 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 aluminum alloy, stainless steel, steel or titanium, composite covers are not permitted.
d. 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. The Technical Directors decision on suitability is final.

e. Plates or crash bars from aluminum 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.
f. FIM approved covers will be permitted without regard of the material or dimensions.
g. 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.
h. Oil containing engine covers cannot be secured with aluminium bolts.
i. The MotoAmerica Technical Director has the right to refuse any cover not satisfying this safety purpose.

2.4.8.12 Transmission / Gearbox

a. Stock transmission shafts and gear set only. Shimming is allowed.
b. Undercutting and surface treatments are permitted.
c. OEM shift drum detent stars may be modified or replaced.
d. External Quick-shift systems are permitted (including wire and potentiometer).
e. Countershaft sprocket, rear wheel sprocket, chain pitch and size can be changed. Chain master links must be rivet type.
f. Final drive system, if not by chain, may be modified to chain type using kits specified on the eligible equipment list.
g. The sprocket cover may be modified or eliminated.

2.4.8.13 Clutch

a. Aftermarket or modified clutches are permitted.
b. Back torque limiter is permitted.
c. Friction and drive discs may be changed.
d. Clutch springs may be changed.
e. 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.
f. Clutch system type (wet or dry / single or multi-plate) and method of operation (cable/hydraulic) must remain as homologated.
g. The clutch basket (outer) **must be the originally fitted and homologated part but** may be reinforced.

2.4.8.14 Oil pumps and oil lines.

a. The originally fitted and homologated oil pumps may be modified, only the original pump parts may be modified, and or shims/spacers added. Modifications include:

i. Blueprinting
ii. Changing the oil pressure relief spring.
iii. Reducing gear and/or housing thickness.

b. The external appearance must remain as homologated.
c. Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of metal reinforced construction with swaged or treaded connectors.

2.4.8.15 Radiator / Oil cooler

a. The only liquid engine coolants permitted is water.
b. The original radiator or oil cooler may be altered or replaced from those fitted to the homologated motorcycle.
c. Additional radiators or oil coolers may be added.
d. The original oil/water heat exchanger may be modified, replaced or removed.
e. The cooling system hoses and catch tanks may be changed.
f. Radiator fan and wiring may be changed, modified or removed.
g. The oil cooler must not be mounted on or above the rear mudguard.
h. 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 Air box

a. The air box must be the originally fitted and homologated part with no modification allowed except as noted in the following.
b. If the homologated air box is used to mount top type fuel injectors, then the air box and the attached systems must remain as homologated.
c. If the homologated air box is used to mount variable intake tract devices, then the air box and the attached systems must remain as homologated and function in the same way (excepting the air funnels – see article 2.4.8.1)
d. If used, variable intake tract devices must function in the same way as on the homologated system (see article 2.4.8.1)
e. Air filters, internal flap type valve, sensors and vacuum fittings may be removed, modified or replaced with aftermarket parts.
f. Any holes in the air box to the outside atmosphere resulting from the removal of components must be completely sealed from incoming air.
g. The air box drains must be sealed.
h. Ram air tubes or ducts running from the fairing to the air box may be modified, replaced or removed. If tubes/ducts are utilized, they must be attached to the original, unmodified air box inlets.
i. 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 air box.
j. If the top of the air box is formed by the bottom of the tank, then that part of

the tank will be considered as the air box and must conform to its homologated shape excepting 2mm variance in corner radii and must be the same volume. A dry break / quick release connector may be fitted. See art 2.4.8.17.

k. Additional heat shielding is allowed to be applied to lower face / side of the air box. (i.e. Foil heat 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 +0.5 bar in respect to the maximum pressure of the homologated motorcycle. 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.
c. 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.
d. Quick connectors or dry break connectors may be used.
e. Fuel vent lines may be replaced.
f. Fuel filters may be added.

2.4.8.18 Exhaust system

a. Exhaust pipes, catalytic converters and silencers may be altered or replaced from those fitted to the homologated motorcycle. Catalytic converters must be removed.
b. 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.
c. For safety reasons, the exposed edge(s) of the exhaust pipe(s) outlet(s) must be rounded to avoid any sharp edges.
d. 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.

The noise limit for Superbikes will be 115 dB/A (with a 3 dB/A tolerance after the race only) measured at 6000rpm (4 cylinder) and 5500rpm (2, 3 cylinder).

The test will be carried out according to the details noted in Art. 2.13

2.4.9 Electronic Control System

a. The engine control system (including ECU) must be either:
    i. A DWO/FIM approved 'Superbike Kit System' See art 2.4.9.1
    ii. See art 2.6.9.1

b. No other external ignition/injection controllers, traction control modules or other active expansion modules or calculation units may be fitted.
c. Central unit (ECU) may be relocated.
d. Telemetry (remote signals to or from the bike) is not allowed.
e. 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.
f. Spark plugs, spark plug caps and HT leads (if applicable) are free.
g. Battery is free.

2.4.9.1 The DWO/FIM approved 'Superbike Kit System' must meet the following:

a. The system must be a complete package including all electrical / electronic parts not supplied on the homologated motorcycle required for full operation of all strategies – excepting the wiring harness.
b. Only the machine manufacturer or one approved partner can submit a single system for approval.
c. The total price of the complete system including ECU, dashboard/display, all additional sensors essential for full operation of all strategies, IMU, software, enable codes, data logging, analysis software, ECU 'tuning' or 'setting' software, data logger, download/connection cable, example harness design, manual for use, (not a complete list), is €8000 Euro (excluding taxes). Data Logging only sensors are excluded from the price cap.
d. There must be at least 50 Superbike Kit Systems (currently approved system) available worldwide per season, if ordered, through authorized distributors or dealers. The Superbike Kit System must be marked and considered as for race use only.
e. Lead time less than 8 weeks.
f. The ECU must be from the FIM/DWO Approved Superbike ECU List.
g. The following sensors may be used:
    1. Throttle position (multiple)
    2. Map sensor, Map Sync (pressure sensor on the intake port used to synchronize the engine during the start)
    3. Air box Pressure
    4. Engine pick-ups (Cam, crank) (Crank trigger may be replaced)
    5. Lambda
    6. Exhaust Valve/Motor position/feedback
    7. Twist grip position
    8. Front speed
    9. Rear Speed
    10. Gearbox output shaft speed
    11. Gear position
    12. Gear shift load cell
    13. Front brake pressure

14. Rear brake pressure
15. Oil pressure
16. Air pressure
17. Water temperature
18. Air temperature
19. IMU (various signals)
20. Transponder / Lap time signal
21. Knock Sensor
22. Fuel pressure
23. Oil temperature
24. Fork position
25. Shock position
26. Tilt / Tip-Over Switch
27. GPS Unit
28. Rear tire temperature (External) (Multiple)
29. Rear TPMS Monitor (Temperature and Pressure)

h. Sensors on the above list that are originally fitted to the standard machine may be replaced with alternative sensors, however they must be included in the Superbike Kit System and inside the total price (art 2.4.9.1.c).
i. 2 additional sensor channels (that are not included in the above list) may be added to the machine.
j. Redundant/doubled sensors are allowed but must be included in the Superbike Kit System if they are required for safe operation.
k. Analog/Logic to CAN sensors are allowed.
l. The sensors originally fitted to the homologated machine and used as homologated, will not be included in the price limit.
m. When the following sensors are damaged through crashes they may be replaced by parts of the same function but do not have to be the same specific part from the Superbike Kit System:
    i. Fork and Shock Potentiometers
    ii. Brake pressure sensors
    iii. Gear shift sensor (but must remain the same type included with the kit – i.e. Load cell, switch etc.)
n. Before the pre-season test, before the mid-season test(s) or at the season midpoint and within three hours of the last race of the season any firmware / software updates being used by the factory teams must be made available to all same manufacturer customer SBK teams (more frequent updates are allowed).
o. The manufacturer must provide current strategies but may remove the ability to change or see these settings, base mapping must be provided.
p. Only firmware and software from the FIM/DWO approved software and firmware list may be used.
q. Factory teams may use any development firmware and software which will be made available to teams according to the update schedule.
r. Any essential hardware updates required must be made available to customer teams from the same race as the factory team and available free

of charge to update those Superbike Kit Systems purchased in the current season.

s. Transponder is NOT included in the ‘’Superbike Kit System’’
t. The selection of logged channels is free.
u. Coils and coil drivers are free and must be included in the Superbike Kit System if altered.
v. No other external ignition/injection controllers, traction control modules or other active expansion modules or calculation units may be fitted unless included in the Superbike System.
w. The factory team must use the current seasons ‘’Superbike Kit System’’. No backdated parts may be used.
x. Superbike kit systems remain approved for 3 seasons (first season inclusive).

Manufacturer nominated Superbike Kit System suppliers please also see ‘’Superbike Kit System Approval Requirements’’ documentation.

2.4.9.2 DWO/FIM approved ‘Superstock 1000’ kit model.

a. See Art. 2.6.9.1

2.4.9.3 Generator, alternator, electric starter

a. The stator/coils must be the originally fitted and homologated parts with no modification allowed.
b. The flywheel may be modified or replaced.
c. The ACG must generate sufficiently to maintain battery charge.
d. The use of a ‘booster’ battery is permitted except during parc fermé.
e. The electric starter must operate normally and always attempt to start the engine during the event.
f. 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.
g. The starter motor gear system must be the originally fitted and homologated parts. Surface and hardening treatments are allowed.
h. 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).

2.4.9.4 Wiring harness

a. The Wiring Harness is free.
b. Each team must provide a download connection lead to the MotoAmerica Technical Director.

2.4.10 Main frame and spare motorcycle

a. During the entire duration of the event, each rider may only use one (1) complete motorcycle, as presented for Technical Control, with the frame clearly identified with a seal. In case the frame needs to be replaced, the rider or the team must request the use of a spare frame to the MotoAmerica Technical Director.
b. One (1) Spare complete motorcycle is allowed per rider.
c. A team may opt to have one (1) spare machine shared by two or more riders.

Explanation of 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, superpole and races.
- The frame of this motorcycle will be officially sealed by the MotoAmerica Technical Director or by his appointed staff. The seal will bear a serial number, 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 MotoAmerica Technical Director, may check the seal and verify that it conforms to the motorcycle and rider it was assigned. For cross reference, every frame must have a unique number punched on it, on the steering-head.
- If the primary or active motorcycle is damaged in a crash or in any other incident and is declared unrepairable or inoperable (safely and in the available time) by the Technical Director or his appointed staff, then the seal on 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 serial number will be recorded by the MotoAmerica Technical Director. The spare machine may then be presented for scrutineering before the next session.
- The spare bike will not be allowed in the front of the pit box until the rider or the team has received authorization from the MotoAmerica Technical Director.
- The replacement motorcycle may be used on the track only after the end of the practice, qualifying session or race in which the damage occurred. The damaged motorcycle must be removed from the front of the pit box as soon as possible and put in storage at the back of the pit box out of view of pit lane.
- Once a rider exits the pit lane for any session including the race the spare machine can no longer be used.
- Any actions contrary to these procedures will result in a penalty as described in the Sporting Regulations.
- The damaged frame may be impounded by the Technical Director for later examination.

2.4.10.1 Frame body and rear sub-frame

a. The main frame must be the originally fitted and homologated part with only the following modifications allowed.
b. The main frame may only be altered by the addition of gussets or tubes. No gussets or tubes may be removed; other modifications are allowed within the following section of these rules.
c. Holes may be drilled on the frame only to fix approved components (i.e. fairing brackets, steering damper mount).
d. The engine must be mounted in the homologated position.
e. Suspension linkage mounting points on the frame must remain as homologated.
f. The steering stem axis/position may be adjusted by moving the steering head bearings. The fore and aft position of each bearing can be a maximum +/-9 mm in respect to the original bearing location (excluding tolerances). Fore and aft is considered at the intersection of the pivot axis and the original bottom plane of the bearing cup/insert, if no insert is fitted in the homologated machine then it is considered along the bottom plane of the original bearing seat.
    i. If the homologated machine has exchangeable bearing inserts/ bushes: The bushings/inserts are free to make the above adjustment and the homologated position is considered as the position in which the production motorcycle is supplied.
    ii. If the homologated motorcycle has fixed bearing positions for the steering stem: Steering angle changes are permitted by fitting inserts onto the bearing seats of the original steering head. The original bearing seats may be modified (ovaled) or increased in diameter to insert special bushings. No part of these special bushings may protrude axially more than 3 mm from the original steering head pipe location nor may the bearing be inset. The steering head pipe can be reinforced in the area of the bearing seats. Welding and machining is allowed for the purpose of making these modifications.
g. The swing arm pivot axis may be moved a maximum of 5 mm radially (excluding tolerances) measured from the homologated axis. Modifications may be made to the frame at the swing arm pivot area to allow this. Welding and machining is allowed for the purpose of making this modification, regardless of the technology used and the dimensions of the component or section of the frame (i.e.: cast, fabricated, etc.). The method of adjustment is free (i.e. bushings, inserts, offset axles). For machines fitted with exchangeable inserts as standard then the homologated position is considered as the position in which the production motorcycle is supplied. 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.

h. The original lock stops may be removed from the frame body by grinding or machining. However, another form of lock stop must be fitted.
i. All motorcycles must display a vehicle identification number punched on the frame body (a proper “legal VIN” or a unique designation by the team to which the technical director may choose to append). No detachable plates are permitted.
j. No polishing or surface refinishing is allowed but the paint scheme is not restricted.
k. Front and rear sub frame may be changed altered or removed.

2.4.10.2 Suspension - General

a. Participants in the Superbike class must only use the approved and listed suspension units for that season.
b. The approved products from the manufacturers must be available to all participants at least one month before the first round of the World Superbike season, and remain available all season. The products must be available within 6 weeks of a confirmed order.
c. 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.
d. 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.
e. The suspension manufacturers are allowed to offer service contracts when the team is using the approved and listed suspension products. The suspension manufacturers cannot demand a service contract for a customer or participant in order to obtain a suspension product.
f. Electronic suspension:
    i. No aftermarket or prototype electronically-controlled suspensions maybe used. Electronically-controlled suspension may only be used if already present on the production model of the homologated motorcycle.
    ii. The electronically-controlled valves must remain as homologated. The shims, spacers and fork/shock springs not connected with these valves can be changed.
    iii. The ECU for the electronic suspension must remain as homologated and cannot receive any motorcycle track position or sector information; the suspension cannot be adjusted relative to track position
    iv. The electronic interface between the rider and the suspension must remain as on the homologated motorcycle. It is allowed to remove or disable this rider interface.

v. The original suspension system must work safely in the event of an electronic failure.
vi. Electro-magnetic fluid systems which change the viscosity of the suspension fluid(s) during operation are not permitted.

g. Electronic controlled steering damper can only be used if installed on the homologated model for road use. However, it must be completely standard (any mechanical or electronic part must remain as homologated).

2.4.10.3 Front Suspension

a. The front fork in whole or part may be changed but must be the same type homologated (leading link, telescopic, etc.).
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.

2.4.10.4 Rear fork (Swing-arm)

a. The rear fork may be altered or replaced from those fitted to the homologated motorcycle. However, the type (single or double sided) must remain as homologated.
b. The use of carbon fiber or Kevlar® materials is not allowed if not homologated on the original motorcycle.
c. A chain guard must be fitted in such a way as to reduce the possibility that any part of the riders' body may become trapped between the lower chain run and the rear wheel sprocket.
d. Rear wheel stand brackets may be added to the rear fork by welding or by bolts.
e. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed.
f. Swing arm spindle (pivot) may be modified or replaced.

2.4.10.5 Rear suspension unit

a. Rear suspension unit may be changed but a similar system must be used (i.e. dual or mono).
b. The rear suspension linkage may be modified or replaced.
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 parts may be altered or replaced from those fitted to the homologated motorcycle.
b. Aftermarket wheels must be made from aluminum (aluminum) 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 approved and 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 tire: 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 MotoAmerica 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 article 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 and brake rotor 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. Any inflation valves may be used.

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

a. Participants in the Superbike season must only use the approved and listed front brake parts (Calipers, master cylinders, brake discs, brake pads and dry break systems) for that season.
b. The approved products from the manufacturers must be available to all participants at least one month before the first round of the MotoAmerica Superbike season, and remain available all season. The products must be available within 4 weeks of a confirmed order.
c. No parts can be added to the approved list during the current season. Performance related updates are not allowed. Any product changes due to manufacturing or material supply issues must be approved in advance.
d. Front brake master cylinder may be altered or replaced from those fitted to the homologated motorcycle.
e. Front brake calipers may be altered or replaced from those fitted to the homologated motorcycle.
f. Rear brake master cylinder may be altered or replaced from those fitted

to the homologated motorcycle.

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).
j. Brake discs may be altered or replaced from those fitted to the homologated motorcycle. Only steel (max. carbon content 2.1 wt. %) is allowed for brake discs. Alloys containing beryllium are not allowed to be used for brake calipers.
k. The Anti-Lock Brake System (ABS) may be used only if installed in the homologated model for road use. However, it must be completely standard (any mechanical or electronic part must remain as homologated, brake discs and master cylinder levers excluded), and only the software of the ABS may be modified.
l. The Anti-Lock Brake System (ABS) can be disconnected and its ECU can be dismantled. The ABS rotor wheel can be deleted, modified or replaced.
m. 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. FIM approved guards will be permitted without regard to the material. The MotoAmerica Technical Director has the right to refuse any guard not satisfying this safety purpose.

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 ride 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; gearshift and rear brake 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.
e. Non folding footrests must have an end (plug) which is permanently fixed, made of aluminum, 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 MotoAmerica 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.
b. The tank may be replaced by a fuel cell and a structural cover.
c. The material of construction of the fuel tank may be altered from the one of the tank fitted to the homologated motorcycle.
d. All fuel tanks must be filled with fire retardant material (i.e. fuel cell foam), or be fitted with a fuel cell bladder.
e. Fuel tanks made of composite materials (carbon fiber, aramid fiber, glass fiber, etc.) must have passed the FIM Standards for fuel tanks or be lined with a fuel cell bladder.
f. Tanks made of composite material must bear the label certifying conformity with FIM Fuel Tank Test Standards. Fuel tanks without a fuel cell bladder must bear a label certifying conformity with FIM Fuel Tank Test Standards.
g. Such labels must include the fuel tank manufacturer's name, date of tank manufacture, and name of testing laboratory.
h. Each manufacturer is requested to inform the FIM/CCR Secretariat of its fuel tank model(s) which have passed the FIM test standards, together with a copy of the fuel tank label. Full details of the FIM Fuel Tank Test Standards and Procedures are available from the FIM (See 'Fuel Tank Test Standards' below).
i. Fuel cell bladders must conform to or exceed the specification FIM/FCB-2005. Full details of this standard are available from the FIM.
j. 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 parts of the streamlining (fairing) or any plastic part. The FIM Superbike Technical Director has the right to refuse a motorcycle if he is of the opinion that the fuel tank fixation is not safe.
k. The original tank may be modified to achieve the maximum capacity of 24 liters, provided the original profile is as homologated.
l. A cross over line between each side of the tank is allowed (maximum inside diameter 10 mm).
m. 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.

n. 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.
o. The same size fuel tank used in practice must be used during the entire event.

Fuel tank homologation

a. Any fuel tanks, made of non-ferrous materials (with the exception of aluminum) must be tested according to the test procedure prescribed by the FIM.
b. Each manufacturer is responsible for testing its own fuel tank model(s) and will certify that the fuel tank exceeds the FIM test standard, if it has passed the FIM test procedure for fuel tanks.
c. Each manufacturer must affix a quality and test label on each fuel tank type that is produced for competition use. This quality and test label will be the recognition of a fuel tank model which has passed the FIM test procedure.
d. All fuel tanks that are made to the same design, dimensions, number of fiber layers, grade of fiber, percentage of resin, etc., must be identified with the same quality and test label.
e. The quality and test label will include the following information on each label affixed to each fuel tank: name of the fuel tank manufacturer, date of fabrication, code or part number, name of testing laboratory, fuel capacity.
f. Each manufacturer is requested to inform the FIM/CCR Secretariat of its fuel tank model(s) which have passed the FIM test procedure, with a copy of the quality and test label, according to point 5.
g. Only fuel tanks that have passed the FIM test procedure will be accepted.

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. Headlights 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. The overall width of the frontal area may be +30mm maximum. The decision of the Technical Director will be final.
c. The windscreen may be replaced.
d. The ram-air intake must maintain the originally homologated shape and dimensions.
e. The original air ducts running between the fairing to the air box 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.

f. 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 liters). The lower edge of openings in the fairing must be positioned at least 70 mm above the bottom of the fairing.

g. There may not be exit air vents in the front half of the lower fairing 40mm below a horizontal centerline between 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 this 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.

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

i. Any vents in the fairing lower must have their inner surface leading edge in-line with the trailing edge or overlap to reduce the risk of liquid spraying from the machine.

j. 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.

k. 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.

l. 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.

m. 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 centers, circle centers and their diameters must be constant. Holes or perforations must have an open area ratio > 60%.

n. 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.

o. 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 molded part of the fairing. The Technical Directors decision on suitability is final.

p. The front mudguard must conform in principle to the homologated shape originally produced by the manufacturer.
q. 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.
r. A rear mudguard may be added or removed.
s. Material of construction of the front mudguard, rear mudguard and fairing is free.

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 pit lane and the session is declared WET. All lights must comply with the following:

a. Lighting direction must be parallel to the machine center line (motorcycle running direction), and be clearly visible from the rear at least 15 degrees to both left and right sides of the machine center line.
b. The rear light must be mounted near the end of the seat/rear bodywork and approximately on the machine center line, in a position approved by the MotoAmerica Technical Director. In case of dispute over the mounting position or visibility, the decision of the MotoAmerica 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 MotoAmerica 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.). Internal engine bolts must remain of standard homologated materials or materials of higher specific weight.
e. Thread repair may be made 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, center and side stand brackets welded to the main frame may be removed.

2.4.14 The following items MUST BE altered

a. All drain plugs must be wired. External oil filter(s) screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases).
b. Where breather or overflow pipes are fitted they must discharge via existing outlets. The original closed system must be retained; no direct atmospheric emission is permitted.
c. Motorcycles must be equipped with a red light on the instrument panel that will illuminate in the event of oil pressure drop.

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2.5 SUPERSPORT TECHNICAL SPECIFICATIONS

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

EVERYTHING THAT IS NOT AUTHORIZED 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.

Supersport motorcycles require an FIM homologation (see Appendix FIM Homologation procedure for Superstock, Supersport and Superbike motorcycles). 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, unless they are already equipped as such on the homologated model.

For 2017: 2013-2016 Kawasaki ZX-6R (636) is accepted as homologated for 2017 MotoAmerica competition.

Once a motorcycle has obtained the homologation, it may be used for racing in the corresponding class for a maximum period of 8 years (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 Supersport 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.

2.5.1 Motorcycle specifications

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

2.5.2 Engine configurations and displacement capacities

The following engine configurations comprise the Supersport class.

Over 400cc up to 600cc	4 stroke	4 cylinders
Over 500cc up to 675cc	4 stroke	3 cylinders
Over 600cc up to 750cc	4 stroke	2 cylinders

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

Modifying the bore and stroke to reach class limits is not allowed.

2.5.3 Balancing various motorcycle concepts

In order to equalize the performance of motorcycles used in the Supersport Championship, a system of performance enhancements or restrictions can be developed. (Such as minimum weight, air restrictor or REV Limit may be applied according to their respective racing performances.) The decision to apply a balancing system to a motorcycle will be taken by the MotoAmerica Permanent Bureau based on decisions made by the Superbike Commission at any time deemed necessary to ensure fair competition.

2.5.4. Minimum weight

The minimum weight will be:	600cc	4 cylinders	161kg (354.2lbs)
	675cc	3 cylinders	161kg (354.2lbs)
	750cc	2 cylinders	161kg (354.2lbs)

For 2017: 2013-2016 Kawasaki ZX-6R (636) minimum weight- 163 kg (358.6 lbs.)

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.

There is no tolerance on the minimum weight of the motorcycle.

During the final technical inspection at the end of the race, the selected motorcycles will be weighed in the condition they finished the race, and **t**he established weight limit must be met in this condition. Nothing may be added to the motorcycle. This includes all fluids.

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.

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 MotoAmerica Technical Director at the preliminary checks.

2.5.5 Numbers and number plates

The background colors and figures (numbers) for Supersport are a white background with blue (pantone 298c) numbers:

The sizes for all the front numbers are:	Minimum height:	140 mm
	Minimum width:	80 mm
	Minimum stroke:	25 mm
	Minimum space between numbers	10 mm
The sizes for all the side numbers are:	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. Once on the front, either in the center of the fairing or slightly off to one side. The number must be centered on the white background with no advertising within 25mm in all directions.
b. Once on each side of the lower rear portion of the lower fairing. The number must be centered on the white background. Any change to this position must be pre-approved a minimum of 2 weeks before the first race by the MotoAmerica Technical Director.
c. The numbers must use the fonts as detailed after Art2. Any numbers not using these fonts must have the design of the numbers and the layout pre-approved by the MotoAmerica Technical Director a minimum of 2 weeks before the first race. All digits must be of standard form.
d. Any outlines must be of a contrasting color and the maximum width of the outline is 3mm. The background color must be clearly visible around all edges of the number (including outline). Reflective or mirror type numbers are not permitted.
e. Numbers cannot overlap.

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

2.5.6 Fuel

Please refer to Article: 2.9

2.5.7 Tires

a. The maximum number of tires, of any type, available to each rider during the event will be **specified in Article: 2.3.7**
b. A maximum of 10 tires per rider can be mounted at any time.
c. For both Supersport races only, Wet and Intermediate tires will not need to be marked with a tire sticker. They will not be considered in the total number of tires available for use However normal

allocation limits still apply.

d. Every tire used during the event must be marked with an adhesive sticker with a number allocated by the MotoAmerica Technical Director. The sticker will be a different color front and rear.
e. The tire stickers will be delivered to the teams in a sealed envelope, on the day before the first practice after which the teams will be responsible for their use.
f. The stickers must be applied to the left sidewall of the tire. Officials will check that all the motorcycles in the pit lane are fitted with tires carrying the sticker.
g. The use of motorcycles without the official stickers will be immediately reported to the Race Direction whom will take appropriate action.
h. Any modification or treatment (cutting, grooving) is forbidden.
i. At the beginning of the event, the Official Supplier may be requested by the MotoAmerica Technical Director to deliver to him four (4) samples of each type of tire to be used at the event.
j. The allocation of individual tires will be made on a random basis, with no involvement of any representative from the tire supplier, teams or riders. Those tires will be individually identified and may not be exchanged between riders, including between team mates, and may not be exchanged by the tire supplier after the allocation, except with the permission of the Race Direction.
k. In exceptional cases, should the sticker be damaged or applied in the wrong way, up to 2 extra stickers may be provided at the sole discretion of the MotoAmerica Technical Director. However, the damaged sticker must be returned to the MotoAmerica Technical Director and/or the tire it was applied to, must be absolutely intact.

2.5.8 Engine

2.5.8.1 Fuel injection system

Fuel injection systems refer to throttle bodies, fuel injectors, variable length intake tract devices, fuel pump and fuel pressure regulator.

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 (including their fixing points) may be altered or replaced.
d. Butterflies 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 parts 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. Vacuum slides may be fixed in the open position.
g. Secondary throttle valves and shafts may be removed or fixed in the open position and the electronics may be disconnected or removed
h. Air and air/fuel mixture must go to the combustion chamber exclusively through the throttle body butterflies.
i. Electronically controlled throttle valves, known as 'ride-by-wire', may only be used if the homologated model is equipped with the same system. Software may be modified but all the safety systems and procedures designed by the original manufacturer must be maintained.

2.5.8.2 Cylinder head

Cylinder head must be the originally fitted and homologated part. The following modifications are allowed:

a. 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. Welding is not allowed. No machining or modification is allowed in the cam box / valve mechanism area.
b. The throttle body insulators may be modified.
c. Modifications of the inlet and exhaust ports by taking off or adding material (welding is forbidden) epoxy may be used to shape the ports.
d. Surface grinding of the cylinder head surface on the head gasket side.
e. Original homologated valves guides may be cut or modified, but only on the intake or exhaust port side.
f. Polishing of the combustion chamber.
g. Original valve seats must be used, but modifications are allowed to the shape.
h. Compression ratio is free, but the combustion chamber may be modified only by taking material off.
i. It is forbidden to add any material to the cylinder head unless as described above.
j. Rocker arms (if any) must remain as homologated.
k. The Valves must remain as homologated.
l. Valve springs may be changed but the number must remain as homologated.
m. Valve spring retainers may be replaced or modified, but their weight must be the same as, or higher than, the original ones.
n. The shim buckets / tappets must remain as homologated.

2.5.8.3 Camshaft

a. The method of drive must remain as homologated.
b. The duration is free but the maximum lift must remain as homologated.
c. At the technical checks: for direct cam drive systems, the cam lobe lift is measured; for non-direct cam drive systems (i.e. with rocker arms),

the valve lift is measured.

2.5.8.4 Cam sprockets or cam gears

a. Camshaft sprockets, pulleys or gears may be altered or replaced to allow degreeing of the camshafts (see also Art. 2.5.8).
b. The cam chain or cam belt tensioning device(s) can be modified or changed.

2.5.8.5 Cylinders

a. Cylinders must be the originally fitted and homologated parts with only the following modification allowed:
    i. Cylinder head gasket surface may be machined to allow the adjustment of compression ratio or resurfacing to repair a warped cylinder surface deck.
b. Homologated materials and castings for cylinders must be used. The surface finish of the cylinder bore must remain as homologated.

2.5.8.6 Pistons

a. Pistons must be the originally fitted and homologated parts with no modification allowed.
b. Polishing and lightening is not allowed.

2.5.8.7 Piston rings

a. Piston rings must be the originally fitted and homologated parts with no modification allowed.
b. All piston rings must be fitted.

2.5.8.8 Piston pins and clips

a. Piston pins and clips must be the originally fitted and homologated parts with no modification allowed.

2.5.8.9 Connecting rods

a. Connecting rod assembly must be the originally fitted and homologated parts with no modification allowed.

2.5.8.10 Crankshaft

a. Crankshaft must be the originally fitted and homologated parts with no modification allowed.
b. Polishing and lightening is not allowed.
c. Modifications of the flywheels are not allowed.

2.5.8.11 Crankcase / Gearbox housing

a. Crankcases must be the originally fitted and homologated parts with no modification allowed.
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.

2.5.8.11.1 Lateral covers and protection

a. Lateral (side) covers may be altered, modified or replaced. 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. Titanium bolts may be used to fasten lateral covers.
c. 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 aluminum alloy, stainless steel or steel or titanium, composite covers are not permitted.
d. 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. The Technical Directors decision on suitability is final.
e. Plates or crash bars from aluminum or steel also are permitted in addition to these covers. All these devices must be designed to be resistant against sudden shocks, abrasions and crash damage.
f. FIM approved covers will be permitted without regard of the material or dimensions.
g. 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.
h. Oil containing engine covers cannot be secured with aluminum bolts**.**
i. The Technical Director has the right to refuse any cover not satisfying this safety purpose.

2.5.8.12 Transmission / Gearbox

a. Stock transmission shafts and gear set only. Shimming is allowed.
b. Undercutting and surface treatments are permitted.
c. Quick-shift systems are allowed (including wire and potentiometer).
d. Countershaft sprocket, rear wheel sprocket, chain pitch and size may be changed.
e. The sprocket cover may be modified or eliminated.
f. Chain guard as long as it is not incorporated in the rear fender may be removed.

2.5.8.13 Clutch

a. Aftermarket or modified clutches are permitted.
b. Back torque limiter is permitted.
c. Friction and drive discs may be changed.
d. Clutch springs may be changed.
e. 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.
f. Clutch system type (wet or dry / single or multi-plate) and method of operation (cable/hydraulic) must remain as homologated.
g. The clutch basket (outer) **must be the originally fitted and homologated part but** may be reinforced.

2.5.8.14 Oil pumps and oil lines.

a. The originally fitted and homologated oil pump may be modified but the oil pump housing, mounting points and oil feed points must remain as original.
b. Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of metal reinforced construction with swaged or treaded connectors.

2.5.8.15 Radiator / Oil cooler

a. The only liquid engine coolants permitted is water.
b. The radiator may be changed with an aftermarket radiator or additional radiator that fits in the standard location and does not require any modifications to the main frame or to the fairings' outer appearance.
c. Modifications to the homologated oil-cooler are allowed only if they do not require any modifications to the main frame or to the fairings' outer appearance. A heat exchanger (oil/water) may be replaced with an oil-cooler.
d. The cooling system hoses and catch tanks may be changed.
e. Radiator fan and wiring may be changed, modified or removed.
f. Additional oil coolers are not allowed.
g. The oil cooler must not be mounted on or above the rear mudguard.

2.5.8.16 Air box

a. The air box must be the originally fitted and homologated part with no modification allowed.
b. The air filter element may be removed or replaced but if fitted must be mounted in the original position.
c. The air box drains must be sealed.
d. All motorcycles must have a closed breather system. All oil breather lines must be connected (may pass through an oil catch tank) and discharge

in the air box.

e. Ram air tubes or ducts running from the fairing to the air box may be modified, replaced or removed. If tubes/ducts are utilized, they must be attached to the original, unmodified air box inlets.
f. No heat protection may be attached to the air box. (i.e. Foil heat tape).

2.5.8.17 Fuel supply

a. Fuel pump and fuel pressure regulator must be the originally fitted and homologated parts with no modification allowed.
b. The fuel pressure must be as homologated.
c. 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.
d. Quick connectors or dry break connectors may be used.
e. Fuel vent lines may be replaced.
f. Fuel filters may be added.

2.5.8.18 Exhaust system

a. Exhaust pipes and silencers may be altered or replaced from those fitted on the homologated motorcycle. Catalytic converters must be removed.
b. The number of final exhaust silencer(s) must remain as homologated. The silencer(s) must be on the same side(s) as on the homologated model.
c. For safety reasons, the exposed edge(s) of the exhaust pipe(s) outlet(s) must be rounded to avoid any sharp edges.
d. 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.
e. The noise limit for Supersport will be **107 dB/A** (with a 3 dB/A tolerance after the race only). The test will be carried out according to the details noted in Art 2.13

2.5.9.0 Electrics and electronics

2.5.9.1 Ignition/ Engine Control System (ECU)

a. The engine control system (ECU) must be an ECU (Kit or OEM) applicable to the specific homologated model. The ECU may have its software changed, but the ECU may not be physically modified.
b. The system may have FIM/DWO/MotoAmerica approved external ignition and/or injection module/s added.
c. The total combined retail price (software and tuning tools included) on sale to the general public cannot be higher than €2500 (tax excluded).
d. Central unit (ECU) may be relocated.
e. Optional equipment sold by the motorcycle Manufacturer for the homologated model is considered not homologated with the bike and

must follow the requirements for approved electronics/data loggers.

f. During an event the Technical Director has the right to ask a team to substitute their ECU or external module with the sample received from the Manufacturer. The change has to be done before Sunday warm up.
g. No extra sensors may be added for control strategies except shift rod sensor, wheel speed sensors and lambda sensors. Wheel speed sensors must be included in the Kit ECU and harness package if required.
h. Other additional electronic hardware equipment not on the original homologated motorcycle cannot be added with the exceptions noted below.
i. The characteristics of approved data logging systems must be the following:
    i. Maximum retail price of the unit (hardware + software, excluding sensors and wiring harness) cannot exceed €3000 Euro (VAT excluded) if it is a standalone unit.
    ii. The Data Logger unit must be available for sale to the public and on the list of FIM/DWO/MotoAmerica approved data loggers.
    iii.. A maximum of 7 simultaneous working sensors (connected to the additional data logger) may be added to the original sensors on the motorcycle.
    iv. The sensors must be simple-function. No inertial platforms are allowed (if an inertial platform is not installed originally on the homologated motorcycle).
    v. Type of sensor is free.
    vi. Communication from the ECU to an approved data logger (logger can receive data only, no data transmission is allowed) is allowed without any limitation in CAN channel logger number.
j. The maximum total price of other active/control/calculation units such as lambda driver modules, quick shifter, analogue to CAN, air bleed control and traction control units is €750. These devices must be approved by FIM/DWO/MotoAmerica.
k. The addition of a device for infra-red (IR) transmission of a signal between the racing rider and his team, used exclusively for lap timing, is allowed and considered in the 7 sensors.
l. The addition of a GPS unit for lap timing/scoring purposes is allowed and considered in the 7 sensors.
m. Telemetry is not allowed.
n. 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.
o. Harness:
    i. The main wiring harness may be replaced by the kit wire harness as supplied for the Kit ECU model, produced and/or approved by the manufacturer of the motorcycle and by FIM/DWO/MotoAmerica. The Kit wiring harness may incorporate the data logging harness.

ii. A kit harness that incorporates the data logging harness may only accommodate 7 additional sensors.
iii. A sample of the kit wiring harness may be requested by the FIM/MotoAmerica.
iv. The key/ignition lock may be relocated, replaced or removed.
v. Cutting of the original main wiring harness is allowed.

p. Data logger Harness:
   i. The Data Logger wire harness cannot include any other sensors with the exception of the seven sensors that are allowed. The only function of the approved Data Logger wire harness is to connect the seven sensors to the Data Logger, to transmit the data and supply the power.

q. For the Superstock Kit to be approved, samples of the ECU kits, kit harnesses and external modules with their tuning tools must be sent by the Manufacturers to the MotoAmerica Technical Director, with technical data and selling price.
r. For the ignition and or injection module, quick shifter or stand-alone data logger to be approved, samples must be sent by the manufacturer of the device to the MotoAmerica Technical Director with technical data and selling price.
s. The original speedometer and tachometer may be altered or replaced (see also 2.5.11).
t. Electric cables, connectors, battery and switches are free.
u. Spark plugs, plug caps, coils and wires may be replaced.

2.5.9.2 Generator, alternator, electric starter

a. The generator (ACG) must remain as homologated – no modifications allowed.
b. The stator must be fitted in its original position and without offsetting.
c. The electric starter must operate normally and always be able to start the engine during the event.
d. 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.

2.5.10 Main frame and pre-assembled spare frame

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 seal. In case the frame needs to be replaced, the rider or the team can request the use of a spare frame to the MotoAmerica Technical Director.

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

a) Main frame
b) Bearings (steering pipe, swing arm, etc.)
c) Swing arm
d) Rear suspension linkage and shock absorber
e) Upper and lower triple clamps
f) Wiring harness

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

The motorcycle, once rebuilt, must be inspected before its use by the technical stewards for safety checks and a new seal 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 MotoAmerica Technical Director or by his appointed staff. The seal will bear a serial number, 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 MotoAmerica 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 MotoAmerica Technical Director. Only at this point may the pre-assembled spare frame be brought into the pit box.

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

Once the assembly of the replacement motorcycle is completed, it will then undergo technical and safety checks and it will be officially sealed. The seal on 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 serial number will be recorded by the MotoAmerica 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 MotoAmerica Technical Director must inspect the bare frame and give his approval before work can start.

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

2.5.10.1 Frame body and rear sub-frame

a. The frame must be the originally fitted and homologated part with no modification allowed.
b. Holes may be drilled on the frame only to fix approved components (i.e. fairing brackets, steering damper mount, sensors).
c. The sides of the frame-body may be covered by a protective part made of a composite material. These protectors must fit the form of the frame.
d. Nothing else may be added or removed from the frame body.
e. All motorcycles must display a vehicle identification number punched on the frame body.
f. Engine mounting brackets or plates must remain as originally produced by the manufacturer for the homologated motorcycle.
g. Front sub frame / fairing mount may be changed or altered.
h. Rear sub frame may be changed or altered, but the type of material must remain as homologated, or of higher specific weight.
i. Additional seat brackets may be added, non-stressed protruding brackets may be removed if they do not affect the safety of the construction or assembly. Bolt-on accessories to the rear sub-frame may be removed.
j. The paint scheme is not restricted but polishing the frame body or sub-frame is not allowed.

2.5.10.2 Suspension – General

a. Participants in the Supersport class must only use the approved and listed suspension units for that season. The price limits are:
    i. **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 €2200 excluding tax**
    ii. **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**
b. The approved products from the suspension manufacturers must be available to all participants at least one month before the first round of the MotoAmerica Superbike season, and remain available all season. The products must be available within 6 weeks of a confirmed order.
c. 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.
d. 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.
e. The suspension manufacturers are allowed to offer service contracts when the team is using the approved and listed suspension products. The suspension manufacturers cannot demand a service contract for a customer or participant in order to obtain a suspension product.
    i. No aftermarket or prototype electronically-controlled suspensions maybe used. Electronically-controlled suspension may only be used if already present on the production model of the homologated motorcycle.
    ii. The electronically-controlled valves must remain as homologated. The shims, spacers and fork/shock springs not connected with these valves can be changed.
    iii. The ECU for the electronic suspension must remain as homologated and cannot receive any motorcycle track position or sector information; the suspension cannot be adjusted relative to track position.
    iv. The electronic interface between the rider and the suspension must remain as on the homologated motorcycle. It is allowed to remove or disable this rider interface.
    v. The original suspension system must work safely in the event of an electronic failure.
    vi. Electro-magnetic fluid systems which change the viscosity of the suspension fluid(s) during operation are not permitted.
f. 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).

2.5.10.3 Front Suspension

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. After market damper kits or valves may be installed.
d. Fork springs may be modified or replaced.
e. Fork caps may be modified or replaced to allow external adjustment.
f. Dust seals may be modified, changed or removed if the fork is totally oil-sealed.
g. The original surface finish of the fork tubes (stanchions, fork pipes) may be changed. Additional surface treatments are allowed.
h. The upper and lower fork clamps (triple clamp, fork bridges, and stem) must remain as originally produced by the manufacturer on the homologated motorcycle.
i. A steering damper may be added or replaced with an aftermarket damper.
j. The steering damper cannot act as a steering lock limiting device.
k. Electronic forks may have their complete internal parts (including all electronic control) replaced with a conventional damping system and it will be considered as a mechanical fork.

2.5.10.4 Rear fork (swing arm)

a. The rear fork must be the originally fitted and homologated part with no modification allowed
b. A chain guard must be fitted in such a way to reduce the possibility that any part of the riders' body may become trapped between the lower chain run and the rear wheel sprocket.
c. Rear fork pivot bolt must be the originally fitted and homologated part with no modification allowed.
d. Rear axle chain adjuster may be modified or changed.
e. Rear wheel stand brackets may be added to the rear fork by welding or by bolts. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed. An anchorage system or point(s) to keep the original rear brake caliper in place may be added to the rear swing-arm.
f. The sides of the swing-arm may be protected by a thin vinyl cover only, no composite or structural covers are allowed.

2.5.10.5 Rear suspension unit

a. Rear suspension unit (shock absorber) may be changed or modified. The original attachment points to the frame and rear fork (or linkage) must be as homologated.

b. All the rear suspension linkage parts must be the originally fitted and homologated parts with no modification allowed.
c. Removable top shock mounts must remain as homologated. A nut may be made captive on the top shock mount and shim spacers may be fitted behind it.

2.5.10.6 Wheels

a. Wheels must be the originally fitted and homologated parts with no modification allowed.
b. A non-slip coating / treatment may be applied to the bead area of the rim.
c. If the original design included a cushion drive for the rear wheel, it must be the originally fitted and homologated parts with no modification allowed.
d. Wheel axles must remain as homologated, wheel spacers may be modified or replaced.
e. The speedometer drive may be removed and replaced with a spacer.
f. Wheel balance weights may be discarded, changed or added to.
g. Any inflation valves may be used.

2.5.10.7 Brakes

a. Front and rear brake discs may be replaced with aftermarket brake discs that must fit the original caliper and mounting. However, the outside diameter and the ventilation system must remain the same as on the homologated motorcycle. Internally ventilated discs are not allowed if not present on the homologated motorcycle.
b. The brake disc carriers may be changed, but they must retain the same off set and same type of mounting to the wheels of the homologated motorcycle.
c. Only steel (max. carbon content 2.1 wt. %) is allowed for brake discs.
d. Front and rear brake calipers as well as all the mounting points and mounting hardware (mount, carrier, hanger) must remain as originally produced by the manufacturer for the homologated motorcycle (see also Art. 2.5.10.4 e.).
e. In order to reduce the transfer of heat to the hydraulic fluid it is permitted to add metallic-shims to the calipers, between the pads and the calipers, and/or to replace light alloy pistons with steel pistons made by the same manufacturer of the caliper.
f. The front brake master cylinder may be replaced.
g. The rear brake master cylinder must be the originally fitted and homologated parts with no modification allowed.
h. Front and rear hydraulic brake lines may be changed. The brake fluid reservoir may be replaced and/or repositioned. Quick connectors may be used. The split of the front brake lines for both front brake calipers must be made above the lower edge of the fork bridge (lower triple clamp).

i. Front and rear brake pads may be changed. Brake pad locking pins may be modified for quick change type.
j. Additional air ducts are not allowed.
k. The ABS System must be removed.
l. 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. FIM approved guards will be permitted without regard to the material. Only composite guards need to be approved. The Technical Director has the right to refuse any guard not satisfying this safety purpose.

2.5.10.8 Handlebars and hand controls

a. Handlebars may be replaced
b. Handlebars and hand controls may be relocated.
c. Throttle controls must be self-closing when not held by the hand.
d. Throttle assembly and associated cables may be modified or replaced but the connection to the throttle body and to the throttle controls must remain as on the homologated motorcycle.
e. Clutch and brake lever may be replaced with an after-market model. An adjuster to the brake lever is allowed.
f. Switches may be changed but the electric starter switch and engine stop switch must be located on the handlebars.
g. 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.

2.5.10.9 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 and rear brake 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 8 mm solid spherical radius.
e. Non folding footrests must have an end (plug) which is permanently fixed, made of aluminum, plastic, Teflon® or an equivalent type material (minimum radius 8mm). The plug surface must be designed to reach the widest possible area. The MotoAmerica Technical Director has the right to refuse any plug not satisfying this safety purpose.

2.5.10.10 Fuel tank

a. Fuel tank must be the originally fitted and homologated parts with no modification allowed.
b. All fuel tanks must be completely filled with fire retardant material (i.e. fuel tank foam).
c. Fuel tanks with tank breather pipes must be fitted with non-return valves that discharge into a catch tank with a minimum volume of 250 cc made of a suitable material.
d. Fuel caps may be changed. Fuel caps when closed, must be leak proof. Additionally, they must be securely locked to prevent accidental opening at any time.
e. A rider spacer/pad may be fitted to the rear of the tank with non-permanent adhesive. It may be constructed of foam padding or composite material.
f. The tank may not have a cover fitted over it unless the homologated machine also features a full cover.
g. The sides of the fuel tank may be protected with a cover made of a composite material. These covers must fit the shape of the fuel tank.
h. Fuel tank may have heat reflective sheet attached to its bottom surface.

2.5.10.11 Fairing / Bodywork

a. Fairing, mudguards and body work must conform in principle to the homologated shape as originally produced by the manufacturer. The use of carbon fiber or Kevlar® materials is not allowed in fairing, fuel tank cover, seat, seat base and associated bodywork construction. Specific reinforcements in Kevlar® or carbon are allowed locally around holes and stressed areas. Headlights must be included even when considered external.
b. Wind screen may be replaced.
c. The ram-air intake must maintain the originally homologated shape and dimensions.
d. Original air ducts running between the fairing to the air box may be altered or replaced from those fitted to the homologated motorcycle.
e. 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 liters). The lower edge of openings in the fairing must be positioned at least 50 mm above the bottom of the fairing.
f. 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 only opened in wet race conditions, as declared by the Race Director.
g. Minimal changes are allowed in the fairing to allow clearance for protective engine covers.
h. 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.

i. 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 centers, circle centers and their diameters must be constant. Holes or perforations must have an open area ratio > 60%.
j. Motorcycles may be equipped with a radiator shroud to improve the air stream towards the radiator but the appearance of the front, the rear and the profile of the motorcycle must not be changed.
k. Front mudguards may be replaced with a cosmetic duplicate of the original parts and may be spaced upward for increased tire clearance. The use of carbon fiber or Kevlar® composites are allowed.
l. Rear mudguard fixed on the swing arm may be modified, changed or removed. The use of carbon fiber or Kevlar® composites are allowed.

2.5.10.12 Seat

a. Seat, seat base and associated bodywork may be replaced with parts of similar appearance as originally produced by the manufacturer for the homologated motorcycles.
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 10 mm must be covered with metal gauze or fine mesh. Mesh must be painted to match the surrounding material.
d. The appearance from both front, rear and profile must conform in principle to the homologated shape.
e. Same material as fairing must be used. (article 2.5.10.11.a)
f. All exposed edges must be rounded.

2.5.10.13 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 pit lane and the session is declared WET. All lights must comply with the following:

a. Lighting direction must be parallel to the machine center line (motorcycle running direction), and be clearly visible from the rear at least 15 degrees to both left and right sides of the machine center line.
b. The rear light must be mounted near the end of the seat/rear bodywork and approximately on the machine center 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.

2.5.10.14 Fasteners

a. Standard fasteners may be replaced with fasteners of any material and design.
b. Aluminum fasteners may only be used in non-structural locations.
c. Titanium fasteners may be used in structural locations, but the strength and design must be equal to or exceed the strength of the standard fastener it is replacing.
d. Special steel fasteners may be used in structural locations, but the strength and design must be equal to or exceed the strength of the standard fastener it is replacing.
e. Fasteners may be drilled for safety wire, but intentional weight-saving modifications are not allowed.
f. Threads repairs may be made using inserts of different material such as Helicoils and Timeserts.
g. Fairing/bodywork fasteners may be changed to the quick disconnect type.

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

a. Any type of lubrication, brake or suspension fluid.
b. Instruments, their supports(s) and associated cables.
c. Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used.
d. Gaskets and gasket materials.
e. Painted external surface finishes and decals.
f. Material for brackets connection non original parts (faring, exhaust, instruments, etc.) to the frame (or engine) cannot be made from titanium or fiber reinforced composites **excepting the exhaust silencer hanger that may be in carbon**.

2.5.12 The following items MAY BE removed

a. Emission control items (anti-pollution) in or around the air box and engine (O2 sensors, air injection devices).
b. Tachometer.
c. Speedometer and related wheel spacers.
d. Bolt on accessories on a rear sub frame.

2.5.13 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, center and side stands must be removed (fixed brackets must remain).

2.5.14 The following items MUST BE altered

a. All drain plugs must be wired. External oil filter(s) screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases).
b. Where breather or overflow pipes are fitted they must discharge via existing outlets. The original closed system must be retained; no direct atmospheric emission is permitted.
c. Motorcycles must be equipped with a red light on the instrument panel that will illuminate in the event of oil pressure drop (Yamaha R6 exempt).

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2.6 SUPERSTOCK 1000 TECHNICAL SPECIFICATIONS

The following rules are intended to permit limited changes to the homologated motorcycle in the interests of safety and improved competition between various motorcycle concepts.

EVERYTHING THAT IS NOT AUTHORIZED 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

Superstock motorcycles require an FIM homologation (see Appendix FIM homologation procedure for Superstock, Supersport and Superbike motorcycles). 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, unless they are already equipped as such on the homologated model.

Once a motorcycle has obtained the homologation, it may be used for racing in the corresponding class for a maximum period of 8 years (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 Superstock motorcycles must (except when otherwise stated) conform to the homologated shape (as originally produced by the manufacturer). The appearance of the exhaust system is excluded from this rule.

2.6.1 Motorcycle specifications

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

2.6.2 Engine configurations and displacement capacities

The following engine configurations comprise the Superstock class:

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

The displacement capacity bore and stroke must remain at the homologated size. Modifying the bore and stroke to reach class limits is not allowed.

2.6.3 Balancing various motorcycle concepts

In order to equalize the performance of motorcycles used in the Superstock 1000 Championship, A system of performance enhancements or restrictions can be developed. (Such as minimum weight, air restrictor or REV Limit may be applied according to their respective racing performances.) The decision to apply a balancing system to a motorcycle will be taken by the MotoAmerica Permanent Bureau based on decisions made by the Superbike Commission at any time deemed necessary to ensure fair competition.

2.6.4 Minimum weight

All machines	170kg (374 lbs.)

At any time of the event, the weight of the whole motorcycle (including the tank and its contents) must not be lower than the minimum weight.

There is no tolerance on the minimum weight of the motorcycle.

During the final technical inspection at the end of the 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.

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.

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 MotoAmerica Technical Director at the preliminary checks.

2.6.5 Numbers and Number Plates

The background colors and figures (numbers) for Superstock are red (pantone 186c) background with white numbers:

The sizes for all the front numbers are:	Minimum height:	140 mm
	Minimum width:	80 mm
	Minimum stroke:	20 mm
	Minimum space between numbers	10 mm
The size for all the side numbers 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. Once on the front, either in the center of the fairing or slightly off to one side. The number must be centered on the red background with no advertising within 25mm in all directions.
b. Once, on each side of the motorcycle. The preferred location for the numbers on each side of the motorcycle is on the lower rear portion of the main fairing near the bottom. The number must be centered on the red background. Any change to this position must be pre-approved a minimum of 2 weeks before the first race by the MotoAmerica Technical Director.
c. The numbers must use the fonts as detailed after Art2. Any numbers not using these fonts must have the design of the numbers and the layout pre-approved by the MotoAmerica Technical Director a minimum of 2 weeks before the first race. All digits must be of standard form.
d. Any outlines must be of a contrasting color and the maximum width of the outline is 3mm. The background color must be clearly visible around all edges of the number (including outline). Reflective or mirror type numbers are not permitted.
e. Numbers cannot overlap.

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

2.6.6 Fuel

Please refer to Article: 2.9

2.6.7 Tires

a. The maximum number of tires, of any type, available to each rider during the event will be **specified in Article: 2.3.7**
b. A maximum of 11 tires per rider can be mounted at any time.
c. For both Superbike/Superstock 1000 races only, wet and intermediate tires will not need to be marked with a tire sticker. They will not be considered in the total number of tires available for use; however normal allocation limits still apply.
d. Every tire used during the event must be marked with an adhesive sticker with a number allocated by the MotoAmerica Technical Director. The sticker will be a different color front and rear.
e. The tire stickers will be delivered to the teams in a sealed envelope, on the day before the first practice after which the teams will be responsible for their use.
f. The stickers must be applied to the left sidewall of the tire. Officials will check that all the motorcycles in the pit lane are fitted with tires carrying the sticker.

g. The use of motorcycles without the official stickers will be immediately reported to the Race Direction whom will take appropriate action.
h. After the third free practice session, the tire supplier will allocate one (1) rear ‘qualifying tire’ to all riders that will participate in Superpole.
i. Qualifying tires can only be used during Superpole.
j. If the qualifying tire is used during any session (excluding Superpole), the rider will lose his qualifying time and must start from the back of the grid.
k. Any modification or treatment (cutting, grooving) is forbidden.
l. At the beginning of the event, the Official Supplier may be requested by the MotoAmerica Technical Director to deliver to him four (4) samples of each type of tire to be used at the event.
m. The allocation of individual tires will be made on a random basis, with no involvement of any representative from the tire supplier, teams or riders. Those tires will be individually identified and may not be exchanged between riders, including between team mates, and may not be exchanged by the tire supplier after the allocation, except with the permission of the Race Direction.
n. In exceptional cases, should the sticker be damaged or applied in the wrong way, up to 2 extra stickers may be provided at the sole discretion of the MotoAmerica Technical Director. However, the damaged sticker must be returned to the MotoAmerica Technical Director and/or the tire it was applied to, must be absolutely intact.

2.6.8 Engine

2.6.8.1 Fuel injection system

Fuel injection systems refer to throttle bodies, fuel injectors, variable length intake tract devices, fuel pump and fuel pressure regulator.

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 must remain as originally produced by the manufacturer for the homologated motorcycle.
d. Butterfly valves cannot be changed or modified.
e. All the parts of the variable intake tract device must remain exactly as homologated. They cannot be added if not fitted to the homologated machine.
f. Air and air/fuel mixture must go to the combustion chamber exclusively through the throttle body butterflies.
g. Electronically controlled throttle valves, known as ‘ride-by-wire’, may be only used if the homologated model is equipped with the same system. Software may be modified but all the safety systems and procedures designed by the original manufacturer must be maintained.

2.6.8.2 Cylinder Head

a. Must be the originally fitted and homologated part with no modification allowed.
b. The gaskets may be changed.
c. The valves, valve seats, guides, springs, tappets, oil seals, shims, cotter valve, rocker arms, spring base and spring retainers must be as originally produced by the manufacturer for the homologated motorcycle.
d. Only normal maintenance interventions as prescribed by the manufacturer in the service manual of the motorcycle are authorized.
e. Valve spring shims are not allowed.

2.6.8.3 Camshaft

a. Must be the originally fitted and homologated part with no modification allowed.
b. At the technical checks: for direct cam drive systems, the cam lobe lift is measured; for non-direct cam drive systems (i.e. with rocker arms), the valve lift is measured.

2.6.8.4 Cam sprockets or gears

a. Cam Sprockets may be slotted to allow the adjustment of cam timing.
b. Pressed on cam sprockets may be replaced with an adjustable boss and cam sprocket.
c. Cam chain and tensioner must remain as homologated.

2.6.8.5 Cylinders

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

2.6.8.6 Pistons

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

2.6.8.7 Piston rings

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

2.6.8.8 Piston pins and clips

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

2.6.8.9 Connecting rods

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

2.6.8.10 Crankshaft

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

2.6.8.11 Crankcase / Gearbox housing

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

2.6.8.11.1 Lateral covers and protection

a. Lateral (side) covers may be altered, modified or replaced. 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 aluminum 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. The Technical Directors decision on suitability is final.
d. Plates or crash bars made from aluminum 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. FIM approved covers will be permitted without regard of the material or its 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. Oil containing engine covers must be secured with steel bolts.
h. The Technical Director has the right to refuse any cover not satisfying this safety purpose.

2.6.8.12 Transmission / Gearbox

a. No modifications are allowed except shimming.

b. Quick-shift systems are allowed (including wire and potentiometer).
c. Countershaft sprocket, rear wheel sprocket, chain pitch and size may be changed.
d. The sprocket cover may be modified or eliminated.
e. Chain guard as long as it is not incorporated in the rear fender may be removed.

2.6.8.13 Clutch

a. Must be the originally fitted and homologated part with no modification allowed.
b. Only friction and drive discs may be changed, but their number must remain as original.
c. Clutch springs may be changed.

2.6.8.14 Oil pumps and oil lines

a. Must be the originally fitted and homologated part with no modification allowed.
b. Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of metal reinforced construction with swaged or threaded connectors.

2.6.8.15 Radiator / Oil cooler

a. The only liquid engine coolants permitted is water.
b. The original water radiator may be altered or replaced but the appearance of the front, the rear and the profile of the motorcycle must not be changed.
c. An additional water radiator may be fitted but the appearance of the front, the rear and the profile of the motorcycle must not be changed. Extra mounting brackets to accommodate the additional radiator are permitted.
d. Protective meshes may be added in front of the oil and/or water radiator(s).
e. Oil coolers / heat exchangers must remain as homologated.
f. The cooling system hoses and catch tanks may be changed.
g. Radiator fan and wiring may be removed. Thermal switches, water temperature sensor and thermostat may be removed inside the cooling system.
h. Radiator cap is free.

2.6.8.16 Air box

a. The air box must be the originally fitted and homologated part with no modification allowed.
b. The air filter element may be modified or replaced but must be mounted in the original position.

c. The air box drains must be sealed.
d. All motorcycles must have a closed breather system. All oil breather lines must be connected (may pass through an oil catch tank) and exclusively discharge in the air box.
e. No heat protection may be attached to the air box. (i.e. Foil heat tape).

2.6.8.17 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.
c. Fuel lines from the fuel tank up to the delivery pipe assembly (delivery pipe excluded) may be replaced and must be located in such a way that they are protected from crash damage.
d. Quick connectors or dry break connectors may be used.
e. Fuel vent lines may be replaced.
f. Fuel filters may be added.

2.6.8.18 Exhaust system

a. Exhaust pipes and silencers may be modified or changed. Catalytic converters must be removed.
b. The number of the final exhaust silencer(s) must remain as homologated. The silencer(s) must be on the same side(s) of the homologated model.
c. For safety reasons, the exposed edges of the exhausts pipe(s) outlet must be rounded to avoid any sharp edges.
d. 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.
e. The noise limit for Superstock will be 115 dB/A (with a 3 dB/A tolerance after the race only) measured at 6000rpm (4 cylinder) and 5500rpm (2, 3 cylinder). The test will be carried out according to the details noted in Art. 2.13

2.6.9 Electrics and electronics

2.6.9.1 Ignition / Engine Control System (ECU)

a. The engine control system (ECU) must be an ECU (Kit or OEM) applicable to the specific homologated model. The ECU may have its software changed, but the ECU may not be physically modified.
b. The system may have FIM/DWO/MotoAmerica approved external ignition and/or injection module/s added.
c. The total combined retail price (software and tuning tools included) on sale to the general public cannot be higher than €3000 (tax excluded) or €3750 if it is a kit ECU than includes data logging facility.
d. Central unit (ECU) may be relocated.
e. Corner by corner or distance/position based adjustments are not allowed.

f. Optional equipment sold by the motorcycle Manufacturer for the homologated model is considered not homologated with the bike and must follow the requirements for approved electronics/data loggers.
g. During an event the Technical Director has the right to ask a team to substitute their ECU or external module with the sample received from the Manufacturer. The change has to be done before Sunday warm up.
h. No extra sensors may be added for control strategies except shift rod sensor, wheel speed sensors and lambda sensors. Wheel speed sensors must be included in the Kit ECU and Harness package if required.
i. Other additional electronic hardware equipment not on the original homologated motorcycle cannot be added with the exceptions noted below.
j. The characteristics of approved data logging systems must be the following:
    i. Maximum retail price of the unit (hardware + software, excluding sensors and wiring harness) cannot exceed **€3.000** Euro (VAT excluded) if it is a standalone unit.
    ii. Maximum retail price of the unit if incorporated into the ECU (hardware + software, excluding sensors and wiring harness) is €3750
    iii. The Data Logger unit must be available for sale to the public and on the list of FIM/DWO/MotoAmerica 'Superbike EVO' approved data loggers.
    iv. A maximum of 7 simultaneous working sensors (connected to the additional data logger) may be added to the original sensors on the motorcycle. The sensors must be from the following list:
        1. Lambda (must be supplied in the kit if used for strategy).
        2. Fork position
        3. Shock position
        4. Front brake pressure
        5. Rear brake pressure
        6. Fuel pressure (not temperature)
        7. Oil pressure
        8. Oil temperature
        9. Transponder / Lap time signal
        10. GPS Unit (Lap timing and track position)
    v. The sensors must be simple-function. No inertial platforms are allowed to be added if an inertial platform is not installed originally on the homologated motorcycle.
    vi. CAN (or other data protocol, k-line, LIN) communication from the ECU to an approved data logger is allowed without any limitation in CAN channel logger number.
k. The maximum total price of other active/control/calculation units such as lambda driver modules, quick shifter, and analogue to CAN and traction control units is €750. These devices must be approved by FIM/DWO/MotoAmerica.
l. Telemetry is not allowed.
m. 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.

n. For the Superstock Kit to be approved, samples of the ECU kits, kit harnesses and external modules with their tuning tools must be sent by the Manufacturers to the MotoAmerica Technical Director, with technical data and selling price.
o. For the ignition and or injection module, quick shifter or standalone data logger to be approved, samples must be sent by the manufacturer of the device to the MotoAmerica Technical Director with technical data and selling price.
p. The original speedometer and tachometer may be altered or replaced (see also 2.6.11).
q. Spark plugs may be replaced.
r. Battery is free.

2.6.9.2 Wiring Harness

a. The Wiring Harness is free.
b. Each team must provide a download connection lead to the MotoAmerica Technical Director.

2.6.9.3 Generator, alternator, electric starter

a. Must be the originally fitted and homologated part with no modification allowed.
b. The stator must be fitted in its original position and without offsetting.
c. The electric starter must operate normally and always be able to start the engine during the event.
d. 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.

2.6.10 Main frame and spare motorcycle

a. During the entire duration of the event, each rider may only use one (1) complete motorcycle, as presented for Technical Control, with the frame clearly identified with a seal. In case the frame needs to be replaced, the rider or the team must request the use of a spare frame to the MotoAmerica Technical Director.
b. One (1) Spare complete motorcycle is allowed per rider.
c. A team may opt to have one (1) spare machine shared by two or more riders.

For a full explanation of the procedures see article 2.4.10

2.6.10.1 Frame body and rear sub frame

a. The main frame must remain as originally produced by the manufacturer for use on the homologated machine.
b. The main frame may only be altered by the addition of gussets or tubes. No gussets or tubes may be removed.
c. Holes may be drilled on the frame only to fix approved components (i.e. fairing brackets, steering damper mount).
d. The homologated dimensions and position of bearing seats in the steering head column, and the engine, swing arm, rear shock, and suspension linkage mounting points must remain as original.
e. Steering angle changes are permitted by fitting offsetting inserts onto the bearing seats of the original steering head, but no part of the insert must protrude axially more than 3 mm from the original steering head.
f. If the homologated machine has exchangeable bearing inserts/bushes: The bushings/inserts are free to make a +/- 6mm adjustment fore and aft in the plane of the original bearing seat. The homologated position is considered as the position in which the production motorcycle is supplied.
g. The swing arm pivot axis may be moved a maximum of 5 mm radially (excluding tolerances) measured from the homologated axis. If the homologated machine does not allow pivot adjustment then the swing arm pivot position may be adjusted by the use of offset inserts, the frame cannot be modified to accommodate the inserts.
h. All motorcycles must display a unique vehicle identification number on the main frame body (chassis number).
i. No polishing or surface refinishing is allowed but the paint scheme is not restricted.
j. Front and rear sub frame may be changed altered or removed.

2.6.10.2 Suspension - General

a. Participants in the Superstock class must only use the approved and listed suspension units for that season. The price limits are:
    i. **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 €2200 excluding tax**
    ii. **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**
b. The approved products from the suspension manufacturers must be available to all participants at least one month before the first round of the MotoAmerica Superbike season, and remain available all season. The products must be available within 6 weeks of a confirmed order.
c. 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.

d. 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.
e. The suspension manufacturers are allowed to offer service contracts when the team is using the approved and listed suspension products. The suspension manufacturers cannot demand a service contract for a customer or participant in order to obtain a suspension product.
f. Electronic Suspension:
    i. No aftermarket or prototype electronically-controlled suspensions maybe used. Electronically-controlled suspension may only be used if already present on the production model of the homologated motorcycle.
    ii. The electronically-controlled valves must remain as homologated. The shims, spacers and fork/shock springs not connected with these valves can be changed.
    iii. The ECU for the electronic suspension must remain as homologated and cannot receive any motorcycle track position or sector information; the suspension cannot be adjusted relative to track position.
    iv. The electronic interface between the rider and the suspension must remain as on the homologated motorcycle. It is allowed to remove or disable this rider interface.
    v. The original suspension system must work safely in the event of an electronic failure.
    vi. Electro-magnetic fluid systems which change the viscosity of the suspension fluid(s) during operation are not permitted.
g. 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).

2.6.10.3 Front Forks

a. Forks must remain as originally produced by the manufacturer for the homologated motorcycle.
b. Original internal parts of the homologated forks may be modified or changed. After market damper kits or valves may be installed.
c. The original surface finish of the fork tubes (stanchions, fork pipes) may be changed. Additional surface treatments are allowed.
d. Fork caps and external damping adjusters may be modified or replaced.
e. The upper and lower fork clamps (triple clamp, fork bridges, and stem) may be modified or replaced.
f. A fork brace may be installed. Fork bottoms may be modified for speed and suspension sensors. Axle hole may not be increased in bore but may have a sleeve for captive axle’s nut.
g. Fender brackets may be modified to maintain stock tire to fender clearance when using race tires or to provide clearance for caliper mounting brackets
h. A steering damper may be added or replaced with an ‘after-market’

damper.

i. The steering damper cannot act as a steering lock limiting device.
j. Electronic forks may have their complete internal parts (including all electronic control) replaced with a conventional damping system and it will be considered as a mechanical fork.

2.6.10.4 Rear fork (Swing arm)

a. Swing arm must remain as originally produced by the manufacturer for the homologated motorcycle with the following changes:
    i. Rear wheel stand mounts may be added to the swing arm by welding or by bolts. Brackets must have rounded edges (with a large radius). Mounting bolts must be recessed.
    ii. Gussets and bracing may be added. A provision for shock absorber and spring clearances is allowed**.**
    iii. Link and link arm pick up points must remain as homologated.
    iv. Axle components associated with locating the rear axle position (not permanently attached to the swing arm) may be modified or replaced.
    v. The range of axle adjustment may be modified by machining existing components or replacing only the area the axle assemblies' travel. i.e. welding in billet blocks to provide optional wheelbase range. Any modifications to the swing arm assembly must be pre-approved by the MotoAmerica Technical Director.
b. A chain guard must be fitted in such a way as to reduce the possibility that any part of the riders' body must become trapped between the lower chain run and the rear wheel sprocket.

2.4.10.5 Rear suspension unit

a. Rear suspension unit may be changed but a similar system must be used (i.e. dual or mono).
b. The rear suspension linkage may be modified or replaced.
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.

2.6.10.6 Wheels

a. Wheels must remain as originally produced by the manufacturer for the homologated motorcycle.
b. Wheels that are standard on same model year bikes can be used instead of the original wheels but they must appear in the MotoAmerica Superstock 1000 wheel approval list.
c. A non-slip coating / treatment may be applied to the bead area of the rim.
d. If the original design includes a cushion drive for the rear wheel, it must

remain as originally produced for the homologated motorcycle.

e. Bearings, seals, spacers 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).
f. Wheel balance weights may be discarded, changed or added.
g. Any inflation valves may be used.

2.6.10.7 Brakes

a. Front brake master cylinder may be altered or replaced from those fitted to the homologated motorcycle.
b. Front brake calipers may be altered or replaced from those fitted to the homologated motorcycle.
c. Rear brake master cylinder may be altered or replaced from those fitted to the homologated motorcycle.
d. Rear brake calipers may be altered or replaced from those fitted to the homologated motorcycle.
e. Rear brake caliper carrier may be modified, or replaced.
f. Brake pads or shoes may be altered or replaced from those fitted to the homologated motorcycle.
g. 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).
h. Brake discs may be altered or replaced from those fitted to the homologated motorcycle. Only steel (max. carbon content 2.1 wt. %) is allowed for brake discs. Alloys containing beryllium are not allowed to be used for brake calipers.
i. The Anti-Lock Brake System (ABS) may be used only if installed in the homologated model for road use. However, it must be completely standard (any mechanical or electronic part must remain as homologated, brake discs and master cylinder levers excluded), and only the software of the ABS may be modified.
j. The Anti-Lock Brake System (ABS) can be disconnected and its ECU can be dismantled. The ABS rotor wheel can be deleted, modified or replaced.
k. 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. FIM approved guards will be permitted without regard to the material.
l. The Technical Director has the right to refuse any guard not satisfying this safety purpose**.**

2.6.10.8 Handlebars and hand controls

a. Handlebars may be replaced.
b. Handlebars and hand controls may be relocated.

c. Throttle controls must be self-closing when not held by the hand.
d. Throttle assembly and associated cables may be modified or replaced but the connection to the throttle body and to the throttle controls must remain as on the homologated motorcycle.
e. Clutch and brake lever may be replaced with an after-market model. An adjuster to the brake lever is allowed.
f. Switches may be changed but the electric starter switch and engine stop switch must be located on the handlebars.
g. 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.

2.6.10.9 Foot rest / 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 and rear brake 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 8 mm solid spherical radius.
e. Non folding footrests must have an end (plug) which is permanently fixed, made of aluminum, plastic, Teflon® or an equivalent type material (Minimum radius 8mm). The plug surface must be designed to reach the widest possible area. The MotoAmerica Technical Director has the right to refuse any plug not satisfying this safety aim.

2.6.10.10 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.
b. The tank may be replaced by a fuel cell and a structural cover.
c. The material of construction of the fuel tank may be altered from the one of the tank fitted to the homologated motorcycle.
d. All fuel tanks must be filled with fire retardant material (i.e. fuel cell foam), or be fitted with a fuel cell bladder.
e. Fuel tanks made of composite materials (carbon fiber, aramid fiber, glass fiber, etc.) must have passed the FIM Standards for fuel tanks or be lined with a fuel cell bladder.
f. Tanks made of composite material must bear the label certifying conformity with FIM Fuel Tank Test Standards. Fuel tanks without a fuel cell bladder must bear a label certifying conformity with FIM Fuel Tank Test Standards.

g. Such labels must include the fuel tank manufacturer's name, date of tank manufacture, and name of testing laboratory.
h. Each manufacturer is requested to inform the FIM/CCR Secretariat of its fuel tank model(s) which have passed the FIM test standards, together with a copy of the fuel tank label. Full details of the FIM Fuel Tank Test Standards and Procedures are available from the FIM (See 'Fuel Tank Test Standards' below).
i. Fuel cell bladders must conform to or exceed the specification FIM/FCB-2005. Full details of this standard are available from the FIM.
j. 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 parts of the streamlining (fairing) or any plastic part. The FIM Superbike Technical Director has the right to refuse a motorcycle if he is of the opinion that the fuel tank fixation is not safe.
k. The original tank may be modified to achieve the maximum capacity of 24 liters, provided the original profile is as homologated.
l. A cross over line between each side of the tank is allowed (maximum inside diameter 10 mm).
m. 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.
n. 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.
o. The same size fuel tank used in practice must be used during the entire event.

Fuel tank homologation

a. Any fuel tanks, made of non-ferrous materials (with the exception of aluminum) must be tested according to the test procedure prescribed by the FIM.
b. Each manufacturer is responsible for testing its own fuel tank model(s) and will certify that the fuel tank exceeds the FIM test standard, if it has passed the FIM test procedure for fuel tanks.
c. Each manufacturer must affix a quality and test label on each fuel tank type that is produced for competition use. This quality and test label will be the recognition of a fuel tank model which has passed the FIM test procedure.
d. All fuel tanks that are made to the same design, dimensions, number of fiber layers, grade of fiber, percentage of resin, etc., must be identified with the same quality and test label.
e. The quality and test label will include the following information on each label affixed to each fuel tank: name of the fuel tank manufacturer, date of fabrication, code or part number, name of testing laboratory, fuel capacity.
f. Each manufacturer is requested to inform the FIM/CCR Secretariat of its fuel tank model(s) which have passed the FIM test procedure, with a copy

of the quality and test label, according to point 5.

g. Only fuel tanks that have passed the FIM test procedure will be accepted.

2.6.10.11 Fairing / Bodywork

a. Fairing and bodywork may be replaced with exact cosmetic duplicates of the original parts, but must appear to be as originally produced by the manufacturer for the homologated motorcycle, with slight differences due to the racing use (different pieces' mix, fixing points, fairing bottom, etc.). The material may be changed. The use of carbon fiber or carbon composite materials is not allowed. Specific reinforcements in Kevlar® or carbon are allowed locally around holes and stressed areas. Headlights must be included even when considered external.
b. Overall size and dimensions must be the same as the original part, with a tolerance of +-10mm, respecting the design and features of the homologated fairing as far as possible. The overall width of the frontal area may be +10mm maximum. The decision of the Technical Director is final.
c. Wind screen may be replaced with an aftermarket product. The height of the windscreen is free, within a tolerance of +/- 15 mm referred to the vertical distance from/to the upper fork bridge. The screen must conform to the same profile from the front as the original – no double bubble or wide types. From a top view the length of the windscreen may be shortened by 25mm to allow clearance for the rider. The edge of the screen must have no sharp edges
d. Motorcycles that are not originally equipped with streamlining are not allowed to add streamlining in any form, with the exception of a lower fairing device, as described in point (h). This device cannot exceed above a line drawn horizontally from wheel axle to wheel axle and must follow the specifications described at point (h&i).
e. The original combination instrument/fairing brackets may be replaced, but the use of titanium and carbon (or similar composite materials) is forbidden. All other fairing brackets may be altered or replaced.
f. The ram-air intake must maintain the originally homologated shape and dimensions.
g. The original air ducts running between the fairing and the air box may be altered or replaced. Carbon fiber composites and other exotic materials are forbidden. Particle grilles or "wire-meshes" originally installed in the openings for the air ducts may be removed.
h. The lower fairing must to be constructed to hold, in case of an engine breakdown minimum 6 liters. The lower edge of all the openings in the fairing must be positioned at least 70 mm above the bottom of the fairing.
i. There may be no exit air vents in the front half of the lower fairing below a line 40mm below line between the wheel axles of the machine. The Superbike 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.

j. Exceptions may be made to 2.6.10.11.i with the sole agreement of the FIM Superbike Technical Director if a manufacturer produced and FIM approved close fitting, oil containing engine shroud is fitted in addition to the belly pan. In this case OEM shaped air vents will be allowed in the front lower half of the fairing.
k. 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.
l. The upper edge of the rear transverse wall of the lower fairing must be at least 70 mm above the bottom. The angle between this wall and the floor must be ≤ 90°.
m. 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 centers, circle centers and their diameters must be constant. Holes or perforations must have an open area ratio > 60%.
n. Motorcycles may be equipped with a radiator shroud (inner ducts) to improve the air stream towards the radiator but the appearance of the front, the rear and the profile of the motorcycle must not be changed.
o. The lower fairing must incorporate a single opening of Ø 25 mm diameter in the front lower area. This hole must remain sealed in dry conditions and must be opened only in wet race conditions as declared by the Race Director.
p. Front mudguards may be replaced with a cosmetic duplicate of the original parts and may be spaced upward for increased tire clearance.
q. Rear mudguard fixed on the swing arm may be modified, changed or removed
r. Material of construction of the front mudguard and rear mudguard is free.

2.6.10.12 Seat

a. Seat, seat base and associated bodywork may be replaced. The appearance from front, rear and profile must conform to the homologated shape
b. The top portion of the rear bodywork around the seat may be modified to a solo seat.
c. The homologated seat locking system (with plates, pins, rubber pads etc.) may be removed.
d. Same material as fairing must be used. (article 2.6.10.10.a)
e. All exposed edges must be rounded.

2.6.10.13 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 pit-lane and the session is declared WET. All lights must comply with the following:

a. Lighting direction must be parallel to the machine center line (motorcycle running direction), and be clearly visible from the rear at least 15 degrees to both left and right sides of the machine center line.
b. The rear light must be mounted near the end of the seat/rear bodywork and approximately on the machine center 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 MotoAmerica Technical Director has the right to refuse any light system not satisfying this safety purpose.

2.6.10.14 Fasteners

a. Standard fasteners may be replaced with fasteners of any material and design but titanium fasteners cannot be used. The strength and design must be equal to or exceed the strength of the standard fastener.
b. Fasteners may be drilled for safety wire, but intentional weight-reduction modifications are not allowed.
c. Thread repairs may be made using inserts of different material such as Helicoils® and Timeserts®.
d. Fairing / bodywork fasteners may be replaced with the quick disconnect type.
e. Aluminum fasteners may only be used in non-structural locations.

2.6.11 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 materials.
c. Instruments, instrument bracket(s) and associated cables.
d. Painted external surface finishes and decals.
e. Material for brackets connection non original parts (faring, exhaust, instruments, etc.) to the frame (or engine) cannot be made from titanium or fiber reinforced composites excepting the exhaust silencer hanger that may be in carbon.
f. Protective covers for the frame, chain, footrests may be made in other materials like fiber composite material if these parts do not replace original parts mounted on the homologated model.

2.6.12 The following items MAY BE Removed

a. Emission control items (anti-pollution) in or around the air box and engine (O2 sensors, air injection devices).
b. Tachometer.
c. Speedometer.
d. Bolt-on accessories on a rear sub frame.

2.6.13 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. Toolkit.
f. Helmet hooks and luggage carrier hooks.
g. Passenger foot rests.
h. Passenger grab rails.
i. Safety bars, center and side stands must be removed (fixed brackets must remain).

2.6.14 The following items MUST BE Altered

a. All drain plugs must be wired. External oil filter(s) screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases).
b. Where breather or overflow pipes are fitted they must discharge via existing outlets. The original closed system must be retained**:** no direct atmospheric emission is permitted.
c. Motorcycles must be equipped with a red light on the instrument panel that will illuminate in the event of oil pressure drop.

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2.7 SUPERSTOCK 600 TECHNICAL SPECIFICATIONS

The following rules are intended to permit limited changes to the homologated motorcycle in the interests of safety and improved competition between various motorcycle concepts.

EVERYTHING THAT IS NOT AUTHORIZED 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

Superstock motorcycles require an FIM homologation (see Appendix FIM Homologation procedure for Superstock, Supersport and Superbike motorcycles). 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, unless they are already equipped as such on the homologated model.

For 2017: 2013-2016 Kawasaki ZX-6R (636) is accepted as homologated for 2017 MotoAmerica competition.

Once a motorcycle has obtained the homologation, it may be used for racing in the corresponding class for a maximum period of 8 years (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 Superstock motorcycles must (except when otherwise stated) conform to the homologated shape (as originally produced by the manufacturer). The appearance of the exhaust system is excluded from this rule.

2.7.1 Motorcycle specifications

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

2.7.2 Engine configurations and displacement capacities

The following engine configurations comprise the Superstock class:

Over 401cc up to 600cc	4-stroke	4 cylinders
Over 401cc up to 675cc	4-stroke	3 cylinders

The displacement capacity bore and stroke must remain at the homologated size. Modifying the bore and stroke to reach class limits is not allowed.

2.7.3 Balancing various motorcycle concepts

In order to equalize the performance of motorcycles used in the Superstock 600 Championship, A system of performance enhancements or restrictions can be developed. (Such as minimum weight, air restrictor or REV Limit may be applied according to their respective racing performances.) The decision to apply a balancing system to a motorcycle will be taken by the MotoAmerica Permanent Bureau based on decisions made by the Superbike Commission at any time deemed necessary to ensure fair competition.

2.7.4 Minimum weight

Over 401cc up to 600cc	4 cylinders	164kg (360.8 lbs.)
Over 401cc up to 675cc	3 cylinders	164kg (360.8 lbs.)

For 2017: 2013-2016 Kawasaki ZX-6R (636) minimum weight- 166 kg (365.2 lbs.)

At any time of the event, the weight of the whole motorcycle (including the tank and its contents) must not be lower than the minimum weight.

There is no tolerance on the minimum weight of the motorcycle.

During the final technical inspection at the end of the 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.

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.

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 MotoAmerica Technical Director at the preliminary checks.

2.7.5 Numbers and Number Plates

The background colors and figures (numbers) for Superstock 600 are red (pantone 186c) background with yellow (pantone yellow) numbers:

The sizes for all the front numbers are:	Minimum height:	140 mm
	Minimum width:	80 mm
	Minimum stroke:	20 mm

	Minimum space between numbers:	10 mm
The size for all the side numbers 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. Once on the front, either in the center of the fairing or slightly off to one side. The number must be centered on the red background with no advertising within 25mm in all directions.
b. Once, on each side of the motorcycle. The preferred location for the numbers on each side of the motorcycle is on the lower rear portion of the main fairing near the bottom. The number must be centered on the red background. Any change to this position must be pre-approved a minimum of 2 weeks before the first race by the MotoAmerica Technical Director.
c. The numbers must use the fonts as detailed after Art2. Any numbers not using these fonts must have the design of the numbers and the layout pre-approved by the MotoAmerica Technical Director a minimum of 2 weeks before the first race. All digits must be of standard form.
d. Any outlines must be of a contrasting colour and the maximum width of the outline is 3mm. The background color must be clearly visible around all edges of the number (including outline). Reflective or mirror type numbers are not permitted.
e. Numbers cannot overlap

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

2.7.6 Fuel

Please refer to Article: 2.9

2.7.7 Tires

a. Tires must be a fully molded type carrying all size and sidewall markings of the tires for commercial sale to the public. The depth of the tire treads must be at least 2.5 mm over the entire tire pattern width at pre-race control. The tires must have a positive and negative tread of 96% positive and minimum 4% negative (land and sea ratio). The

maximum distance from the external edge of the tire to 50% of the tread elements is 35 mm.

b. The maximum number of tires, of any type, available to each rider during the event will be **specified in Article: 2.3.7**
c. For the Superstock 600 race only, wet and intermediate tires will not need to be marked with a tire sticker. They will not be considered in the total number of tires available for use, however normal allocation limits still apply.
d. Every tire used during the event must be marked with an adhesive sticker with a number allocated by the MotoAmerica Technical Director. The sticker will be a different color front and rear.
e. The tire stickers will be delivered to the teams in a sealed envelope, on the day before the first practice after which the teams will be responsible for their use.
f. Officials will check that all the motorcycles in the pit lane are fitted with tires carrying the sticker.
g. The use of motorcycles without the official stickers will be immediately reported to the Race Direction whom will take appropriate action.
h. Tire stickers must be mounted to the left sidewall.
i. Any modification or treatment (cutting, grooving) is forbidden.
j. At the beginning of the event, the Official Supplier may be requested by the MotoAmerica Technical Director to deliver to him four (4) samples of each type of tire to be used at the event.
k. The allocation of individual tires will be made on a random basis, with no involvement of any representative from the tire supplier, teams or riders. Those tires will be individually identified and may not be exchanged between riders, including between team mates, and may not be exchanged by the tire supplier after the allocation, except with the permission of the Race Direction.
l. In exceptional cases, should the sticker be damaged or applied in the wrong way, up to 2 extra stickers may be provided at the sole discretion of the MotoAmerica Technical Director. However, the damaged sticker must be returned to the MotoAmerica Technical Director and/or the tire it was applied to, must be absolutely intact.

2.7.8 Engine

2.7.8.1 Fuel injection system

Fuel injection systems refer to throttle bodies, fuel injectors, variable length intake tract devices, fuel pump and fuel pressure regulator.

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. Bell mouths must remain as originally produced by the manufacturer

for the homologated motorcycle.

d. Butterfly valves cannot be changed or modified.
e. All parts of the variable intake tract device must remain exactly as homologated. Variable intake tract devices cannot be added if they are not present on the homologated motorcycle
f. Air and air/fuel mixture must go to the combustion chamber exclusively through the throttle body butterflies.
g. Electronically controlled throttle valves, known as 'ride-by-wire', may be only used if the homologated model is equipped with the same system. Software may be modified but all the safety systems and procedures designed by the original manufacturer must be maintained.

2.7.8.2 Cylinder Head

a. Must be the originally fitted and homologated part with no modification.
b. No material may be added or removed from the cylinder head.
c. The gaskets may be changed.
d. The valves, valve seats, guides, springs, tappets, oil seals, shims, cotter valve, spring base and spring retainers must be as originally produced by the manufacturer for the homologated motorcycle. Only normal maintenance interventions as prescribed by the manufacturer in the service manual of the motorcycle are authorized.
e. Valve spring shims are not allowed.

2.7.8.3 Camshaft

a. Must be the originally fitted and homologated part with no modification.
b. At the technical checks: for direct cam drive systems, the cam lobe lift is measured; for non-direct cam drive systems (i.e. with rocker arms), the valve lift is measured.

2.7.8.4 Cam sprockets or gears

a. Cam Sprockets may be slotted to allow the adjustment of cam timing.
b. Pressed on cam sprockets may be replaced with an adjustable boss and cam sprocket.
c. The cam chain must remain as homologated.
d. Cam chain tensioner must remain as homologated.

2.7.8.5 Cylinders

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

2.7.8.6 Pistons

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

2.7.8.7 Piston rings

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

2.7.8.8 Piston pins and clips

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

2.7.8.9 Connecting rods

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

2.7.8.10 Crankshaft

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

2.7.8.11 Crankcase / Gearbox housing

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

2.7.8.11.1 Lateral covers and protection

a. Lateral (side) covers may be altered, modified or replaced. 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 aluminum 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. The Technical Directors decision on suitability is final.
d. Plates or crash bars made from aluminum 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. FIM approved covers will be permitted without regard of the material or its 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. Oil containing engine covers must be secured with steel bolts.

h. The Technical Director has the right to refuse any cover not satisfying this safety purpose.

2.7.8.12 Transmission / Gearbox

a. Must be the originally fitted and homologated part with no modification allowed.
b. Quick-shift systems are allowed (including wire and potentiometer).
c. Countershaft sprocket, rear wheel sprocket, chain pitch and size may be changed.
d. The sprocket cover may be modified or eliminated.
e. Chain guard as long as it is not incorporated in the rear fender may be removed.

2.7.8.13 Clutch

a. The original clutch assembly may be modified or replaced by an aftermarket clutch, also including back torque limiting capabilities (slipper type).
b. Clutch system type (wet or dry / single or multi-plate) and the method of operation (by cable or hydraulic) must remain as homologated.
c. Friction and drive discs may be changed.
d. Clutch springs may be changed.
e. The clutch basket (outer) must be the originally fitted and homologated part but may be reinforced.
f. No power source (i.e. hydraulic or electric) can be used for gear selection, if not installed in the homologated model for road use. Human power is excluded from the ban.

2.7.8.14 Oil pumps and oil lines

a. Must be the originally fitted and homologated part with no modification.
b. Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of metal reinforced construction with swaged or threaded connectors.

2.7.8.15 Radiator / Oil cooler

a. The only liquid engine coolants permitted is water.
b. Protective meshes may be added in front of the oil and/or water radiator(s).
c. The cooling system hoses and catch tanks may be changed.
d. Radiator fan and wiring may be removed. Thermal switches, water temperature sensor and thermostat may be removed inside the cooling system.
e. Radiator cap is free.

2.7.8.16 Air box

a. The air box must be the originally fitted and homologated part with no modification.
b. The air filter element may be modified or replaced but must be mounted in the original position.
c. The air box drains must be sealed.
d. 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 air box.
e. Additional heat shielding is not allowed (i.e. gold or silver heat tape).

2.7.8.17 Fuel supply

a. Fuel pump and fuel pressure regulator must be the originally fitted and homologated part with no modification.
b. The fuel pressure must be as homologated.
c. Fuel lines from the fuel tank to the delivery pipe assembly (delivery pipe excluded) may be replaced and must be located in such a way that they are protected from crash damage.
d. Quick connectors or dry break connectors may be used.
e. Fuel vent lines may be replaced.
f. Fuel filters may be added.

2.7.8.18 Exhaust system

a. Exhaust pipes and silencers may be modified or changed. Catalytic converters must be removed.
b. The number of the final exhaust silencer(s) must remain as homologated. The silencer(s) must be on the same side(s) of the homologated model.
c. For safety reasons, the exposed edges of the exhausts pipe(s) outlet must be rounded to avoid any sharp edges.
d. 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.
e. The noise limit for Superstock is 107 dB/A (with a 3 dB/A tolerance after the race only) The test will be carried out according to the details noted in Art 2.13

2.7.9 Electrics and electronics

2.7.9.1 Ignition / Engine Control System (ECU)

a. The engine control system (ECU) must be an ECU (Kit or OEM) applicable to the specific homologated model. The ECU may have its software changed, but the ECU may not be physically modified.
b. The system may have FIM/DWO/MotoAmerica approved external ignition

and/or injection module/s added.

c. The total combined retail price (software and tuning tools included) on sale to the general public cannot be higher than €2500 (tax excluded).
d. Central unit (ECU) may be relocated.
e. Optional equipment sold by the motorcycle Manufacturer for the homologated model is considered not homologated with the bike and must follow the requirements for approved electronics/data loggers.
f. During an event the Technical Director has the right to ask a team to substitute their ECU or external module with the sample received from the Manufacturer. The change has to be done before Sunday warm up.
g. No extra sensors may be added for control strategies except shift rod sensor, wheel speed sensors and lambda sensors. Wheel speed sensors must be included in the Kit ECU and Harness package if required.
h. The addition of an infrared (IR) or GPS based lap timing system is allowed.
i. Data logging is not allowed. Lap timers using any data recording with the exception of lap time are not allowed.
j. Telemetry is not allowed.
k. 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.
l. Harness:
    i. The main wiring harness may be replaced by the kit wire harness as supplied for the Kit ECU model, produced and/or approved by the manufacturer of the motorcycle and by FIM/DWO
    ii. The key/ignition lock may be relocated, replaced or removed.
    iii. Cutting of the original main wiring harness is allowed.
m. To be approved, samples of the ECU kits, kit harnesses and external modules with their tuning tools must be sent by the Manufacturers to the FIM Technical Director, with technical data and selling price.
n. For the ignition and or injection module, or quick shifter to be approved, samples must be sent by the manufacturer of the device to the MotoAmerica Technical Director with technical data and selling price.
o. The original speedometer and tachometer may be altered or replaced.
p. Spark plugs may be replaced.
q. Battery is free.

2.7.9.2 Generator, alternator, electric starter

a. Must be the originally fitted and homologated part with no modification allowed.
b. The stator must be fitted in its original position and without offsetting.
c. The electric starter must operate normally and always be able to start the engine during the event.
d. 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.

2.7.10 Main frame and pre-assembled spare frame

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 seal. In case the frame needs to be replaced, the rider or the team can request the use of a spare frame to the MotoAmerica Technical Director.

The pre-assembled spare frame must be presented to the MotoAmerica 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 before the rider or the team has received authorization from the MotoAmerica Technical Director.

The motorcycle, once rebuilt, prior to use must be inspected by the technical stewards for safety checks and a new seal will be placed on the motorcycle frame. No other 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.

For a full explanation of the procedures see article 2.5.10

2.7.10.1 Frame body and rear sub frame

a. The frame must remain as originally produced by the manufacturer for the homologated motorcycle.
b. Holes may be drilled on the frame only to fix approved components (i.e. fairing brackets, steering damper mount, sensors).
c. The sides of the frame-body may be covered by a protective part made of a composite material. These protectors must fit the form of the frame.
d. Nothing else may be added or removed from the frame body.
e. All motorcycles must display a vehicle identification number punched on the frame body (chassis number).
f. Engine mounting brackets or plates must remain as originally produced by the manufacturer for the homologated motorcycle.
g. Front sub frame / fairing mount may be changed or altered.

h. Rear sub frame must remain as homologated but additional seat brackets may be added.
i. Additional seat brackets may be added; non-stressed protruding brackets may be removed if they do not affect the safety of the construction or assembly. Bolt-on accessories to the rear sub-frame may be removed.
j. The paint scheme is not restricted but polishing the frame body or sub frame is not allowed.

2.7.10.2 Suspension – General

a. Participants in the Superstock class must only use the approved and listed suspension units for that season. The price limits are:
    i. **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 €2200 excluding tax**
    ii. **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**
b. The approved products from the suspension manufacturers must be available to all participants at least one month before the first round of the MotoAmerica Superbike season, and remain available all season. The products must be available within 6 weeks of a confirmed order.
c. 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.
d. 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.
e. The suspension manufacturers are allowed to offer service contracts when the team is using the approved and listed suspension products. The suspension manufacturers cannot demand a service contract for a customer or participant in order to obtain a suspension product.
f. Electronic Suspension:
    i. No aftermarket or prototype electronically-controlled suspensions maybe used. Electronically-controlled suspension may only be used if already present on the production model of the homologated motorcycle.
    ii. The electronically-controlled valves must remain as homologated. The shims, spacers and fork/shock springs not connected with these valves can be changed.
    iii. The ECU for the electronic suspension must remain as homologated and cannot receive any motorcycle track position or sector

information; the suspension cannot be adjusted relative to track position.

iv. The electronic interface between the rider and the suspension must remain as on the homologated motorcycle. It is allowed to remove or disable this rider interface.

v. The original suspension system must work safely in the event of an electronic failure.

vi. Electro-magnetic fluid systems which change the viscosity of the suspension fluid(s) during operation are not permitted.

g. 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).

2.7.10.3 Front Suspension

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. After market damper kits or valves may be installed.
d. Fork springs may be modified or replaced.
e. Fork caps may be modified or replaced to allow external adjustment.
f. Dust seals may be modified, changed or removed if the fork is totally oil-sealed.
g. The original surface finish of the fork tubes (stanchions, fork pipes) may be changed. Additional surface treatments are allowed.
h. The upper and lower fork clamps (triple clamp, fork bridges, and stem) must remain as originally produced by the manufacturer on the homologated motorcycle.
i. A steering damper may be added or replaced with an aftermarket damper.
j. The steering damper cannot act as a steering lock limiting device.
k. Electronic forks may have their complete internal parts (including all electronic control) replaced with a conventional damping system and it will be considered as a mechanical fork.

2.7.10.4 Rear fork (Swing arm)

a. The rear fork must be the originally fitted and homologated part with no modification allowed.
b. A chain guard must be fitted in such a way to reduce the possibility that any part of the riders' body may become trapped between the lower chain run and the rear wheel sprocket.
c. Rear fork pivot bolt must be the originally fitted and homologated part with no modification allowed.
d. Rear pivot position must remain in the homologated position (as supplied on the production bike). If the standard bike has inserts, then the orientation/position of the original insert may be changed but

the insert cannot be replaced or modified.

e. Rear wheel stand brackets may be added to the rear fork by welding or by bolts. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed. An anchorage system or point(s) to keep the original rear brake caliper in place may be added to the rear swing-arm.
f. The sides of the swing-arm may be protected by a thin vinyl cover only, no composite or structural covers are allowed.

2.7.10.5 Rear suspension unit

a. Rear suspension unit (shock absorber) may be modified or replaced, but the original attachments to the frame and rear fork (swing arm) must be as homologated.
b. All the rear suspension linkage parts must be the originally fitted and homologated part with no modification allowed.
c. Removable top shock mounts must be the originally fitted and homologated part with no modification allowed. A nut may be made captive on the top shock mount and shim spacers may be fitted behind it to adjust ride height.

2.7.10.6 Wheels

a. Wheels must be the originally fitted and homologated part with no modification allowed.
b. A non-slip coating / treatment may be applied to the bead area of the rim.
c. If the original design includes a cushion drive for the rear wheel, it must remain as originally produced for the homologated motorcycle.
d. Wheel axles must be the originally fitted and homologated part with no modification allowed, wheel spacers may be modified or replaced.
e. Wheel balance weights may be discarded, changed or added.
f. Any inflation valves may be used.

2.7.10.7 Brakes

a. Brake discs may be replaced by aftermarket discs which comply with following requirements:
    i. Only steel (max. carbon content 2.1 wt. %) is allowed for brake discs.
    ii. Carrier must retain the same material as the homologated disc and carrier.
    iii. The outside and inner diameters of the brake disc must not be larger than the ones on the homologated disc.
    iv. The thickness of the brake disc may be increased but the disc must fit into the homologated brake caliper without any modification. The number of floaters is free.
    v. The fixing of the carrier on the wheel must remain the same as

on the homologated disc.

b. The front and rear brake caliper (mount, carrier, hanger) must remain as originally produced by the manufacturer for the homologated motorcycle.
c. In order to reduce the transfer of heat to the hydraulic fluid it is permitted to add metallic shims to the calipers, between the pads and the calipers, and/or to replace light alloy pistons with steel pistons made by the same manufacturer of the caliper.
d. The rear brake caliper bracket may be mounted fixed on the swing-arm, but the bracket must maintain the same mounting (fixing) points for the caliper as used on the homologated motorcycle.
e. The swing-arm may be modified for this reason to aid the location of the rear brake caliper bracket, by welding, drilling or by using a Helicoil.
f. The front and rear master cylinder must be the originally fitted and homologated part with no modification allowed. Front and rear brake fluid reservoirs may be changed.
g. Front and rear hydraulic brake lines may be changed.
h. The split of the front brake lines for both front brake calipers must be made above the lower fork bridge (lower triple clamp).
i. "Quick" (or "dry-brake") connectors in the brake lines are allowed.
j. Front and rear brake pads may be changed. Brake pad locking pins may be modified for quick change type.
k. Additional air scoops or ducts are not allowed.
l. The Antilock Brake System (ABS) must be removed.
m. 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. FIM approved guards will be permitted without regard to the material. The Technical Director has the right to refuse any guard not satisfying this safety purpose.

2.7.10.8 Handlebars and hand controls

a. Handlebars may be replaced (except for the brake master cylinder).
b. Handlebars and hand controls may be relocated.
c. Throttle controls must be self-closing when not held by the hand.
d. Throttle assembly and associated cables may be modified or replaced but the connection to the throttle body and to the throttle controls must remain as on the homologated motorcycle.
e. Clutch and brake lever may be replaced with an after-market model. An adjuster to the brake lever is allowed.
f. Switches may be changed but the electric starter switch and engine stop switch must be located on the handlebars.
g. 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.

2.7.10.9 Foot rest / 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 and rear brake 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 8 mm solid spherical radius.
e. Non folding footrests must have an end (plug) which is permanently fixed, made of aluminum, plastic, Teflon® or an equivalent type material (minimum radius 8mm). The plug surface must be designed to reach the widest possible area. The MotoAmerica Technical Director has the right to refuse any plug not satisfying this safety aim.

2.7.10.10 Fuel tank

a. Fuel tank must be the originally fitted and homologated part with no modification allowed.
b. All fuel tanks must be completely filled with fire retardant material (i.e. fuel tank foam)
c. Fuel tanks with tank breather pipes must be fitted with non-return valves that discharge into a catch tank with a minimum volume of 250cc made of a suitable material.
d. Fuel caps may be changed. Fuel caps when closed must be leak proof. Additionally, they must be securely locked to prevent accidental opening at any time.
e. A rider spacer/pad may be fitted to the rear of the tank with non-permanent adhesive. It may be constructed of foam padding or composite material.
f. The tank may not have a cover fitted over it unless the homologated machine also features a full cover.
g. The sides of the fuel tank may be protected with a cover made of a composite material. These covers must fit the shape of the fuel tank.

2.7.10.11 Fairing / Bodywork

a. Fairing and bodywork may be replaced with exact cosmetic duplicates of the original parts, but must appear to be as originally produced by the manufacturer for the homologated motorcycle, with slight differences due to the racing use (different pieces mix, fixing points, fairing bottom, etc). The material may be changed. The use of carbon fiber or carbon composite materials is not allowed. Specific reinforcements in Kevlar® or carbon are allowed locally around holes and stressed areas. Headlights must be

included even when considered external.

b. Overall size and dimensions must be the same as the original part, with a tolerance of +-10mm, respecting the design and features of the homologated fairing as far as possible. The overall width of the frontal area may be +10mm maximum. The decision of the Technical Director is final.
c. Wind screen may be replaced with an aftermarket product. The height of the windscreen is free, within a tolerance of +/- 15 mm referred to the vertical distance from/to the upper fork bridge. The screen must conform to the same profile from the front as the original – no double bubble or wide types. From a top view the length of the windscreen may be shortened by 25mm to allow clearance for the rider. The edge of the screen must have no sharp edges
d. Motorcycles that are not originally equipped with streamlining are not allowed to add streamlining in any form, with the exception of a lower fairing device, as described in point (h). This device cannot exceed above a line drawn horizontally from wheel axle to wheel axle and must follow the specifications described at point (h& i).
e. The original combination instrument/fairing brackets may be replaced, but the use of titanium and carbon (or similar composite materials) is forbidden. All other fairing brackets may be altered or replaced.
f. The ram-air intake must maintain the originally homologated shape and dimensions.
g. The original air ducts running between the fairing and the air box may be altered or replaced. Carbon fiber composites and other exotic materials are forbidden. Particle grilles or “wire-meshes” originally installed in the openings for the air ducts may be removed.
h. The lower fairing must to be constructed to hold, in case of an engine breakdown minimum 6 liters. The lower edge of all the openings in the fairing must be positioned at least 70 mm above the bottom of the fairing.
i. The upper edge of the rear transverse wall of the lower fairing must be at least 70 mm above the bottom. The angle between this wall and the floor must be ≤ 90°.
j. 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 centers, circle centers and their diameters must be constant. Holes or perforations must have an open area ratio > 60%.
k. Motorcycles may be equipped with a radiator shroud (inner ducts) to improve the air stream towards the radiator but the appearance of the front, the rear and the profile of the motorcycle must not be changed.
l. The lower fairing must incorporate a single opening of Ø 25 mm diameter in the front lower area. This hole must remain sealed in dry conditions and must be opened only in wet race conditions as declared by the Race Director.
m. Front mudguards may be replaced with a cosmetic duplicate of the original parts and may be spaced upward for increased tire clearance.

n. Rear mudguard fixed on the swing arm may be modified, changed or removed.

2.7.10.12 Seat

a. Seat, seat base and associated bodywork may be replaced. The appearance from front, rear and profile must conform to the homologated shape
b. The top portion of the rear bodywork around the seat may be modified to a solo seat.
c. The homologated seat locking system (with plates, pins, rubber pads etc.) may be removed.
d. Same material as fairing must be used. (article 2.7.10.10.a)
e. All exposed edges must be rounded.

2.7.10.13 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 pit-lane and the session is declared WET. All lights must comply with the following:

a. Lighting direction must be parallel to the machine center line (motorcycle running direction), and be clearly visible from the rear at least 15 degrees to both left and right sides of the machine center line.
b. The rear light must be mounted near the end of the seat/rear bodywork and approximately on the machine center 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.

2.7.10.14 Fasteners

a. Standard fasteners may be replaced with fasteners of any material and design but titanium fasteners cannot be used. The strength and design must be equal to or exceed the strength of the standard fastener.
b. Fasteners may be drilled for safety wire, but intentional weight-reduction modifications are not allowed.
c. Thread repairs may be made using inserts of different material such

as Helicoils® and Timeserts®.

d. Fairing / bodywork fasteners may be replaced with the quick disconnect type.
e. Aluminum fasteners may only be used in non-structural locations.

2.7.11 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 materials.
c. Instruments, instrument bracket(s) and associated cables.
d. Painted external surface finishes and decals.
e. Material for brackets connecting non original parts (fairing, exhaust, instruments, etc.) to the frame (or engine) cannot be made from titanium or fiber reinforced composites **excepting the exhaust silencer hanger that may be in carbon.**
f. Protective covers for the frame, chain, footrests, etc. may be made in other materials like fiber composite material if these parts do not replace original parts mounted on the homologated model.

2.7.12 The following items MAY BE Removed

a. Emission control items (anti-pollution) in or around the air box and engine (O2 sensors, air injection devices).
b. Tachometer.
c. Speedometer.
d. Bolt-on accessories on a rear sub frame.

2.7.13 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. Toolkit.
f. Helmet hooks and luggage carrier hooks.
g. Passenger foot rests.
h. Passenger grab rails.
i. Safety bars, center and side stands must be removed (fixed brackets must remain).

2.7.14 The following items MUST BE Altered

a. All drain plugs must be wired. External oil filter(s) screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases).
b. Where breather or overflow pipes are fitted they must discharge via

existing outlets. The original closed system must be retained**:** no direct atmospheric emission is permitted.

c. Motorcycles must be equipped with a red light on the instrument panel that will illuminate in the event of oil pressure drop (Yamaha R6 exempted).

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2.8 KTM RC CUP TECHNICAL SPECIFICATIONS

The following rules are intended to permit limited changes to the homologated motorcycle in the interests of safety and improved competition between various motorcycle concepts.

EVERYTHING THAT IS NOT AUTHORIZED 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

KTM RC Cup motorcycles will be checked randomly for conformity of the rules.

Only KTM RC Cup bikes meeting the specifications of the KTM RC Cup powered by KTM and delivered officially for the series by KTM shall be allowed

The appearance from the front, rear and the profile of KTM RC Cup motorcycles must (except when otherwise stated) conform to the homologated shape (as originally produced by the manufacturer).

2.8.1 Motorcycle specifications

All parts and systems not specifically mentioned in the following articles must remain as originally produced by KTM for the KTM RC Cup specific race model.

2.8.2 Engine configurations and displacement capacities

The following engine configurations comprise the KTM RC Cup class:

373.2 cc 4-stroke 1 cylinder

The displacement capacity, bore and stroke (new), must remain at the homologated size.

2.8.4 Minimum weight

KTM RC 390 141kg (310.8lb)

At any time of the event, the weight of the whole motorcycle (including the tank and its contents) must not be lower than the minimum weight.

There is no tolerance on the minimum weight of the motorcycle.

During the final technical inspection at the end of the 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.

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.

2.8.5 Number plate colors

The background colors and figures (numbers) for KTM RC Cup are Yellow Background (pantone yellow c) with Black Numbers.

The sizes for all the front numbers are:	Minimum height:	78mm
	Minimum width:	64mm
	Minimum stroke:	15mm
	Minimum space between numbers	2.5mm
The size for all the side numbers is:	Minimum height:	93mm
	Minimum width:	77mm
	Minimum stroke:	15mm
	Minimum space between numbers	2.5mm

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

a. Once on the front, either in the center of the fairing or slightly off to one side. The number must be centered on the **yellow** background with no advertising within 25mm in all directions.
b. Once, on each side of the motorcycle. The preferred location for the numbers on each side of the motorcycle is on the lower rear portion of the main fairing near the bottom. The number must be centered on the red background. Any change to this position must be pre-approved a minimum of 2 weeks before the first race by the MotoAmerica Technical Director.
c. The numbers must use the fonts as detailed after Art. 2. Any numbers not using these fonts must have the design of the numbers and the layout pre-approved by the MotoAmerica Technical Director a minimum of 2 weeks before the first race. All digits must be of standard form.
d. Any outlines must be of a contrasting color and the maximum width of the outline is 3mm. The background color must be clearly visible around all edges of the number (including outline). Reflective or mirror type numbers are not permitted.
e. Numbers cannot overlap.

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

2.8.6 Fuel

Specified in Article: 2.9

2.8.7 Tires

a. You must use the KTM RC Cup series approved Dunlop tires only.
    1. Dry Tires – DOT All Tracks
        - Front - 110/70ZR17 ALPHA 13 SP
        - Rear - 150/60ZR17 ALPHA 13 SP

    2. Rain Tires
        - Rain Front - 110/70R17 KR189 WA
        - Rain Rear - 140/65R17 KR389 WA
b. The maximum number of tires, of any type, available to each rider during the event will be **specified in Article: 2.3.7**
c. For the KTM RC Cup race only, wet tires will not need to be marked with a tire sticker. They will not be considered in the total number of tires available for use, however normal allocation limits still apply.
d. Every tire used during the event must be marked with an adhesive sticker with a number allocated by the MotoAmerica Technical Director. The sticker will be a different color front and rear.
e. The tire stickers will be delivered to the teams in a sealed envelope, on the day before the first practice after which the teams will be responsible for their use.
f. Officials will check that all the motorcycles in the pit lane are fitted with tires carrying the sticker.
g. Stickers must be mounted to the left sidewall.
h. The use of motorcycles without the official stickers will be immediately reported to the Race Direction whom will take appropriate action.
i. Any modification or treatment (cutting, grooving) is forbidden.
j. At the beginning of the event, the Official Supplier may be requested by the MotoAmerica Technical Director to deliver to him four (4) samples of each type of tire to be used at the event.
k. The allocation of individual tires will be made on a random basis, with no involvement of any representative from the tire supplier, teams or riders. Those tires will be individually identified and may not be exchanged between riders, including between team mates, and may not be exchanged by the tire supplier after the allocation, except with the permission of the Race Direction.
l. In exceptional cases, should the sticker be damaged or applied in the wrong way, up to 2 extra stickers may be provided at the sole discretion of the MotoAmerica Technical Director. However, the damaged sticker must be returned to the MotoAmerica Technical Director and/or the tire it was applied to, must be absolutely intact.

2.8.8 Engine

2.8.8.1 Fuel injection system

Fuel injection systems refer to throttle bodies, fuel injectors, variable length intake tract devices, fuel pump and fuel pressure regulator.

a. The fuel injection system must maintain the configuration that KTM delivers the machines with and cannot be altered or changed.
b. The fuel injectors must be stock and unaltered from the original specification and manufacture.
c. Bell mouths must remain as originally produced by the manufacturer for the homologated motorcycle.
d. Butterfly valves cannot be changed or modified.
e. Air and air/fuel mixture must exclusively enter the combustion chamber through the throttle body butterflies.

2.8.8.2 Cylinder Head

a. Must be the originally fitted and homologated part with no modification.
b. The cylinder head and cylinders must have the official tech seal intact.

2.8.8.3 Camshaft

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

2.8.8.4 Cam sprockets or gears

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

2.8.8.5 Cylinders

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

2.8.8.6 Pistons

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

2.8.8.7 Piston rings

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

2.8.8.8 Piston pins and clips

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

2.8.8.9 Connecting rods

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

2.8.8.10 Crankshaft

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

2.8.8.11 Crankcase / Gearbox housing

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

2.8.8.11.1 Lateral covers and protection

a. Lateral (side) covers may be altered, modified or replaced. 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 either replaced by a 'heavier' engine cover or protected by a second cover made from metal such as aluminum alloy, stainless steel, steel or titanium, or an approved cover.
c. Any secondary covers must cover a minimum of 1/3 of the original cover. It must have no sharp edges to damage the track surface. 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.
d. Plates or crash bars made from aluminum 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. **Oil containing engine cases must be secured with steel bolts.**
f. FIM approved covers will be permitted without regard of the material or dimensions.
g. These covers must be fixed properly and securely with case cover screws that also mount the original covers/engine cases to the crankcases.The Technical Director has the right to refuse any cover not satisfying this safety purpose.

2.8.8.12 Transmission / Gearbox

a. Transmission or gearbox must be the originally fitted and homologated part with no modification.
b. OEM shift drum detent star must remain as homologated but the detent arm and spring may be modified or replaced.
c. The sprocket cover may be modified or eliminated.
d. Final drive sprockets may be changed.
e. Sprockets can be made of aluminum or steel.
f. Chain must remain a 520 size O-ring style chain

2.8.8.13 Clutch

a. The homologated non-back torque limiting or back torque limiting clutch may be used.
b. 2015 KTM RC Cup motorcycles equipped with a non-back torque limiting clutch may be updated to the 2016 KTM RC Cup Back torque limiting clutch. The following part numbers must be used for the conversion:

Qty	Part Number	Description
1	90232101044	Clutch Cage
1	90232102000	Inner Clutch Hub
1	90232111010	Clutch Kit 390
1	90232103000	Pressure Plate
3	90232105000	Clutch Springs
3	90232101101	HH Screw M6x35
1	J625069020	Ball Bearing 6902
1	90232006000	Stopper Plate
3	90232004000	Spring Seat

c. No other modifications are allowed
d. Replacement clutch parts (ie friction plates, steel plates, springs, etc.) must remain as homologated.

2.8.8.14 Oil pumps and oil lines

a. No pump or oil line modifications are allowed.

2.8.8.15 Radiator, cooling system and oil cooler

a. The only liquid engine coolants permitted is water
b. Protective meshes may be added in front of the oil and/or water radiator(s).
c. The cooling system hoses and catch tanks may be changed.
d. Radiator cap is free.

2.8.8.16 Air box

a. The air box must remain as originally produced by the manufacturer on the homologated motorcycle.
b. b. The air filter element must remain as homologated.
c. The air box drains must be sealed. Drains may be open during wet conditions only
d. All motorcycles must have a closed breather system. All oil breather lines must be connected and discharge in the air box.

2.8.8.17 Fuel supply

a. Fuel pump and fuel pressure regulator must be the originally fitted and homologated part with no modification.
b. The fuel pressure must be as homologated.
c. Fuel lines from the fuel tank to the delivery pipe assembly (excluded) may be replaced.
d. Fuel vent lines may be replaced.

2.8.8.18 Exhaust system

a. The MotoAmerica approved KTM RC Cup Akrapovic exhaust system is the only system that can be used.
b. 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.
c. The silencer noise insert may be removed.

2.8.8.19 Lubrication system

The MotoAmerica approved KTM RC Cup **Motorex "POWER SYNT 4T Fully Synthetic 10w/50"** engine oil must be used.

2.8.9 Electrics and electronics

2.8.9.1 Ignition / Engine Control System (ECU)

a. The engine control system (ECU) must be:
    i. The original system as homologated.
b. Optional equipment sold by the motorcycle manufacturer for the homologated model is considered not homologated.
c. During an event the Technical Director has the right to ask a team to substitute their ECU with the sample received from the Manufacturer. The change has to be done before Sunday warm up.
d. No extra sensors may be added for control strategies.
e. The addition of an infrared (IR) or GPS based lap timing system is allowed.
f. Data logging is not allowed. Lap timers using any data recording with the exception of lap time are not allowed.
g. Telemetry is not allowed.
h. 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.
i. Harness:
    i. No modifications to the main harness are allowed.
    ii. An on/off circuit may be added for the rain light
    iii. The key/ignition lock may be relocated, replaced or removed. However, the main harness cannot be altered or cut.
j. Spark plugs may be replaced.
k. Battery is free.

2.8.9.2 Generator, alternator, electric starter

a. No modifications are allowed.
b. The electric starter must operate normally and always be able to start the engine during the event.

2.8.10 Main frame and spare frame

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 seal. In case the frame will need to be replaced the rider or the team can request the use of a spare frame to the MotoAmerica Technical Director. The spare frame must be inspected before assembly can begin.

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

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

No other 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

In extraordinary circumstances the technical director may give permission for the KTM supplied spare machine to be used if it is felt the damaged machined cannot be repaired safely and in the available time.

See 2.5.10 for the explanation of the procedures.

2.8.10.1 Frame body and rear sub frame

a. The frame must remain as originally produced by the manufacturer for the homologated motorcycle.
b. The sides of the frame-body may be covered by a protective part made of a composite material. These protectors must fit the form of the frame.
c. Nothing else may be added or removed from the frame body.
d. All motorcycles must display a vehicle identification number punched on the frame body (chassis number).
e. Engine mounting brackets or plates must remain as originally produced by the manufacturer for the homologated motorcycle.
f. The frame paint scheme is restricted to the original KTM orange.

2.8.10.3 Front Suspension

a. Forks (stanchions, stem, wheel spindle, upper and lower crown, etc.) must remain as originally produced by the manufacturer for the homologated motorcycle.
b. The upper and lower fork clamps (triple clamp, fork bridges) must remain as originally produced by the manufacturer on the homologated motorcycle.
c. Steering stem pivot position must remain in the homologated position (as supplied on the production bike).
d. Original internal parts of the homologated forks may not be modified or changed.

e. Springs may be changed with the following:
   i. **7040-9005 Fork spring 7.0**
   ii. **7040-9006 Fork spring 7.5**
   iii. **7040-9007 Fork spring 8.0**
   iv. **97010029 Fork Spring 8.5**
   v. **97010030 Fork Spring 9.0**
f. Oil weight/height may be changed.
g. Additional surface treatments are not allowed.
h. Modifications to the pistons, valve stacks, or oil passage ways is not allowed.

2.8.10.4 Rear fork (Swing arm)

a. The rear fork must remain as originally produced by the manufacturer for the homologated motorcycle.
b. The stock or aftermarket chain guard must be fitted in such a way to reduce the possibility that any part of the riders' body may become trapped between the lower chain run and the rear wheel sprocket.

2.8.10.5 Rear suspension unit

a. All rear suspension linkage parts must remain as originally produced by the manufacturer for the homologated motorcycle.
b. Rear suspension unit cannot be changed.
c. Normal service components (seals, oil, bushings) may be changed or replaced.
d. Springs may be changed with the following:
   i. **7018-9001 Shock spring 72/130**
   ii. **7018-9002 Shock spring 74/130**
   iii. **7018-9003 Shock spring 76/130**
   iv. **7018-9004 Shock spring 78/130**
   v. **7018-9005 Shock spring 80/130**
   vi. **7018-9006 Shock Spring 82/130**
   vii. **7018-9007 Shock Spring 84/130**
   viii. **7018-9008 Shock Spring 86/130**
e. Modifications to the pistons, valve stacks, or oil passage ways is not allowed.

2.8.10.6 Wheels

a. Wheels must remain as originally produced by the manufacturer for the homologated motorcycle.
b. A non-slip coating / treatment may be applied to the bead area of the rim.
c. The original KTM RC Cup orange paint must remain as homologated.
d. Wheel axles and bearings must remain as homologated, wheel spacers may be modified or replaced.
e. Wheel balance weights may be discarded, changed or added to.

f. Any inflation valves may be used.

2.8.10.7 Brakes

a. Brake discs must remain as homologated.
b. The front and rear brake caliper (mount, carrier, hanger) must remain as originally produced by the manufacturer for the homologated motorcycle.
c. The front and rear master cylinder must remain as originally produced by the manufacturer for the homologated motorcycle.
d. Front and rear brake fluid reservoirs may be changed with aftermarket products.
e. Front and rear hydraulic brake lines may not be changed.
f. Front and rear brake pads **Can only be replaced with the homologated brake pads (part# 90813030000 or 90113030000)**
g. Additional air scoops or ducts are not allowed.
h. 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 with the exception of the original equipment as delivered by KTM. FIM approved guards will be permitted without regard to the material.
i. The MotoAmerica Technical Director has the right to refuse any guard not satisfying this safety purpose.

2.8.10.8 Handlebars and hand controls

a. Handlebars may be replaced with homologated or aftermarket parts.
b. The original mounting location for the handle bars must be used.
c. Throttle controls must be self-closing when not held by the hand.
d. Throttle assembly and associated cables may not be modified or replaced.
e. Clutch and brake lever may be replaced.
f. Switches may be changed but the electric starter switch and engine stop switch must be located on the handlebars.
g. 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.

2.8.10.9 Foot rest / 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 and rear brake 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 8 mm solid spherical radius.
e. Non folding footrests must have an end (plug) which is permanently fixed, made of aluminum, plastic, Teflon® or an equivalent type material (minimum radius 8mm). The plug surface must be designed to reach the widest possible area. The MotoAmerica Technical Director has the right to refuse any plug not satisfying this safety aim.

2.8.10.10 Fuel tank

a. Fuel tank must remain as originally produced by KTM for the homologated motorcycle.
b. The sides of the fuel tank may be protected with a cover made of a composite material. These covers must fit the shape of the fuel tank.

2.8.10.11 Fairing / Bodywork

a. Fairing, bodywork, and windscreen must be as originally fitted on KTM RC Cup model motorcycle.
b. The rear fender upper cover may be removed or modified only for the purpose of accessing rear shock adjustments.

2.8.10.12 Seat

a. Seat padding may be replaced with parts of similar appearance as originally produced by the manufacturer for the homologated motorcycle. The appearance from the front, rear and profile must conform to the homologated shape.

2.8.10.13 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 pit-lane and the session is declared WET. All lights may be the KTM light as originally supplied or comply with the following:
a. Lighting direction must be parallel to the machine center line (motorcycle running direction), and be clearly visible from the rear at least 15 degrees to both left and right sides of the machine center line.
b. The rear light must be mounted near the end of the seat/rear bodywork and approximately on the machine center 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.

2.8.10.14 Fasteners

a. Standard fasteners may be replaced with fasteners of any material and design but titanium fasteners cannot be used. The strength and design must be equal to or exceed the strength of the standard fastener.
b. Fasteners may be drilled for safety wire, but intentional weight-reduction modifications are not allowed.
c. Threads may be repaired using inserts of different material such as helicoils and timeserts.
d. Fairing / bodywork fasteners may be replaced with the quick disconnect type.
e. Aluminum fasteners may only be used in non-structural locations.

2.8.10 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 with the exception of engine oil.
b. Material for brackets connecting non original parts (fairing, exhaust, instruments, etc.) to the frame (or engine) cannot be made from titanium or fiber reinforced composites.
c. Protective covers for the frame, chain, footrests, etc. may be made in other materials like fiber composite material if these parts do not replace original parts mounted on the homologated model
d. The OEM chain guard may be modified for the purpose of making rear wheel changes more efficient as long as the chain guard still functions as intended.

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2.9 FUEL, OIL AND COOLANTS

a. All motorcycles must be fueled with **TBA by January 15th**

2.9.3 Air

Only ambient air may be mixed with the fuel as an oxidant.

2.9.4 Primary Tests

2.9.4.1 The AMA/FIMNA may require tests of fuels to be administered before, or at the time of delivery to, an event at which such fuels are to be used.

2.9.4.2 Fuel companies supplying fuels to participating teams must submit ten liters (2 x 5 L) to the laboratory appointed by the AMA/FIMNA for analysis in accordance with the specification. Providing the fuel is within the specification, a certificate containing a test report number will be issued to the fuel company. The fuel company must provide a copy of the test report number to the appropriate rider/teams before they take part in a race. Contact for fuel analysis technicaldirector@motoamerica.com

2.9.5 Fuel Sampling and Testing

1) The MotoAmerica Technical Director has the sole responsibility for the administration and supervision during the taking of fuel samples.

2) The preferred fuel test method is gas chromatography or GC Fingerprint method.

Gas chromatography (GC) is an analytical technique for separating compounds based primarily on their volatility and polarity. Gas chromatography provides both qualitative and quantitative information for individual compounds present in a sample. Gas chromatography is widely used for the analysis of fuels.

The GC Fingerprint is a comparison between the given reference and the fuel drawn from the competitor. With the fingerprint method any changes in composition and concentration of the fuel against the reference is detected. The separation is done with a non-polar column suitable for fuels analysis. The detection of the components is done with a flame ionization detector.

3) If other test methods are required, fuel samples will be transported to the appointed laboratory by an official courier, using the appropriate containers.

4) Riders selected for fuel controls will be directed with their motorcycles to the inspection area.

5) Only new sample bottles will be used for the fuel samples.

6) The fuel to be tested will be transferred into three bottles (3 small sample containers), marked A, B and C, and identified by reference to the motorcycle from which the sample was taken. The bottles will be closed, sealed and labelled by the MotoAmerica Technical Director and/or the Fuel Analysts.

7) The Fuel Sample Declaration form will be filled out immediately, containing all information as shown on the sample sheet, including the riders' name and race number, date and place of fuel sampling. A responsible team member will sign this declaration, after verifying that all the information is correct.

8) Sample A and B will be given to the appointed laboratory staff, present at the event for analysis or be sent to the respective laboratory by the organizer if no trackside laboratory is available. Sample B will be kept by the laboratory staff as a retained sample in case of a dispute. All samples will be accompanied by a copy of the Fuel Sample Declaration form. Costs for the analyses of sample A and B will be paid by MotoAmerica.

9) Sample C will be handed over to the AMA/FIMNA for safeguarding in case of protests and/or requirement of a counter-expertise by the AMA/FIMNA appointed laboratory, accompanied by a copy of the Fuel Sample Declaration form. Costs for the analyses of sample C will be paid by the team concerned.

10) As soon as possible after receipt of the samples and completing the testing, the Fuel Analyst/AMA/FIMNA appointed laboratory will report the results of the fuel sample analyses directly to the MotoAmerica Technical Director.

11) In the case of non-conformity, the MotoAmerica Technical Director must notify the results to MotoAmerica, the Race Direction and the rider/team representative concerned. Failure of the sample to correspond to the controlled fuel will result in the disqualification of the competitor. The result of the competitor's fuel sample analysis ("A" or "B" sample) more favorable to the competitor will be taken into account.

12) Within 48 hours of the receipt of the notification of the results of the test of sample A and/or B, the team must notify MotoAmerica and the MotoAmerica Technical Director if a counter-expertise is required (or not required) for sample C.

13) The Race Direction will take a decision at the Superbike, Supersport and Superstock event immediately following the notification of the results of the final expertise. Any appeal against the decision of the Race Direction will be heard by the FIMNA Stewards appointed for the Superbike, Supersport and Superstock event at which the Race Direction decision is taken. This will take place after the C sample has been analyzed.

2.9.6 Fuel Storage

Fuel must only be stored in metal, sealable containers in the competitor's pit.

Firefighting equipment, protective devices and staff must conform to the requirements imposed by the local authorities and by-laws.

The organizer must have fire extinguishers of a size and type approved by the local by-laws, available to each competitor in the pit area.

2.9.7 Coolants

The only liquid engine coolants permitted other than lubricating oil is water.

2.10 PROTECTIVE CLOTHING AND HELMETS

2.10.1 Riders must wear a complete leather suit with additional leather padding or other protection on the principal contact points, knees, elbows, musters, hips etc.

2.10.2 Linings or undergarments must not be made of a synthetic material which might melt and cause damage to the riders' skin.

2.10.3 Riders must also wear leather gloves and boots, which with the leather suit provide complete coverage from the neck down.

2.10.4 Leather substitute materials may be used, providing they have been checked by the MotoAmerica Technical Director.

2.10.5 Use of a back protector is highly recommended.

2.10.6 Riders must wear a helmet which is in good condition, provides a good fit and is properly fastened.

2.10.7 Helmets must be of the full face type (integral) and conform to one of the recognized international standards:

- Europe ECE 22-05 ‘P’
- Japan JIS T 8133 :
- USA SNELL M 2010

2.10.8 Visors must be made of a shatterproof material.

2.10.9 Disposable "tear-offs" are permitted.

2.10.10 The riders clothing must include their name, emergency contact, and blood type adhered to the left-side lining adjacent to the main zipper.

2.10.11 Any question concerning the suitability or condition of the riders clothing and/or helmet shall be decided by the MotoAmerica Technical Director, who may, if he so wishes, consult with the manufacturers of the product before

making a final decision.

2.11 PROCEDURES FOR TECHNICAL CONTROL

A rider is at all times responsible for his motorcycle.

2.11.1 At each circuit the Technical Checking Area consisting of the *parc fermé* and the inspection area must be clearly defined:

a) Parc fermé

The *parc fermé* is a restricted access area sealed with fences or other physical divisions with one or more gates.
The gates and the area are under the control of marshals when the *parc fermé* is in use (e.g. after practice/race).
The *parc fermé* area must be sufficiently large to give shelter to all participating motorcycles.
The only persons allowed to enter the *parc fermé* are the:

- MotoAmerica Technical Director and Technical Staff
- Race Direction Members
- FIMNA Stewards
- Tire Manufacturer's staff
- Riders and Team Managers of motorcycles staying in the *parc fermé*
- Up to 3 Team Mechanics until dismissed by the technical stewards

No other persons have the right to enter and stay in the *parc fermé* unless invited by the MotoAmerica Technical Director.

b) Inspection area

The inspection area is a sensitive area where motorcycles are disassembled and inspected and technical meetings are held. Therefore, the inspection area is highly restricted.

The following persons are allowed to remain in the inspection area:

- The MotoAmerica Technical Director and Technical Staff
- The Race Direction Members
- The FIMNA Stewards
- The Riders, Team managers or their representatives of the inspected motorcycles
- For disassembling operations, up to 3 mechanics per motorcycle may be present

Any other persons may enter or stay in the inspection area at the sole discretion of the MotoAmerica Technical Director. In case of an engine inspection, the inspected entrant has the right to request a reserved area where other entrants

cannot watch closely.
In the inspection areas, under the control of the Technical Manager and the supervision of the MotoAmerica Technical Director, suitable equipment will be installed to conduct the various tests, e.g.

i) Equipment for measuring the noise of the motorcycle

ii) Weighing scales with check weights for calibration purposes

iii) Instruments for measuring engine capacity

iv) Rulers and degree discs and gauges for measuring other dimensions

2.11.2 The technical control procedure will be carried out in accordance with the schedule set out in these Regulations. The Technical Stewards must be available throughout the event to check motorcycles and equipment as required by the MotoAmerica Technical Director.

2.11.3 Presentation of a motorcycle will be deemed as an implicit statement of conformity with the technical regulations. A rider's presence at the technical control is not mandatory.

2.11.4 The motorcycle will be inspected under the name of the rider.

2.11.5 For each motorcycle the Technical Stewards will prepare a technical control card on to which will be recorded, amongst other information, the team presenting the motorcycle and the rider.

2.11.6 The Technical Stewards must inspect the motorcycle for obvious safety omissions and the MotoAmerica Technical Director may, at his discretion, choose to check the motorcycles for technical compliance with all other aspects of these Regulations.

2.11.7 The MotoAmerica Technical Director will refuse any motorcycle that does not have a correctly-positioned positive transponder attachment. The transponder must be fixed to the motorcycle in the position and orientation as shown in the Timekeeping information given to teams pre-season and available at each event. Positive attachment of the transponder bracket consists of a minimum of tie-wraps, but preferably by screw or rivet. **Velcro or adhesive alone will not be accepted. The transponder retaining clip must also be secured by a tie-wrap.**

2.11.8 At the conclusion of the check, the Technical Stewards will place a small sticker on the motorcycle indicating that it has passed the safety checks.

2.11.9 The Technical Manager will prepare a report on the results of technical control which, will be submitted to the Event Management Committee via the MotoAmerica Technical Director.

2.11.10 The Technical Stewards must re-inspect any motorcycle that has been involved in an accident. This would normally be carried out at the inspection area.

2.11.11 The Technical Stewards must be available, based on instructions from the MotoAmerica Technical Director, to re-inspect any motorcycle for technical compliance during the meeting or after the race and to supervise inspection of a motorcycle following a protest on a technical matter.

2.11.12 At the end of Superpole the Technical Manager will ensure that the classified motorcycles are placed in the parc fermé for a period of at least 30 minutes after the end of the session.

At the end of the races, the Technical Manager will ensure that all classified motorcycles are placed in the parc fermé for a period of at least 30 minutes from the end of the race (unless held longer at the discretion of the Technical Director) with the following exception;

Competitors must retrieve their motorcycles within approximately 30 minutes after the motorcycle entered the parc fermé, except for those motorcycles chosen for disassembly. After this time limit, the parc fermé officials will no longer be responsible for the motorcycles left behind.

2.11.13 The MotoAmerica Technical Director may require a team to provide such parts or samples as he may deem necessary.

2.11.14 If a motorcycle is involved in an accident, the MotoAmerica Technical Director or his appointed staff must check the motorcycle to ensure that no defect of a serious nature has occurred. However, it is the responsibility of the rider or the team to present his motorcycle for this re-examination together with helmet and clothing.

If the helmet is clearly defective, the Technical Manager must arrange to retain this helmet. The Medical Director must send this helmet, together with the accident and medical report (and pictures and video, if available) to the AMA/ FIMNA and/or the Federation of the rider.

2.11.15 Noise may be checked after Superpole as well as after the race. Noise may be checked at any time of the event by request of the MotoAmerica Technical Director. On request of rider, team or mechanic, noise of their own motorcycles can be checked at any time during the event.

2.11.16 The random weight check during practices will be held with minimum disturbance to the riders.

The MotoAmerica Technical Director has the final authority in case of a dispute on the conformity of the parts in question and for their acceptance.

2.12 VERIFICATION GUIDELINES FOR TECHNICAL STEWARDS

2.12.1 Verification for the classes

- Make sure all necessary measures and administrative equipment are in place at least 1 hour before the Technical control is due to open.

- Decide who is doing what and note decisions. "Efficiency" must be the watchword. Always keep cheerful and remember the reasons for Technical controls: SAFETY AND FAIRNESS.

- Be well informed. Make sure MotoAmerica has supplied you with all technical "updates" that may have been issued subsequent to the printing of the Technical Regulations. Copies of all homologation documents must be in your possession.

- Inspection must take place under cover with a large enough area (min. surface 100 sq. meters).

- Weighing apparatus must be accurate and practical. The scale must be certified in the current year.

- Rules regarding noise level and measurement must be respected.

- The scales and noise meter will be available to the teams or riders for pre-race checking in the technical control area.

In general

The motorcycles will not be required for weight and/or noise check at the pre-race technical inspection.

Noise test must take place in a clear area adjacent to the Technical control at least 5 meters from any possible noise reflecting obstruction.

The riders and teams must be aware that the weight and noise may be checked at random during practice in the pit-lane, at the end of Superpole and at the end of each race.

Claiming that the noise and weight were not officially controlled before the race will not be grounds for appeal. Conformity of the rules is the responsibility of the rider and the team (or of the participants).

The MotoAmerica Technical Director reserves the right to spot check the weight and noise of any motorcycles on pit row during free practice and official practice. This can occur at any time during the free practice and in the first forty minutes of any official (timed) practice. This will be carried out with the least possible inconvenience to the rider or the team.

Motorcycles arriving later than the first free practice must be controlled in the technical control area.

At the conclusion of the inspections, a small sticker or colored mark will be placed on the motorcycle indicating that the motorcycle had passed inspection

The MotoAmerica Technical Director/Technical Manager must re-inspect any motorcycle that has been involved in an accident.

The Technical Stewards must be available, based on instructions from the MotoAmerica Technical Director or the Technical Manager, to re-inspect any motorcycle for compliance during the meeting.

Dry Superpole

Each motorcycle which completed the Superpole may be checked.

The minimum checks are weight and noise.

The MotoAmerica Technical Director may request other checks.

Superbike/STK 1000 Race 1

The first five motorcycles plus one at random from six through fifteen can be checked for the following compliance points:

- Weight: The weight will be checked in the condition that the motorcycle has finished the race. No elements can be added to the motorcycle neither fuel, oil, water nor tires.

- Noise

- Throttle bodies / injection: Homologation points

The MotoAmerica Technical Director may request other checks.

Superbike/STK 1000 Race 2

The first ten motorcycles plus one at random from eleven through fifteen can be checked for the following compliance points:

- Weight: The weight will be checked in the condition that the motorcycle has finished the race. No elements can be added to the motorcycle neither fuel, oil, water nor tires.

- Noise.

- Throttle bodies/injection: Measurement and inspection of both inlet and outlet tract. (Homologation points)

- Engine: Any engine, chosen at random, can be checked internally for capacity and compliance with the regulations.

The random choice can be determined by the finishing positions selected prior to the race by the Technical Manager. The MotoAmerica Technical Director may at his absolute discretion require the control of any additional motorcycle and other checks.

The MotoAmerica Technical Director may require a team to provide parts or samples, as he may deem necessary to confirm compliance with the rules.

The MotoAmerica Technical Director may request other checks.

Supersport & Superstock 600 Races

The first ten motorcycles plus one at random from eleven through fifteen can be checked for the following compliance points:

- Weight: The weight will be checked in the condition that the motorcycle has finished the race. No elements can be added to the motorcycle neither fuel, oil, water nor tires.

- Noise.

- Throttle bodies /injection: Measurement and inspection of both inlet and outlet tract.

- Engine: One engine and up to a maximum of three engines, chosen at random, can be checked internally for capacity, cams, valve size, timing, etc.

- Tire, air box and electric starter – compliance.

The random choice can be determined by the finishing positions selected prior to the race by the Technical Manager. The MotoAmerica Technical Director may at his absolute discretion require the control of any additional motorcycle and other checks.

2.12.2 Timetable

The Technical Stewards must be present and available during the opening hours of the Technical control area. The MotoAmerica Technical Director and the Technical Manager will instruct the Technical Stewards to verify motorcycles for compliance with technical and safety rules.

See final instructions for event specific timetable.

2.12.3 Equipment list

- Revolution meter
- Sound meter and calibrator
- Slide caliper
- Depth gauge
- Steel measuring tape
- Seals
- Weighing apparatus (scales) with calibration weights
- Tools for measuring engine capacity
- Tools for measuring valve lift
- Weighing apparatus for investigation of valve weights
- Color for marking parts
- Magnet for materials testing
- Computer with Homologation Documents

2.12.4 Documents list

- Regulations of the CURRENT year.
- Homologation documents
- Homologations Information
- Technical control forms
- Writing materials

2.13 SOUND LEVEL CONTROL

Sound limits in force:

The maximum sound level shall be measured at a mean piston speed of 11 m/sec. The fixed RPM specified in Art. 2.13.5 may be used.

2.13.1 With the microphone placed at 50 cm from the exhaust pipe at an angle of 45° measured from the center-line of the exhaust end and at the height of the exhaust pipe, but at least 20 cm above the ground. If this is not possible, the measurement can be taken at 45° upwards.

2.13.2 During a sound test, motorcycles not equipped with a gear-box neutral must be placed on a stand.

2.13.3 The silencers will be marked when they are checked and it is not allowed to change them after the verification, except for any spare silencer which has also been checked and marked.

2.13.4 The rider shall keep his engine running out of gear and shall increase the engine speed until it reaches the specified Revolutions Per Minute (RPM). Measurements must be taken when the specified RPM is reached.

2.13.5 Noise control

Due to the similarity of the piston stroke in different engine configurations within the capacity classes, the noise test will be conducted at a fixed RPM. For reference only, the mean piston speed at which the noise test is conducted is calculated at 11 m/sec.

	2 cylinders	3 cylinders	4 cylinders
600cc	5,500 RPM	6,500 RPM	7,000 RPM
750cc	5,500 RPM	6,000 RPM	7,000 RPM
over 750cc	5,000 RPM	5,000 RPM	5,500 RPM

The maximum sound level for engines with more than one cylinder will be measured on each exhaust end.

A motorcycle which does not comply with the maximum sound limits may be presented several times at pre-race control.

The surrounding sound must not exceed 90 dB/A within a 5 meters radius from the power source during tests.

Apparatus for noise control must be to international standard IEC 651, Type 1.

The sound level meter must be equipped with a calibrator for control and adjustment of the meter during periods of use.

The "slow response" setting must always be used.

2.13.7 Sound control after the competition

In a competition which requires a final examination of motorcycles before the results are announced, this examination must include a sound control measurement of at least the first three motorcycles listed in the final classification. At this final test, there will be a 3 dB/A tolerance.

2.13.7 Noise control during a competition

In a competition which requires noise control tests during the event, motorcycles must comply with the noise limits without tolerance.

2.13.8 GUIDELINES FOR USE OF SOUND LEVEL METERS

The Technical Stewards must arrive in sufficient time for discussions with the MotoAmerica Technical Director and other Technical Stewards in order that a

suitable test site and testing policy can be agreed.

Sound level measuring equipment must include a compatible calibrator, which must be used immediately before testing begins and always just prior to a re-test if a disciplinary sanction may be imposed.

Two sets of equipment must be available in case of failure of tachometer, sound level meter or calibrator during technical control.

Tests may take place in rain or excessively damp conditions. Motorcycles considered excessively noisy must be individually tested if conditions allow.

In other than moderate wind, motorcycles must face forward in the wind direction. (Mechanical noise will blow forward, away from microphone).

'Slow' meter response must be used.

'A' weighted setting on sound level meter.

No rounding down of the meter reading, that is: 110.9 dB/A = 110.9 dB/A.

2.13.9 Corrections

Type 1 meter: deduct 1 dB/A

2.13.10 Precision of the method (tolerances)

All corrections are accumulative. Action and decisions will depend on the Sporting Discipline concerned, and decisions taken during prior discussions with the MotoAmerica Technical Director.

AMA / FIM NORTH AMERICA ROAD RACING
FUEL SAMPLE DECLARATION FORM

FUEL SAMPLES TAKEN ON ….. /….. / ….. FOR LABORATORY ANALYSIS

	Sample Can "A"	
RIDER N°:	Can Label N°	Can Seal N°
	Sample Can "B"	
SESSION:	Can Label N°	Can Seal N°
	Sample Can "C"	
RIDER NAME:	Can Label N°	Can Seal N°

MOTORCYCLE MAKE: _____

TEAM: _____

The above listed details refer to fuel samples taken from the fuel tank of the motorcycle specified after the race while in the Check Area for a period of 60 minutes pending any protest.

Sample "A" and "B" will go to the laboratory appointed by the AMA/FIM North America for analysis. Sample "B" will be kept by the laboratory staff as a retained sample in case of a dispute.

Sample "C" will be safeguarded by the AMA/FIMNA in case of protests and/or counter-expertise is required.

As a responsible member of the team named on this sheet, I,

(print name): _____

have controlled the serial numbers of can seals and serial numbers of can labels and hereby certify the accuracy of the listed information.

Time: _____ _____
(Signature)

Position in team: _____
(OWNER/MANAGER/MECHANIC)

2.14 Procedure and time limit for protests

All protests must be submitted and signed only by the person directly concerned. Each protest must refer to a single subject only and the intention to protest must be notified to Race Direction or to MotoAmerica within 30 minutes of the publication of the results - which is analogous to the end of the race.

The protest must then be confirmed in writing or withdrawn within 1 hour at the latest after the publication of the results.

Protests must be handed to a responsible official (Race Direction, Technical Director) together with the protest fee or equivalent.

Teams and riders contracted to compete in the Championship may submit a letter of guarantee from MotoAmerica in lieu of payment.

A protest against the eligibility of a rider, team or a motorcycle to enter a class or event must be made before the start of the official practice.

A protest against a machine on technical control compliance grounds (e.g. weight, noise, materials, etc.) may be made after the start of official practice.