MOTOAMERICA AMA ROAD RACING SERIES
FIM NORTH AMERICA CHAMPIONSHIP

2025 TECHNICAL REGULATIONS

SUPERBIKE • SUPERSPORT • TALENT CUP • STOCK 1000 • TWINS • BAGGERS • SUPER HOOLIGAN

FIM NORTH AMERICA

AMERICAN MOTORCYCLIST ASSOCIATION

2025 MotoAmerica AMA FIM North America Technical Regulations

Version 6-05-2025

Articles amended as of 1-01-2025 are in bold text.

Articles amended after 1-01-2025 are in red text.

TECHNICAL REGULATIONS

2025 REVISIONS	
Version	**Modified Regulations**
1/01/2025	SBK: No significant rule changes until the beginning of the 2027 season.
1/01/2025	SSP: Many rule additions, transitioning to full next-generation status in 2025; no significant rule changes until the beginning of the 2027 season.
1/01/2025	Stock1000: No rule changes.
1/01/2025	KOTB: Bodywork changes; spec ECU listed for 2026; no other significant rule changes until the beginning of the 2027 season.
1/01/2025	Twins: No rule changes.
1/01/2025	Talent Cup: New class for 2025.
1/01/2025	RSD: Numerous rule additions for 2025 to clarify number plates, brakes, and suspension controls.
3/20/2025	Talent Cup: 2.9.8.13 Updated clutch requirements
3/20/2025	RSD: 2.10.9.2 Updated fork and rear shock requirements
4/02/2025	SSP: Added minimum weight for Yamaha YZF-R9
4/02/2025	KOTB: 2.7.7 Fuel specification modified to VP T4+
4/02/2025	RSD: 2.10.5 Fuel specification modified to VP T4+ or MGP-R
4/02/2025	RSD: 2.10.8.2 Added Yamaha MT-09 Kits
4/10/2025	RSD: 2.10.3 Modified Minimum Weight requirements
5/23/2025	Talent Cup: 2.9.4 Modified Minimum Weight requirements
6/05/2025	RSD: 2.10.3 Modified Minimum Weight requirements

2.0 TECHNICAL REGULATIONS

The MotoAmerica Permanent Bureau may make amendments to the technical regulations at any time.

During free practices, qualifying practices, and warm-up sessions: If a motorcycle is found not to conform with the technical regulations during or after the session, 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.

During races: If a motorcycle is found not to conform with the technical regulations during or 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 have valid road homologation in the 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 Main Frame

a. The main frame is considered as any structure that joins the steering tube, engine, and swing-arm pivot. If the steering tube, engine mounts or swing-arm is connected through a removable bracket (with engine removed) then those brackets will be considered as part of the main frame. If the steering tube, engine mounts and rear swing-arm pivot connect to the main frame without removable brackets, then any additional brackets will not be considered as part of the main frame. If there is any part in question, the Technical Directors decision is final.

b. If the rear section (rearward of the engine, meant for the riders seating) of a frame is not removable then there is no rear sub-frame and only a main frame. Regulations applying to the rear sub-frame will not apply to main frames.

2.3.2 Materials

The use of titanium in the construction of the frame, front forks, handlebars, swing arm, swing arm spindles, and wheel spindles is forbidden. For wheel spindles, the use of light weight alloys is also forbidden. The use of titanium alloy nuts and bolts are allowed in certain classes specified in their respective sections.

2.3.3 Handlebars and Control Levers

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

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

c. The front wheel, tire, and mudguard must maintain a minimum gap of 10 mm from any part of the machine that can cause binding, regardless of the handlebar position.

d. 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 and/or other bodywork when on full lock to prevent trapping of the rider's fingers.

e. Repairing light weight alloy handlebars by welding is prohibited.

f. Composite handlebars are not allowed in any class.

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

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

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

j. Modified rider controls will be considered for the mobility-challenged subject to a report by the Medical Director; the Technical Directors' decision is final.

k. Clutch lever may have a guard similar to a brake lever guard.

2.3.4 Compulsory Safety Items

a. All drain plugs must be lock wired (safety wired). The use of clips is not permitted. External oil filter(s), screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases) or have a secondary retention mechanism.

b. Brake caliper(s) bolts must be safety wired or have a secondary retention method. The use of clips is permitted.

c. Motorcycles must be equipped with brake lever protection, which is intended to prevent the handlebar brake lever from being accidentally activated in a collision with another motorcycle.

   i. Composite brake lever guards are not permitted. However, FIM-approved guards will be permitted without regard to the material. Only composite guards need FIM approval.

   ii. The Technical Director has the right to refuse any guard not satisfying this safety purpose.

d. A solid protective cover (shark fin) shall be securely fixed (bolted or riveted, bonding permitted with the approval of the Technical Director) to the swing arm and must always cover the opening between the lower chain run, swingarm, and the rear wheel sprocket, irrespective of the position of the rear wheel.

e. All fasteners must meet factory torque specifications. If any fasteners (i.e., axles, pinch bolts, brake calipers, etc.) are found to be loose while on the race course, the competitor will be subject to penalties.

f. 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.

g. Motorcycles must be equipped with a red light on the instrument panel that illuminates in the event of an oil pressure drop.

h. All motorcycles must have a functioning red light mounted at the rear of the machine. This light must be switched on whenever 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:

   i. The 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.

ii. 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 Technical Director's decision will be final.

iii. Power output/luminosity equivalent to approximately 10 – 15 (incandescent), 0.6 – 1.8 W (LED).

iv. The output must be continuous; no flashing safety light is allowed while on track. Flashing is permitted in the pit lane when the pit limiter is active.

v. The safety light power supply may be separated from the motorcycle.

vi. The Technical Director has the right to refuse any light system that does not satisfy this safety purpose.

i. All fuel tanks must be **completely** filled with fire-retardant material (e.g., fuel cell foam).

2.3.5 Wheels and rims

a. Any modification to the rim or spokes of an integral wheel (cast, molded, riveted) supplied by the manufacturer or of a traditional detachable rim other than for spokes, air valve, or security bolts is prohibited.

b. Tire retention screws may be used to prevent tire movement relative to the rim. If the rim is modified for these purposes, bolts and/or screws must be fitted.

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

d. A non-slip coating/treatment may be applied to the bead area of the rim.

e. Wheel balance weights may be discarded, changed, or added to.

~~f.~~ Aluminum or steel inflation valves are compulsory. Angled valves are recommended.

2.3.6 Tires

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

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

b. 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.

c. Tires that, 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.

d. The surface of a slick tire must contain three (3) or more hollows at 120° intervals or less, indicating the limit of wear on the center and muster areas of the tire. The rider shall not enter the track if at least two (2) of these indicator hollows are worn on different parts of the periphery.

2.3.7 Tire warmers

a. The use of tire warmers and suspension pre-heaters is allowed.

2.3.8 Use of tires

a. The competitors shall only use tires listed on the allocation sheet provided by the official supplier.

b. **Only Race Direction, after consulting with the Technical Director and the official tire supplier, may alter the allocation during an event.**

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

d. All tires to be used must be easily identifiable with a color marking or a numerical system, which the official supplier will apply at the time of manufacturing.

e. 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.

f. At the beginning of the event, the Technical Director may request that the official supplier deliver four (4) samples of each type of tire to be used at the event.

g. The official supplier is not permitted to modify the tread pattern after the practices start.

h. Any modification or treatment (cutting, grooving) is forbidden.

i. Every tire used during the event must be marked with an adhesive sticker with a number allocated by the Technical Director.

j. Tire allocation stickers must be applied on the left side of each tire by the entrant.

k. The tire stickers will be given to the teams in a sealed envelope before the first practice after the rider's machine has passed technical pre-inspection. The rider is solely responsible for the use and safekeeping of the tire stickers.

l. The use of motorcycles without the official stickers will be immediately reported to Race Direction, which will take appropriate action.

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 teammates, 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 incorrectly, up to two (2) extra stickers may be provided at the sole discretion of the Technical Director. However, the damaged sticker must be returned to the Technical Director and/or the tire it was applied to and must be intact and unused.

o. The Technical Director may, at his discretion, require the exchange of one (1) or more competitors' tire(s) 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.

2.3.8.1 Tire allocations by class

a. The Technical Director and/or Race Direction can modify the tire allotments based on the official schedule; this modification will be noted in the event supplementary regulations. During a normally scheduled event, the tire allotments will be as follows:

Class	Single Race Event	Two-Race Events	Three-Race Events
Superbike	N/A	14	16
Supersport	N/A	12	N/A
Stock 1000	N/A	12	N/A

Twins Cup	N/A	10	N/A
Talent Cup	N/A	8	N/A
KOTB	N/A	12	N/A

2.3.9 Engine Sealing

a. The total number of engines that a rider may use during the entire championship is free.

b. The Technical Director or his appointed staff must be notified of all engine changes and therefore always know which engine is in current use.

c. Engines may be sealed by the Technical Director or by his appointed staff at any time during an event.

d. Seals will bear a serial number, which will be recorded.

e. Any attempt made to remove the seal will damage it irreparably. All seals, including the seals on an engine that has completed its life cycle or is in need of repair can only be broken by the Technical Director or his appointed staff. At the time of the breaking of the seals the Technical Director may ask for this engine to be disassembled to check for compliance with the technical rules for the relevant class.

f. The crankcases will be sealed in such a way not to allow the disassembly for repair, replacement, or adjustment of the crankshaft, connecting rods and/or associated bearings, pistons, piston pins or piston rings.

g. The cylinder, cylinder head(s) and head cover/cam cover will be sealed to prevent repairs, replacement or adjustment on the cylinder head, valve, valve seats or any other repairs or service work on the valve train.

h. The cassette gearbox door and/or crankcases will be sealed to control the gearbox use.

i. The right and left engine side covers will not be sealed to allow repair or adjustment to the ACG, clutch system, water pump or other accessory systems located behind these covers.

j. If an engine is found not to be in compliance with the regulations, any penalties imposed will apply retrospectively to each race this engine was used in.

k. The technical director will determine the number of events that the engine may remain sealed.

2.3.10 Ballast

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

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

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

2.3.11 Timekeeping instruments

All motorcycles must have a correctly positioned timekeeping transponder.

a. Teams must provide their own transponder. MotoAmerica will not provide transponders.

b. The transponder must be approved by the official timekeeper. See Team Handbook for compatible models.

c. The transponder should be fitted centrally on the machine and as low to the ground as possible, avoiding being shielded by bodywork. The manufacturer's suggested direction of the transponder should also be respected.

d. The team is responsible for ensuring that the transponder is in an optimal position and working properly. Any machine without a working transponder is not allowed on the circuit.

The correct attachment of the transponder bracket consists of a minimum of tie-wraps but preferably consists of screws or rivets. A tie-wrap must also secure any transponder retaining clip. Velcro or adhesive alone will not be accepted. The transponder must always be working during practices, qualifying, and races, as well as when the engine is switched off.

2.3.12 MyLaps RaceLink Devices

MyLaps RaceLink devices will allow for bi-directional communication between the Timing Servers and the vehicle's CAN bus. This allows Race Control messages sent to the bike to be received immediately, at any point of the circuit, allowing flag conditions and messages to be displayed on the vehicles dash.

MotoAmerica will be using two versions of the device, the RaceLink Pro and RaceLink Club. Superbike and King of The Baggers will be required to use the RaceLink Pro while the Talent Cup classes can choose between the Racelink Pro or Club. All other classes may optionally adopt the device if they would like to have flag conditions sent to the rider's dash screen.

See MotoAmerica Bulletin 06-2025.

2.3.13 Wings and Aerodynamic Aids

Wings and other aerodynamic aids will only be considered legal if originally fitted to the homologated road specification machine in Europe, Japan, and North America. For race use, the wings must follow the dimensions, profiles, and positions of the homologated shapes exactly (+-1mm). For copies of the OEM parts the leading edges (including end plates) must have a minimum circumference of 4mm and must have a rounded end (8mm radius) or be enclosed / integrated into the fairing.

The OEM parts may be used 'as is' except that the wing root and 10mm from the end face may be modified to allow mounting to the (race) fairing. This may not be in the form of an extension, and the size of the wing will be measured with reference to the face of the wing root.

The wing must be fitted in the same 'relative' position (accepting the tolerance allowed for the fairing), and the angle of attack must be within +/-4° of the original angle of attack relative to the chassis.

For active or dynamic aerodynamic parts, ONLY the standard homologated mechanism may be used. The range of movement must be the same as that of the homologated road machine used in normal use - not the mechanical maximum.

The Technical Director's decision will be final.

2.3.14 Crash Protection

Crash protection may be fitted to the frame using existing mounting points or pressed into the ends of the wheel axles. Wheel axles may not be modified for the fitment of crash

protection. (this does not apply to SBK or Twins Cup). Crash protection (frame sliders) may not provide an aerodynamic advantage unless originally fitted to the homologated machine.

2.3.15 Homologated Parts

Homologated parts are the OEM parts supplied and fitted to the machine during manufacture and as delivered. Unless stated otherwise, these parts may not be remade, refinished, treated, coated, or modified in any way.

Parts from different homologations may not be used on machines from another homologation, including when sharing the model name, except when the part is superseded for production reasons and also accepted by the FIM or **MotoAmerica**.

See FIM homologation rules for details.

2.3.16 Eligible Parts

The Technical Director must approve all **eligible** parts before they are allowed to be used. **The FIMNA National MotoAmerica Eligible Parts for Competition List** can be found at http://www.motoamericaregistration.com/competitor-info/

2.4 SUPERBIKE TECHNICAL SPECIFICATIONS

The following rules are intended to give freedom to modify or replace some parts for safety, research and development, and improve competition between various motorcycle concepts.

The intent is that these rules will remain in place until the beginning of the 2027 season and not be significantly changed for the next two (2) years.

EVERYTHING THAT IS NOT AUTHORIZED AND PRESCRIBED IN THIS RULEBOOK 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 new rules or changes in the technical specifications of the corresponding class disqualify the homologated motorcycle.

The appearance from the front, rear, and 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

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 machine model 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.

2.4.3.1 Balancing calculation

a. 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.

b. 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 finishers from one of the selected manufacturers, the event will not be considered.

c. 'Wet' races (as declared by the Race Direction) are not taken in account for the calculation of an '*event average*'.

2.4.3.2 Air restrictors for 1200cc 2-cylinders

Application: Only the 1200cc 2-cylinder engines may be fitted with air restrictors. Should a restrictor be required, 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 that 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 bypass the restrictor. No fuel injection system part (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 (Ø52, Ø50, Ø48, Ø46 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 FIM/MotoAmerica with 10 sets of plug-calibers (-gauges) for measuring the restrictor during the technical verifications.

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

2.4.3.3 Air restrictor adjustment

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

a. If the gap in the average value of 'event averages', calculated as described in article 2.4.3.1 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.

b. If the resulting gap of the average value of 'event averages', calculated as described in article 2.4.3.1, 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, or as a last step, to a minimum of Ø46 mm (or the equivalent area 1661.9 mm2).

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 points.

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 for 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 in. The established weight limit must be met in this condition. Nothing may be added to the motorcycle, including all fluids.

During the practice and qualifying sessions, riders may be asked to submit their motorcycle to 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 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 is allowed within 25mm in all directions.

b. Once on each side 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.

The Technical Director's decision will be final in case of a dispute concerning the legibility of numbers.

2.4.6 Fuel

a. The designated fuel is VP Racing Fuels MGP-R.

b. Please refer to Article 2.11 for additional details

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 2.3.8.1

b. A maximum of 11 tires per rider can be mounted at any time.

c. For Superbike races 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. Qualifying tires will be allocated and can only be used during the session designated on the official tire allocation document. If the qualifying tire is used during any other session, the rider will lose his qualifying time and must start from the back of the grid.

e. During free practices, qualifying practices, warm-up sessions, and races, front and rear tires are required to be marked with tire stickers.

f. See article. 2.3.8.

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. c. The method of valve retention must remain the same as that of the homologated model. Pneumatic valve retention devices are not 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 two (2) cylinders is also forbidden if not adopted on the homologated motorcycle. Up to five (5) degrees firing difference in two (2) cylinders is considered '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 (except 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 bodies.

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 mounts are integrated into the air funnel, then those parts alone may be redesigned, maintaining the exact geometry of the original parts.

2.4.8.2 Cylinder head

The 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 intake 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, which is 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. See the **FIMNA National MotoAmerica Eligible Parts for Competition List** for approved homologated valves.

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, and/or 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 with 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.

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.

b. The cam chain or 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. Cylinders must be the originally fitted and homologated part with no modification allowed.

b. The cylinder base gasket(s) may be changed.

c. The top face of the cylinder may be ground to adjust deck height.

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 rods from those fitted to the homologated motorcycle may be altered or replaced. 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 (e.g. 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 the same material as the connecting rod or steel.

e. The center-to-center (little end to big end) length of the rod must be the same as the original homologated item.

f. Connecting rod bolts are free.

g. From 2019 for any newly homologated machine the following applies:

   i. The connecting rod must be the originally fitted and homologated part with no modification allowed.

   ii. Connecting rod big end bolts may be changed but must be the same weight or heavier, the same material, or a higher specific weight material.

   iii. The weight of the connecting rod assembly is the homologated weight (normally the weight of the middle-weight rod) with a tolerance of +/-3%.

2.4.8.10 Crankshaft

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. (e.g. REM, WPC)

c. Polishing of the crankshaft is not allowed.

d. Heavy metals may be used to balance the crankshaft and counter balancer.

e. The addition or reduction in weight of the crankshaft to reach a racing balance can be no higher than 20% of the homologated weight without the tolerance as shown on the homologation specification of the crankshaft.

f. Balance shaft must remain as homologated. Only the following modifications are allowed:

   i. Balancing of the counterbalance shaft is allowed.

   ii. The balance shaft may be balanced so that the maximum weight change is +/-10% of the homologated weight, excluding tolerances.

g. The use of the approved manufacture crankshaft, as shown on the **FIMNA National MotoAmerica Eligible Parts for Competition List**, is allowed. See the **FIMNA National MotoAmerica Eligible Parts for Competition List** for approved crankshafts.

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 integral cylinders, then the top face of the cylinder may be machined 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. c. The oil pan (sump) and oil pick-up may be altered or replaced.

d. One threaded port may be altered for direct oil pressure/temperature sensor fitting in the crankcases or engine covers. See 2.4.10.1/k./iv.

e. The 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 the 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. Oil-containing engine covers cannot be secured with aluminum bolts.

d. All lateral covers/engine cases containing oil that 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. Each side (left and right) of the engine must have at least one (1) protective cover installed on the farthest protruding engine cover containing oil. Composite covers are not permitted. FIM-approved covers will be permitted without regard to the material or dimensions.

   i. The secondary cover must cover a minimum of 1/3 of the original cover. It must not have sharp edges that could damage the track surface. 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.

   ii. Heavy-duty engine case covers may be used instead of secondary case covers.

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

e. Plates or crash bars made of aluminum or steel are also permitted in addition to these covers. All these devices must be designed to resist sudden shocks, abrasions, and crash damage.

2.4.8.12 Transmission / Gearbox

a. Only one (1) set of gearbox ratios will be allowed for the whole season. The ratios can be freely chosen.

   i. The ratios chosen by the team (individually and separately for each entry) must be declared before the start of the first event of the season for permanent entries.

   ii. For wildcard or one-event entries, the ratios must be chosen prior to the participant’s first event.

   iii. In all cases, the ratios chosen are per rider for a specific homologated motorcycle and cannot be changed during the season. Switching between sub-models of the same manufacturer will not allow a new nominated ratio. The technical director's decision is final.

iv. If a rider changes the homologated motorcycle during the season, the ratios must be chosen prior to the first event.

b. Only the homologated primary gear ratio may be used (see Art. 2.4.8.13).

The layout of the transmission shafts must be the same as on the homologated motorcycle.

c. The gear design and material are free.

d. The selector drum and complete gear index mechanism are free.

e. The selector forks may be changed. However, the forks must engage with the same gears and function in the same way as on the homologated motorcycle (i.e. no dog boxes if not fitted as standard).

f. Countershaft sprocket, rear wheel sprocket, chain pitch, and size may be changed.

g. The sprocket cover may be modified or eliminated.

h. An external neutral selection mechanism may be fitted.

i. Seamless shift gearboxes are not allowed. If the homologated base model was originally fitted with a seamless shift gearbox, then the complete homologated gearbox assembly may be used, with no modifications allowed except surface finish.

2.4.8.13 Clutch

a. Aftermarket or modified clutches (including plates/ springs etc) are permitted.

b. Back torque limiter is permitted.

c. No power source (i.e. hydraulic or electric) can be used for clutch operation, if not installed in the homologated model for road use. Human power is excluded from the ban.

d. The clutch system (wet or dry type), type (multiplate), and method of operation (cable/hydraulic) must remain as homologated.

e. Clutch basket may be changed. If the clutch basket has the primary gear integrated, then the primary gear must retain the original number of teeth and tooth forms.

2.4.8.14 Oil pumps and oil lines

a. The originally fitted and homologated oil pump must be used. The oil pressure relief spring is free.

b. Oil lines may be modified or replaced. If replaced, oil lines containing positive pressure must be of braided reinforced construction with swaged or treaded connectors.

2.4.8.15 Cooling System

a. The only liquid engine coolant permitted is water.

b. The water pump must remain as homologated.

c. The original radiator or oil cooler may be altered or replaced from those fitted to the homologated motorcycle.

d. Additional radiators or oil coolers may be added.

e. The original oil/water heat exchanger may be modified, replaced or removed.

f. The cooling system hoses and catch tanks may be changed.

g. The radiator fan and wiring may be changed, modified or removed.

h. The oil cooler must not be mounted on or above the rear mudguard.

i. The motorcycle's appearance from the front, rear, and profile must, in principle, conform to the homologated shape after adding 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:

   i. 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.

   ii. 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).

   iii. If used, variable intake tract devices must function in the same way as on the homologated system (see article 2.4.8.1).

b. Air filters, internal flap type valves, sensors and vacuum fittings may be removed, modified or replaced with aftermarket parts. Should any modification be required for the fitment of these parts it will be at the discretion of the Technical Director.

c. Any holes in the air box to the outside atmosphere resulting from the removal of components must be completely sealed from incoming air.

d. The air box drains must be sealed.

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. 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.

g. If the top of the air box is formed by the bottom of the tank, then that part of the tank will be considered the air box. It must conform to its homologated shape except for two (2) mm variance in corner radii and must be the same volume. A dry-break / quick-release connector may be fitted (see article 2.4.8.17).

h. Additional heat shielding is allowed to be applied to the lower face / side of the air box (i.e. foil heat tape).

2.4.8.17 Fuel Supply

a. The 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 Article 2.14

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. A MotoAmerica approved "Superbike Kit" system (See art 2.4.9.2)

   iii. The homologated ECU with or without software changes (See art 2.4.9.3)

   iv. DWO/FIM approved "Superstock 1000" kit model.

b. The central unit (ECU) may be relocated.

c. The original speedometer and tachometer may be altered or replaced.

d. The wiring harness is free.

   i. Each team must provide a download connection lead to the Technical Director.

e. Telemetry (remote signals to or from the bike) is not allowed.

f. No remote or wireless connection to the bike for any data exchange or setting is allowed while the engine is running or, the bike is moving.

g. Spark plugs, spark plug caps, and HT leads (if applicable) are free.

h. 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 – except 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. The lead time must be less than 8 weeks.

f. No other external ignition/injection controllers, traction control modules or other active expansion modules or calculation units may be fitted.

g. The ECU must be from the FIM/DWO approved superbike ECU list.

h. 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 tire monitor (temperature and pressure)

30. Front tire monitor (temperature and pressure)

i. 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 (article 2.4.9.1.c).

j. Two (2) additional sensor channels (that are not included in the above list) may be added to the machine. These sensors must be declared to the Technical Director, they may be changed only between meetings and if changed a new declaration must be made.

k. Redundant/doubled sensors are allowed but must be included in the “Superbike Kit” system if they are required for safe operation.

l. Analog/logic to CAN sensors are allowed.

m. The sensors originally fitted to the homologated machine and used as homologated, will not be included in the price limit.

n. 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.)

o. 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).

p. The manufacturer must provide current strategies but may remove the ability to change or see these settings. Base mapping must be provided.

q. Only firmware and software from the FIM/DWO approved software and firmware list may be used.

r. Factory teams may use any development firmware and software which will be made available to teams according to the update schedule.

s. 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.

t. The transponder is NOT included in the ‘’Superbike Kit” system.

u. The selection of logged channels is free.

v. Coils and coil drivers are free and must be included in the “Superbike Kit” system if altered.

w. 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.

x. The factory teams must use the current season’s ‘’Superbike Kit System’’. No backdated parts may be used.

y. Superbike kit systems remain approved for three (3) seasons (first season inclusive).

z. Manufacturer nominated “Superbike Kit” system suppliers please also see

‘’Superbike Kit System Approval Requirements’’ documentation.

2.4.9.2 The MotoAmerica approved “Superbike Kit” system must meet the following:

a. The system must be the MoTec M130 spec system with MotoAmerica approved activations. See Technical Bulletin 01-2019.

b. 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.

c. Lead time less than 8 weeks

d. No other external ignition/injection controllers, traction control modules or other active expansion modules or calculation units may be fitted.

e. The ECU must be from the MotoAmerica approved superbike ECU list.

f. 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 tire monitor (temperature and pressure)
30. Front tire monitor (temperature and pressure)

g. 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 (article 2.4.9.2.b).

h. Two (2) additional sensor channels (that are not included in the above list) may be added to the machine. These sensors must be declared to the Technical Director, they may be changed only between meetings and if changed a new declaration must be made.

i. Redundant/doubled sensors are allowed but must be included in the “Superbike Kit” system if they are required for safe operation.

j. Analog/logic to CAN sensors are allowed.

k. The sensors originally fitted to the homologated machine and used as homologated, will not be included in the price limit.

l. 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.)

m. 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).

n. The manufacturer must provide current strategies but may remove the ability to change or see these settings. Base mapping must be provided.

o. Only firmware and software from the MotoAmerica approved software and firmware list may be used.

p. 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.

q. The transponder is NOT included in the ‘’Superbike Kit” system.

r. The selection of logged channels is free.

s. Coils and coil drivers are free and must be included in the “Superbike Kit” system if altered.

t. 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.

u. The factory teams must use the current season’s ‘’Superbike Kit System’’. No backdated parts may be used.

v. Superbike kit systems remain approved for three (3) seasons (first season inclusive).

2.4.9.3 Homologated ECU and DWO/FIM approved 'Superstock 1000' kit model.

a. The originally fitted and homologated ECU may be used with or without software changes.

   i. The homologated ECU cannot have any hardware or physical modifications.

   ii. No extra sensors may be added for control strategies except for shift rod sensors and lambda sensors.

   iii. Software changes may include, but are limited to, the same control strategies as the "Superbike Kit" system. (See 2.4.9.1)

   iv. Maximum retail price of the ECU, software and combined or separate data logging systems must meet the same requirements as the DWO/FIM Superstock 1000 kit. (See Article 2.6.9.1-)

b. For complete DWO/FIM approved Superstock 1000 kit requirements, see article 2.6.9.1

2.4.9.4 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. The starter motor gear system must be originally fitted and homologated parts. Surface and hardening treatments are allowed.

g. 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).

h. 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.

2.4.10 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.

b. In case the frame or motorcycle needs to be replaced, the rider or the team must request the use of a spare frame or motorcycle from the Technical Director. The participants recognize the need for the Technical Director to make decisions requiring judgment and exercising discretion. The Technical Director's decision is final.

c. One (1) spare complete motorcycle is allowed per rider. The spare motorcycle may only be used once the Technical Director deems your original frame or motorcycle unusable. (For example, you may not go to your spare motorcycle for a complete engine failure unless there are extenuating circumstances, and the Technical Director approves it.)

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

e. The technical stewards must inspect the motorcycle before it is used for safety checks, and a new seal will be placed on the frame.

f. 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 front of the pit box during the practices, qualifying, and races.

The Technical Director or his appointed staff will officially seal the frame of this motorcycle. The seal will bear a serial number, which will be recorded. Any attempt to remove the seal will damage it irreparably.

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

If the primary or active motorcycle is damaged in a crash/incident or is declared unrepairable for other reasons (safely and within the available time) by the Technical Director or his appointed staff. In that case, the technical staff will destroy the seal on the damaged motorcycle. The chassis of this motorcycle must not be used for the remainder of the event. The technical director will record the new serial number.

The frame or motorcycle can be any spare available that is not necessarily provided by the same team.

The spare motorcycle must be of the same manufacturer and have the same displacement. Changes to manufacturer or displacement may be allowed at the discretion of race direction and may be accompanied by grid position penalties.

Minor adjustments may be made to the spare motorcycle during an event, intending to allow teams to maintain parity with the primary bike.

If the spare motorcycle is used in competition, the primary machine is removed from the competition. At that time, the damaged machine must be kept out of view.

The spare machine can only be used in the next session in which the incident occurred, rendering the primary bike unusable. The first opportunity to use the spare machine in a race situation is the next session or race. A race will be deemed to have begun when the rider exits the pit lane for the sighting laps. All restarts, including those three laps or less, are considered a continuation of the original race for determining spare machine eligibility.

The team may rebuild the original primary machine; however, only in the case of TOTAL PROVEN WRECKAGE with the spare bike can an application be made to utilize the original machine. The Technical Director's decision regarding this is final.

The Technical Director may impound the damaged frame for a later examination.

2.4.10.1 Frame body and rear sub-frame

a. The main frame must be the originally manufactured, fitted, and homologated part with only the following modifications allowed.

b. In all the following cases, the main frame may only be altered by the addition of gussets, tubes, or plates unless stated otherwise. The additions may be welded or bonded. No gussets or tubes may be removed. Other allowed modifications are

detailed within the following section of these rules. These additions must be documented by the reference team (or manufacturer).

c. Holes may be drilled on the frame only to fix approved components (i.e. fairing brackets, steering damper mount).

d. The homologated position (of engine, steering stem or pivots) is considered as the position in which the production motorcycle is supplied. (Fore and aft are considered along the bottom plane of the original bearing seat).

e. Suspension linkage mounting points on the frame must remain as homologated.

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

    i. The inserts are free BUT the chassis cannot be modified further (except as mentioned in b).

    ii. There is no limit to the range of adjustment.

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

Steering Stem Position:

h. if the homologated machine has adjustable/exchangeable bearing inserts/bushes for the steering stem position then:

    i. The inserts/bushes can be used to adjust the fore and aft position of each bearing.

    ii. No part of these bushings may protrude axially more than 3 mm from the original steering head pipe location, nor may the bearing be inset.

    iii. A slot and clamp may be machined/added to allow easier bushing exchange. At the discretion of the Technical Director, other positive retention mechanisms may be allowed.

    iv. The chassis cannot be modified further except as mentioned in point b.

i. If the original chassis has a fixed steering stem position, the steering stem axis/position may be adjusted by moving the steering head bearings.

    i. The fore and aft position of each bearing can be a maximum +/-6 mm in respect to the original bearing location (excluding tolerances).

    ii. The original bearing seats may be modified (ovaled) or increased in diameter to insert special bushings.

    iii. 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.

    iv. The steering head pipe can be reinforced in the area of the bearing seats.

    v. Welding and machining are allowed for the purpose of making these modifications.

Swingarm Pivot Position:

j. If the original chassis includes adjustable inserts for the swinging arm pivot axis, then:

    i. Inserts/bushings are free.

    ii. The chassis cannot be modified further (except as mentioned in b).

    iii. There is no limit to the range of adjustment.

k. If the original chassis has a fixed swingarm mounting pivot axis:
    i. The swing arm pivot axis may be moved a maximum of 5 mm radially (excluding tolerances) measured from the homologated axis.
    ii. Modifications may be made to the frame at the swing arm pivot area to allow this. Welding and machining are 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.).
    iii. The method of adjustment is free - e.g. 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.
    iv. Should this pivot/axle 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.
l. The original lock stops may be removed from the frame body by grinding or machining. However, another form of lock stop must be fitted.
m. 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.
n. No polishing or surface refinishing is allowed, but the paint scheme is not restricted.
o. Fairing brackets may be altered or replaced.
p. The front and rear subframe may be changed, altered, or removed.
q. Crash protectors may be fitted to the frame using existing points (max. length: 50 mm) or pressed into the ends of the wheel axles (max. length: 30mm).

2.4.10.2 Suspension - General

a. Participants in 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 Superbike season and remain available all season. The products must be available within six (6) weeks of a confirmed order.
c. The suspension manufacturers must provide setting and tuning parts to all customers/teams/participants using their products. These parts can be used by all participants during the season and 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 a 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 cannot be used.
g. An 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 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 (e.g. 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 Swing-arm (rear fork)

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. Rear wheel stand brackets may be added to the rear fork by welding or by bolts.

d. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed.

e. Swing arm spindle (pivot) may be modified or replaced.

2.4.10.5 Rear suspension unit

a. The 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/or 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 but not modified (see article 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 the front wheel and 195 kg for the 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 a copy of the certificate for their wheel(s) as proof of compliance to the Technical Director when requested.

f. The homologated road bike wheel and sprocket carrier assembly may be used with no modification irrespective of material. They must meet 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).

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 four (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 cylinders 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 cylinders 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. Hydraulic anti-knockback systems may be fitted to the brake lines/caliper.

k. Brake discs may be altered or replaced from those fitted to the homologated motorcycle. Only steel (max. carbon content 2.1 wt. %) is allowed for brake discs. Alloys containing beryllium are not allowed to be used for brake calipers.

l. The Anti-Lock Brake System (ABS) cannot be used.

m. The Anti-Lock Brake System (ABS) ECU can be disconnected or dismantled. The ABS rotor wheel can be deleted, modified, or replaced.

n. Front brake system cooling ducts are allowed.

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/switch must be red.

2.4.10.9 Footrest and Foot Controls

a. Footrests, 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. Footrests 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 footrest must have at least an eight (8) mm 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 eight (8) mm). The plug surface must be designed to reach the widest possible area of the footrest. The Technical Director has the right to refuse any plug not satisfying this safety purpose.

2.4.10.10 Fuel tank

a. The fuel tank must conform in principle to the homologated appearance and location of the original tank; however, its actual shape can be slightly changed to suit the rider's preference and increased fuel volume. The tank may also be modified below the upper frame line and under the seat.

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 tank fitted to the homologated motorcycle.

d. All fuel tanks must be filled with fire-retardant material (e.g., fuel cell foam) or 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 have a label certifying conformity with FIM Tank Test Standards. Such labels must include the fuel tank manufacturer's name, tank manufacture date, and testing laboratory name.

g. Each manufacturer is required 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).

h. All fuel bladders must conform to the FIA Standard FT3.5-1999, specifically for the chapters 2 (Fuel bladder lifetime), 3 (General requirements), 4 (Fittings and connections), 5 (Sampling and pretreatment), 6 (Testing) and 7 (Performance requirements).

   As stated in 3, this also includes that all fuel bladders should be supplied with a suitable fuel-resistant polyurethane foam baffling, conforming to Mil-Spec MIL-B-83054, SAE-AIR-4170, or equivalent. This foam shall fill a minimum of 80 % of the volume of the fuel bladder. Where rapid refueling is expected, an anti-static foam conforming to Mil-Spec MIL-F-87260 (USAF) should be employed.

i. 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 can the tank

be fixed to any part of the streamlining (fairing) or any plastic part. The Technical Director has the right to refuse a motorcycle if he believes that the fuel tank fixation is not safe.

j. The original tank may be modified to achieve the maximum capacity of 24 liters, provided the original profile is as homologated.

k. A cross over line between each side of the tank is allowed (maximum inside diameter 10 mm).

l. 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.

m. 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.

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

2.4.10.10.1 Fuel tank homologation

a. Any fuel tanks made of non-ferrous materials (except for 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.

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, except for the oil containing portion of the lower fairing, seat area and the area supporting the screen. The front upper fairing section (cowling) above the area of the front wheel cavity (front view) may have its frontal are increased in width by up to 30 mm per side (60 mm overall). It must still conform to the style of the original machine (scaled +/-15 mm planar) incorporating all included design features; however, it may not exceed the homologated maximum width of the fairing side panels (excluding wings). The decision of the Technical Director will be final.

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 must 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.

h. Any added vents will not allow the exit of air in the front half of the fairing lower if they are behind a water or oil radiator.

i. Exceptions may be made to 2.4.10.11.f/g with the sole agreement of the Technical Director if a manufacturer produced an 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.

j. 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.

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

l. A feature may be built into the shape of the belly pan on its rear lower section. It may not extend around the tire. The maximum dimensions when viewed from below (normally z-minus axis) are 120mm front to rear and 200mm in width. The feature may project 30mm from the bottom of the original belly pan shape.

   The feature must have rounded edges and must not create a ‘plough’ action (for safety and to stop issues in the gravel traps). The only aerodynamic effect must be to redirect the airflow laterally around the rear tire. No downforce may be created. If there is any doubt about the aerodynamic effects, then a CFD run of the whole machine (with rider) must be submitted to the Technical Director with and without the feature indicating the resultant forces. The Technical Director’s decision on suitability is final.

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

n. Holes may be drilled or cut in the fairing or bodywork to allow additional increased intake air to the oil cooler. Holes bigger than 10 mm must be covered with a particle

   grill or fine wire mesh. Grill/mesh must be painted to match the surrounding material.

o. 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(s). 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%.

p. 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.

q. 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 four (4) mm 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 Director's decision on suitability is final.

r. The front fender may be replaced with a cosmetic duplicate of the shape of the originally produced part by the manufacturer and may be spaced upward for tire clearance. Front fender mounting points may be altered. The technical Director's decision is final.

s. Holes may be drilled in the front mudguard to allow additional cooling. Holes bigger than 10 mm must be covered with metal gauze or fine mesh. Mesh must be painted to match the surrounding material.

t. A rear fender may be added or removed.

u. Material of construction of the front mudguard, rear mudguard and fairing is free.

2.4.10.12 Seat

a. The 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 10 mm 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. See 2.3.4h.

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, seals, and gasket material

c. Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used.

d. Fasteners (nuts, bolts, screws, etc.) may be altered or replaced. 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. Toolbox

f. Helmet hooks and luggage carrier hooks

g. Passenger footrests

h. Passenger grab rails

i. Safety bars, center and side stand brackets welded to the main frame may be removed.

2.5 SUPERSPORT NEXT GENERATION TECHNICAL SPECIFICATIONS

The following rules are intended to give freedom to modify or replace some parts for safety, research and development, and improve competition between various motorcycle concepts.

The intent is that these rules will remain in place until the beginning of the 2027 season and not be significantly changed for the next two (2) years.

Competitors that are participating in three rounds or less of the MotoAmerica Supersport Championship series may use machines that do not comply with these SuperSport Next Generation Technical Specifications.
(See SUPERSPORT SUPPLEMENTARY TECHNICAL SPECIFICATIONS)

The MotoAmerica Daytona 200 will have additional regulations published.

EVERYTHING THAT IS NOT AUTHORIZED AND PRESCRIBED IN THIS RULEBOOK 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 the relevant FIM Phase 2 homologation (see Appendix FIM homologation procedure). All machines must be normally aspirated. All motorcycles must comply in every respect with all the requirements for road racing as specified in these technical regulations 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 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 Next Generation class and are by application.

Over xxx cc up to xxx	**4 stroke**	**4 cylinders**
Over xxx cc up to xxx	**4 stroke**	**3 cylinders**
Over xxx cc up to xxx	**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.

Machines outside of these classifications will be considered upon application by the FIM, DWO, **and MotoAmerica Permanent Bureau.** They must be equipped with a Ride by Wire throttle system (OEM or as part of a compulsory kit). If approved, these machines will be known as Supersport Next Generation Machines. Manufacturers may resubmit currently homologated machines as Supersport Next Generation.

For 2025, all machines must meet the requirements of the Supersport Next Generation regulations if the competitor is competing in more than three rounds

of the MotoAmerica Supersport Championship series.

For 2025, competitors participating in three rounds or less of the MotoAmerica Supersport Championship series may use the 2025 MotoAmerica AMA FIM North America SuperSport Technical Supplemental Regulations (Next Generation Exception) if the machine does not comply with the Next Generation regulations.

2.5.3 Balancing various motorcycle concepts

a. To equalize the performance of motorcycles used in the Supersport Championship, a system of performance enhancements or restrictions "balancing factors" may be applied, including but not limited to:

- Concession Parts
- Torque limited map with Rev Limit
- Minimum Weight
- Air restrictor
- Modifications

b. The eligible concession parts (and modifications) supersede all the following regulations (Supersport). The range of concession parts are decided by mutual agreement of SBK Commission. These agreed concession parts will be documented in the **FIMNA National MotoAmerica Eligible Parts for Competition List**.

c. The specification of Supersport Next Generation machines will be agreed between the machine manufacturer and the Technical Director. The specification will be published in the **FIMNA National MotoAmerica Eligible Parts for Competition List** and will supersede all of the following regulations. The specification will be fixed for the entire season.

d. Balancing level will be continued between seasons.

2.5.3.1 Balancing Calculation

a. The following may include but not be limited to the following signals:

- Lap time relative to all other competitors
- Speed traps
- Number of riders per brand
- Anticipated individual rider performance
- Per track
- Considering preceding rounds
- Race results
- Laps led
- Overall race time
- Change in balance following any rpm limiter changes
- Bias towards recent results reflecting current performance
- Any concession part updates being applied

b. The balancing factors may be updated at the end of every 3rd event provided at least 3 events remain in the season. The balance will be weighted to the data

collected during the previous 6 events. The balancing factors may also be updated at the end of the season.

c. The primary method of balancing will be torque-limited maps updated in increments of +- x %.

d. The balancing factors may also be updated at the end of the season.

e. FIM/DWO/MotoAmerica reserves the right to update the balance at their discretion in the case of an imbalance. The balance criteria are considered a “Statement of Fact”.

2.5.4 Minimum weight

Brand	Bike Weight		Combined Minimum Bike and Rider Weight*
	Hard Minimum	Soft Maximum	
Ducati Panigale V2	166 kg	176 kg	244 kg
Honda CBR600RR	161 kg	173 kg	239 kg
Kawasaki ZX-6R (636)	**161 kg**	**173 kg**	**239 kg**
MV Agusta F3 800	161 kg	173 kg	239 kg
MV Agusta Superveloce	161 kg	173 kg	239 kg
Suzuki GSX-R750	161 kg	173 kg	239 kg
Triumph ST765RS	161 kg	173 kg	239 kg
Yamaha YZF-R6	161 kg	173 kg	239 kg
Yamaha YZF-R9	161 kg	173 kg	239 kg

a. Combined weight is the weight of the rider (in full racing equipment) and bike, as used on track.

b. IF the bike has achieved or exceeded the ‘Soft Maximum Weight’ then the combined minimum weight does not need to be reached. The bike alone may never at any time be below the ‘Hard Minimum Weight’. **This limits the maximum amount of ballast that can be added to the machines.**

c. 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.

d. There is no tolerance for the minimum weight of the motorcycle or rider.

e. 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.

f. During the practice and qualifying sessions, riders may be asked to submit their motorcycle to weight control. In all cases the rider must comply with this request.

g. 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 Technical Director at the preliminary checks.

2.5.5 Numbers and number plates

a. Numbers must be easily legible, in a clear simple font and contrast strongly with the background color. The background color must be white.

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

i. 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 25 mm in all directions.

ii. 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 two (2) weeks before the first race by the Technical Director.

iii. The numbers must use the fonts as detailed in Section 2.15. Any numbers not using these fonts must have the design of the numbers and the layout pre-approved by the Technical Director a minimum of two (2) weeks before the first race. All digits must be of standard form.

iv. Any outlines must be of a contrasting color and the maximum width of the outline is three (3) mm. The background color must be clearly visible around all edges of the number (including outline). Reflective or mirror type numbers are not permitted.

v. Numbers cannot overlap.

vi. 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
vii. 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

2.5.6 Fuel

a. The designated fuel is VP Racing Fuels MGP-R. (Refer to Article 2.11 for additional details.)

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 2.3.8.1.

b. **A maximum of twelve (12) tires per rider can be mounted at any time.**

c. For both Supersport races 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. During free practices, qualifying practices, warm-up sessions and races, front and rear tires are required to be marked with tire stickers.

e. See article 2.3.8

2.5.8 Engine

a. For Supersport Next Generation: No modifications may be made to the engine (all of 2.5.8 and 2.5.9) unless noted in the text or in the **FIMNA National MotoAmerica Eligible Parts for Competition List, where the list will take precedence over the following.**

For Supersport Next Generation: FIMNA National MotoAmerica Eligible Parts for Competition List - Road Racing Regulations - American Motorcyclist Association

b. There is no limit to the number of engines that may be used. If the Technical Director wishes to inspect an engine at the current or future rounds, then the engine may be sealed for future inspection. If the engine is not presented when arranged then all points that were earned by this engine will be removed from the rider, team and manufacturer standings. See Art. 2.3.9 for Sealing and Usage Details.

c. Engines may be chosen and impounded for Dyno testing (during events, between events or after the season) on track or at an approved balancing facility for comparison to the reference engine (see homologation). One team representative may attend the test.

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 if listed in the FIM National MotoAmerica Eligible Parts for Competition List.**

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.

2.5.8.2 Cylinder Head and Valvetrain

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

b. Original valve seats must be used, but modifications are permitted to the shape in the valve contact area, but not to the internal diameter of the main seal material.

c. The exhaust air bleed system must be blocked and the external fittings on the cam cover(s) may be replaced by plates.

d. **The throttle body intake insulators may be modified to match their inner surface to the cylinder head and throttle body.**

e. Adding any material to the cylinder head is forbidden unless described above.

2.5.8.3 Camshaft

a. **Only the camshafts from the FIMNA National MotoAmerica Eligible Parts for Competition List may be used.**

2.5.8.4 Cam sprockets or cam gears

a. **Camshaft timing is free only If the originally fitted pulleys/gears allow it. Bolt holes may be elongated into slots for this purpose. If the gear is fixed then it may be replaced ONLY if listed in the FIMNA National MotoAmerica Eligible Parts for Competition List.**

2.5.8.5 Cylinders

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

2.5.8.6 Pistons

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

2.5.8.10 Crankshaft

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

2.5.8.11 Crankcase / Gearbox housing

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

b. One threaded area may be altered or created to allow for oil pressure/temperature measurement. The sensor must be positioned so it cannot sustain impact in the case of a crash. **The sensor cannot be mounted directly into the crankcases but must be on a flexible braided hose to reduce vibration and temperature reaching the sensor. The original oil pressure switch may be used as originally installed**.

2.5.8.11.1 Lateral covers and protection (Including SuperSport Next Generation)

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 the 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. Oil containing engine covers cannot be secured with aluminum bolts.

d. 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.

i. The secondary cover must cover a minimum of 1/3 of the original cover. It must

not have sharp edges that could damage the track surface.

ii. Plates or crash bars from aluminum or steel are permitted in addition to these covers. All these devices must be designed to be resistant against sudden shocks, abrasions and crash damage.

iii. Covers from the **FIMNA National MotoAmerica Eligible Parts for Competition List** will be permitted without regard to the material or dimensions.

iv. 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.

v. Oil containing engine covers cannot be secured with aluminum bolts.

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

2.5.8.12 Transmission / Gearbox

a. Must be the originally fitted and homologated parts (including but not limited to shafts, selector mechanism, gears and primary gears) with the following exceptions:

b. Undercutting and re-shimming is allowed.

c. The positive neutral selector mechanism may be removed

d. Shift star/indexer, spring, roller, and detent may be replaced or modified but must function as originally designed.

e. Polishing, surface treatment, and heat treatment of all gearbox components is allowed.

f. Countershaft sprocket, rear wheel sprocket, chain pitch, and size may be changed.

g. The sprocket cover may be modified or eliminated.

h. Chain Guard If not incorporated in the rear fender, the chain guard may be removed.

i. To reduce flex, a support may be added to the gearbox shift shaft; this support may be a separate part or integrated into a cover.

2.5.8.13 Clutch

a. Clutch system (wet or dry type) and the method of operation (by cable or hydraulic) must remain as homologated.

b. Friction and drive discs may be changed.

c. Clutch springs may be changed.

d. The clutch basket (outer) must be the originally fitted and homologated part but may be reinforced.

e. The original clutch inner assembly may be modified or replaced by an aftermarket clutch, including back-torque limiting capabilities (slipper type).

f. 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.

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 braided reinforced construction with swaged or treaded connectors.

2.5.8.15 Cooling System

a. The only liquid engine coolant permitted is water.

b. The radiator may be changed with an aftermarket radiator, or an additional radiator may be added provided that it 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. Protective meshes may be added in front of the oil and/or water radiator(s).

f. The cooling system hoses and catch tanks may be changed. The reservoir/overflow/expansion bottle must be fitted. It can have a small vent hole.

g. Radiator fan and wiring may be changed, modified or removed. **Thermal switches, unused temperature sensors and thermostat may be removed.**

h. Radiator cap is free.

i. The oil cooler must not be mounted on or above the rear mudguard/fender.

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 replaced.

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. **Only the original breather vents may be used.**

e. No heat protection may be attached to the air box (i.e. foil heat tape)

2.5.8.17 Fuel Supply

a. Fuel pumps and fuel pressure regulators 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. Fuel level sensors may be removed or in a fixed position.

e. Quick connectors or dry break connectors may be used.

f. Fuel vent lines may be replaced.

g. 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 three (3) dB/A tolerance after the race only). The test will be carried out according to the details noted in article 2.14.

f. Supersport Next Generation machines **may** have limitations on the exhaust specification defined at the time of the balance test and specified in **the FIMNA National MotoAmerica Eligible Parts list for Competition**. If an exhaust system manufacturer wishes to make a system that does not match the manufacturer's defined specification (or point b) eligible, then they may pay to have the (Phase 2) balancing test performed with their system. Once approved, the system and its map ID will be added to the **FIMNA National MotoAmerica Eligible Parts for Competition List**.

2.5.9 Electrics and Electronics

2.5.9.1 Supersport Next Generation Electrics and Electronics

a. The ECU/Dashboard/Harness must be the Supersport control ECU and dashboard Electronic System as documented in the **FIMNA National MotoAmerica Eligible Parts for Competition List**. The official supplier of the ECU is Solo Engineering, **and the units must feature the Solo Engineering official labelling.** (www.soloengineering.com)

b. The firmware and manufacturer (engine) map must be **declared authorized by the championship and published on the online system Supersport Updated Rules – Mectronik Support.**

c. The ECU must always have the 'FIM Settings' section up to date, it is the team's responsibility to ensure that this is done.

d. No other external modules may be fitted except:

i. Part of a quick shifter where the module may only provide a signal to the control ECU.

ii. Championship-mandated devices (e.g., 2-way RF system).

iii. Datalogger.

iv. Additional lambda driver module.

e. **Two (2) CAN** connections must be made available for Championship devices. One must be located in the rear of the seat unit of the bike. They must be connected to the ECU CAN bus and the TPMS system (if fitted) must be connected to the same bus. 12v power should be available switched by the main switch (not switched by the ignition switch). The devices may be championship-mandated or nominated by the Technical Director.

Connector spec: JST 04R-JWPF-VSLE-S

i. Ground
ii. CAN Lo
iii. CAN Hi
iv. 12v Main Switch

f. The rain light must be powered **and switched exclusively** by the ECU (as detailed in the harness schematics).

g. The ECU may be freely located but must be fitted securely, in a damped mounting without vibration.

h. During an event, the Technical Director has the right to ask a team to substitute their ECU. The change must be made before the Sunday warm-up.

i. During an event the Technical Director or his appointed deputy has the right to read and save the team's calibration file, it will not be shared except for conformity checks with control electronics system partners but may be used in Dyno tests.

j. The following sensors must be connected directly to the ECU only and must be the original OEM sensors unless noted below: **No other sensors may be fitted.**

1. Throttle position (multiple allowed)
2. Map sensor, map sync (pressure sensor on the intake port used to synchronize the engine start)
3. Airbox pressure
4. Engine pick-ups (cam, crank)
5. Twist grip position
6. Front speed (add only if not available OEM)
7. Rear speed (add only if not available OEM)
8. Gearbox output shaft speed (if on OEM machine)
9. Gear position
10. Ambient air pressure
11. Water temperature
12. Air temperature
13. Tip-over switch (no lean angle except from ECU) (all ECU's feature crash detection by IMU.

k. The following sensors may be connected directly to the ECU only and are not required to be OEM sensors unless noted below:

1. Gear shift load cell/switch may only provide a signal to the controlled ECU.
2. Lambda - Bosch LSU4.9 only **(one per cylinder allowed).**
3. Fork position
4. Shock position
5. Front brake pressure
6. Rear brake pressure
7. Fuel pressure (not temperature)
8. Oil pressure
9. Oil temperature
10. Switches (Left and right)
11. Rear TPMS (Temperature and pressure, must be CAN)*
12. Front TPMS (Temperature and pressure must be CAN)*

*The OEM phonic/speed sensor must be used (ZX636)
*Must be from the **FIMNA National MotoAmerica Eligible Parts for Competition List**

l. The data logger must be from the **FIMNA National MotoAmerica Eligible Parts for Competition List** (Data Logger list). The characteristics of approved data logging systems must be the following:

i. The maximum retail price of the unit (hardware + software, excluding sensors and wiring harness) cannot exceed €3000 Euro (VAT excluded). The "unit" may consist of multiple parts, such as an input module or recording module.

ii. The Data Logger unit must be available for sale to the public.

iii. The data logger may ONLY be connected to the CAN bus and to those sensors listed in section 2.5.9.2/h.

iv. **The logged data must be available to the Technical Director (uploaded to a secure file share or via flash drive). The logger must log any channels/signals requested by the series.**

v. **The ECU may log data exclusively for the Championship. It will be used for BOP and diagnostics purposes.**

m. Only the following may be connected directly to the logging system.

i. GPS Unit (Lap timing and track position)

ii. Rear tire temperature (Infra-Red)(External)(Maximum 3)

iii. **Any exceptions noted in the FIMNA National MotoAmerica Eligible Parts for Competition List.**

o. Telemetry is not allowed.

p. No remote or wireless connection to the bike for any data exchange or setting is allowed while the engine is running, or the bike is moving.

q. All shift lights must be white.

r. If handlebar switches are replaced from those supplied in the kit then they must meet the specification documented on www.soloengineering.com Their basic layout, switch function, position and color must follow those supplied in the kit.

s. Plug caps and coils must be as homologated.

t. Electric cables, connectors, batteries, and switches are free, but the harness must comply with the wiring schematic that is available from soloengineering.com.

u. Spark plugs and wires may be replaced.

2.5.9.2 Generator, alternator, electric starter

a. The generator (ACG) must remain as homologated. No modifications are 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 two (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 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.

b. In case the frame or motorcycle needs to be replaced, the rider or the team must

request the use of a spare frame or motorcycle from the Technical Director. The participants recognize the need for the Technical Director to make decisions requiring judgment and exercising discretion. The Technical Director's decision is final.

c. One (1) spare complete motorcycle is allowed per rider. The spare motorcycle may only be used once the Technical Director deems your original frame or motorcycle unusable. (For example, you may not go to your spare motorcycle for a complete engine failure unless there are extenuating circumstances, and the Technical Director approves it.)

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

e. The technical stewards must inspect the motorcycle before it is used for safety checks, and a new seal will be placed on the frame.

f. 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 front of the pit box during the practices, qualifying, and races.

The Technical Director or his appointed staff will officially seal the frame of this motorcycle. The seal will bear a serial number, which will be recorded. Any attempt to remove the seal will damage it irreparably.

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

If the primary or active motorcycle is damaged in a crash/incident or is declared unrepairable for other reasons (safely and within the available time) by the Technical Director or his appointed staff. In that case, the technical staff will destroy the seal on the damaged motorcycle. The chassis of this motorcycle must not be used for the remainder of the event. The technical director will record the new serial number.

The frame or motorcycle can be any spare available that is not necessarily provided by the same team.

The spare motorcycle must be of the same manufacturer and have the same displacement. Changes to manufacturer or displacement may be allowed at the discretion of race direction and may be accompanied by grid position penalties.

Minor adjustments may be made to the spare motorcycle during an event, intending to allow teams to maintain parity with the primary bike.

If the spare motorcycle is used in competition, the primary machine is removed from the competition. At that time, the damaged machine must be kept out of view.

The spare machine can only be used in the next session in which the incident occurred, rendering the primary bike unusable. The first opportunity to use the spare machine in a race situation is the next session or race. A race will be deemed to have begun when the rider exits the pit lane for the sighting laps. All restarts, including those three laps or less, are considered a continuation of the original race for determining spare machine eligibility.

The team may rebuild the original primary machine; however, only in the case of TOTAL PROVEN WRECKAGE with the spare bike can an application be made to utilize the original machine. The Technical Director's decision regarding this is final.

The Technical Director may impound the damaged frame for a later examination.

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. Crash protectors may be fitted to the frame using existing points (max. length: 50 mm) or pressed into the ends of the wheel axles (max. length: 30mm).

e. Nothing else may be added or removed from the frame body.

f. All motorcycles must display a **unique** vehicle identification number punched on the frame body (a proper “legal VIN” or a unique designation by the team, which the Technical Director may choose to append). No detachable plates are permitted.

g. Engine mounting brackets or plates must remain as originally produced by the manufacturer for the homologated motorcycle.

h. Front subframes / fairing mounts may be changed or altered; the material is free.

i. Rear sub frames may be changed or altered. The material must be metal. No composites are allowed.

j. 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.

k. The paint scheme is not restricted, but polishing the frame body or sub-frame is not allowed.

Steering Stem Position:

l. Steering angle changes are permitted by fitting inserts onto the bearing seats of the original steering head, but no part of the insert may protrude axially more than 1.5 mm outside the original steering head. The bearing position may be moved a maximum of 4mm forward and aft in the plane of the original bearing.

m. These parts must be on the FIMNA National MotoAmerica Eligible Parts for Competition List and freely available with a price limit of €180 / pair.

Swingarm Pivot Position:

n. If the original chassis includes adjustable/replaceable inserts for the swingarm pivot position, then they may be replaced. The swingarm pivot position may be moved a maximum of 3mm.

o. If the original chassis does not include adjustable/replaceable inserts, then the swingarm pivot (axle) may be replaced to allow offset bushings in both the frame and to support the swingarm pivot bearings. The pivot axis may be moved a maximum of 3mm radially from the homologated position.

p. A modification may be made to the frame to locate or lock the pivot axle ONLY with prior written approval of the Technical Director following application including drawings and full details of the modification.

q. These parts (as complete kits) must be on the FIMNA National MotoAmerica

Eligible Parts for Competition List and freely available with a price limit of €600 / set.

2.5.10.2 Suspension - General

a. Participants in the Supersport class must only use units from the **FIMNA National MotoAmerica Eligible Parts for Competition List** 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 €2450 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 eligible products from the suspension manufacturers must be available to all participants at least one (1) month before the first round of the MotoAmerica Superbike season and remain available all season. The products must be available within six (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 eligible 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 may be 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 dampers cannot be used if not installed on the homologated model for road use. If equipped, 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, as listed in the FIMNA National MotoAmerica Eligible Parts for Competition List.**

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 front fender mounts integrated in the fork lower may be modified or replaced.**

i. **Fittings for suspension stoke sensors (potentiometers) may be attached**

j. **The axle bore in the fork lower cannot be modified. The front axle nut/sleeve may be added or modified and/or made captive.**

k. **The triple clamp assembly (Upper clamp, lower clamp and stem) may be replaced. The parts may be manufactured by the team but must be listed on the FIMNA National MotoAmerica Eligible Parts for Competition List at least two (2) weeks before their first use during official sessions and be freely available for other teams to purchase (and supplied within four (4) weeks of a paid order). The registration of the parts must include dimensioned drawings and photographs to allow easy identification. The price limit for the complete assembly is €1250.**

l. A steering damper may be added or replaced with an aftermarket damper.

m. The steering damper cannot act as a steering lock limiting device.

2.5.10.4 Swing arm (rear fork)

a. The rear fork must be the originally fitted and homologated part with no modification allowed except the following:

b. Rear axle chain adjuster may be modified or changed. The wheel axle nut may be replaced and/or made.

c. A rear axle chain adjuster slot may be enlarged to allow the brake caliper mounting to become captive

d. A solid protective cover (shark fin) shall be fixed to the swing-arm, and must always cover the opening between the lower chain run, swingarm and the rear wheel sprocket, irrespective of the position of the rear wheel.

e. Rear wheel stand brackets may be added to the rear fork by welding or by bolts. 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. An anchorage system or point(s) to keep the original brake calipers in place may be added to the rear swing arm.

g. The sides of the swing arm may be protected by a thin vinyl cover only; no composite or structural covers are allowed.

h. Wheel support rails/guides may be added to permit quick wheel changes.

2.5.10.5 Rear suspension unit

a. The rear suspension unit (shock absorber) may be replaced with a unit from the **FIMNA National MotoAmerica Eligible Parts for Competition List** (see 2.5.10.2b).

b. The original attachment points to the frame and rear fork (or linkage) must be as homologated.

c. **The rear suspension linkage assembly (all parts, including bearings) may be replaced. The parts may be manufactured by the team but must be listed on the FIMNA National MotoAmerica Eligible Parts for Competition List at least two (2) weeks before their first use during official sessions and be freely available for other teams to purchase (and supplied within four (4) weeks of a paid order). The registration of the parts must include dimensioned drawings and photographs to allow easy identification. A maximum of two (2) types of linkages per supplier are allowed. The price limit for the complete assembly is €600.**

d. 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. The wheels may be overpainted, but the original finish cannot be removed.

c. A non-slip coating/treatment may be applied to the bead area of the rim.

d. 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.

e. **Wheel axles may be modified or replaced.**

f. Wheel spacers can be modified or replaced.

g. Bearing spacers are free.

h. Wheel balance weights may be discarded, changed, or added.

i. Aluminum or steel inflation valves are compulsory.

j. The only allowed rim sizes are:

Wheels Size	
Front	**3.5"**
Rear	**5.5"**

In the case the machine is not fitted with the aforementioned sizes, a single alternative wheel will be agreed between the manufacturer and the Superbike Technical Director. It should be an OEM type production wheel. The inertia must be within 10% of the originally fitted wheel. The inertia must be within the range of homologated wheels in the other machines.

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. The maximum outside diameter is 320 mm. However, the offset, wheel mounting 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 maximum thickness of the brake disc is 6mm.**

c. Only steel (max. carbon content 2.1 wt. %) is allowed for brake discs.

d. Front brake calipers, as well as all the mounting points and mounting hardware (mount, carrier, hanger), must be the originally fitted and homologated parts with no modification allowed (see art. 2.5.10.3). Spacers may be fitted between the caliper and fork lower to fit larger diameter disks.

e. Rear brake calipers must be the originally fitted and homologated parts with no modifications allowed. **The mounting points must remain as homologated, but the mounting hardware (mount, carrier, hanger) may have the axle bore sleeved to capture the brake caliper assembly to the swingarm to permit quick wheel changes.**

f. **The rear brake caliper carrier/hanger may be replaced, and the caliper's position may be moved. The caliper's underslung position is allowed.**

g. 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.

h. The front brake master cylinder can be the originally fitted and homologated part with no modification allowed or may be replaced with a unit from the **FIMNA National MotoAmerica Eligible Parts for Competition List**. The retail price limit for the front master cylinder (including the lever) is €450. The brake lever design is free.

i. The rear brake master cylinder can be the originally fitted and homologated part with no modification allowed or may be replaced with a unit from the **FIMNA National MotoAmerica Eligible Parts for Competition List**. The retail price limits are:

i.	Thumb brake (including lever and mounts)	€450
ii.	Hand brake	€450
iii.	Foot operated master	**€300**

The use of thumb or hand brakes is allowed in addition to or instead of the foot-operated system. To facilitate this, an adaptor may be fitted to the reservoir input of the OEM master cylinder.

j. 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). Brake line hose fittings (including banjo bolts) can only be steel or titanium.

k. Front and rear brake pads may be changed. Brake pad locking pins may be modified for quick change type.

l. Additional air ducts are not allowed.

m. The anti-lock brake system (ABS) must be removed.

n. Motorcycles must be equipped with brake lever protection, intended to protect the handlebar brake lever from being accidentally activated in case of collision with another motorcycle. Composite guards are not permitted. Guards from the **FIMNA National MotoAmerica Eligible Parts for Competition List** will be permitted without regard to the material. 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 replaced and relocated.

c. Throttle controls must be self-closing when not held by the hand.

d. **Only the originally fitted (Drive-by-wire) grip sensor or an optional grip sensor listed in the FIMNA National MotoAmerica Eligible Parts for Competition List may be used.**

e. The clutch assembly 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 and engine stop switches 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 can stop a running engine. The button or switch must be red.

2.5.10.9 Footrest and foot controls

a. The footrests, hangers/brackets and hardware may be replaced and relocated but the hangers/brackets must be mounted to their original frame mounting points.

b. The foot controls, gear shift and rear brake must remain operated manually by foot.

c. Footrests 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 footrest must have at least an eight (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 of material (minimum radius 8 mm). The plug surface must be designed to reach the widest possible area. The

Technical Director has the right to refuse any plug not satisfying this safety purpose.

2.5.10.10 Fuel tank

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

b. All fuel tanks must be completely filled with fire retardant material (open-celled mesh, i.e. "Explosafe®").

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. If the tank has a filler ‘neck’ (tube) inside the tank that restricts its complete filling, then the neck may be removed or have vent holes drilled through it.

f. **Fuel tank drains may be added.**

g. 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.

h. The tank may not have a cover fitted over it unless the homologated machine also features a full cover.

i. The sides and rear of the fuel tank may be protected with a cover made of a composite material. These covers must follow the shape of the fuel tank exactly.

j. The fuel tank may have a 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. All bodywork paint and decal designs are free.

c. The fairing has a tolerance of +/-10mm from the original homologated road fairing, respecting the design and features of the homologated fairing and any articles below. The overall width of the frontal area may be +10mm maximum. The decision of the Technical Director is final.

d. For Supersport Next Generation: The fairing has a tolerance of +/-8mm from the original homologated road fairing, respecting the design and features of the homologated fairing and any articles below. The overall width of the frontal area may be +5mm maximum. The decision of the Technical Director is final.

e. The windscreen may be replaced.

f. Fairing brackets may be altered or replaced.

g. The ram-air intake must maintain the originally homologated shape and dimensions.

h. **Original air ducts running between the fairing and the air box may be altered or replaced by exact cosmetic replicas of the original parts. If the parts serve another function (e.g., dashboard mounting), then the airflow passage must retain the homologated internal shape, and the part must be listed in the FIMNA National MotoAmerica Eligible Parts for Competition List. Material is free.**

i. Particle grills or “wire meshes” originally installed in the openings for the air ducts may be removed. Flap valve systems may be removed. Air ducts cannot be added if not on the original machine.

j. The lower fairing must 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 if they are not present on the original machine. (min. 5 liters). The lower edge of openings in the fairing must be positioned at least 50 mm above the bottom of the fairing.

k. The lower fairing must incorporate one (1) 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.

l. Minimal changes are allowed in the fairing to allow clearance for protective engine covers.

m. 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.

n. Front mudguard must conform in principle to the homologated shape originally produced by the manufacturer. Front mudguards may be replaced and the use of carbon fiber or Kevlar® composites are allowed.

o. Front mudguard may be spaced upward for increased tire clearance.

p. Rear hugger type mudguards fixed on the swing-arm may be replaced with a cosmetic duplicate of the original part. The use of carbon fiber or Kevlar® composites are allowed.

The chain guard may be removed if it is not incorporated in the rear hugger. If the chain guard is incorporated in the hugger, then the chain guard section may be removed or modified to accommodate larger diameter rear sprockets.

q. The chain guard may be removed if it is not incorporated in the rear fender.

r. The existing rear mudguard under the seat may be removed.

s. The exact appearance, shape, size, and location of the front headlights of the homologated motorcycle must be respected and should be obtained by applying a plastic or metallic film on the front of the motorcycle.

t. Supersport Next Generation, if the proposed machine is not fitted with a fairing, then a fairing from the manufacturers' range may be used by agreement with DWO and the Technical Director. A belly pan is compulsory.

2.5.10.12 Seat

a. The 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 the front, rear and profile must conform in principle to the homologated shape.

e. The 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. See 2.3.4h.

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 materials 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. Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used

c. Gaskets, seals, and gasket materials **(head and cylinder base gaskets may NOT be replaced unless noted in the FIMNA National MotoAmerica Eligible Parts for Competition List)**

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. Speedometer and related wheel spacers

c. 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. Toolbox

f. Helmet hooks and luggage carrier hooks

g. Passenger footrests

h. Passenger grab rails

i. Safety bars, center and side stands must be removed (fixed brackets must remain)

j. Catalytic converters.

k. Rear mudguards affixed to the seat unit.

2.6 STOCK 1000 TECHNICAL SPECIFICATIONS

The following rules are intended to give freedom to modify or replace some parts for safety, research and development, and improve competition between various motorcycle concepts.

EVERYTHING THAT IS NOT AUTHORIZED AND PRESCRIBED IN THIS RULEBOOK 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.

Stock 1000 motorcycles require a Superstock 1000 FIM homologation. (see FIM homologation procedure for Superstock, Supersport and Superbike motorcycles). 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 homologation, it may be used for racing in the corresponding class for a maximum period of eight (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 Stock 1000 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.

2019-2022 Ducati V4R is accepted as homologated for MotoAmerica competition. Effective 6-26-2020 the Ducati V4R will be balanced per Article 2.6.3 adjusting the minimum weight to 180 kg.

2.6.2 Engine configurations and displacement capacities

The following engine configurations comprise the Stock 1000 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 (new), must remain at the homologated size. All machines must be normally aspirated.

2.6.3 Balancing various motorcycle concepts

To equalize the performance of motorcycles used in the Stock 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 (unless balanced) 170 kg (374 lbs.)

Aprilia RSV4 1100 balanced at 176kg (388 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 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 Technical Director at the preliminary checks.

2.6.5 Numbers and number plates

The background colors and figures (numbers) for Stock 1000 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:	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 red background with no advertising within 25 mm 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 two (2) weeks before the first race by the Technical Director.

c. The numbers must use the fonts as detailed in Section 2.15. 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 two (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 three (3) mm. 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.

f. The Technical Director's decision will be final in case of a dispute concerning the legibility of numbers.

2.6.6 Fuel

a. The designated fuel is VP Racing Fuels MGP-R.

b. Please refer to Article 2.11 for additional details

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 2.3.8.1.

b. A maximum of six (6) tires per rider can be mounted at any time.

c. For Stock 1000 races 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. During free practices, qualifying practices, warm-up sessions, and races, front and rear tires are required to be marked with tire stickers.

e. See article 2.3.8

2.6.8 Engine

2.6.8.1 Fuel injection system

2.6.8.1.1 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. 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.

f. Air and air/fuel mixture can go to the combustion chamber exclusively through the throttle body butterflies.

g. 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.

2.6.8.2 Cylinder head

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

   i. Original valve seats must be used, but modifications are permitted to the shape in the valve contact area, but not to the internal diameter of the main seal material.

   ii. Rocker arms (if any) must remain as homologated.

   iii. The valves must remain as originally equipped and homologated. See the **FIMNA National MotoAmerica Eligible Parts for Competition List** for approved homologated valves.

   iv. The shim buckets / tappets must remain as originally equipped and homologated.

b. The exhaust air bleed system must be blocked, and the external fittings on the cam cover(s) may be replaced with plates.

c. The compression ratio is free.

d. It is forbidden to add any material to the cylinder head unless as described above.

2.6.8.3 Camshaft

a. The camshaft 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.

2.6.8.4 Cam sprockets or gears

a. Cam sprockets may be slotted to allow the cam timing to be adjusted.

b. Pressed on cam sprockets may be replaced with an adjustable boss and cam sprocket.

c. The cam chain must remain as homologated.

d. The cam chain tensioner must remain as homologated.

2.6.8.5 Cylinders

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

2.6.8.6 Pistons

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

2.6.8.7 Piston rings

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

b. All piston rings must be fitted.

2.6.8.8 Piston pins and clips

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

2.6.8.9 Connecting rods

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

2.6.8.10 Crankshaft

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

b. The balancer shaft must be the originally fitted and homologated part with no modification.

2.6.8.11 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.

2.6.8.11.1 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 the same or higher specific weight and the total weight of the cover must not be less than the original one.

b. Oil-containing engine covers cannot be secured with aluminum bolts.

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. Each side (left and right) of the engine must have at least one (1) protective cover installed on the farthest protruding engine cover containing oil. Composite covers are not permitted. FIM approved covers will be permitted without regard of the material or dimensions.

   i. The secondary cover must cover a minimum of 1/3 of the original cover. It must not have sharp edges that could damage the track surface. 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.

   ii. Heavy-duty engine case covers may be used in lieu of secondary case covers.

d. 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 for shimming.

b. Quick-shift systems (including wire and potentiometer) are allowed.

c. Countershaft sprocket, rear wheel sprocket, chain pitch, and size may be changed.

d. The sprocket cover may be modified or eliminated.

e. The chain guard may be removed if it is not incorporated in the rear fender.

2.6.8.13 Clutch

a. Aftermarket or modified clutches are permitted.

b. Only friction and drive discs may be changed, but their number must remain as original.

c. Clutch springs may be changed.

d. The clutch basket (outer) must be the originally fitted and homologated part but may be reinforced.

2.6.8.14 Oil pumps and oil lines

a. No pump modifications are allowed.

b. Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of braided reinforced construction with swaged or threaded connectors.

2.6.8.15 Radiator, cooling system and oil cooler

a. The only liquid engine coolant 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 fans and wiring may be removed. Thermal switches, water temperature sensors, and thermostats may be removed from the cooling system.

e. Radiator cap is free.

f. An additional water radiator may be fitted, but the appearance of the front, the rear, and the motorcycle's profile must not be changed. Extra mounting brackets to accommodate the additional radiator are permitted.

2.6.8.16 Air box

a. The air box on the homologated motorcycle must remain as originally produced by the manufacturer, but the air box drains must be sealed.

b. The air filter element may be modified or replaced but not removed and 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 and discharge in the air box.

e. Additional heat shielding is not allowed (e. g. gold or silver heat tape).

2.6.8.17 Fuel supply

a. The fuel pump and fuel pressure regulator must remain as homologated.

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. 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 exhaust 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 Stock 1000 will be 115 dB/A (with a three (3) dB/A tolerance after the race only), except for where local rules prevail.

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. The Ducati V4R must use the homologated ECU with control software provided by Ducati. No other software will be allowed for usage. The rider is responsible for using the most recent control software version.

b. The system may have FIM/DWO/MotoAmerica approved external ignition and/or injection module(s) added. Ducati V4R may not use any external ignition modules. This includes quick shift modules that connect directly to the ignition harness.

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. 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 must be done before Sunday warm-up.

g. No extra sensors may be added for control strategies except shift rod sensors, 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 €3.000 (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 approved data loggers.

   iv. A maximum of seven (7) simultaneously 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.

   vi. Approved data loggers with internal inertial platforms (IMU or gyros) may be used for data collection but may not be used for control strategy. Also see 2.6.9.1/i./vii.

   vii. CAN (or other data) 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, and analogue to CAN and traction control units is €750. These devices must be approved by FIM/DWO/MotoAmerica.

k. Telemetry is not allowed.

l. 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.

m. 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.

ii. The Kit wiring harness may incorporate the data logging harness.

iii. A kit harness that incorporates the data logging harness may only accommodate seven (7) additional sensors.

iv. A sample of the kit wiring harness may be requested by FIM/MotoAmerica.

v. The key/ignition lock may be relocated, replaced or removed.

vi. Cutting of the original main wiring harness is allowed.

n. Data logger harness:

i. The data logger wire harness cannot include any other sensors except for the seven (7) 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.

o. For the Stock 1000 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.

p. 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.

q. Spark plugs may be replaced.

r. The original speedometer and tachometer may be altered or replaced.

s. Battery is free.

2.6.9.2 Generator, alternator, electric starter

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

b. The electric starter must operate normally and always be able to start the engine during the event.

c. During parc fermé, the starter must crank the engine at a suitable speed for starting for a minimum of two (2) seconds without using 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.

b. In case the frame or motorcycle needs to be replaced, the rider or the team must request the use of a spare frame or motorcycle from the Technical Director. The participants recognize the need for the Technical Director to make decisions requiring judgment and exercising discretion. The Technical Director's decision is final.

c. One (1) spare complete motorcycle is allowed per rider. The spare motorcycle may only be used once the Technical Director deems your original frame or motorcycle unusable. (For example, you may not go to your spare motorcycle for a complete engine failure unless there are extenuating circumstances, and the Technical Director approves it.)

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

e. The technical stewards must inspect the motorcycle before it is used for safety checks, and a new seal will be placed on the frame.

f. 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 front of the pit box during the practices, qualifying, and races.

The Technical Director or his appointed staff will officially seal the frame of this motorcycle. The seal will bear a serial number, which will be recorded. Any attempt to remove the seal will damage it irreparably.

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

If the primary or active motorcycle is damaged in a crash/incident or is declared unrepairable for other reasons (safely and within the available time) by the Technical Director or his appointed staff. In that case, the technical staff will destroy the seal on the damaged motorcycle. The chassis of this motorcycle must not be used for the remainder of the event. The technical director will record the new serial number.

The frame or motorcycle can be any spare available that is not necessarily provided by the same team.

The spare motorcycle must be of the same manufacturer and have the same displacement. Changes to manufacturer or displacement may be allowed at the discretion of race direction and may be accompanied by grid position penalties.

Minor adjustments may be made to the spare motorcycle during an event, intending to allow teams to maintain parity with the primary bike.

If the spare motorcycle is used in competition, the primary machine is removed from the competition. At that time, the damaged machine must be kept out of view.

The spare machine can only be used in the next session in which the incident occurred, rendering the primary bike unusable. The first opportunity to use the spare machine in a race situation is the next session or race. A race will be deemed to have begun when the rider exits the pit lane for the sighting laps. All restarts, including those three laps or less, are considered a continuation of the original race for determining spare machine eligibility.

The team may rebuild the original primary machine; however, only in the case of TOTAL PROVEN WRECKAGE with the spare bike can an application be made to utilize the original machine. The Technical Director's decision regarding this is final.

The Technical Director may impound the damaged frame for a later examination.

2.6.10.1 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 (a proper “legal VIN” by the team to which the Technical Director may choose to append). No detachable plates are permitted.

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 material of a 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.

2.6.10.2 Suspension - General

a. Participants in the Stock 1000 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 except oil and fitting the price limit is €2420 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 Stock 1000 season and remain available all season. The products must be available within six (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 must be removed.

g. Electronic controlled steering dampers 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 suspension

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) must remain as originally produced by the manufacturer for the homologated motorcycle.

f. Steering head 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.

g. A fork brace may be installed. Fork bottoms may be modified for speed and suspension sensors.

h. Fender brackets may be modified to maintain stock tire to fender clearance when using race tires or to provide clearance for caliper mounting brackets.

i. A steering damper may be added or replaced with an after-market 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.

2.6.10.4 Swing arm (rear fork)

a. The rear fork must remain as originally produced by the manufacturer for the homologated motorcycle.

b. The rear fork pivot bolt must remain as originally produced by the manufacturer for the homologated motorcycle.

c. The rear pivot position must remain in the homologated position (as supplied on the production bike). If the standard bike has inserts, the orientation/position of the original insert may be changed, but the insert cannot be replaced or modified.

d. 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 axle blocks.

e. Rear axle adjusters must remain as originally produced by the manufacturer for the homologated motorcycle.

f. The sides of the swing-arm may be protected by a thin vinyl cover only; no composite or structural covers are allowed.

2.6.10.5 Rear suspension unit (shock)

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

b. All rear suspension linkage parts must remain as originally produced by the manufacturer for the homologated motorcycle.

c. Mechanical Suspension: 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.

d. Electronic suspension may be used if such suspension is already present on the production model of the homologated motorcycle, and it must remain completely standard (all mechanical and electronic parts must remain as homologated except

for shims and springs). The original suspension system must work properly and safely in the event of an electronic failure. The electronic shock absorber can be replaced with a mechanical one.

2.6.10.6 Wheels

a. Wheels may be replaced but not modified (see article 2.3.5) and associated parts may be altered or replaced from those fitted to the homologated motorcycle.

b. Aftermarket Wheels Maximum retail price $2600 USD.

c. See the **FIMNA National MotoAmerica Eligible Parts for Competition List** for list of approved aftermarket wheels.

d. Aftermarket wheels must be made from aluminum (aluminum) alloys.

e. The use of the following alloy materials for the wheels is not allowed: Beryllium (>=5%), Scandium (>=2%), Lithium (>=1%).

f. 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.

g. Wheel manufacturers must provide a copy of the certificate for their wheel(s) as proof of compliance to the Technical Director when requested.

h. 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.

i. 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.

j. Bearings, seals, 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).

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

k. Wheel axles must remain as homologated; wheel spacers may be modified or replaced.

2.6.10.7 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. The 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. 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. Also see Article 2.6.10.4 e.

e. Refer to “Supersport Master Cylinder” **FIMNA National MotoAmerica Eligible Parts for Competition List** for all approved Stock 1000 front master cylinders.

f. Front and rear hydraulic brake lines may be changed.

g. The split of the front brake lines for both front brake calipers must be made above the lower fork bridge (lower triple clamp).

h. "Quick" (or "dry-break") connectors in the brake lines are allowed.

i. Front and rear brake pads may be changed. Brake pad locking pins may be modified for quick change type.

j. Front brake system cooling airducts are allowed.

   i. Air ducts shall be routed to cool the discs or directed onto the brake caliper bodies. Viewed from the side, the airducts opening shall not pass the vertical line drawn by the front axle shaft. Viewed from the front, the airducts must fall inside the shape drawn by the fairing (aerodynamic winglets excluded) and must be positioned as close as possible to the front fork leg/foot. For safety reasons, the airflow shall not be directed onto the brake pads.

   ii. Air ducts may be made of composite materials. The complete assembly must be presented and validated by the Technical Director in prior of its use.

k. The anti-lock brake system (ABS) must be removed.

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. The 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 can stop a running engine. The button or switch must be red.

2.6.10.9 Footrest / Foot controls

a. Footrests, 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. Footrests 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 footrest must have at least an eight (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 of material (minimum radius 8 mm). The plug surface must be designed to reach the widest possible area.

f. The 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 begin as originally produced by the manufacturer for the homologated motorcycle. If the standard tank is of insufficient capacity to achieve full race distance, then with the prior agreement of the Technical Director, the tank may be modified to increase its fuel capacity but must maintain its original external appearance.

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 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 full cover fitted unless the homologated machine also features a full cover.

g. The sides and rear of the fuel tank may be protected with a cover made of vinyl or a composite material. These covers must follow the shape of the fuel tank exactly.

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.

b. Overall size and dimensions must be the same as the original part.

c. The windscreen may be replaced.

d. Motorcycles that are not originally equipped with streamlining are not allowed to add streamlining in any form, except for a lower fairing device, as described in point (g). This device cannot exceed above a line drawn horizontally from wheel axle to wheel axle and must follow the specifications described at point (g).

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

g. The lower fairing must be constructed to hold, in case of an engine breakdown, a minimum of six (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.

h. 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°.

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 plates. 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. 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 only opened in wet race conditions as declared by the race director.

k. The front fender may be replaced with a cosmetic duplicate of the original parts and may be spaced upward for increased tire clearance.

l. The rear fender fixed on the swing arm may be modified, changed, or removed.

m. Motorcycles may be equipped with 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.

2.6.10.12 Seat

a. The seat, seat base and associated bodywork may be replaced with parts of similar appearance as originally produced by the manufacturer for the homologated motorcycle. The front, rear and profile appearance 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.

2.6.10.13 Rear safety light

All motorcycles must have a functioning red light mounted at the rear of the machine. See 2.3.4h.

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 equal or exceed the standard fastener's strength.

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 materials 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, seals, 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, instruments, etc.) to the frame (or engine) cannot be made from titanium or fiber reinforced composites except for the exhaust silencer hanger that may be made from carbon.

f. Protective covers for the frame, chain, footrests, etc., may be made of other materials, such as fiber composite material, if these parts do not replace the 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. Chain guard if it is not incorporated in the rear fender.

c. Bolt-on accessories on a rear subframe.

2.6.13 The following items MUST BE removed.

a. Headlamp, rear lamp, and turn signal indicators (when not incorporated in the fairing). Suitable materials must cover openings.

b. Rear-view mirrors

c. Horn

d. License plate bracket

e. Toolkit

f. Helmet hooks and luggage carrier hooks

g. Passenger footrests

h. Passenger grab rails

i. Safety bars, center and side stands must be removed (fixed brackets must remain).

2.7 KING OF THE BAGGERS TECHNICAL SPECIFICATIONS

The following rules are intended to give freedom to modify or replace some parts for safety, research and development, and improve competition between various motorcycle concepts.

The intent is that these rules will remain in place until the beginning of the 2027 season and not be significantly changed for the next two (2) years.

EVERYTHING THAT IS NOT AUTHORIZED AND PRESCRIBED IN THIS RULEBOOK 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.

King of the Baggers motorcycles (including approved engines) require a MotoAmerica homologation. All motorcycles must comply in every respect with the road racing requirements 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 twelve (12) years or until new rules or changes in the technical specifications of the corresponding class disqualify the homologated motorcycle.

The appearance from the front, rear, and profile of King of the Bagger 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.

2.7.1 Motorcycle specifications

- Harley-Davidson FL Touring (All Years)
- Indian Bagger or Touring (All Years)

2.7.2 Engine configurations and displacement capacities

Harley-Davidson Motorcycles:

a. Originally equipped Milwaukee-Eight twin-cooled or air-cooled pushrod V-Twin engines, maximum displacement of 131.95 ci. normally aspirated.

b. Originally equipped with air-cooled pushrod V-Twin engines with a maximum displacement of 131.95 ci. normally aspirated.

c. S&S or Jim's air-cooled pushrod Twin Cam or twin-cooled engines w/MSO are acceptable up to 131.95 ci. normally aspirated.

d. Forced induction air-cooled pushrod V-Twin engines allowed with a maximum displacement of 107ci.

Indian Motorcycles:

a. Originally equipped with a water-cooled V-Twin Engine with a maximum displacement of 112 ci. normally aspirated.

b. Originally equipped with an air-cooled pushrod V-Twin Engine with a maximum displacement of 131.95 ci. normally aspirated.

c. Forced induction air-cooled pushrod V-Twin engines allowed with a maximum displacement of 111 ci.

2.7.3 Balancing various motorcycle concepts

To equalize the performance of motorcycles used in the King of the Baggers

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 MotoAmerica Permanent Bureau will take the decision to apply a balancing system to a motorcycle based on decisions made by the Superbike Commission at any time deemed necessary to ensure fair competition.

2.7.4 Rev Limits

a. Maximum rpm limits

Harley-Davidson – 7000 Maximum rpm limit

Indian Challenger – 7700 Maximum rpm limit

2.7.5 Minimum weight

All machines 281.23 kg (620 lbs.)

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

There is no tolerance for 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 in. The established weight limit must be met in this condition. Nothing may be added to the motorcycle, including all fluids.

During the practice and qualifying sessions, riders may be asked to submit their motorcycle to 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 Technical Director at the preliminary checks.

2.7.6 Numbers and number plates

The background colors and figures (numbers) for Baggers may be any color but must be strongly contrasting.

2.7.7 Fuel

a. All competitors must use VP Supplied Fuel. Fuel Specification VP T4+.

2.7.8 Tires

a. The maximum number of tires, of any type, available to each rider during the event will be specified in Article 2.3.8.1.

b. A maximum of twelve (12) tires per rider can be mounted at any time.

c. For All King of the Bagger races 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. For the King of the Bagger Challenge race only, tire stickers are not required.

e. During free practices, qualifying practices, warm-up sessions and races, front and rear tires are required to be marked with tire stickers.

f. All machines must be fitted with Dunlop tires. Specification (Dunlop Slicks)

g. See article 2.3.8.1

2.7.9 Engine

2.7.9.1 Fuel system

a. The original equipped fuel system must be used.
b. The fuel pump and fuel pressure regulator must be the originally fitted and homologated part with no modification allowed.
c. Air funnels, air intake, or airboxes may be altered or replaced.
d. Throttle bodies may be modified or replaced.
    i. The number of drive motors attached to the throttle bodies must remain as originally homologated.
e. Fuel injectors may be modified or replaced.
f. Air and air/fuel mixture must go to the combustion chamber exclusively through the throttle bodies.

2.7.9.2 Cylinder Head

The 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 allowed.
b. No machining or modification is allowed in the cam box/valve mechanism area unless pre-approved by the Technical Director, whose decision is final.
c. The throttle body insulators may be modified.
d. Modifications of the inlet and exhaust ports are free
e. Surface grinding of the cylinder head surface on the head gasket side
f. Original homologated valve guides may be replaced materials are free
g. Polishing of the combustion chamber is allowed.
h. Original valve seats may be modified or replaced.
i. The compression ratio is free.
j. Welding of material for cooling purposes is allowed. Must be approved by Technical Director
k. It is forbidden to add any material to the cylinder head unless as described above.
l. Rocker arms (if any) may be modified or replaced.
m. Valves may be modified or replaced.
    i. Material must stay as homologated.
n. Valve springs may be modified or replaced.
o. Valve spring retainers, collets and/or spring seats may be altered or replaced.
p. The shim buckets must remain as homologated.
q. Tappets/lifters may be modified or replaced.
    i. The method of valve lash must stay as homologated.

r. Pushrods (if any) may be modified or replaced including covers, pushrod tubes, and anti-rotation device.

i. Material must stay as homologated.

2.7.9.3 Camshaft

a. Camshafts may be altered or replaced.

i. Material must stay as homologated.

b. Camshafts must be available to all competitors within six (6) weeks of confirmed availability.

2.7.9.4 Cam sprockets or cam gears

a. Camshaft sprockets, pulleys, or gears may be altered or replaced to allow degree adjustments of the camshafts.

b. The cam chain or belt tensioning device(s) can be modified or changed.

2.7.9.5 Cylinders

a. May be altered or replaced.

b. Cylinders must retain their homologated appearance.

c. Maximum bore size is 4.330” (110.00mm)

d. Normally aspirated air-cooled / Twin-Cooled pushrod engines may increase the bore to a maximum total displacement of 131.95 ci.

e. Normally aspirated water-cooled engines are limited to 112 ci.

f. Forced induction engines: Harley Davidson air-cooled 107 ci. / Indian air-cooled 111 ci.

2.7.9.6 Pistons, rings, pins, and clip

a. May be modified or replaced.

b. Pistons must be made available to all competitors within six (6) weeks of confirmed availability.

2.7.9.7 Connecting rods

a. Connecting rod may be altered or replaced.

i. Material Must stay as homologated.

b. Connecting rod bolts are free but must be of the same material as the original bolt or of higher specific weight material.

c. Connecting rods must be available to all competitors within six (6) weeks of confirmed availability.

2.7.9.8 Crankshaft

a. Crankshaft may be modified or replaced.

b. Crankshaft addition or reduction in weight to reach a racing balance can be no higher than 10% of the homologated weight listed below.

I. Indian (38.8 LBS) 17,610 grams. (crankshaft + trigger wheel + 4 mounting bolts)

II. Harley-Davidson (32.9 LBS) 14,923 grams. (complete flywheel/crankshaft assembly including connecting rods)

c. Heavy metal is not permitted unless originally specified in the homologated crankshaft.

d. Removal of the balancing shaft is allowed.

e. Indian Challenger - Stroke must be as homologated.

f. Crankshafts must be available to all competitors within six (6) weeks of confirmed availability.

2.7.9.9 Crankshaft / Gearbox Housing

a. Crankcases must be the originally fitted part, with only the following modifications allowed: If the crankcases have an integral cylinder, 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).

   i. See KOTB approved eligible parts list for allowed engine cases.

   ii. The inner primary cover is considered part of the crankcases.

b. Modification to the inner primary cover to add a primary breather and/or enlarge the OEM breather hole is allowed. All breather hoses from the primary must be routed directly to the catch can/overflow container.

c. Engine crankcases may be relieved to allow installation of replacement bearings for the crankshaft/flywheel. Excludes All Harley-Davidson Milwaukee Eight engines. Must be pre-approved by the Technical Director. The decision of the Technical Director is final.

d. Air-cooled/Twin-Cooled pushrod V-Twin engines crankcase may be modified to install 131.95 ci cylinders.

e. Only the original or an approved sump Oil-pan (sump) and oil pick-up can be used.

f. Oil breather cover may be modified or replaced.

g. Oil tank breathers are acceptable and may run through an external catch-can.

h. All the oil breather lines must be connected (may pass through an oil catch tank) and exclusively discharge in the air box or air intake.

i. Engine crankcase/transmission cases may be modified to allow clearance of chain/swingarm line only. Must be approved by the Technical Director.

j. Engine mounts must be as homologated.

2.7.9.9.1 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 of material of the 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, or steel. Each side (left and right) of the engine must have at least one (1) protective cover installed on the farthest protruding engine cover containing oil. Composite covers are not permitted.

   i. Heavy-duty engine case covers may be used in place of secondary case covers.

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

c. All drain and fill plugs must be lock wired (safety wired). The use of clips is not permitted. External oil filter(s), screws and bolts that enter an oil cavity must be safety wired (i.e., on crankcases) or the oil filter may optionally have a secondary retention mechanism.

2.7.9.10 Transmission, Gearbox, and Primary

a. Transmission shafts and gear set must begin as originally fitted and homologated.

b. Shimming is allowed.

c. Undercutting and surface treatments are permitted.

d. Final drive belt systems may be converted to chain-type systems.

e. Harley Davidson – Compensator may be modified or replaced.

i. The method of compensation must stay as homologated.

f. The countershaft sprocket, rear wheel sprocket, chain pitch, and size can be changed. Chain master links must be rivet type.

g. External quick-shift systems are permitted.

h. The compensating sprocket gear ratio must stay as homologated.

2.7.9.11 Clutch

a. Aftermarket or modified clutches (including plates/springs etc.) are permitted.

b. Primary gear may be modified or replaced but gear ratio must stay as homologated.

2.7.9.12 Oil pumps, cam plates, and oil lines

a. The oil pump and cam plate may be modified or replaced.

b. Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of braided reinforced construction with wedged or threaded connectors.

2.7.9.13 Cooling System

a. The only liquid engine coolants permitted are water.

b. The radiator may be changed, modified, or removed.

c. The water pump must remain as homologated.

d. Additional radiators or oil coolers may be added.

e. The original oil/water heat exchanger may be modified, replaced, or removed.

f. The cooling system hoses and catch tanks may be changed.

g. The radiator fan and wiring may be changed, modified, or removed.

h. The appearance of the motorcycle's front, rear, and profile must, in principle, conform to the homologated shape after adding additional radiators or oil coolers. The decision of the Technical Director is final.

2.7.9.14 Airbox

a. The airbox may be modified or replaced.

b. The appearance from the front, rear and profile of the motorcycle must in principle

conform to the homologated shape. The decision of the Technical Director is final.

c. Airboxes should be designed to retain oil from the crankcases in the event of engine failure or tip-over.

d. Where breather or overflow pipes are fitted, they must discharge via existing outlets.

   i. Catch cans may be used**.**

2.7.9.15 Fuel Supply

a. The 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 +/- 7.25 psi (0.5 bar) in respect to the maximum pressure of the homologated motorcycle.

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 in such a way that they are protected from crash damage.

d. Fuel pump may be relocated inside the fuel tank. The method of fuel pickup must stay as homologated.

e. Quick connectors or dry break connectors may be used.

f. Fuel vent lines may be replaced.

g. Fuel filters may be added.

2.7.9.16 Exhaust System

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

b. For safety reasons, the exposed edge(s) of the exhaust pipe(s) outlet(s) must be rounded to avoid any sharp edges.

c. Wrapping of exhaust systems is allowed.

d. The noise limit for Baggers will be 115 dB/A measured at 3000 RPM. See Art. 2.14 for the complete sound testing procedure. (With a 3 dB/A tolerance after the race only).

2.7.10 Electrics and Electronics

For 2026 MotoAmerica will require a controlled ECU. The ECU will be a MAXX Race unit with MotoAmerica spec firmware.

2.7.10.1 Engine control system

a. The engine control system (ECU) must be:

   i. Original system as homologated, with or without a change of software

   ii. An approved aftermarket system with series specified software from the King of the Bagger eligible parts list.

b. Central unit (ECU) may be relocated.

c. Wiring harness is free.

d. Optional equipment sold by the motorcycle manufacturer for the homologated model is considered not homologated.

e. At any time during an event, the Technical Director has the right to require a team to

substitute their ECU or external module with the MotoAmerica sample.

f. No traction control or lift control strategies may be used.

g. No sensor may be modified or replaced from the homologated machine unless described in line h.

h. The following sensors may be added or replaced.

   1. Lambda sensor X2
   2. Left- and Right-Hand switches (may be replaced from kit)
   3. Fork position potentiometer
   4. Shock position potentiometer
   5. Front brake pressure sensor
   6. Rear brake pressure sensor
   7. Transponder/lap time signal
   8. GPS receiver unit
   9. Oil temperature sensor
   10. Oil pressure sensor
   11. Throttle grip sensor
   12. Gear shift load cell
   13. Water temperature sensor
   14. Cylinder head temperature sensor
   15. Tire Pressure Monitoring Sensors TPMS
   16. Gear position sensor
   17. MAP Pressure sensor
   18. Fuel Pressure sensor

i. No extra sensors except the lambda and shift rod sensor may be added for control strategies.

j. Wheel speed sensors must be removed.

k. IMU if originally installed per the homologation, must be removed.

l. The MotoAmerica approved external fuel injection modules may not alter any sensor signal relating to the ride by wire system or control/actuate any part of the machine excepting the fuel injectors and ignition coils. No external module may add traction control strategies. The modules may only connect to the fuel injectors, ignition coils, lambda sensor, power supply and “piggyback the Throttle Position, Gear and RPM signals”. Lambda closed loop/auto tuning is permitted.

m. Other additional electronic hardware equipment not on the original homologated motorcycle cannot be added with the exceptions noted below.

   i. Resistors/load may be added to replace the parts of the electrical system that have been removed (including lights and lambda sensors), to prevent ECU errors.

n. Telemetry is not allowed.

o. No remote or wireless connection to the bike for any data exchange or setting is

allowed whilst the engine is running, or the bike is moving.

p. A data logger may be fitted, Data collection from the machines sensors or ECU is allowed. Data collection by the lap timer by way of GPS and internal IMU is permitted.
    i. External IMU may be added for data collection purposes only. IMU must go through data logger only and must not be connected directly to ECU.

q. All manufacturers in KOTB are required to provide DBC files with these required channels for the purpose of data collection.
    1. RPM
    2. Throttle position
    3. Gear position
    4. Coolant temperature
    5. Engine temperature

r. The characteristics of approved data logging systems must be the following:
    I. The Data Logger unit must be available for sale to the public.
    II. The data logger may ONLY be connected to the CAN bus and to those sensors listed in section 2.7.10.1/H.
    III. No traction control or lift control channels may be added or logged.

s. Spark plug caps and coils may be modified or replaced.

t. Spark plugs may be replaced.

u. Battery is free.

v. ECU must be made available to all competitors within six (6) weeks of confirmed availability.

2.7.10.2 Generator, alternator, electric starter

a. The stator/coil must be the originally fitted parts with no modification allowed.

b. 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).

2.7.11 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.

b. In case the frame or motorcycle needs to be replaced, the rider or the team must request the use of a spare frame or motorcycle from the Technical Director. The participants recognize the need for the Technical Director to make decisions requiring judgment and exercising discretion. The Technical Director's decision is final.

c. One (1) spare complete motorcycle is allowed per rider. The spare motorcycle may only be used once the Technical Director deems your original frame or motorcycle unusable. (For example, you may not go to your spare motorcycle for a complete engine failure unless there are extenuating circumstances, and the Technical Director approves it.)

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

e. The technical stewards must inspect the motorcycle before it is used for safety checks, and a new seal will be placed on the frame.

f. 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 front of the pit box during the practices, qualifying, and races.

The Technical Director or his appointed staff will officially seal the frame of this motorcycle. The seal will bear a serial number, which will be recorded. Any attempt to remove the seal will damage it irreparably.

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

If the primary or active motorcycle is damaged in a crash/incident or is declared unrepairable for other reasons (safely and within the available time) by the Technical Director or his appointed staff. In that case, the technical staff will destroy the seal on the damaged motorcycle. The chassis of this motorcycle must not be used for the remainder of the event. The technical director will record the new serial number.

The frame or motorcycle can be any spare available that is not necessarily provided by the same team.

The spare motorcycle must be of the same manufacturer and have the same displacement. Changes to manufacturer or displacement may be allowed at the discretion of race direction and may be accompanied by grid position penalties.

Minor adjustments may be made to the spare motorcycle during an event, intending to allow teams to maintain parity with the primary bike.

If the spare motorcycle is used in competition, the primary machine is removed from the competition. At that time, the damaged machine must be kept out of view.

The spare machine can only be used in the next session in which the incident occurred, rendering the primary bike unusable. The first opportunity to use the spare machine in a race situation is the next session or race. A race will be deemed to have begun when the rider exits the pit lane for the sighting laps. All restarts, including those three laps or less, are considered a continuation of the original race for determining spare machine eligibility.

The team may rebuild the original primary machine; however, only in the case of TOTAL PROVEN WRECKAGE with the spare bike can an application be made to utilize the original machine. The Technical Director's decision regarding this is final.

The Technical Director may impound the damaged frame for a later examination.

2.7.11.1 Frame body and rear subframe

a. The main frame must be the originally manufactured and fitted part.

b. Holes may be drilled on the frame only to fix approved components (i.e., fairing brackets and steering damper mount).

c. c. The original position (of the engine, steering stem, or pivots) is considered the position in which the production motorcycle is supplied and must be retained.

d. All motorcycles must display a vehicle identification number punched on the frame body (a proper ‘legal VIN’)

e. Crash protectors may be fitted to the frame using existing points or pressed into the ends of the wheel axles.

f. For the Indian Challenger, the lower portion of front frame spares may be modified for ground clearance only. This must be pre-approved by the Technical Director, whose decision is final.

g. Suspension linkage mounting points on the frame must remain as homologated.

h. No polishing or surface refinishing is allowed but the paint scheme is not restricted.

i. The front fairing stay may be modified or replaced. Material is free.

j. The rear sub frame may be modified or replaced.

   i. Using titanium, carbon fiber, or Kevlar materials that are not homologated on the original motorcycle is not allowed.

2.7.11.2 Suspension – General

a. Participants in the King of the Bagger class must only use the approved and listed suspension units for that season. Suspension price caps will be $6,000 for Forks and $2,000 for Shocks.

b. The approved products from the manufacturers must be available to all participants at least one month before the first round of the King of The Bagger season and remain available all season. The products must be available within six (6) weeks of a confirmed order.

c. The suspension manufacturers must provide setting and tuning parts to all customers/teams/participants using their products. These parts can be used by all participants during the season and shall be available for immediate delivery to all teams/customers.

d. All setting parts must be supplied by the suspension manufacturer and available to all teams/riders.

e. Suspension manufacturers are allowed to offer service contracts when a team is using the approved and listed suspension products. However, suspension manufacturers cannot demand a service contract from a customer or participant to obtain a suspension product.

f. Electronic suspension cannot be used.

g. An 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 homologated).

2.7.11.3 Front Suspension

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

b. The upper and lower fork clamps (triple clamp, fork bridges) and stem may be changed or modified.

   i. The modified upper and lower triple clamps must be available to all participants at least two months before the first round of the King of the Baggers season and remain available all season. The products must be available within six (6) weeks of a confirmed order.

   ii. The price cap for all fork clamps is $3000.

c. A steering damper may be added or replaced.

d. The steering damper cannot act as a steering lock limiting device.

2.7.11.4 Swing-arm (Rear fork)

a. Swing arms may be replaced or modified.

b. Using titanium, carbon fiber, or Kevlar materials is not allowed if they are not homologated on the original motorcycle.

c. A solid protective cover (shark fin) shall be fixed to the swing arm and must always cover the opening between the lower chain run, swingarm, and the rear wheel sprocket, irrespective of the position of the rear wheel.

d. Rear wheel stand brackets may be added to the rear fork by welding or bolts.

e. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed.

f. Swingarm spindle (pivot) may be modified or replaced.

g. The modified swingarms from the manufacturers must be available to all participants at least two months before the first round of the King of the Baggers season and remain available all season. The products must be available within six (6) weeks of a confirmed order including all mounting hardware.

h. Swingarm price cap will be $8,000.

i. See 2.7.9.9, line H, for swingarm/motor mounts

2.7.11.5 Rear Suspension Unit

a. The rear suspension unit may be changed, but a similar system (e.g., dual or mono) must be used.

b. The rear suspension linkage and pull rod 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.

2.7.11.6 Wheels

a. Wheels may be replaced, and associated parts may be altered or replaced from those fitted to the homologated motorcycle.

b. Wheels can either be made from aluminum alloys or homologated material.

c. The use of the following alloy materials for the wheels is not allowed: Beryllium (>=5%), Scandium (>=2%), Lithium (>=1%).

d. Bearings, seals, and axles may be altered or replaced from those fitted to the homologated motorcycle. Using titanium and light alloys is forbidden for wheel spindles (axles).

e. Wheel balance weights may be discarded, changed, or added to.

f. Aluminum or steel inflation valves are compulsory.

g. Front and rear wheel sizes must be 17-19 inches.

2.7.11.7 Brakes

a. Front brake master cylinder may be altered or replaced.

b. Front brake calipers may be altered or replaced.

c. Rear brake master cylinder may be altered or replaced.

d. Rear brake calipers may be altered or replaced.

e. Brake pads or shoes may be altered or replaced.

f. Brake hoses and brake couplings may be altered or replaced.

g. Hydraulic anti-knockback systems may be fitted to the brake lines/caliper.

h. Brake discs may be altered or replaced. 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. ABS systems must be removed.

2.7.11.8 Handlebars and hand controls

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

b. Cable-operated throttles (grip assembly) must be equipped with both an opening and a closing cable, including when actuating a remote drive by wire grip/demand sensor.

c. Motorcycles must have a functional ignition kill switch or button mounted on the right-hand handlebar (within reach of the hand while on the hand grips) that can stop a running engine. The button or switch must be RED.

2.7.11.9 Footrest and foot controls

a. Footrests, hangers/brackets, and hardware may be replaced and relocated, but the hangers/brackets must either be mounted to their original frame mounting points or in another location that does not require the frame modification.

2.7.11.10 Fuel tank

a. The fuel tank must, in principle, conform to the homologated appearance and location of the original tank. The Technical Director's decision is final.

b. The fuel tank must remain homologated material.

2.7.11.11 Fairing and Bodywork

a. The fairings, mudguards, and bodywork must conform in principle to the homologated shape as originally produced by the manufacturer. Material is free. The decision of the Technical Director is final.

b. The fairing has a tolerance of +/-20mm from the original homologated road fairing, respecting the design and features of the homologated fairing. It must conform to the style of the original machine (scaled +/-20 mm planar), incorporating all included design features. However, it may not exceed the homologated minimum width of the fairing or side panels.

   i. **The front fairings may be positioned to allow clearance of the handlebars only but must be within 110 mm of the homologated position in any direction on the X and Y axis.**

   ii. **The bodywork must maintain its relative homologated position (it cannot be tilted front or back) along the y-axis, as viewed from a side profile, with a maximum deviation of ±15 millimeters from its original position when subjected to a force applied to the bodywork in any direction.**

c. Air ducts for cooling purposes may be used if there is a similar design feature present on the homologated motorcycle, but they must conform in principle to the

homologated appearance of the motorcycle. Must be pre-approved by the Technical Director.

d. The windscreen must be installed and may be replaced.

e. The front mudguard (fender) may be modified or replaced. Material is free.

f. The rear mudguard (fender) may be modified or replaced.

   i. The fender may be modified to increase clearance for installing/removing the rear tire. In principle, the rear fender must conform to the homologated shape and size as originally produced by the manufacturer. Material is free. The decision of the Technical Director is final.

g. A lower catch/belly pan must 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 water-cooled/ 2.5 liters air-cooled).

   i. The lower catch/belly pan 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.

   ii. Participants in the King of the Baggers class must only use the approved catch/belly pan, which the manufacturer must provide. The belly pan price cap will be $1,000.

   iii. The manufacturers' approved catch/belly pan must be available to all participants (including all mounting hardware) at least one month before the first round of the King of The Baggers season and remain available all season. The products must be available within six (6) weeks of a confirmed order.

h. The saddlebags must conform in principle to the homologated appearance and remaining stock size. Position height may be altered to a maximum of 3” with respect to the homologated vertical distance of the OEM mounting point. The lid must be functional and locked in the closed position. Each saddle bag must be able to enclose a 13.6” x 5.4” x 9” box. Material is free. The decision of the Technical Director is final.

   i. **The saddlebags and lid must be installed as on the homologated machine** and should conform to the design and features of the homologated saddlebags, with a tolerance of +/-20mm. They should also match the style of the original machine, with a planar scale of +/-20mm, and include all the design features of the original saddlebags.

   ii. The saddlebags may be adjusted inward toward the fender. However, the subframe must remain in place to support both the saddlebags and the fender. The fender's size must comply with the homologated dimensions as specified in line f. Additionally, even when the saddlebags are moved inward, their appearance must still align with the homologated shape and positioning of the original saddlebags.

i. **All motorcycle bodywork manufacturers and OEM motorcycle manufacturers that use a third-party manufacturer for their bodywork components used in the racing series must make the bodywork components available for retail purchase by all competitors within six (6) weeks of a confirmed order. Bodywork components include front fairings, front fenders, rear fenders, side panels, and saddlebags.**

2.7.11.12 Seat

a. Seat may be altered or replaced.

2.7.11.13 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. Fairing / bodywork fasteners may be replaced with the quick disconnect type.

d. Aluminum fasteners may only be used in non-structural locations.

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

a. Any lubrication, brake or suspension fluid may be used.

b. Gaskets, seals, and gasket material.

c. Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used.

d. Thread repair using inserts of different material such as helicoils and timeserts.

e. External surface finishes and decals.

2.7.13 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.

2.7.14 The following items Must BE removed.

a. Rear-view mirrors.

b. Horn.

c. License plate bracket.

d. Toolbox.

e. Side stand

f. Safety bars, center, and side stand brackets welded to the main frame may be removed.

2.8 MOTOAMERICA TWINS CUP TECHNICAL SPECIFICATIONS

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

EVERYTHING THAT IS NOT AUTHORIZED AND PRESCRIBED IN THIS RULEBOOK 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.

Twins Cup motorcycles require MotoAmerica homologation. (See MotoAmerica homologation procedure for Twins cup). All motorcycles must comply with all the requirements for road racing as specified in these technical regulations.

Once a motorcycle has been homologated, it may be used for racing in the corresponding class for a maximum of twenty (20) years or until new rules or changes in the technical specifications of the corresponding class disqualify the homologated motorcycle.

The appearance from the front, rear and the profile of the Twins Cup 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.

2.8.1 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.

2.8.2 Engine configurations and displacement capacities

The following engine configurations comprise the Twins Cup class.

Over 600cc up to 750cc	4 stroke	2-cylinder water-cooled
Over 750cc up to 800cc*	4 stroke	2-cylinder water-cooled
Over 600cc up to 800cc	4 stroke	2-cylinder air cooled

*The over 750cc up to 800cc 2-cylinder water-cooled engines require approval and will be considered on a case-by-case basis. Engine restrictions will apply.

Modifying the bore and stroke to reach class limits is not allowed. All machines must be normally aspirated.

2.8.3 Balancing various motorcycle concepts

To equalize the performance of motorcycles used in the Twins Cup Championship, a system of performance enhancements or restrictions can be developed (such as minimum weight, **engine restrictions,** air restrictors or REV limits may be applied according to their respective racing performances). The decision to apply a balancing system to a motorcycle will be made by the MotoAmerica Permanent Bureau based on information provided by the Technical Director at any time deemed necessary to ensure fair competition.

See MotoAmerica Technical Bulletin 02-2021 for Aprilia RS660 engine restrictions.

2.8.4 Minimum weight

2.8.4.1 The minimum weight will be:

Over 600cc up to 800cc 153.31 kg (338 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 for 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 in which they finished the race. The established weight limit must be met in this condition. Nothing, including all fluids, may be added to the motorcycle.

During the practice and qualifying sessions, riders may be asked to submit their motorcycle to weight control. In all cases, the rider must comply with this request.

Ballast may be used to stay over the minimum weight limit, which may be required due to the handicap system. The use of ballast and weight handicap must be declared to the Technical Director at the preliminary checks.

2.8.5 Numbers and number plates

The background colors and figures (numbers) for the Twins Cup are blue (Pantone 281c) background with white 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 blue background with no advertising within 25 mm 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 blue background. The Technical Director must pre-approve any change to this position a minimum of two (2) weeks before the first race.

c. The numbers must use the fonts as detailed in Section 2.15. Any numbers not using these fonts must have the design of the numbers and the layout pre-approved by the Technical Director a minimum of two (2) weeks before the first race. All digits must be of standard form.

d. Any outline must be of a contrasting color, and the maximum width of the outline must be three (3) mm. The background color must be clearly visible around all edges of the number (including the outline). Reflective or mirror-type numbers are not permitted.

e. Numbers cannot overlap.

f. The Technical Director's decision will be final in case of a dispute concerning the legibility of numbers.

2.8.6 Fuel

a. The designated fuel is VP Racing Fuels MGP-R.

b. Please refer to Article 2.11 for additional details

2.8.7 Tires

a. The maximum number of tires, of any type, available to each rider during the event will be specified in Article 2.3.8.1.

b. A maximum of six (6) tires per rider can be mounted at any time.

c. For the 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. During free practices, qualifying practices, warm-up sessions, and races, front and rear tires must be marked with tire stickers.

e. See article. 2.3.8.

2.8.8 Engine

2.8.8.1 Fuel injection system

2.8.8.1.1 Fuel injection systems refer to throttle bodies, fuel injectors, variable-length intake tract devices, and fuel pumps.

a. The original homologated fuel injection system must be used without any modification with the following exceptions:

   i. Air funnels may be modified.

   ii. Throttle bores may be modified.

   iii. Butterfly valves may be modified to fit increased throttle size but must include the same safety features as stock.

   iv. Secondary throttle valves and shafts may be removed or fixed in the open position, and the electronics may be disconnected or removed.

b. The fuel injectors must be stock and unaltered from the original specification and manufacture.

c. 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.

d. Air and air/fuel mixture must go to the combustion chamber exclusively through the throttle body.

e. 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.

2.8.8.2 Cylinder head

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

a. Porting and polishing of the cylinder head, which is 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 valve guides may be replaced.

f. Polishing of the combustion chamber is allowed.

g. Original valve seats must be used, but modifications are allowed to the shape.

h. Compression ratio is free, but the combustion chamber may only be modified by removing material.

i. It is forbidden to add any material to the cylinder head unless described above.

j. Rocker arms (if any) must remain as homologated.

k. The valves may be replaced but the valve face must remain the same diameter as homologated.

l. Valve springs may be changed but the number must remain as homologated.

m. Valve spring retainers, collets, and/or spring seats may be altered or replaced.

n. The shim buckets/tappets must remain as homologated.

2.8.8.3 Camshaft

a. Camshafts may be modified or replaced (see article 2.8.8.2 a).

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.

2.8.8.4 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 may be replaced.

2.8.8.5 Cylinders

a. Cylinders may be bored to a maximum of 2mm over standard bore or up to a maximum total displacement of 700 cc, whichever is less. Machines with a standard displacement greater than 700cc must remain as homologated.

b. If the homologated cylinder is unsupported or open on the cylinder deck, the cylinder may have the deck closed.

   i. Water jackets must match the homologated cylinder head.

   ii. The thickness of the addition may not exceed 8mm.

c. Cylinder coatings must remain as homologated or replaced with a steel sleeve.

d. The cylinder base gasket(s) may be changed.

e. The top face of the cylinder may be machined to adjust deck height.

2.8.8.6 Pistons

a. May be modified or replaced.

2.8.8.7 Piston rings

a. May be modified or replaced.

2.8.8.8 Piston pins and clips

a. May be modified or replaced.

2.8.8.9 Connecting rods

a. Connecting rods may be altered or replaced from those fitted to the homologated motorcycle.

b. The material must be the same type as the homologated item (e.g. steel, titanium, alloy) or steel.

c. 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.

d. The center-to-center (little end to big end) length of the rod must be the same as the original homologated item.

e. Connecting rod bolts are free.

2.8.8.10 Crankshaft

Only the following modifications are allowed to the originally fitted and homologated crankshaft:

a. Bearing surfaces may be polished.

b. Surface treatments may be applied to the crankshaft. (e.g. REM, WPC)

c. Balancing is allowed only by the same method as the homologated crankshaft. For example, heavy metal (e.g. Mallory metal inserts) is not permitted unless originally specified in the homologated crankshaft.

d. The reduction in weight of the crankshaft can be no higher than 5% of the homologated weight without the tolerance as shown on the homologation drawing of the crankshaft.

e. There is no limit to the addition of crankshaft weight.

f. The balancing must be performed using the original method (e.g., drilling or machining) and in the same position (e.g., the edge of counterweights).

g. Polishing of the crankshaft is not allowed.

h. The balance shaft must remain as homologated. No modifications are allowed.

2.8.8.11 Crankcase / Gearbox housing

a. Crankcases must remain as homologated. No modifications are allowed (including painting, polishing, and lightening).

b. Bolt-on brackets and/or bracing may be added internally to the crankcase to increase strength; however, welding on the crankcase and external bracing is not allowed.

c. c. A pump used to create a vacuum in the crankcase may not be added. If a vacuum pump is installed on a homologated motorcycle, it may be used only as homologated.

2.8.8.11.1 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 of material of the 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. Oil containing engine covers cannot be secured with aluminum bolts.

d. 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. Each side (left and right) of the engine must have at least one (1) protective cover installed on the farthest protruding engine cover containing oil. Composite covers are not permitted. FIM approved covers will be permitted without regard to the material or dimensions.

   i. The secondary cover must cover a minimum of 1/3 of the original cover. It must not have sharp edges that could damage the track surface. 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.

   ii. Heavy-duty engine case covers may be used in lieu of secondary case covers.

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

2.8.8.12 Transmission / Gearbox

a. The stock transmission shafts, and gear set only are permitted. Shimming is allowed.

b. Undercutting and surface treatments are permitted.

c. OEM shift drum detent stars may be modified or replaced.

d. Quick-shift systems (including wire and potentiometer) are allowed.

e. The countershaft sprocket, rear wheel sprocket, chain pitch, and size may be changed.

f. The sprocket cover may be modified or eliminated.

g. The chain guard may be removed.

2.8.8.13 Clutch

a. The clutch system (wet or dry type) and the method of operation (by cable or hydraulic) must remain as homologated.

b. Friction and drive discs may be changed.

c. Clutch springs may be changed.

d. The original clutch assembly (including the clutch basket) may be modified or replaced by an aftermarket unit. The maximum retail price of the complete assembly is €1200. The clutch may include back torque limiting capabilities (slipper type).

e. 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.

2.8.8.14 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 braided reinforced construction with swaged or threaded connectors.

2.8.8.15 Cooling System

a. The only liquid engine coolant 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. The radiator fan and wiring may be removed. Thermal switches, water temperature sensors and thermostats may be removed inside the cooling system.

e. The radiator may be replaced with an aftermarket radiator or additional radiator.

f. Oil coolers may be modified. An oil cooler may replace heat exchangers (oil/water).

g. Oil coolers must not be mounted on or above the rear fender.

h. The radiator cap is free.

2.8.8.16 Air box

a. The airbox design is free but must allow the engine to operate continuously in all climatic conditions (e.g., rain should not stall the engine).

b. The air box drains must be sealed.

c. Ram air tubes or ducts running from the fairing to the air box may be modified, replaced, or removed.

d. All motorcycles must have a closed breather system. All oil breather lines must be connected and discharged in the air box or into a vented oil catch tank.

e. Additional heat shielding is allowed (i.e. gold or silver heat tape).

2.8.8.17 Fuel supply

a. Fuel pumps must remain as homologated.

b. The fuel pressure regulator may be modified or replaced.

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 so they are protected from crash damage.

d. Fuel petcocks may be altered, replaced, or removed from those fitted to the homologated motorcycle.

e. Quick connectors or dry break connectors may be used.

f. Fuel vent lines may be replaced.

g. Fuel filters may be added.

2.8.8.18 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) is free.

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 the Twins Cup will be 107 dB/A (with a three (3) dB/A tolerance after the race only), except for where local rules prevail.

2.8.9 Electrics and electronics

2.8.9.1 Ignition / Engine Control System (ECU)

a. The engine control system (ECU) may be modified or replaced with the following:

i. The original and homologated ECU with or without software changes and /or FIM/DWO/MotoAmerica approved external ignition/ injection module(s). Price

limit €1800 (tax and OEM ECU price excluded but includes software, upgrades/ flashes)

ii. A MotoAmerica-approved race ECU. For the race ECU to be approved, the retail price, including software, any activations, and upgrades, or necessary hardware (e.g., ignition driver and lambda modules), must be less than €1800 excluding data logger or €3100, including data logger.

iii. The maximum total price of other active/control/calculation units such as lambda driver modules, quick shifters, analogue to CAN, air bleed control, dash and ABS defeat modules and traction control units is €750. FIM/DWO/MotoAmerica must approve these devices.

b. For the ignition and injection module or quick shifter to be approved, the device manufacturer must send the Technical Director samples with technical data and the selling price.

c. 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.

d. 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 must be made before the Sunday warm-up.

e. No extra sensors may be added for control strategies except shift rod sensors, wheel speed sensors, and lambda sensors.

f. The following sensors must be connected directly to the ECU only and must be the original homologated sensors unless noted in section 2.8.9.1g below.

1. Throttle position (multiple allowed)
2. Map sensor, map sync (pressure sensor on the intake port used to synchronize the engine start)
3. Airbox pressure
4. Engine pick-ups (cam, crank)
5. Front speed (add only if not available OEM)
6. Rear speed (add only if not available OEM)
7. Gearbox output shaft speed (if on OEM machine)
8. Oil temperature.
9. Ambient air pressure
10. Water temperature
11. Air temperature
12. Tip-over switch.
13. IMU (unless IMU is provided with MotoAmerica approved Race ECU)
14. Knock Sensor
15. Fuel pressure sensor.

g. The following sensors may be connected directly to the ECU only and are not required to be homologated sensors unless noted below:

1. Gear shift load cell/switch may only provide a signal to the controlled ECU.

2. Lambda - (one sensor only).

3. Fork position

4. Shock position

5. Front brake pressure
6. Rear brake pressure
7. Gear position
8. Throttle grip sensor
9. Oil temperature
10. Transponder/lap time signal
11. Switches (Left and right)
12. Rear TPMS (Temperature and pressure must be CAN)*
13. Front TPMS (Temperature and pressure must be CAN)*

h. 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 seven (7) sensors.

i. The addition of a GPS unit for lap timing/scoring purposes is allowed and considered in the seven (7) sensors.

j. Telemetry is not allowed.

k. No remote or wireless connection to the bike for any data exchange or setting is allowed while the engine is running, or the bike is moving.

l. Harness:

i. The wiring harness is free.

m. The original speedometer and tachometer may be altered or replaced.

n. Spark plugs may be replaced.

o. The central unit (ECU) may be relocated.

p. The battery is free.

2.8.9.2 Generator, alternator, electric starter

a. The generator (ACG) must remain as homologated; no modifications are allowed.

b. The flywheel may be modified or replaced.

c. The ACG must generate sufficiently to maintain battery charge.

d. The stator must be fitted in its original position and without offsetting.

e. The electric starter must operate normally and always be able to start the engine during the event.

During parc fermé, the starter must crank the engine at a suitable speed for starting for a minimum of two (2) seconds without using a boost battery. No boost battery may be connected to the machine after the end of the session.

2.8.10 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 identified with a seal.

b. In case the frame or motorcycle needs to be replaced, the rider or the team must request the use of a spare frame or motorcycle from the Technical Director. The participants recognize the need for the Technical Director to make decisions requiring judgment and exercising discretion. The Technical Director's decision is final.

c. One (1) spare complete motorcycle is allowed per rider. The spare motorcycle may only be used once the Technical Director deems your original frame or motorcycle unusable. (For example, you may not go to your spare motorcycle for a complete engine failure unless there are extenuating circumstances, and the Technical Director approves it.)

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

e. The technical stewards must inspect the motorcycle before it is used for safety checks, and a new seal will be placed on the frame.

f. 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 front of the pit box during the practices, qualifying, and races.

The Technical Director or his appointed staff will officially seal the frame of this motorcycle. The seal will bear a serial number, which will be recorded. Any attempt to remove the seal will damage it irreparably.

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

If the primary or active motorcycle is damaged in a crash/incident or is declared unrepairable for other reasons (safely and within the available time) by the Technical Director or his appointed staff. In that case, the technical staff will destroy the seal on the damaged motorcycle. The chassis of this motorcycle must not be used for the remainder of the event. The technical director will record the new serial number.

The frame or motorcycle can be any spare available that is not necessarily provided by the same team.

The spare motorcycle must be of the same manufacturer and have the same displacement. Changes to manufacturer or displacement may be allowed at the discretion of race direction and may be accompanied by grid position penalties.

Minor adjustments may be made to the spare motorcycle during an event, intending to allow teams to maintain parity with the primary bike.

If the spare motorcycle is used in competition, the primary machine is removed from the competition. At that time, the damaged machine must be kept out of view.

The spare machine can only be used in the next session in which the incident occurred, rendering the primary bike unusable. The first opportunity to use the spare machine in a race situation is the next session or race. A race will be deemed to have begun when the rider exits the pit lane for the sighting laps. All restarts, including those three laps or less, are considered a continuation of the original race for determining spare machine eligibility.

The team may rebuild the original primary machine; however, only in the case of TOTAL PROVEN WRECKAGE with the spare bike can an application be made to utilize the original machine. The Technical Director's decision regarding this is final.

The Technical Director may impound the damaged frame for a later examination.

2.8.10.1 Frame body and sub-frames

a. The main frame must remain as originally produced by the manufacturer for use on the homologated machine.

b. Gussets or tubes may not be added or removed; other modifications are allowed within the following section of these rules. Brackets may be welded or bolted to the main frame to construct a detachable front or rear sub-frame or attach fairings. These brackets may not be used to change the rigidity of the main frame. (See 2.8.10.1/ j)

c. Holes may be drilled in 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. If the homologated machine has exchangeable bearing inserts/ bushes:

   i. 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.

g. If the homologated motorcycle has fixed bearing positions for the steering stem:

   i. 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 three (3) mm from the original steering head pipe location, nor may the bearing be inset.

h. All motorcycles must display a vehicle identification number punched on the frame body (a proper “legal VIN” which the Technical Director may choose to append). No detachable plates are permitted.

i. No polishing or surface refinishing is allowed, but the paint scheme is not restricted.

j. The front and rear subframe may be changed, altered, or removed. Suppose the rear subframe is integral to the mainframe. In that case, additional seat brackets may be added, and non-stressed protruding brackets may be removed if they do not affect the safety of the construction or assembly. Rear sub frames integral to the main frame may be replaced with a detachable sub-frame. Titanium or composites may not be used for the construction of the subframe. Bolt-on accessories to the rear sub-frame may be removed. Also see 2.8.11/f.

k. Approved sub-frames will be permitted without regard to the material.

2.8.10.2 Suspension - General

a. Participants in the Twins Cup 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 (1) month before the first round of the Twins Cup season and remain available all season. The products must be available within six (6) weeks of a confirmed order.

c. The suspension manufacturers must provide setting and tuning parts to all customers/teams/participants using their products. These parts can be used by all participants during the season and shall be available for immediate delivery to all teams/customers.

d. Teams may not modify any part of the forks or shock absorber; the suspension manufacturer must supply all setting parts and available to all teams/riders.

e. Suspension manufacturers are allowed to offer service contracts when the team is using the approved and listed suspension products. However, suspension

manufacturers cannot demand a service contract from a customer or participant to obtain a suspension product.

f. Electronically controlled suspension must be removed.

2.8.10.3 Front suspension

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

b. Forks from the Twins Cup approved list or from any other FIM homologated Supersport or Superstock 1000 machine may be used.

   i. See 2.5.10.3 Front suspension for permitted front fork modifications.

c. The upper and lower fork clamps (triple clamp, fork bridges) and stem may be changed or modified.

d. A steering damper may be added or replaced with an after-market damper.

e. The steering damper cannot act as a steering lock limiting device.

2.8.10.4 Swing-arm (rear fork)

a. The rear fork must remain as originally produced by the manufacturer for the homologated motorcycle.

b. The rear swing-arm pivot position may be modified by use of a modified pivot bolt (smaller or elongated) but the frame must remain as homologated. 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.

c. Rear wheel stand brackets may be added to the rear fork by welding or 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.

d. The rear axle chain adjuster may be modified or changed.

2.8.10.5 Rear suspension unit (shock)

a. The rear suspension unit may be changed, but a similar system (e.g., dual or mono) must be used.

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.

2.8.10.6 Wheels

a. Wheels may be replaced (see article 2.3.4) and associated parts may be altered or replaced from those fitted to the homologated motorcycle.

b. OEM wheels that do not meet the size requirements must be replaced.

c. Aftermarket wheels must be made from aluminum alloys.

d. The use of the following alloy materials for the wheels is not allowed: Beryllium (>=5%), Scandium (>=2%), Lithium (>=1%).

e. 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 the front wheel and 195 kg for the rear wheel; K = 1.5 for front and rear wheels. Static radius of tire: front 0.301 m, rear 0.331 m.

f. Wheel manufacturers must provide the Technical Director with a copy (or copies) of the certificate for their wheel(s) as proof of compliance when requested.

g. The homologated wheel and sprocket carrier assembly may be used with no modification, irrespective of material.

h. The wheels may be overpainted, but the original finish cannot be removed.

i. 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.

j. Bearings, seals, and axles may be altered or replaced from those fitted to the homologated motorcycle. Using titanium and light alloys is forbidden for wheel spindles (axles).

Wheel rim diameter size (front and rear):	17 inches
Front wheel rim width:	3.50 inches
Rear wheel rim width:	5.25-5.5 inches

2.8.10.7 Brakes

a. Participants in the Twins Cup season may use the following front brake parts:

   i. The originally fitted and homologated front and rear master cylinder and calipers

   ii. The front and rear master cylinder and calipers from an FIM homologated Supersport or Superstock 1000 machine.

   iii. The front and rear master cylinder and calipers from the Twins Cup or Supersport approved list.

   iv. Any combination of the above.

b. The approved products from the manufacturers must be available to all participants at least one month before the first round of the MotoAmerica Twins Cup season and remain available all season. The products must be available within four (4) weeks of a confirmed order.

c. Any product changes due to manufacturing or material supply issues must be approved in advance.

d. Front and rear brake discs may be replaced with aftermarket brake discs that must fit the original caliper and mounting. The maximum outside diameter is 320mm. However, the offset, wheel mounting, and ventilation system must remain the same as those on the homologated motorcycle.

e. Front and rear brake calipers and all mounting points and mounting hardware (mount, carrier, hanger) must remain in the homologated position (see also article 2.8.10.4 c). When using brake systems from other homologated machines, you may use the same mounting technique from which the systems originated. (i.e. rear brakes may be converted to underslung if the caliper was made for that purpose and vice versa) Spacers may be fitted between the caliper and fork lower to fit larger diameter disks.

f. Brake pads or shoes may be altered or replaced from those fitted to the homologated motorcycle.

g. The front brake master cylinder can be the originally fitted and homologated part with no modification allowed or may be replaced with a unit from the **FIMNA National MotoAmerica Eligible Parts for Competition List.** The retail price limit for the front master cylinder (including the lever) is €450. The brake lever design is free.

h. The rear brake master cylinder can be the originally fitted and homologated part with no modification allowed or may be replaced with a unit from the **FIMNA National MotoAmerica Eligible Parts for Competition List**. The retail price limits are:

   i. Thumb brake (including lever and mounts) €450

   ii. Hand brake €450

   iii. Foot operated master **€300**

i. The use of thumb or hand brakes is allowed in addition to or instead of the foot-operated system. An adaptor may be fitted to the reservoir input of the OEM master cylinder to facilitate this.

j. 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).

k. Only steel (max. carbon content 2.1 wt. %) is allowed for brake discs.

l. The ABS system must be removed.

2.8.10.8 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. The 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. The 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 and engine stop switches 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 can stop a running engine. The button or switch must be RED.

2.8.10.9 Footrest and foot controls

a. Footrests, 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. Footrests 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 footrest must have at least an eight (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 of material (minimum radius 8 mm). The plug surface must be designed to reach the widest possible area. The Technical Director has the right to refuse any plug that does not satisfy this safety purpose.

2.8.10.10 Fuel Tank

a. The 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 made of suitable material with a minimum volume of 250cc.

d. Fuel caps may be changed. When closed, fuel caps must be leakproof and 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 have a fitted cover.

g. The sides and rear of the fuel tank may be protected with a cover made of a composite material.

h. **Heat reflective tape may be applied to the fuel tank.**

2.8.10.11 Fairing / Bodywork

a. The fairing and bodywork may conform in principle to the homologated shape as originally produced by the manufacturer or replicate any full fairing-type motorcycle within the following limits:

   i. No wings or winglets

   ii. No excessive aerodynamics that may interfere with the safe operation of the motorcycle.

b. Carbon fiber or Kevlar® materials are not allowed in the 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.

c. “Naked” or fairing-less is acceptable but must have a belly pan that conforms with 2.8.10.11 (e)(f).

d. The windscreen may be replaced or added if not originally equipped.

e. The original air ducts running between the fairing and airbox may be altered or replaced from those fitted to the homologated motorcycle.

f. The lower fairing must 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.

g. 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.

h. The front fender design and material are free, but there is no excessive aerodynamics that may interfere with the motorcycle's safe operation. The technical director will make the final decision.

i. The rear fender design and material are free and may be added or removed. There should be no excessive aerodynamics that may interfere with the motorcycle's safe operation. The Technical Director will make the decision, and it is final.

2.8.10.12 Seat

a. The seat may be altered or replaced from those fitted to the homologated motorcycle.

b. The top portion of the rear bodywork around the seat may be modified to a solo seat.

c. c. Holes may be drilled in the seat or rear cowl to allow additional cooling. Holes bigger than 10 mm must be covered with metal gauze or fine mesh, which must be painted to match the surrounding material.

d. The seat construction material may be altered or replaced from those fitted to the homologated motorcycle.

2.8.10.13 Rear safety light

All motorcycles must have a functioning red light mounted at the rear of the machine. See 2.3.4h.

2.8.10.14 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. c. Titanium fasteners may be used in structural locations, but their strength and design must be equal to or exceed the strength of the standard fastener they are replacing. See article 2.8.10.6/j.

d. Special steel fasteners may be used in structural locations, but their strength and design must equal or exceed the strength of the standard fastener they are replacing.

e. Fasteners may be drilled for safety wire, but intentional weight-saving modifications are prohibited.

f. Threads repairs may be made using inserts of different materials such as Helicoils and Timeserts.

g. Fairing/bodywork fasteners may be changed to the quick disconnect type.

2.8.11 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, seals, and gasket materials

c. Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used.

d. Instruments, instrument bracket(s) and associated cables

e. Painted external surface finishes and decals.

f. 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 except the exhaust silencer hanger that may be in carbon.

g. Protective covers for the frame, chain and footrests may be made in other materials, like fiber composite material, if these parts do not replace original parts mounted on the homologated model.

2.8.12 The following items MAY BE removed.

a. Instrument, instrument bracket, and associated cables

b. Tachometer

c. Speedometer and associated wheel spacers

d. Chain guard

2.8.13 The following items MUST BE removed.

a. Headlamp, rear lamp, and turn signal indicators (when not incorporated in the fairing). Suitable materials must cover openings.

b. Rear-view mirrors

c. Horn

d. License plate bracket

e. Toolbox

f. Helmet hooks and luggage carrier hooks

g. Passenger footrests

h. Passenger grab rails

i. Safety bars, center, and side stand brackets welded to the main frame may be removed.

2.9 MOTOAMERICA TALENT CUP TECHNICAL SPECIFICATIONS

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

EVERYTHING THAT IS NOT AUTHORIZED AND PRESCRIBED IN THIS RULEBOOK 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.

Talent Cup motorcycles require MotoAmerica Phase 1 homologation**.** (see Appendix FIM homologation procedure for Superstock, Supersport, and Superbike motorcycles). 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 been homologated, it may be used for racing in the corresponding class for a maximum period of 8 years (see FIM homologation art 1.4.4), or until such time that new rules or changes in the technical specifications of the corresponding class disqualify the homologated motorcycle.

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

2.9.1 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.

2.9.2 Eligible machines

The class will be based around the MotoAmerica specification Kramer APX-350 MA models sold in the USA. The MotoAmerica/FIM Commission can decide which machines will be eligible in the class.

For the MotoAmerica Talent Cup, the following will be legal (this list can be amended at any time by the MotoAmerica Permanent Bureau):

- Kramer MotoAmerica APX-350 MA

2.9.3 Balancing various motorcycle concepts

The MotoAmerica permanent bureau reserves the right to apply balancing to the machines in the class as they see fit to maintain equality amongst machines. Methods may include but are not limited to the following:

- The primary method of balancing will be torque-limited maps updated in increments of +- x %
- Weight limit changes
- The balance criteria are considered a “Statement of Fact.”

The MotoAmerica Permanent Bureau will decide whether to apply the handicap at any time necessary to ensure fair competition.

2.9.4 Minimum weight

The minimum weight for each model is as follows:

Brand	Bike Weight		Combined Minimum Bike and Rider Weight*
	Hard Minimum	Soft Maximum	
Kramer APX-350 MA	**113 kg**	**121 kg**	**183 kg**

a. Combined weight is the rider's weight (in complete racing equipment) and bike, as used on the track.

b. If the bike has achieved or exceeded the 'Soft Maximum Weight', then the combined minimum weight does not need to be reached. The bike alone may never be below the 'Hard Minimum Weight.' This limits the maximum amount of ballast that can be added to the machines.

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

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

During the final technical inspection at the end of the race, the selected motorcycles and riders will be weighed in the condition in which they finished the race. The established weight limit must be met in this condition. Nothing may be added to the motorcycle, including all fluids.

During the practice and qualifying sessions, riders may be asked to submit their motorcycle to weight control. In all cases, the rider must comply with this request.

Ballast may be used to stay over the minimum weight limit, which may be required due to the handicap system. The use of ballast and weight handicap must be declared to the Technical Director at the preliminary checks.

2.9.5 Numbers and number plates

The numbers must be easily legible, in a clear, simple font, and contrast strongly with the background color. The background must be yellow (Pantone yellow c).

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:	10 mm

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 yellow background. Any change to this must be pre-approved a minimum of two (2) weeks before the first race by the MotoAmerica Technical Director.

c. The numbers must use the fonts as detailed in Section 2.15. 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 two (2) weeks before the first race. All digits must be of standard form.

d. Any outline must be of a contrasting color and the maximum width of the outline is three (3) mm. 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.

The Technical Director's decision will be final in case of a dispute concerning the legibility of numbers.

2.9.6 Fuel

a. The designated fuel is VP Racing Fuels MGP-R.

b. Please refer to Article 2.11 for additional details.

2.9.7 Tires

a. The maximum number of tires, of any type, available to each rider during the event will be specified in Article 2.3.8.1

b. Wet tires will not need to be marked with a tire sticker for the Talent Cup race only. They will not be considered in the total number of tires available for use; however, normal allocation limits still apply.

c. During free practices, qualifying practices, warm-up sessions, and races, front and rear tires are required to be marked with tire stickers.

d. See article. 2.3.8.

2.9.8 Engine

Machines may be randomly chosen for dyno testing.

2.9.8.1 Fuel injection system

2.9.8.1.1 Fuel injection systems refer to throttle bodies, fuel injectors, variable length intake tract devices, fuel pumps and fuel pressure regulators.

a. The fuel injection system must have all the original fitted parts with no modifications allowed.

2.9.8.2 Cylinder head

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

b. The Original valve seats must be used, but modifications to the valve contact area are permitted for service purposes only.

   i. No modifications to the internal diameter of the main seal material are allowed.

   ii. Original valve seat angles must be maintained.

c. Valve spring shims may be changed freely.

d. The head and base gasket must be the homologated gaskets, and no modifications are allowed.

2.9.8.3 Camshaft

a. The camshaft(s) must be the originally fitted and homologated part with no modification allowed.

2.9.8.4 Cam sprockets or gears

a. The cam chain must remain as homologated.

b. Cam chain tensioning devices must remain as homologated.

2.9.8.5 Cylinders

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

2.9.8.6 Pistons

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

2.9.8.7 Piston rings

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

b. All piston rings must be fitted.

2.9.8.8 Piston pins and clips

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

2.9.8.9 Connecting rods

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

2.9.8.10 Crankshaft

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

2.9.8.11 Crankcase / Gearbox housing

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

2.9.8.11.1 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 of material of the same or a higher specific weight, and the total weight of the cover must not be less than the original one.

b. Oil containing engine covers must be secured with steel bolts.

c. All lateral covers/engine cases containing oil, 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. Each side (left and right) of the engine must have at least one (1) protective cover installed on the farthest protruding engine cover containing oil. Composite covers are not permitted. FIM-approved covers will be permitted without regard to the material or dimensions.

   i. The secondary cover must cover a minimum of 1/3 of the original cover. It must not have sharp edges that could damage the track surface. 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.

   ii. Heavy-duty engine case covers may be used in lieu of secondary case covers.

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

2.9.8.12 Transmission / Gearbox

a. Must be the originally fitted and homologated parts with no modification allowed except:

   i. Shimming is allowed.

b. The countershaft sprocket and rear wheel sprocket may be changed. Original chain pitch must be maintained.

2.9.8.13 Clutch

a. The clutch system (wet or dry type) and the method of operation (by cable or hydraulic) must remain as homologated.

b. Friction and drive discs may be changed.

c. Clutch springs may be changed.

d. The clutch basket (outer) must be the originally fitted and homologated part but may be reinforced.

e. The original clutch inner assembly may be modified or replaced by an aftermarket clutch, including back-torque limiting capabilities (slipper type).

f. 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.

2.9.8.14 Oil pumps, oil lines, and water pump

a. The oil pump and oil lines must be the originally fitted and homologated parts with no modification allowed.

b. The water pump must be the originally fitted and homologated part.

2.9.8.15 Radiator / Oil cooler

a. The only liquid engine coolant 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. The radiator cap is free.

2.9.8.16 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 replaced but not eliminated; it must be mounted in its 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. No heat protection may be attached to the air box.

2.9.8.17 Fuel supply

a. The 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. Quick connectors or dry break connectors may be used.

2.9.8.18 Exhaust system

a. Exhaust pipes and silencers may not be modified or changed.

b. For safety reasons, the exposed edges of the exhaust pipe(s) outlet must be rounded to avoid any sharp edges.

c. 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.

d. The noise limit for the Talent Cup will be **109** dB/A (with a three (3) dB/A tolerance after the race only).

e. The test RPM will be as follows:

Machine:	Test rpm
Kramer APX-350 MA	5000

2.9.9 Electrics and electronics

2.9.9.1 Kramer APX-350 MA Control Electronics System

a. The ECU/Dashboard/Harness must be the MotoAmerica Kramer APX-350 MA approved Control Electronic System as documented in the MotoAmerica eligible parts list. Replacement ECU, Dashboard, and handlebar switches may also be provided by https://soloengineering.com/.

b. The software and firmware used must be from the legal software/firmware versions list.

c. 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.

d. At any time during an event, the Technical Director has the right to require a team to substitute their ECU with a MotoAmerica sample.

1. Sensors may not be replaced, modified, or substituted unless noted.

e. The following sensors may be added:

1. Lambda sensor (Bosch LSU4.9) single only
2. Left-hand switches (may be replaced from kit)
3. Fork position (teams' choice)
4. Shock position (teams' choice)
5. Front brake pressure sensor (teams' choice)
6. Rear brake pressure sensor (teams' choice)
7. Transponder/lap time signal
8. GPS receiver unit

f. No external modules that may alter any sensor signal may be fitted.

g. The data logger must be:

i. From the MotoAmerica/FIMNA approved Talent Cup approved logger list.

ii. The firmware/software of any data logging units must be an FIM/DWO approved version.

iii. The manufacturer must submit a copy of the software and documentation to the Technical Director before it can be approved for use.

iv. An external logger may only connect to the harness 'CAN' connections, which supply CAN and 12v Power.

v. A GPS receiver/aerial may be connected to an external logging device.

vi. No other connections can be made to the data logger.

vii. Free analysis software must be available.

h. Telemetry is not allowed.

i. No remote or wireless connection to the bike for any data exchange or setting is allowed while the engine is running or the bike is moving.

j. Plug cap must remain as homologated.

k. Spark plugs may be replaced.

l. Battery is free.

2.9.9.2 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 two (2) seconds without using a boost battery. No boost battery may be connected to the machine after the end of the session.

2.9.10 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 identified with a seal.

b. In case the frame or motorcycle needs to be replaced, the rider or the team must request the use of a spare frame or motorcycle from the Technical Director. The participants recognize the need for the Technical Director to make decisions requiring judgment and exercising discretion. The Technical Director's decision is final.

c. One (1) spare complete motorcycle is allowed per rider. The spare motorcycle may only be used once the Technical Director deems your original frame or motorcycle unusable. (For example, you may not go to your spare motorcycle for a complete engine failure unless there are extenuating circumstances, and the Technical Director approves it.)

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

e. The technical stewards must inspect the motorcycle before it is used for safety checks, and a new seal will be placed on the frame.

f. 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 front of the pit box during the practices, qualifying, and races.

The Technical Director or his appointed staff will officially seal the frame of this motorcycle. The seal will bear a serial number, which will be recorded. Any attempt to remove the seal will damage it irreparably.

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

If the primary or active motorcycle is damaged in a crash/incident or is declared unrepairable for other reasons (safely and within the available time) by the Technical Director or his appointed staff. In that case, the technical staff will destroy the seal on the

damaged motorcycle. The chassis of this motorcycle must not be used for the remainder of the event. The technical director will record the new serial number.

The frame or motorcycle can be any spare available that is not necessarily provided by the same team.

The spare motorcycle must be of the same manufacturer and have the same displacement. Changes to manufacturer or displacement may be allowed at the discretion of race direction and may be accompanied by grid position penalties.

Minor adjustments may be made to the spare motorcycle during an event, intending to allow teams to maintain parity with the primary bike.

If the spare motorcycle is used in competition, the primary machine is removed from the competition. At that time, the damaged machine must be kept out of view.

The spare machine can only be used in the next session in which the incident occurred, rendering the primary bike unusable. The first opportunity to use the spare machine in a race situation is the next session or race. A race will be deemed to have begun when the rider exits the pit lane for the sighting laps. All restarts, including those three laps or less, are considered a continuation of the original race for determining spare machine eligibility.

The team may rebuild the original primary machine; however, only in the case of TOTAL PROVEN WRECKAGE with the spare bike can an application be made to utilize the original machine. The Technical Director's decision regarding this is final.

The Technical Director may impound the damaged frame for a later examination.

2.9.10.1 Frame body and rear subframe

a. The frame must be the originally fitted and homologated part with no modification allowed.

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. Steering stem position:

    i. Steering head races may be changed but cannot be modified. See the **FIMNA National MotoAmerica Eligible Parts for Competition List** for the approved steering head races.

    ii. The approved steering head races can be used to adjust the fore and aft position to change the fork angle.

d. Crash protectors must stay as homologated.

e. Nothing else may be added or removed from the frame body.

f. 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.

g. Engine mounting brackets or plates must remain as originally produced by the manufacturer for the homologated motorcycle.

h. The front subframe/fairing mount must be the originally fitted and homologated part with no modification allowed.

i. The rear subframe/fuel cell must be the originally fitted and homologated part with no modification allowed.

j. The paint scheme is not restricted, but polishing the main frame body or front subframe/fairing mount is not allowed.

2.9.10.2 Suspension - General

a. Participants in the Talent Cup class must only use the approved and listed suspension units from the **FIMNA National MotoAmerica Eligible Parts for Competition List**. The price limits and suspension types are as follows:

   i. Forks: Open direct damping type internal cartridges only. No through rod, pressurized, or closed cartridges will be allowed. The price limit for the fork kit, including all parts such as but not limited to cartridges, springs (1 set), adjusters, fork caps, blanking inserts, seals, and bushes, except oil and fitting, is $1300, excluding tax.

   ii. Shock Absorber/RCU, **single tube damper only, no through rod, or twin tube style rear damper allowed**. The price limit for the complete shock absorber / RCU, including but not limited to spring (1 of), is $1100 excluding tax. The pre-load adjuster must also be included in the price limit.

b. The approved products from the suspension manufacturers must be available to all participants at least one (1) month before the first round of the MotoAmerica season and remain available all season. The products must be available within six (6) weeks of a confirmed order.

c. The suspension manufacturers must provide setting and tuning parts to all customers/ teams/ participants using their products. These parts can be used by all participants during the season and shall be available for immediate delivery to all teams/customers.

d. Teams may not modify any other part of the forks or shock absorber; the suspension manufacturer must supply all setting parts and available to all teams/riders.

e. The suspension manufacturers can offer service contracts when the team uses the approved and listed suspension products. However, they cannot demand a service contract from a customer or participant to obtain a suspension product.

2.9.10.3 Front forks

a. Forks (stanchions, stem, wheel spindle, upper and lower crown, etc.) must be the originally fitted and homologated parts with the following modifications allowed:

b. The upper and lower fork clamps (triple clamp, fork bridges) must remain as originally produced by the manufacturer on the homologated motorcycle.

c. The steering stem pivot orientation/position may be changed, but the steering stem cannot be replaced or modified.

d. A steering damper may be added or replaced with an after-market damper.

e. The steering damper cannot act as a steering lock limiting device.

f. Fork caps may only be modified or replaced to allow external adjustment.

g. Dust seals may be modified, changed or removed if the fork remains totally oil sealed.

h. Original internal parts of the homologated forks may be modified or changed. Only approved after-market damper kits or valves may be installed. The original surface finish of the fork tubes (stanchions, fork pipes) may not be changed.

2.9.10.4 Swing-arm (rear fork)

a. The rear fork must be the originally fitted and homologated part with no modification allowed.

b. The rear fork pivot bolt must be the originally fitted and homologated part with no modification allowed.

c. The rear swing-arm pivot position must remain in the homologated position (as supplied on the production bike).

d. Rear wheel stand brackets may be added to the rear fork by bolts. Brackets must have rounded edges (with a large radius).

e. The sides of the swing arm may be protected by a thin vinyl cover only; no composite or structural covers are allowed.

2.9.10.5 Rear suspension unit (shock)

a. The rear suspension unit (shock) may be modified or replaced, but the original attachments to the frame and swing arm or linkage must be as homologated.

b. All the rear suspension linkage parts must be the originally fitted and homologated parts with only the following modifications allowed.

c. Rear suspension linkage insert/ flip chips may be altered or replaced with only the parts listed in the **FIMNA National MotoAmerica Eligible Parts for Competition List**.

2.9.10.6 Wheels

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

b. The wheels may be overpainted, but the original finish cannot be removed.

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 remain as homologated. Wheel spacers may be modified or replaced.

2.9.10.7 Brakes

a. Brake discs may be replaced by aftermarket discs which comply with the following requirements:

   i. Brake discs must retain the same material as the homologated disc or be steel (max. carbon content 2.1 wt.%).

   ii. The disc carrier must have the same material as the homologated carrier.

   iii. The outside of the brake disc must not be larger than the homologated disc.

   iv. Maximum thickness of the brake disk is 6mm.

   v. The carrier must be fixed on the wheel, the same as on the homologated disc.

   vi. The number of floaters is free.

b. The front and rear brake calipers (mount, carrier, hanger) must be the originally fitted and homologated parts with no modification allowed.

c. To reduce the transfer of heat to the hydraulic fluid, metallic shims between the pads and the calipers are permitted.

d. The front brake master cylinder can be the originally fitted and homologated part with no modification allowed or may be replaced with a unit from the **FIMNA National MotoAmerica Eligible Parts for Competition List**. **The retail price limit for the front master cylinder (including the lever) is $280.** The brake lever design is free.

e. The rear brake master cylinder can be the originally fitted and homologated part with no modification allowed or may be replaced with a unit from the **FIMNA National MotoAmerica Eligible Parts for Competition List** The retail price limits are:

i. Thumb brake (including lever and mounts) €450

ii. Hand brake €450

iii. Foot operated master €300

The use of thumb or hand brakes is allowed in addition to or instead of the foot operated system. An adaptor may be fitted to the reservoir input of the OEM master cylinder to facilitate this

f. Front-only brake fluid reservoir 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 break") connectors in the brake lines are allowed.

j. Front and rear brake pads may be changed.

k. Additional air scoops or ducts for brake cooling are not allowed.

2.9.10.8 Handlebars and hand controls

a. Handlebars and fork clip-ons may be replaced.

b. Handlebars and hand controls may be relocated.

c. Only the originally fitted (Drive-by-wire) grip sensor may be used or an optional grip sensor listed in the **FIMNA National MotoAmerica Eligible Parts for Competition List**.

d. Clutch and brake levers may be replaced with an after-market model. An adjuster to the brake lever is allowed.

e. Left side handlebar switches may be changed but must function as originally equipped handlebar switches.

f. 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 can stop a running engine. The button or switch must be RED.

2.9.10.9 Footrest / Foot controls

a. Footrests, hangers/brackets must be the originally fitted and homologated part with no modification allowed except as listed below.

b. Footrests, hangers/brackets, and hardware may be relocated, but the hangers/brackets must be mounted to their original frame mounting points.

c. Foot controls: gear shift must remain operated manually by foot.

d. The end of the footrest must have at least an eight (8) mm or a solid spherical radius, an end (plug) that is permanently fixed and made of aluminum, plastic, Teflon®, or an equivalent type of material (minimum radius 8mm). The plug surface must be designed to reach the widest possible area. The Technical Director has the right to refuse any footrest or plug not satisfying this safety aim.

2.9.10.10 Fuel tank

a. The fuel tank/fuel cell must be the originally fitted and homologated part with no modification allowed.

b. The fuel tank or fuel cell must be completely filled with fire retardant material (open-celled mesh, e.g., Explosafe).

c. Fuel caps may not be changed.

d. The fuel tank or fuel cell cannot have a heat-reflective sheet attached to any surface unless it is present on the homologated motorcycle.

2.9.10.11 Fairing / Bodywork

a. The fairing and bodywork must be the originally fitted and homologated part with only the following modifications allowed

b. A rider spacer/pad may be fitted to the rear of the air box cover with non-permanent adhesive. It may be constructed of foam padding or composite material.

c. The sides and rear of the air box cover may be protected with a vinyl or composite cover. These covers must follow the shape of the fuel tank exactly and be fitted with non-permanent adhesive.

d. All bodywork, paint, and decal design are free.

e. The windscreen may be replaced with a cosmetic replica of the original windscreen.

f. 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 Race Direction.

g. The front fender may be spaced upward for increased tire clearance.

2.9.10.12 Seat

a. The seat base and associated bodywork must be the originally fitted and homologated part.

b. The seat height position may be adjusted using the two (2) positions provided on the homologated motorcycle.

c. The seat pad may be modified or replaced. Its appearance must, in principle, conform to that of the homologated motorcycle. The decision of the Technical Director is final.

2.9.10.13 Rear safety light

All motorcycles must have a functioning red light mounted at the rear of the machine. See 2.3.4h.

2.9.10.14 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 equal or exceed the standard fastener's strength.

b. Fasteners may be drilled for safety wire, but intentional weight-reduction modifications are not allowed.

c. Thread repair may be made using inserts of different materials 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.

2.9.11 The following items MAY be altered or replaced from those fitted to the homologated motorcycle.

a. Any lubrication, brake, or suspension fluid may be used.

b. Gaskets, seals, and gasket materials. The cylinder head and cylinder base gaskets may NOT be replaced.

c. All bearings (ball, roller, taper, plain, etc.) must be the exact OEM bearing replacement regarding size, shape, and material.

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 except the exhaust silencer hanger that may be in carbon.

f. Protective covers for the frame, chain and footrests may be made in other materials like fiber composite material if these parts do not replace original parts mounted on the homologated model.

2.10 RSD SUPER HOOLIGAN TECHNICAL REGULATIONS

The following rules are intended to give freedom to modify or replace some parts for safety, research and development, and improve competition between various motorcycle concepts.

The RSD Super Hooligans class is centered around production-based motorcycles originally equipped with Twin or Triple cylinder engines. The MotoAmerica/FIMNA Commission (MotoAmerica/AMA Commission) has the right to determine motorcycle eligibility in the class.

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

2.10.1 Motorcycle Specifications Allowed

a. **Air Cooled Motorcycles:**

   i. Originally equipped air-cooled 4-stroke Twin Engine, minimum displacement of 750cc normally aspirated.

   ii. Originally equipped air-cooled 4-stroke Twin Engine, minimum displacement of 750cc. forced induction.

   iii. Water-assisted for the purpose of cooling in any form will not be considered an air cooled motorcycle.

b. **Water Cooled Motorcycles:**

   i. Originally equipped water-cooled 4-stroke Twin Engine, minimum displacement of 750cc. normally aspirated.

   ii. Originally equipped water-cooled 4-stroke triple-cylinder engine. Maximum displacement of 900cc.

c. **Electric Motorcycles:**

   i. Electric street-legal production motorcycle with single motor. No MX or dual-sport type electric bikes are allowed. All electric motorcycles must be pre-approved for competition before the event or season.

d. Only production-based motorcycles with top-mounted handlebars “high bar bike”. No clip-ons permitted.

e. Maximum claimed OEM production horsepower of 128 HP or less.

f. Manufacturers seeking approval for bikes which do not meet specified requirements are required to obtain a pre-approval form from the MotoAmerica/AMA Permanent Bureau.

2.10.2 Balancing various motorcycle concepts

To equalize the performance of motorcycles used in the RSD Super Hooligan Championship, a system of performance enhancements or restrictions can be developed (such as minimum weight, engine restrictions, and air restrictors or REV limits may be applied according to their respective racing performances). The MotoAmerica Permanent Bureau will decide whether to apply a balancing system to a motorcycle based on decisions made by the Superbike Commission at any time deemed necessary to ensure fair competition.

2.10.3 Minimum weight

All air-cooled Twins – 158.7 kg (350 lbs.)

Machines 1000cc and below - 166 kg (365 lbs.) Unless specific weight listed below.

Machines over 1000cc - 171 kg (377 lbs.) Unless specific weight listed below.

Harly-Davidson Pan-American – 204.12 kg (450 lbs.)

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

There is no tolerance for 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 in. The established weight limit must be met in this condition. Nothing may be added to the motorcycle, including all fluids.

During the practice and qualifying sessions, riders may be asked to submit their motorcycle to weight control. In all cases, the rider must comply with this request.

Ballast may be used to stay over the minimum weight limit, which may be required due to the handicap system. The use of ballast and weight handicap must be declared to the Technical Director at the preliminary checks.

2.10.4 Numbers and number plates

a. RSD Super Hooligan front and side number plates must be used.

b. **Side number plates must be mounted to the tail section on the upper rear area of the subframe area of the motorcycle and must be positioned in a way that they are visible.**

c. The top edge of the front number plate shall not extend above the lowest point of the handlebar when measured at the clamping area.

i. The clamping area is defined as the point where the handlebars are fixed to the vehicle's handlebar mounts/risers

d. Front number plates must be mounted in a flat orientation without any bending or curvature or manipulation of the shape of the number plates. Number plates must be securely fastened to maintain their flatness throughout the race.

2.10.5 Fuel

a. All competitors must use VP-supplied fuel, specification T4+ or MGP-R.

2.10.6 Tires

a. All machines must use the Dunlop tires listed on the allocation sheet.

2.10.7 Engine

2.10.7.1 Fuel system

Water Cooled Motorcycles

a. The original equipped fuel system must be used. Fuel injection systems refer to throttle bodies, carburetors, fuel injectors, variable-length intake tract devices, and fuel pumps.

b. Air funnels and airbox may be altered or replaced.

c. Air must go to the combustion chamber exclusively through the throttle bodies.

Air Cooled Motorcycles

a. May be modified or replaced.

2.10.7.2 Cylinder Head

Water-cooled motorcycles: The cylinder head must be the originally fitted and homologated part. The following modifications are allowed.

a. Porting and polishing of the cylinder head, which is normally associated with individual tunings, such as gas flowing of the cylinder head, including the combustion chamber, is allowed. Welding is allowed. No machining or modification is permitted in the cam box/valve mechanism area.

b. The throttle body insulators may be modified.

c. Modifications of the inlet and exhaust ports are free

d. Surface grinding of the cylinder head surface on the head gasket side

e. Original homologated valve guides may be replaced; materials are free.

f. Polishing of the combustion chamber is allowed.

g. Original valve seats may be modified or replaced.

h. Compression ratio is free, but the combustion chamber may only be modified by removing material.

i. Welding of material for cooling purposes is allowed. Must be approved by Technical Director.

j. It is forbidden to add any material to the cylinder head unless as described above.

k. Rocker arms (if any) may be modified or replaced

l. Valves may be modified or replaced.

m. Valve springs may be modified or replaced.

n. Valve spring retainers, collets and/or spring seats may be altered or replaced.

o. The shim buckets/tappets must remain as homologated

Air Cooled Motorcycles

a. Cylinder head is free.

2.10.7.3 Camshaft

a. Camshafts are free.

2.10.7.4 Cam sprockets or cam gears

a. Camshaft sprockets, pulleys, or gears may be altered or replaced to allow degree adjustments of the camshafts.

b. The cam chain or belt tension device(s) can be modified or changed.

2.10.7.5 Cylinders

a. May be modified or replaced.

b. Water-cooled motorcycle cylinders may have the cylinder head side of the cylinder surfaced.

2.10.7.6 Pistons, rings, pins, and clips.

a. May be modified or replaced.

b. Water-cooled motorcycles must stay as homologated.

2.10.7.7 Connecting rods

a. Connecting rods are free.

b. Connecting rod bolts are free.

c. Water-cooled motorcycles must stay as homologated.

2.10.7.8 Crankshaft

a. Crankshaft/flywheel are free.

a. Water-cooled motorcycles must stay as homologated.

2.10.7.9 Crankcase / Gearbox housing

a. Crankcases are free.

b. Water-cooled motorcycles must stay as homologated with no modifications allowed.

2.10.7.10 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 of material of the 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 that 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.

c. All drain and fill plugs must be lock-wired (safety-wired). The use of clips is not permitted. External oil filter(s), screws, and bolts that enter an oil cavity must be safety wired (i.e., on crankcases), or the oil filter may optionally have a secondary retention mechanism.

2.10.7.11 Transmission / Gearbox

a. Stock transmission shafts and gear set must be the originally fitted and homologated part except as noted in the following.

b. Quick-shift systems (including wire and potentiometer) are allowed.

c. Countershaft sprocket, rear wheel sprocket, chain pitch and size may be changed.

d. The sprocket cover may be modified or eliminated.

e. If it is not incorporated in the rear fender, the chain guard may be removed.

f. Undercutting and re-shimming are allowed.

g. Shift star/indexer, spring, roller, and detent may be replaced or modified but must function as originally designed.

h. Polishing, surface treatment, and heat treatment of all gearbox components is allowed.

i. Air cooled motorcycles - Transmission is free.

2.10.7.12 Clutch

a. Aftermarket or modified clutches (including plates/springs etc.) are permitted.

2.10.7.13 Oil pumps, cam plates and oil lines

a. The oil pump and cam plate may be modified or replaced.

b. 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.

c. Oil lines may be modified or replaced. If replaced, oil lines containing positive pressure must be braided reinforced construction with wedged or threaded connectors.

2.10.7.14 Cooling System

a. The only liquid engine coolant permitted is water.

b. Additional radiators or oil coolers may be added.

c. Radiators may be modified or replaced.

c. The original oil/water heat exchanger may be modified, replaced, or removed.

2.10.7.15 Airbox

a. The airbox may be modified or replaced.

b. Airboxes should be designed to retain oil from the crankcases in the event of engine failure or tip-over.

c. Where breather or overflow pipes are fitted, they must discharge via existing outlets. Catch cans may be used but the original closed system must be retained; no direct atmospheric emission is permitted.

See Bulletin 03-5000-24 for Pan America Eligibility.

2.10.7.16 Fuel supply

a. 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 in such a way that they are protected from crash damage.

b. Quick connectors or dry break connectors may be used.

c. Fuel vent lines may be replaced.

d. Fuel filters may be added.

2.10.7.17 Exhaust system

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

b. For safety reasons, the exposed edge(s) of the exhaust pipe(s) outlet(s) must be rounded to avoid any sharp edges.

c. Wrapping of exhaust systems is allowed.

d. The noise limit for Super Hooligans will be 112 dB/A, measured at 3000 RPM.

2.10.8 Electrics and Electronics

a. Transponders are required

b. Competitors are required to provide their transponder. See the link to find available units. Circuit Racing - MYLAPS Timing System

2.10.8.1 Engine control system

Water Cooled Motorcycles

a. The engine control system (ECU) must be:

   i. Original system as homologated, with or without a change of software

   ii. An approved aftermarket system with series specified software

b. Central unit (ECU) may be relocated.

c. Optional equipment sold by the motorcycle manufacturer for the homologated model is considered not homologated.

d. At any time during an event, the Technical Director has the right to require the team to substitute their ECU or external module with the MotoAmerica sample.

e. The original sensors may not be replaced or modified, and no additional sensors may be added to the machine for data collection.

f. Left and right handlebar switches may be replaced.

g. No extra sensors except the lambda and shift rod sensor may be added for control strategies.

h. The MotoAmerica-approved external fuel injection modules may not alter any sensor signal relating to the ride-by-wire system or control/actuate any part of the machine except the fuel injectors and ignition coils. No external module may add traction control strategies. The modules may only connect to the fuel injectors, ignition coils, lambda sensor, power supply and “piggyback the Throttle Position, Gear, and RPM signals.” Lambda closed loop/auto tuning is permitted.

i. Other additional electronic hardware equipment not on the original homologated motorcycle cannot be added, with the exceptions noted below.

j. **The following sensors may be connected directly to the ECU only and are not required to be homologated sensors unless noted below:**

    1. **Gear shift load cell/switch may only provide a signal to the controlled ECU.**
    2. **Lambda - (X1 lambda sensor per cylinder only)**
    3. **Gear position**
    4. **The throttle grip sensor may only provide a signal to the controlled ECU.**
    5. **Oil temperature**
    6. **Transponder/lap time signal**
    7. **Switches (Left and right)**

k. Resistors/load may be added to replace the parts of the electrical system that have been removed (including lights and lambda sensors) to prevent ECU errors.

l. Telemetry is not allowed.

m. No remote or wireless connection to the bike for any data exchange or setting is allowed while the engine is running, or the bike is moving.

n. Wire Harness is free.

o. The original speedometer and tachometer may be altered or replaced.

p. A Data Logger may be fitted, but the system must be available for sale to the public.

q. The Data system may only include the following sensors:

    1. **GPS**
    2. **Transponder/Lap time signal**

r. A lap timer may be fitted, including GPS lap timers. Data collection from the machine's sensors or ECU is allowed. Data collection by the lap timer or **standalone data logger** by way of GPS and internal IMU is permitted.

s. Plug cap must remain as homologated.

t. Spark plugs may be replaced.

u. Battery is free.

Air-cooled Motorcycles

a. Engine control system (ECU) is free.

b. Telemetry is not allowed.

c. **A Data Logger may be fitted, but the system must be available for sale to the public.**

d. **The Data system may only include the following sensors:**

   1. **GPS**

   2. **Transponder/Lap time signal**

e. A lap timer may be fitted, including GPS lap timers. Data collection from the machine's sensors or ECU is allowed. Data collection by the lap timer or **standalone data logger** by way of GPS and internal IMU is permitted.

2.10.8.2 Generator, alternator, electric starter

Water Cooled Motorcycles

a. The stator/coil must be the originally fitted parts with no modification allowed.

b. 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).

   i. Yamaha MT-09 may use ACG kit: B7N-81410-00 – Stator, 1RC-81450-01 - Rotor, 1D7-81960-10 – Rectifier

   ii. Yamaha MT-09 may use ACG kit: See R9 page for approved ACG KIT on the FIMNA National MotoAmerica Eligible Parts for Competition List

Air Cooled Motorcycles

a. The stator/coil is free.

2.10.9 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.

b. In case the frame or motorcycle needs to be replaced, the rider or the team must request the use of a spare frame or motorcycle from the Technical Director. The participants recognize the need for the Technical Director to make decisions requiring judgment and exercising discretion. The Technical Director's decision is final.

c. One (1) spare complete motorcycle is allowed per rider. The spare motorcycle may only be used once the Technical Director deems your original frame or motorcycle unusable. (For example, you may not go to your spare motorcycle for a complete engine failure unless there are extenuating circumstances, and the Technical Director approves it.)

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

e. The technical stewards must inspect the motorcycle before it is used for safety checks, and a new seal will be placed on the frame.

f. 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 front of the pit box during the practices, qualifying, and races.

The Technical Director or his appointed staff will officially seal the frame of this motorcycle. The seal will bear a serial number, which will be recorded. Any attempt to remove the seal will damage it irreparably.

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

If the primary or active motorcycle is damaged in a crash/incident or is declared unrepairable for other reasons (safely and within the available time) by the Technical Director or his appointed staff. In that case, the technical staff will destroy the seal on the damaged motorcycle. The chassis of this motorcycle must not be used for the remainder of the event. The technical director will record the new serial number.

The frame or motorcycle can be any spare available that is not necessarily provided by the same team.

The spare motorcycle must be of the same manufacturer and have the same displacement. Changes to manufacturer or displacement may be allowed at the discretion of race direction and may be accompanied by grid position penalties.

Minor adjustments may be made to the spare motorcycle during an event, intending to allow teams to maintain parity with the primary bike.

If the spare motorcycle is used in competition, the primary machine is removed from the competition. At that time, the damaged machine must be kept out of view.

The spare machine can only be used in the next session in which the incident occurred, rendering the primary bike unusable. The first opportunity to use the spare machine in a race situation is the next session or race. A race will be deemed to have begun when the rider exits the pit lane for the sighting laps. All restarts, including those three laps or less, are considered a continuation of the original race for determining spare machine eligibility.

The team may rebuild the original primary machine; however, only in the case of TOTAL PROVEN WRECKAGE with the spare bike can an application be made to utilize the original machine. The Technical Director's decision regarding this is final.

The Technical Director may impound the damaged frame for a later examination.

2.10.9.1 Frame body and rear subframe

Water Cooled Motorcycles

a. The main frame must be the originally manufactured and fitted part with no modifications allowed except listed below.

b. On motorcycles fitted with dual shock style frames. Removal of the rear fender struts by grinding or cutting allowed. No welding allowed.

c. Holes may be drilled on the frame only to fix approved components (i.e. fairing brackets, steering damper mount).

d. The original position (of engine, steering stem or pivots) is considered as the position in which the production motorcycle is supplied and must be retained.

e. All motorcycles must display a vehicle identification number punched on the frame body (a proper ‘legal VIN’)

f. Crash protectors may be fitted to the frame using existing points or pressed into the ends of the wheel axles.

g. Subframes are free.

Air Cooled Motorcycles

a. Modifications to the main frame are free.

2.10.9.2 Suspension – General

a. Forks and rear shock may be the originally fitted and homologated units.

b. Participants in the Super Hooligan class may use units from the KOTB/Hooligan Eligible Parts for Competition – List 2025 - Road Racing Regulations - American Motorcyclist Association. The price limits are:

i. Fork: The price limit for the fork kit, including all parts such as, but not limited to, the cartridge, springs (1 set), adjusters, fork caps, blanking inserts, seals, and bushes, except oil and fitting, is $2400 excluding tax.

ii. Fork: The price limit for the Full fork kit, including all parts such as, but not limited to, the complete fork, springs (1 set), adjusters, fork caps, blanking inserts, seals, and bushes, except oil and fitting, is $6000 excluding tax.

iii. Shock Absorber/RCU: The price limit for the complete shock absorber / RCU, including but not limited to spring (1 of), pre-load adjuster, and length/ride height adjuster, is $2000, excluding tax.

c. The eligible products from the suspension manufacturers must be available to all participants at least one (1) month before the first round of the MotoAmerica Superbike season and remain available all season. The products must be available within six (6) weeks of a confirmed order.

d. The suspension manufacturers must provide Setting and tuning parts to all customers/ teams/ participants using the manufacturer's products. These parts can be used by all participants during the season and shall be available for immediate delivery to all teams/customers.

e. Teams may not modify any part of the forks or shock absorber; the suspension manufacturer must supply all setting parts and make them available to all teams/riders.

f. The suspension manufacturers can offer service contracts when the team uses the eligible suspension products. However, they cannot demand a service contract from a customer or participant to obtain a suspension product.

f. No aftermarket or prototype electronically controlled suspensions may be used. Electronically controlled suspensions may only be used if they are already present on the production model of the homologated motorcycle.

g. The electronically controlled valves must remain homologated. The shims, spacers, and fork/shock springs not connected to these valves can be changed.

h. 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.

i. 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.

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

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

l. Electronic-controlled steering dampers cannot be used if not installed on the homologated model for road use. If equipped, it must be completely standard (any mechanical or electronic part must remain as homologated.

2.10.9.3 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.

2.10.9.4 Swing arm (Rear Fork)

a. Swing arms may be replaced or modified.

b. A solid protective cover (shark fin) shall be fixed to the swing arm and must always cover the opening between the lower chain run, swingarm, and the rear wheel sprocket, irrespective of the position of the rear wheel.

c. Rear wheel stand brackets may be added to the rear fork by welding or by bolts.

d. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed.

e. Swingarm spindle (pivot) may be modified or replaced.

2.10.9.5 Rear Suspension Unit

a. The rear suspension unit may be changed, but a similar system (e.g., dual or mono) must be used.

b. Removable top shock mounts may be replaced. Geometry of shock(s) is free.

2.10.9.6 Wheels

a. Wheels may be replaced, and associated parts may be altered or replaced from those fitted to the homologated motorcycle.

b. Material of wheels is free.

c. 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).

d. Wheel balance weights may be discarded, changed or added to.

e. Aluminum or steel inflation valves are compulsory.

f. Front and rear wheel sizes are as follows:

Wheel rim diameter size (front and rear)	**17 inches**
Front wheel rim width:	**3.50 inches**
Rear wheel rim width:	**5.50 - 6.00 inches**

2.10.9.7 Brakes

a. **Participants in the RSD Super Hooligan season may use the following brake parts:**

i. The originally fitted and homologated front and rear master cylinder and calipers

ii. **The front and rear master cylinder and calipers from an FIM homologated Supersport or Superstock 1000 machine.**

iii. **The front and rear master cylinder and calipers from the Twins Cup or Supersport approved list.**

iv. **Any combination of the above.**

b. **The approved products from the manufacturers must be available to all participants at least one month before the first round of the MotoAmerica season and remain available all season. The products must be available within four (6) weeks of a confirmed order.**

c. **Any product changes due to manufacturing or material supply issues must be approved in advance.**

d. **Front and rear brake discs may be replaced with aftermarket brake discs that must fit the original caliper and mounting. The maximum outside diameter is 330mm. However, the offset, wheel mounting and the ventilation system must remain the same as on the homologated motorcycle.**

e. **Front and rear brake calipers and all mounting points and mounting hardware (mount, carrier, hanger) must remain in the homologated position. When using brake systems from other homologated machines, you may use the same mounting technique from which the systems originated. (i.e. rear brakes may be converted to underslung if the caliper was made for that purpose and vice versa) Spacers may be fitted between the caliper and fork lower to accommodate larger diameter disks.**

f. **Brake pads or shoes may be altered or replaced from those fitted to the homologated motorcycle.**

g. **The front brake master cylinder can be the originally fitted and homologated part with no modification allowed or may be replaced with a unit from the FIMNA National MotoAmerica Eligible Parts for Competition List - Road Racing Regulations - American Motorcyclist Association. The retail price limit for the front master cylinder (including the lever) is €450. The brake lever design is free.**

h. **The rear brake master cylinder can be the originally fitted and homologated part with no modification allowed or may be replaced with a unit from the FIM National MotoAmerica Eligible Parts for Competition List - Road Racing Regulations - American Motorcyclist Association. The retail price limits are:**

i.	**Thumb brake (including lever and mounts)**	**€450**
ii.	**Hand brake**	**€450**
iii.	**Foot operated master**	**€200**

i. **The use of thumb or hand brakes is allowed in addition to or instead of the foot-operated system. An adaptor may be fitted to the reservoir input of the OEM master cylinder to facilitate this.**

j. **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).**

k. **Only steel (max. carbon content 2.1 wt. %) is allowed for brake discs.**

l. **The ABS system must be removed.**

2.10.9.8 Handlebars and hand controls

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

b. No clip-ons that have been converted to top-mounted handlebars are permitted. Clip-ons refer to handlebars that are attached to the outer fork tubes.

c. At no point can any part of the handlebar sit below the highest portion of the clamping surface on the triple clamp. The clamping surface refers to the top outermost portion of the triple clamp, where the outer fork tube is secured or clamped in place.

d. Cable-operated throttles (grip assembly) must be equipped with both an opening and a closing cable, including when actuating a remote drive by wire grip/demand sensor.

e. Motorcycles must have a functional ignition kill switch or button mounted on the right-hand handlebar (within reach of the hand while on the hand grips) that can stop a running engine. The button or switch must be RED.

2.10.9.9 Footrest and foot controls

a. Footrests, hangers/brackets, and hardware may be replaced and relocated, but the hangers/brackets must either be mounted to their original frame mounting points or in another location that does not require frame modification.

2.10.9.10 Fuel tank

a. Maybe modified or replaced.

b. The fuel tank must conform in principle to the homologated appearance and location of the original tank

c. Fuel tank material is free.

d. If any non-metal material is used, a fuel cell is required.

2.10.9.11 Fairing / Bodywork

a. No upper fairing or windscreen allowed

b. RSD Super Hooligan number plate required. See 2.7.4.b for required number plate placement.

c. A lower catch/belly pan must 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 water-cooled/ 2.5 liters air-cooled).

2.10.9.12 Seat

a. Seat may be altered or replaced.

2.10.9.13 Rear safety light

All motorcycles must have a functioning red light mounted at the rear of the machine. See 2.3.4h.

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

a. Any lubrication, brake, or suspension fluid may be used.

b. Gaskets, seals, and gasket material.

c. Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used.

d. Bearing race is free

e. Fasteners (nuts, bolts, screws, etc.), but internal engine bolts must remain of standard homologated materials or materials of higher specific weight.

f. Thread repair using inserts of different material such as helicoils and timeserts.

g. External surface finishes and decals.

2.10.11 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.

2.10.12 The Following Items MUST BE Removed

a. Rear-view mirrors.

b. Horn.

c. License plate bracket.

d. Toolbox.

e. Safety bars, center, and side stand brackets welded to the main frame may be removed. If the side stand is not removed it must be held in the up position by a secondary device.

2.11 FUEL, OIL AND COOLANTS

2.11.1 Fuel

a. The designated fuel is VP Racing Fuels MGP-R for all classes other than the KOTB and RSD Super Hooligans class.

b. The designated fuel for KOTB is VP Racing Fuels T4+.

c. The designated fuel for RSD Super Holligan is VP Racing Fuels T4+ or MGP-R.

d. No other additives or fuels are permitted for use**.**

2.11.1.1 Fuel technical details

a. The general physical properties for VP Racing Fuels MGP-R are available at:

VP Racing Fuels MGP-R

b. The general physical properties for VP Racing Fuels T4 are available at:

VP Racing Fuels T4

2.11.2 Air

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

2.11.3 Primary tests

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

2.11.3.2 The fuel company supplying fuel to participating teams must submit, if requested, ten (10) liters (2 x 5 L) to the laboratory appointed by the AMA/FIMNA for analysis in accordance with the specification. If the fuel is within the specification, a certificate containing a test report number will be issued to the company. The contact for fuel analysis is: technicaldirector@motoamerica.com

2.11.4 Fuel sampling and testing

a. The Technical Director is solely responsible for the administration and supervision while taking fuel samples.

b. The preferred fuel test method is gas chromatography or the 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 are detected. The separation is done with a non-polar column suitable for fuel analysis. The detection of the components is done with a flame ionization detector.

c. The fuel samples will be transported to the AMA/FIM North America appointed laboratory by an official courier, using the appropriate containers.

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

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

f. The fuel to be tested will be transferred into three (3) bottles (3 small sample containers), marked A, B, and C, and identified by reference to the motorcycle from which the sample was taken. The Technical Director and/or the fuel analysts supervised by the Technical Director will close, seal, and label the bottles.

g. The fuel sample declaration form will be filled out immediately. It will contain all the information shown on the sample sheet, including the rider's name and race number, date, and location of fuel sampling. The responsible team member will sign this declaration after verifying all the correct information.

h. Samples 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 without disclosing the rider/team. MotoAmerica will pay for the analyses of samples A and B.

i. Sample C will be given to the AMA/FIMNA for safeguarding in case of appeals and/or requirement of a counter-expertise by an AMA/FIMNA-appointed laboratory, accompanied by a copy of the fuel sample declaration form without disclosing the rider/team. Costs for the analysis of sample C, if requested, will be paid by the team concerned.

j. As soon as possible after receipt of the samples and completion of the testing, the fuel analyst/AMA/FIMNA appointed laboratory will report the results of the fuel sample analyses directly to the Technical Director.

k. In the case of non-conformity, the Technical Director must notify the FIMNA Stewards, and the rider/team representative concerned about the results. Failure of the sample to correspond to the controlled fuel will result in the disqualification of the rider/team from the entire event. The entire event is defined as all sessions and races during the event weekend. The result of the competitor's fuel sample analysis ("A" or "B" sample) that is more favorable to the competitor will be considered. The result of the competitor's fuel sample analysis ("A" or "B" sample) is considered a statement of fact.

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

m. If there is a request to have sample C tested, AMA/FIMNA, in coordination with the Technical Director, shall arrange for the "C" sample to be tested by an independent AMA/FIMNA-appointed laboratory. The result of the competitor's fuel sample analysis ("C" sample), which is more favorable to the competitor, will be considered. The result of the competitor's fuel sample analysis ("C" sample) is considered a statement of fact.

n. The FIMNA Stewards shall conduct a hearing with the rider/team representative immediately following the notification of the results or as soon as practical and take a decision. They shall notify the MotoAmerica Permanent Bureau, Technical Director, and the rider/team representative of the decision.

o. No appeal may be lodged against the results as they are considered a statement of fact by a judge of fact per Article 3.6.1. An appeal for any other reason against the decision of the FIMNA stewards must be received within five (5) days of receiving the sanction notification. FIMNA-appointed Appeal Stewards shall hear the appeal, and the decision is final if the FIMNA Appeal Stewards confirm the FIMNA Steward's decision.

2.11.5 Fuel storage

a. Fuel must only be stored in metal, sealable containers in the competitors' pit.

b. Fire Firefighting equipment, protective devices, and staff must conform to the

c. c. Firefighting equipment, protective devices, and staff must comply with the requirements imposed by local authorities and by-laws.

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

2.11.6 Coolants

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

AMA / FIM NORTH AMERICA ROAD RACING
FUEL SAMPLE DECLARATION FORM
(Internal Version)

DATE FUEL SAMPLES TAKEN
FOR LAB ANALYSIS ….. /….. / …..

RIDER #:

_____

SESSION:

_____

RIDER NAME:

_____

Sample "A"	
Label #	Seal #
Sample "B"	
Label #	Seal #
Sample "C"	
Label #	Seal #

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 30 minutes pending any protest.

Sample "A" and "B" will go to the laboratory appointed by 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 an appeal 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 seals and serial numbers of labels and hereby certify the accuracy of the listed information.

Time: Signature: _____

Team Position: _____
(OWNER/MANAGER/MECHANIC)

AMA / FIM NORTH AMERICA ROAD RACING
FUEL SAMPLE DECLARATION FORM
(External Laboratory Version)

DATE FUEL SAMPLES TAKEN
FOR LAB ANALYSIS ….. /….. / …..

EVENT:

_____

SESSION:

_____

Sample "A"	
Label #	Seal #
Sample "B"	
Label #	Seal #
Sample "C"	
Label #	Seal #

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 30 minutes pending any protest.

Sample "A" and "B" will go to the laboratory appointed by 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 an appeal and/or counter-expertise is required.

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

(print Name): _____

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

Time: Signature: _____

_____
(AMA/FIMNA/MOTOAMERICA POSITION)

2.12 PROTECTIVE CLOTHING AND HELMETS

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

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

2.12.3 Riders must also wear leather gloves and boots, with the leather suit providing complete coverage from the neck down.

2.12.4 Leather substitute materials may be used, provided the Technical Director has checked them.

2.12.5 Use of a back protector is required.

2.12.6 Permanent riders and riders participating in more than five (5) MotoAmerica events must use a rider suit airbag. Each event may have multiple race events.

a. The rider suit airbag must conform to the FIM requirements. The list of FIM approved airbags is included in MotoAmerica Competitor Bulletin 11-2025.

b. Every rider required to use an airbag must start each track session with a functional airbag system. Once the airbag has been deployed, the responsibility for continuing the practice or race rests with the rider.

c. Failure to use an airbag if required will result in a penalty.

2.12.7 Riders must wear helmets that are in good condition, provide a good fit, and are properly fastened.

2.12.8 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 M2015, M2020D and M2020R
- FIM FRHP (Circuit Racing Certification)

2.12.9 All helmets used by season riders in competition must be equipped with either a manufacturer-installed emergency cheek pad removal system or an Eject emergency helmet removal system. Single-event riders will be granted a one-race exemption from this requirement; however, on their second event weekend, the device will be required if the helmet manufacturer does not have an incorporated emergency cheek pad removal device. If used, riders will be responsible for ensuring that the Eject device is installed correctly and operable during all on-track activities. The inflation tube must exit at the left chin bar. Riders must attach the provided Eject logo on the helmet's left chin bar. Helmets with a manufacture-installed emergency cheek pad removal system must have either manufactured labeling on both chin bars or labeling provided by MotoAmerica.

2.12.10 Helmets are to provide protection and are not a platform to attach foreign objects. No foreign objects, including cameras, are permitted to be attached to the rider’s helmet.

2.12.11 Visors must be made of a shatterproof material.

2.12.12 Disposable "tear-offs" are permitted.

2.12.13 The rider's clothing must include their name, emergency contact, and blood type adhered to the left-side lining adjacent to the main zipper.

2.12.14 The Technical Director shall decide on any question concerning the suitability or condition of the riders’ clothing and/or helmet. He may, if he so wishes, consult with the product manufacturers before making a final decision.

2.13 PROCEDURES FOR TECHNICAL CONTROL

A team/rider is always responsible for his motorcycle. During the initial technical inspection, the team/rider must declare the year, make, and model of the motorcycle to be used in the competition. The declared motorcycle must conform to technical rules applicable to the year, make, and model per the homologation.

2.13.1 At each circuit, the technical checking area consisting of the *parc fermé* and the inspection area must be clearly defined:

a. "Parc fermé"

   i. The parc fermé is a restricted access area sealed with fences or other physical divisions with one or more gates.

   ii. When the parc fermé is in use (e.g., after practice/qualifying/race), marshals control the gates and the area.

   iii. The parc fermé area must be sufficiently large to give shelter to all participating motorcycles.

b. The only persons allowed to enter the parc fermé are the:

   i. MotoAmerica Technical Director and technical staff

   ii. Race Direction members

   iii. FIMNA stewards

   iv. Tire manufacturer's staff

   v. Riders and team managers of motorcycles remaining in the parc fermé.

   vi. Up to two (2) team mechanics until dismissed by the technical stewards.

c. Only the Technical Director may invite others to enter and stay in the parc fermé.

2.13.2 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.

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

   i. The MotoAmerica Technical Director and technical staff

   ii. The Race Direction members

   iii. The FIMNA stewards

   iv. The rider, team managers or their representatives of the inspected motorcycles.

   v. For disassembling operations, up to two (2) mechanics per motorcycle may be present.

b. Any other persons may enter or stay in the inspection area at the sole discretion of the Technical Director. In the case of an engine inspection, the inspected entrant has the right to request a reserved area where other entrants cannot watch closely.

c. In the inspection areas under the control of the technical stewards and the supervision of the MotoAmerica Technical Director, suitable equipment will be installed to conduct the various tests for example:

   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.

2.13.3 The technical control procedure will be carried out according to 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 Technical Director.

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

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

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

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

2.13.8 The Technical Director will refuse any motorcycle without an operational transponder and team radio (listen only).

2.13.9 After the check, the technical stewards will place a sticker on the motorcycle indicating it has passed the safety checks.

2.13.10 The Technical Manager will prepare a report on the results of technical checks, which will be submitted to the event management committee via the Technical Director.

2.13.11 The technical stewards must re-inspect any motorcycle involved in an accident. This would normally be carried out at the inspection area.

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

2.13.13 At the end of qualifying, qualifying practices, and races, the Technical Director will ensure that all classified motorcycles are placed in the parc fermé for at least 30 minutes from the end of the session (unless held longer at the discretion of the Technical Director).

a. Competitors must ride directly into parc fermé from hot pit if they took the checkered flag in any qualifying session or race.

b. If the machine is in the hot pit when the session ends, work on the machine must be stopped (including data download) and taken to parc fermé immediately.

c. c. If a motorcycle leaves the hot pit at any time during qualifying, it must go directly to Parc Ferme; otherwise, all times before the departure from the hot pit will be disallowed.

d. If a rider leaves the hot pit during a qualifying session and returns to the track and subsequently follows the above procedure his times after the return the track are allowed.

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

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

2.13.15 If a motorcycle is involved in an accident the 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, along with his helmet and clothing.

If the helmet is clearly defective, the Technical Director must arrange to retain it. The medical director must then send it, together with the accident and medical report (and pictures and video, if available), to the AMA/ FIMNA and/or the rider's federation.

2.13.16 Noise may be checked at any time during the event by the Technical Director. On request of the rider, team, or mechanic, the noise of their own motorcycles can be checked at any time during the event.

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

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

2.13.19 The parc fermé session may be reduced to 15 minutes and/or held in the hot pit if time constraints are deemed necessary. A shortened parc fermé session will be referred to as quick parc fermé. The Technical Director will make the decision. If quick parc fermé is imposed, the time limit for protests will also be modified. (see art. 3.4.2)

2.13.20 The Technical Director may, at any time during the event and until one hour after the last race, choose to inspect any machine or team equipment (including but not limited to laptop and other computer equipment) for conformity to these regulations. The purpose of these inspections is to ensure fair competition and compliance with the event's rules. Data of any type may be collected for analysis at any point (for any session). The Technical Director, at any point, may apply a data logger or any other device for data collection purposes.

Refusal to allow machine or team equipment inspection will be referred to race direction for an access penalty.

2.13.21 Dyno tests of any machine may be made at any point during the event at the discretion of the technical director.

2.14 VERIFICATION GUIDELINES FOR TECHNICAL STEWARDS

2.14.1 Verification for the classes

a. Make sure all necessary measures and administrative equipment are in place at least one (1) hour before the technical control is due to open.

b. Decide who is doing what and note decisions. "Efficiency" must always be the watchword. Always keep a positive environment and remember the reasons for technical controls: SAFETY AND FAIRNESS.

c. c. Be well informed. Make sure MotoAmerica has supplied you with all technical "updates" that may have been issued after the technical regulations were printed. Copies of all homologation documents must be in your possession.

d. Inspection must take place under cover with a large enough area.

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

f. Rules regarding noise level and measurement must be respected.

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

2.14.2 General

a. The motorcycles are not required for weight and/or noise checks at the pre-race technical inspection.

b. The noise test must occur in a clear area adjacent to the technical control, at least five (5) meters from any possible noise-reflecting obstruction.

c. Riders and teams must be aware that weight and noise may be checked at random during practice or qualifying in the pit lane and at the end of each race.

i. 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).

d. The Technical Director reserves the right to spot-check the weight and noise of any motorcycles on the pit row during any timed session. This can occur during free practice and in the first two-thirds (2/3) of any qualifying session. It will be carried out with the least possible inconvenience to the rider or the team.

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

f. The results of the inspections will be recorded electronically, indicating whether the motorcycle passed or failed.

g. The Technical Director must re-inspect any motorcycle involved in an accident.

h. The technical stewards must be available upon instruction from the technical director or the technical manager to re-inspect any motorcycle for compliance during the meeting.

i. The Technical Director reserves the right to check any motorcycles during or after any session for technical compliance. This will be done with the least possible inconvenience to the rider or the team.

2.14.3 Timetable

The technical stewards must be present and available during the technical control area's opening hours. The Technical Director and the technical manager will instruct

the technical stewards to verify motorcycles for compliance with technical and safety rules.

See event-specific timetable for final instructions.

2.14.4 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

2.14.5 Documents list

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

2.15 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 article 2.15.5 may be used.

2.15.1 Sound level shall be measured with the microphone placed at 50 cm from the exhaust pipe at an angle of 45° measured from the centerline of the exhaust end and at the height of the exhaust pipe, but at least 20 cm above the ground. If this is impossible, the measurement can be taken at 45° upwards.

2.15.2 During a sound test, motorcycles not equipped with a gearbox neutral must be placed on a stand.

2.15.3 The silencers will be marked when they are checked, and they may not be changed after the verification, except for any spare silencer that has also been checked and marked.

2.15.4 The rider shall keep his engine running out of gear and increase the engine speed until it reaches the specified revolutions per minute (RPM). Measurements must be taken when the specified RPM is reached.

2.15.5 Noise control

a. 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

b. The maximum sound level for engines with more than one (1) cylinder will be measured on each exhaust end.

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

d. The surrounding sound must not exceed 90 dB/A within a five (5) meter radius from the power source during tests.

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

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

g. The "slow response" setting must always be used.

2.15.6 Sound control after the competition

a. In a competition which requires a final examination of motorcycles before the results are announced, this examination may include a sound control measurement of at least the first three (3) motorcycles listed in the final classification.

b. At this final test, there will be a three (3) dB/A tolerance.

2.15.7 Noise control during a competition

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

2.15.8 Guidelines for the use of sound meters

a. The technical stewards must arrive in sufficient time to discuss a suitable test site and testing policy with the technical director and other technical stewards.

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

c. c. Two (2) sets of equipment must be available in case the tachometer, sound level meter, or calibrator fails during technical control.

d. Tests may take place in rain or excessively damp conditions. If conditions allow, motorcycles considered excessively noisy must be individually tested.

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

f. The 'slow' meter response must be used.

g. 'A' weighted setting on the sound level meter must be used.

h. No rounding down of the meter reading is permitted: 110.9 dB/A = 110.9 dB/A.

2.15.9 Corrections

a. Type 1 meter: deduct one (1) dB/A

2.15.10 Precision of the method (tolerances)

a. All corrections are accumulated.

b. Action and decisions will depend on the sporting discipline and decisions taken during prior discussions with the Technical Director.

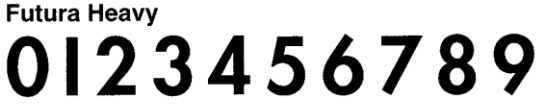
2.15.11 Noise Control Compliance

a. Riders found to not comply with the limits will initially receive an Official Warning. The penalty for subsequent non-compliance will normally be a fine, but the FIM North America Stewards may apply an additional penalty.

b. Penalties for non-compliance with noise limits resulting from crash damage and mechanical issues will not be issued.

2.16 APPROVED NUMBER FONTS

Futura Heavy



Futura Heavy Italicy

Univers Bold

Univers Bold Italic

Oliver Med.

Oliver Med. Italic

Franklin Gothic

Franklin Gothic Italic

2.17 HOMOLOGATION

MotoAmerica homologation procedures will follow the requirements of the FIM homologation rules for Superbike, Superstock, Supersport, and Talent Cup. MotoAmerica reserves the right to make exceptions to the FIM homologation rules under the guidance of the Permanent Bureau. The technical director's decision is final.

2.17.1 MotoAmerica Twins Cup and KOTB homologation procedures will follow the requirements of MotoAmerica.

2.17.2 Homologation List

a. FIM homologation list:

   http://www.motoamericaregistration.com/competitor-info/

b. MotoAmerica homologation list:

   http://www.motoamericaregistration.com/competitor-info/

2.17.3 Period of homologation

a. Once a motorcycle has obtained the homologation, it may be used for racing in the corresponding class for a maximum period of:
   i. Superbike and Superstock 1000: 8 years
   ii. Supersport 600 and Talent Cup: 8 years
   iii. Twins Cup: 20 years (MotoAmerica Homologation)
   iv. King of the Baggers: 12 years (MotoAmerica Homologation)

b. A homologation will be withdrawn if the motorcycle no longer complies with the technical rules.

c. A homologation will be granted only if the fee has been paid.

d. The Manufacturer of the homologated model can request an extension of a homologation before the end of the 8-year homologation period. The FIM may grant a 2-year extension of the homologation period. All Homologation documents must be updated to the latest standard, but no fee will be charged for a homologation extension.


AMERICAN MOTORCYCLIST ASSOCIATION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