MOTOAMERICA AMA ROAD RACING SERIES
FIM NORTH AMERICA CHAMPIONSHIP

2020 REGULATIONS

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AMA AMERICAN MOTORCYCLIST ASSOCIATION
MOTOAMERICA
FIM NORTH AMERICA

MOTOAMERICA AMA ROAD RACING SERIES FIM NORTH AMERICA CHAMPIONSHIP REGULATIONS

This book (hereinafter collectively referred to as the "Regulations") has been printed on 12-20-2019. Successive editions can be printed for supplementing and/or amending. The new editions will be dated and issued to all relevant Bodies.

THIS BOOK PREVAILS OVER ALL OTHER AMA AND FIM NORTH AMERICA ROAD RACE RULE BOOKS.

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MOTOAMERICA AMA ROAD RACING SERIES FIM NORTH AMERICA CHAMPIONSHIP
2020 Calendar

MAR 10-11	**Barber Motorsports Park Pre-Season Test**
APR 03-05	**Circuit of the Americas**
APR 17-19	**Michelin Raceway Road Atlanta**
MAY 01-03	**Virginia International Raceway**
MAY 29-31	**Road America**
JUN 26-28	**Ridge Motorsports Park**
JUL 10-12	**Weathertech Raceway Laguna Seca**
AUG 07-09	**Pittsburg International Race Complex**
AUG 21-23	**Indianapolis Motor Speedway**
SEP 11-13	**New Jersey Motorsports Park**
SEP 18-20	**Barber Motorsports Park**

AMENDMENTS TO THE MOTOAMERICA AMA ROAD RACING REGULATIONS

The AMA, through the MotoAmerica Rules Commission and the MotoAmerica Permanent Bureau, may at any time amend any or all provisions of the Regulations.
Any subsequent changes that take place after the printed versions are completed will be made electronically, and the on-line versions would then be the prevailing versions.
The Permanent Bureau consists of:

a. One (1) Representative of the Krave Group LLC
b. One (1) Representative of MotoAmerica
c. One (1) Representative of FIM North America (FIMNA) or the American Motorcyclist Association (AMA)

The Permanent Bureau shall meet on a regular basis to discuss and decide on all issues pertinent to the respective interests of the members.
The calling of meetings of the Permanent Bureau and the format of meetings must be mutually agreed by the members. A decision of the Permanent Bureau must be unanimous.
The MotoAmerica Rules Commission is competent to study any proposal of changes to the MotoAmerica AMA Road Racing Series Championship Regulations.
The MotoAmerica Rules Commission consists of:

a. One (1) representative appointed by MotoAmerica who will be the Chairman of the MotoAmerica Rules Commission
b. One (1) representative appointed by FIM North America (FIMNA) or the American Motorcyclist Association (AMA)
c. One (1) representative appointed by KRAVE Group LLC
d. One (1) representative from FIM Technical
e. One (1) representative that is a participant of the series

Any resolution voted by the MotoAmerica Rules Commission shall require a simple majority. The chairman will have the casting vote in case of a tie. The resolutions of the MotoAmerica Rules Commission are subject to the approval of the Permanent Bureau. The meetings of the MotoAmerica Rules Commission shall take place no later than fourteen (14) days following the request of any representative.

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A. GENERAL UNDERTAKINGS AND CONDITIONS

All riders, team personnel, officials, promoters/organizers and all the persons involved in any capacity whatsoever participating in the MotoAmerica AMA Road Racing Series, an FIM North America Championship (hereinafter collectively referred to “Championship”) undertake, on behalf of themselves, their employees, and agents, to observe all the provisions of:

1.0 SPORTING REGULATIONS

2.0 TECHNICAL REGULATIONS

3.0 DISCIPLINARY AND ARBITRATION CODE

4.0 CIRCUIT STANDARDS

5.0 MEDICAL CODE

6.0 ANTIDOPING CODE

7.0 FIM ENVIRONMENTAL CODE

These Regulations, Codes and Standards may be supplemented and amended from time to time (hereinafter collectively referred to as the "Regulations").

All the persons mentioned above may be penalized in accordance with the provisions of the Regulations.

It is the responsibility of the team to ensure that all persons concerned with its entry observe all the requirements of the Regulations. The responsibility of the rider or any other person having charge of an entered motorcycle during any part of the event with respect to observance of the regulations is joint and several with that of the team.

All persons concerned in any way with an entered motorcycle or present in any capacity whatsoever in the paddock, pits, pit lane or track, must wear an appropriate pass at all times during the event.

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1.0 SPORTING REGULATIONS

1.1 INTRODUCTION

The MotoAmerica/AMA Road Race Series will organize a series of motorcycle races counting toward a FIM North America Championship for riders and manufacturers.

1.2 EVENTS

a. Each event shall be deemed to commence at the scheduled time for technical and sporting checks and finish after all the races at the expiry of the deadline for the lodging of a protest and the time, at which technical or sporting verifications have been concluded, whichever is the latest.

b. Race control must remain operative with all equipment in place until the end of the period provided for the lodging of a protest, and all officials and marshals must remain at the circuit available to the Race Direction and FIM North America Stewards during that period.

c. Events must be staged on race circuits that have been approved by the MotoAmerica, FIM North America and the AMA.

d. Events must not include any other races except for races approved by MotoAmerica, FIM North America and the AMA.

e. Any activity involving four (4) wheels racing vehicular use of the track during the event, including "demonstrations", displays or other activity must receive prior approval from AMA and MotoAmerica.

f. MotoAmerica and the AMA will nominate organizers.

g. The Organizer is responsible for providing the facilities and personnel to ensure the smooth and efficient running of the event.

h. MotoAmerica shall require or arrange for the provision of each organizer to provide proof of insurance for third party liability at each event. This insurance must cover MotoAmerica's liability and that of all participants, manufacturers, competitors, sponsors, teams, service companies and officials in case of damage or injury.

    1. The insurance policy shall also cover any possible liability of FIM North America, the AMA and the organizer to third parties.

    2. A copy of the policy shall be made available to the organizer, MotoAmerica and to the AMA not later than 20 days prior to the event.

    3. The coverage provided for each event shall be a minimum of $5,000,000 USD.

    4. The validity of the insurance will come into effect three (3) days before the first race and will terminate one (1) day after the last race day.

    5. In the case that the Organizer subscribes his own Third-Party Liability Insurance in full conformity with the above specification of the present (Article 1.2/h./1.-.4). The organizer must send the certificate of insurance duly filled in, signed and stamped by an authorized representative of the insurance company, to MotoAmerica and to the AMA.

i. This original declaration (form to be provided by MotoAmerica) shall be sent to the AMA by mail or courier at least 20 days before the event.

j. At least 30 days prior to the Event, the Organizers of the event must submit the following information to the AMA and MotoAmerica:

    1. The location at the circuit where the rider information center and the official notice board can be found.

2. The name and address of the company providing the third-party liability insurance coverage and the policy number.
3. The name, address and telephone number of the circuit Medical Representative.
4. MotoAmerica must publish the above information and Supplementary Regulations. This information must be available to all teams with an entry for the event.

1.3 THE PADDOCK

a. The Paddock, pit boxes and all other facilities should be available to teams at least on the day prior to a race. This is subject to the MotoAmerica event schedule as notified in the Team Handbook.

b. Access should be available for teams arriving to set up between the hours of 8:00 a.m. and 8:30 p.m. This is subject to the MotoAmerica event schedule.

c. At all times that the Paddock is occupied there must be 24-hour attendance at the gates providing vehicular access to the circuit and paddock.

d. When the paddock is occupied there must be an adequate medical and fire- fighting service available to all riders, teams, manufacturers, sponsors, service companies, officials, AMA, MotoAmerica, etc. At minimum medical and fire services must be available from 8:00 a.m. to 6:00 p.m. on the day prior to the “move-in” day, and from one (1) hour before on-track activity begins and two (2) hours after on-track activity ceases.

e. Full security must be supplied to the paddock area from at least 12:00 a.m. of the day prior to the event until 11:59 p.m. of the last day of the event.

1.4 OFFICIALS

a. All the following Officials must be present and available at the time necessary to ensure smooth and efficient running of the event.

b. All communications between the individual event officials must be made via the relevant permanent officials.

1.4.1 Permanent Officials

All permanent officials shall be appointed for the Championship by the Permanent Bureau.

The following officials will be appointed to perform supervisory and executive roles. Except in cases of illness or force majeure, these officials are expected to be present at each event.

a. Race Director

The Race Director is responsible for:

- Ensuring proper observance of the regulations.
- Communications between the Event Management Committee and the FIM North America Stewards.
- The control of practices, qualifying and races, adherence to the timetable and, if deemed necessary, the making of any proposal to the Race Direction to modify the timetable in accordance with the Sporting Regulations
- The stopping of practice or the race in accordance with the Sporting Regulations if he deems it unsafe to continue and ensuring that the correct restart procedure is carried out.
- All versions of the starting procedures.

- Directing the use of medical cars/fast intervention vehicles.
- Immediate approval and signature with time of provisional results (practices, qualifying, warm-ups, starting grids and races) and presentation of reports to the Event Management Committee.

b. Rider Representative

The Rider representative is responsible for:

- Assisting riders with interpreting and clarifying sporting and technical regulations
- Accepting rider input regarding safety issues
- Accepting, evaluating and making recommendations regarding rider concerns and requested exceptions
- Coordinating with the MotoAmerica CMO regarding rider fit/unfit status

c. FIM North America Safety Officer

The FIM North America Safety Officer is responsible for the supervision of all aspects of safety.

d. Technical Director

The Technical Director is responsible for:

- Ensuring that technical regulations are correctly enforced
- Supervising/scrutineering protests of a technical nature

1.4.2 Individual event officials appointed by FIM North America

All individual event officials shall be appointed for each event.

a. FIM North America Chief Steward

The FIM North America Chief Steward (with FIM Sporting Steward license) is responsible for ensuring that the event is conducted according to the regulations.

b. FIM North America FMNR Steward

The FIM North America FMNR Steward (with FIM Sporting Steward license) is appointed in coordination with the host federation and is responsible for ensuring that the event is conducted according to the Regulations.

c. FIM North America Safety Officer

1. The FIM North America Safety Officer is appointed in coordination with MotoAmerica and serves as a permanent official. The FIM North America Safety Officer is responsible for:
   - Ensuring that the circuit is suitably prepared for and maintained during the event.
   - Ensure that all legal requirements applicable for the running of the event have been successfully completed.
   - Ensuring that all officials and services are in place. The stationing of all track personnel and equipment (i.e. marshals, fire-fighting services, medical services, moto-taxi, recovery and intervention vehicles, flags, etc.) alongside the circuit no later than 30 minutes prior to all on track activity.
2. The Race director, the FIM North America Safety Officer, and the Medical Officer will make the final inspection of the circuit to ensure that regulations are being followed 30 minutes prior to the beginning of the day's first practice sessions and/or warm up.

- During the final inspection lap, the yellow flag must be waved at each flag marshal post together with the display of other flags and equipment requested by the FIM North America Safety Officer.

1.4.3 Individual event officials appointed by the series or organizer

a. Secretaries

Secretaries are responsible for providing secretarial support for the Race Direction and the FIM North America Stewards. They are also responsible for effecting communications between various officials.

b. Other officials including; marshals, technical scrutineers, security personnel, medical staff, etc. required for the efficient running of the event.

1.4.4 The Race Direction

The Race Direction shall be appointed for the Championship by the Permanent Bureau.

1.4.5 The FIM North America Stewards

The FIM North America Stewards shall be appointed for each event by FIM North America.

1.5 MOTOAMERICA EVENT MANAGEMENT

a. The management of the event will be carried out by the MotoAmerica Event Management Committee (EMC) which will be comprised of the following delegates:

- The MotoAmerica Race Director (who will chair the meetings)
- Circuit representative
- The delegate(s) appointed by MotoAmerica
- The MotoAmerica Technical Director
- The FIM North America Safety Officer
- The FIM North America Chief Steward

b. The duties of the members of the Event Management Committee are:

- To ensure the smooth and efficient running of the event.
- To make recommendations to the Race Direction concerning any matter that is in contradiction to the regulations.
- To report to the Race Direction any infringements of the regulations.
- To receive reports from the various Officials concerning scrutineering, practice and races.
- To make recommendations to the organizer to improve the smooth and efficient running of the event.

c. The Event Management Committee will meet at any time required during the event, but at least:

- Prior to the first practice session
- At the end of each day during an event
- At the end of the event

d. The quorum for a meeting of the Event Management Committee is three (3) persons.

e. All the Members have one vote. Decisions are based on a simple majority. In the case of a tie, then the MotoAmerica Race Director will exercise a casting vote.

f. The Race Director may invite the participation of officials or other persons to assist in the meetings. However, these invited persons will have no right of vote.

g. The duties of the Event Management Committee are:

- To receive reports from the various Officials concerning scrutineering, practice and races.
- To make recommendations to the Organizer to improve the smooth and efficient running of the event.

1.6 MOTOAMERICA RACE DIRECTION

a. The Race Direction will comprise the following persons:

- The Race Director (who will chair the meetings)
- The FIM North America Safety Officer
- The MotoAmerica Riders' Representative

b. The quorum for a meeting of the Race Direction is two (2) persons.

c. Each member has one vote and decisions are based on a simple majority.

d. The Race Direction will meet at any time required during the event.

e. The duties of the Race Direction are:

- To make decisions as provided in the regulations.
- To impose penalties for any infringements of the regulations.
- To adjudicate on any protest relating to infringements of the regulations.
- Race Direction may make change in the conduct and/or format of a race and/or a practice session based on safety considerations and provided that such decision is necessary to resolve a situation not foreseen in the regulations. In such exceptional cases, such decision may prevail over specific provisions of the regulations.
- Provided that it is absolutely necessary to resolve a situation not foreseen in the regulations, the Race Direction may issue pre-race instructions or clarifications and in specific cases even create pre-race regulations (e.g. to take into account the local conditions at a particular circuit). However, such actions may only be taken within the limits set out by the regulations.

1.7 FIM NORTH AMERICA STEWARDS

a. There will be a panel of two (2) FIM North America Stewards (with FIM Sporting Stewards license) supervised by the Chief Steward who will chair the meetings.

b. The FIM North America Stewards are responsible for enforcing the regulations. All Stewards officiating at more than four events in any year shall be approved by the Permanent Bureau.

c. The quorum for a meeting of the FIM North America Stewards is two (2) persons.

d. If the Chief Steward is indisposed during the event, the second FIM North America Steward will fill the vacancy.

e. The second FIM North America Steward may be replaced by the FMNR steward or a selected FIM steward at events conducted in conjunction with World Championship events.

f. Each member has one (1) vote. Decisions are based on a simple majority. In the case of a tie, the Chairman will exercise a casting vote.

g. The FIM North America Stewards have no executive role in the running of the events.

h. The FIM North America Stewards will meet at any time required during the event.

i. The FIM North America Stewards are responsible for:

- Ensuring that the event is conducted according to the regulations and reporting any infringement to the Race Direction.
- Adjudicating on any appeal against the decisions of the Race Direction.
- All decisions of the FIM North America Stewards must be communicated in writing to the Race Direction and all affected parties.

1.8 THE CALENDAR

a. The calendar of races counting for the Championships will be, in principle, published by no later than 31st October of the preceding year.

b. The MotoAmerica Rules Commission reserve the right to amend the calendar or change the number of races per event due to force majeure.

1.9 CLASSES

Class	Minimum license required	Cylinders
Superbike	Superbike	2, 3 or 4 cylinders
STK 1000	Stock 1000	2, 3 or 4 cylinders
Supersport	Supersport	2, 3 or 4 cylinders
Twins	Stock 1000 or Twins	2 cylinders
Junior Cup	Junior Cup	1 or 2 cylinders

Technical Regulations governing the five classes are provided under Chapter 2.0 of the regulations.

1.10 LICENSE REQUIREMENT AND ELIGIBLE COMPETITORS

a. United States riders must be in possession of a license issued by the AMA, as defined in Article 1.9.

b. Non-United States riders must be in possession of an FIM International or FIM Continental Union license and the appropriate start permission from their own federation to include personal accident insurance and repatriation. The AMA, MotoAmerica or the organizer will not be held responsible for repatriation.

c. Non-United States riders may be issued an AMA license if they provide a release from their own federation and they meet the minimum requirements.

License Type	Minimum Age	Maximum Age
Superbike	18 years	55 years
Supersport	16 years	55 years
Stock 1000	17 years	55 years
Twins Cup	**15 years**	55 years
Junior Cup	14 years	28 years

d. The limit for the minimum age starts on the date of the rider's birthday.

e. The limit for maximum age is the date of license issued.

f. Each license will be valid until the end of the calendar year.

g. An exception may be requested on an annual basis for riders (except the Superbike License) above 55 years of age whom will be required to provide evidence of medical fitness.

1.11 ENTRIES

a. The registration form and the entry fees are posted on the website:

   1. www.motoamericaregistration.com
   2. Riders shall not take part in more than two (2) classes on the same day.
   3. The withdrawal of entry from an event must be communicated to MotoAmerica no later than seven (7) days before the event takes place. The communication must be written and sent through e-mail to registration@motoamerica.com. Riders failing to communicate this circumstance may be penalized.
   4. AMA and MotoAmerica have the right not to accept or to reject an entry.

b. A compulsory rider/entrant briefing will be held for all riders participating in the MotoAmerica AMA Championship prior to the first official practice session each event. An entrant or representative may represent more than one (1) rider.

   1. An additional compulsory riders briefing may be held for all new riders who will be participating in the event.
   2. Failure to attend the briefings in full may result in disqualification from the event or penalty.
   3. A waiver can be granted to a rider by Race Direction.

c. A rider shall be deemed to have taken part in the event when the rider participates in, at least, one practice session.

d. A rider shall be deemed to have started a race when the rider participates in, at least, the first lap of the race.

1.12 STARTING NUMBERS

a. Each rider accepted for any class in the MotoAmerica Series will be allocated a specific starting number that will be valid for the entire Championship. AMA and MotoAmerica reserve the right to assign the number to a rider or team. In general, the starting number will be based on the results of the rider in the previous year's Championship. Requests will be taken into consideration.

b. The number one (1) is reserved for the rider that finished in the first position in the previous year championship.

1.13 SCHEDULE

The schedule for the event should be posted no later than 30 days prior to the event at www.motoamericaregistration.com.

1.14 TECHNICAL CONTROL AND MEDICAL CONTROL

a. All motorcycles should be checked by the technical stewards on the day preceding the event up to one (1) hour before the first practice session of the event according to the published schedule. At the discretion of the Technical Director, machines and protective clothing may be checked earlier than the schedule if the machines are ready.

b. Teams may present for technical control one (1) motorcycle per rider for all classes, which will be specially identified by the technical controllers.

c. Unless a waiver is granted by the Race Direction, teams who do not comply with the schedule for technical or any medical controls will not be allowed to take part in the event.

d. The procedure for technical control is described in the Technical Regulations, articles 2.0 thru 2.13. The procedure for medical control and doping control is described in articles 5.0 and 6.0.

1.15 INSTRUCTIONS AND COMMUNICATIONS TO COMPETITORS

a. Instructions may be given by the Race Director to teams and/or riders by means of special circulars in accordance with the regulations. Circulars must be posted on the official notice board and available to each team representative. Circulars that are posted on the official notice board and/or delivered to the team representative will be deemed as proof of delivery.

b. All classifications and results of practice and the race, as well as all decisions issued by the officials, must be posted on the official notice board. Posting on the official notice board will be deemed as proof of delivery and official publication.

c. Any official communication from the Race Direction or the Permanent Officials to a team or rider must be communicated in writing, by time keeping displays or radio. Similarly, any communication from a team or rider to the Race Direction or the Permanent Officials must also be made in writing.

d. MotoAmerica Race Control communicates schedule, track, rider and motorcycle status information on the frequency published in the supplementary regulations and/or timing screens throughout each race event. It is mandatory that each team possess either a radio or scanner to monitor MotoAmerica Race Control. Radios must not be capable of broadcasting on the control frequency. Every team is required to bring an example of their equipment to tech inspection prior to the first on track activity and a once a year log will be maintained to monitor rule compliance. All teams must have at least one crewmember monitor this “listen only” communications channel during all practice, qualifying, and race sessions. Teams must also monitor timing screens similarly. Failure to comply may result in a penalty or fine by Race Direction.

1.16 FLAGS AND LIGHTS

Marshals and other officials display flags or lights to provide information and/or convey instructions to the riders.

1.16.1 Flags and lights used to provide information:

a. Green Flag

The track is clear. This flag must be waved at each flag marshal post for the first lap of each practice and warm up session also during the sighting lap and warm up lap of a race. The green flag must be shown waved at the flag marshal post immediately after an incident that necessitated the use of one or more yellow flags. When the pit-lane exit is open, the green flag must be waved at the pit-lane exit.

b. Yellow and Red Striped Flag

The adhesion on this section of the track could be affected by any reason other than rain. This flag must be shown waved at the flag marshal post.

c. White Flag with diagonal red cross (stroke width of the cross between 10 and 13 cm)

Indicates drops of rain on this section of the track. This flag must be waved at the flag marshal post.

d. Yellow and Red Striped Flag together with the White Flag with diagonal red cross
Indicates it is raining on this section of the track. This flag must be waved at the flag marshal post.

e. White Flag

Indicates the final lap of a race, waved at the finish line.

f. Checkered Black / White Flag

This flag will be waved at the finish line to indicate the finish of race or practice session.

g. Checkered Black / White Flag and Blue Flag

The checkered black/white flag(s) will be waved together with the blue flag at the finish line when a rider(s) precedes closely the leader during the final lap before the finish line (see art. 1.26.1c).

h. Green Light

If used this light must be switched on at the pit lane exit to signal the start of each practice and warm up sessions, the start of the sighting lap(s) and the start of the warm up lap.

1.16.2 Flags which convey information and instructions:

a. Yellow Flag

1. Waved at designated rows of the starting grid, this flag indicates that the start of the race is delayed.
2. A standing yellow flag at the flag marshal post indicates that there is a danger ahead beside the track. Riders must exercise caution, overtaking is forbidden up until the point where the green flag is waved.
3. Waving yellow flag at the flag marshal post indicates that there is a hazard wholly or partly blocking the track, or other high-risk situation. Riders must slow down and be prepared to stop. Overtaking is forbidden from the first yellow flag up until the point where the green flag is waved. Any Infringement of this rule during a practice session will result in the cancellation of the time of the lap during which the infraction occurred.
   - In case of infringement of this rule during the race, the rider must go back the number of positions decided by the Race Direction.
   - A board will be displayed for the rider on the finish line during a maximum of five (5) laps. If the rider does not go back after the board has been presented five (5) times, he may be penalized by the Race Direction. In both cases, further penalties (such as penalty points, fine or suspension) may also be imposed.
   - If immediately after having overtaken, the rider realizes that he made an infraction, he must raise his hand and let past the rider(s) that he has overtaken. In this case, no penalty will be imposed.
4. During the final inspection lap, this flag must be waved at the exact place where the flag marshal will be positioned during the practices, qualifying Superpole, warm ups and races.

b. Red Flag and Red Lights

1. When the practice or race is being interrupted, the red flag will be waved at each flag marshal post and the red lights around the track will be switched on. Riders must return slowly to the pits.
2. When the pit-lane exit is closed, this flag will be waved at the pit lane exit and the light will be switched on. Riders are not allowed to exit the pit lane. Any infringement of this rule may be penalized by Race Direction.
3. The red flag will be <u>shown motionless</u> on the starting grid at the end of the warm up lap. This will indicate that you must stop in your grid position and cannot pass the official holding the red flag.

4. The red flag may also be used to indicate the track is closed.
5. The red lights will be switched on at the start line for between two (2) and five (5) seconds to start each race. When the red light has extinguished, the race has begun.

c. Blue Flag

1. This flag indicates to a rider that he is about to be overtaken and will be waved at the flag marshal post. During the qualifying sessions, the rider concerned must keep his line and slow down gradually to allow the faster rider to pass him. During the race, the rider concerned is about to be lapped and must allow the following rider(s) to pass at the earliest opportunity. Overtaking within a group of lapped riders is forbidden under the blue flag.
2. Any Infringement of this rule may be penalized by Race Direction.

d. Black Flag

1. This flag is used to convey instructions to one (1) rider only and is waved at selected flag marshal post together with the rider's number. The rider must stop at the pits at the end of the current lap and cannot restart when this flag results from a penalty.
2. This flag can also be presented to a rider for a reason other than a penalty (e.g. to rectify a non-dangerous technical problem such as a transponder issue).
3. Any infringement of this rule may be penalized by Race Direction.

e. Black Flag with orange disk (40 cm)

1. This flag is used to convey instructions to one (1) rider only and is waved at selected flag marshal posts together with the rider's number. This flag informs the rider that his motorcycle has mechanical problems likely to endanger himself or others, and that he must immediately leave the track.
2. Any infringement of this rule may be penalized by Race Direction.

1.16.3 Flag dimension

The flag dimension should be 80 cm vertically and 100 cm horizontally. The flag dimension will be checked the day before the first practice session.

1.16.4 Flag Marshals posts

The location will be assigned during the circuit homologation.

1.16.5 Marshals uniforms

It is strongly recommended the marshals' uniforms to be in white or orange and rain coats be transparent.

1.17 SAFETY CARS

The safety cars should be equipped with flashing lights.

1.18 PRACTICE AND QUALIFYING

1.18.1 Practice and testing restrictions

a. No practice or testing activity may take place at a circuit hosting a championship event in the thirty (30) days preceding the first official practice day at that venue **for riders participating in Superbike or Supersport classes. Riders participating in Stock 1000, Junior Cup and Twins may participate in any publicly listed practice or AMA-sanctioned race until four (4) days prior to the first official practice day at the venue.**

b. Practice Restriction Exceptions:

1. Official practice sessions organized by MotoAmerica.
2. Any activity allowed by Race Direction.
3. Non-permanent riders are not subject to the practice and testing restrictions noted above.
   - A non-permanent rider is defined as: A rider that is not a MotoAmerica season entrant. In addition, the rider has not participated in more than three (3) events (maximum of six (6) races) at any time during the season. Should a rider participate in additional events after taking advantage of the non-permanent rider status as it pertains to Section 1.18.1/a the rider shall be subject to penalties for each non-compliant occasion at the discretion of Race Direction.
4. Riders acting as coaches for an approved school on a motorcycle of different displacement from their competition motorcycle and deemed to not be a competitive advantage. Requests must be submitted in writing prior to on track activity and approved by the MotoAmerica Permanent Bureau. Requests will not be approved at a circuit hosting a championship event in the seven (7) days preceding the first official practice day at that venue.
5. **Teams may apply for testing exemptions in writing to MotoAmerica for consideration. The test must be open to all licensed riders and be publically listed as a MotoAmerica Approved Test. Requests should be made 90 days prior to the planned test.**
6. Exceptions to this rule may be granted, with the approval of the MotoAmerica Permanent Bureau, due to reasons of force majeure. For example, where a team recruits a qualified rider to replace an injured rider, the qualified rider could possibly have practiced unwittingly at a circuit included in the Championships.

c. Riders found to be in violation may be fined, subject to grid penalties and/or subject to suspension from participation in part or whole of a MotoAmerica Championship event. Riders who are found to be in violation of this policy a second time may be subject to a penalty as decided by Race Direction or the MotoAmerica Permanent Bureau, including but not limited to suspension for the remainder of the season.

1.18.2 Race restrictions

a. Participation in AMA-sanctioned race events may take place at a circuit hosting a championship event up to seven (7) days preceding the first official practice day at that venue. Participation in non-AMA-sanctioned race events may only take place up to thirty (30) days preceding the first official practice day at that venue. Endurance race participation is not restricted.

   Example: A MotoAmerica event is scheduled to take place April 3/4/5, 2020. The first day of the event is Friday April 3, accordingly no AMA-sanctioned race activity would be permitted after 23:59 on Thursday March 26. Non-AMA-sanctioned activity would not be permitted after 23:59 on Wednesday March 3.

b. Riders found to be in violation may be fined, subject to grid penalties and/or subject to suspension from participation in part or whole of a MotoAmerica Championship event. Riders who are found to be in violation of this policy a second time may be subject to a penalty as decided by Race Direction or the MotoAmerica Permanent Bureau, including but not limited to suspension for the remainder of the season.

1.18.3 Practice sessions (Superpole and warm-up inclusive)

a. Practice sessions may be conducted as practice or qualifying practice and in all cases, are timed.

b. Except for Superbike, competitors must participate in a minimum of one (1) practice session prior to the qualifying session. Exceptions may be approved by Race Direction due to extenuating circumstances.

c. Riders will commence practice from the pit lane when the green light and/or the green flag is displayed at the exit of the pit lane.

d. A visible board or count-down will be shown in the pit lane to indicate the minutes of practice remaining.

e. The end of practice will be indicated by the waving of a checkered flag, at which time the pit exit will be closed. A rider's time will continue to be recorded until he passes the official checkered flag at the finish line after the allotted time has elapsed. After the checkered flag riders may complete the lap to the pit entry.

f. If practice is interrupted due to an incident or any other reason, then a red flag will be displayed at the start line and at all flag marshal's posts. All riders must return at a safe and controlled pace to the pit lane. If practice is restarted, the time remaining will be that shown on the count-down device.

g. After practice has started, the condition of the racing surface of the circuit should not be altered except on instruction from the Race Director or the FIM North America Safety Officer in response to a localized change in conditions.

h. Refueling is allowed in the pit lane. Riders must be off the bike during refueling.

   1. Riders must be off the bike during refueling.

   2. The ignition must be off, and the motorcycle must be on a rear stand before refueling is permitted to start.

   3. A crew member must be standing by with a fire extinguisher with the pin pulled and the nozzle aimed at the motorcycle.

   4. No electrical devices such as battery chargers, fans, or tire warmers may be plugged in during any refueling operations.

i. Warm up sessions are only available to riders that have qualified for the race and will not be used to qualify a rider for a race.

1.18.4 Motorcycle use

a. During the event, a rider may only use a motorcycle that has been presented for technical control, according to the procedures described in articles 2.4.10, 2.5.10, 2.6.10, 2.8.10 and 2.9.10 of the Technical Regulations.

b. Superbike riders may use the primary motorcycle presented for technical control at any time during the event. Riders are allowed one (1) complete spare motorcycle. Only one (1) motorcycle may be presented for preliminary technical checks and it will be the only motorcycle allowed on the track and in the pit box during the practices, qualifying, Superpole and races. If the Technical Director declares the primary motorcycle unrepairable, the spare motorcycle may then be presented for scrutineering before the next session. For a full explanation of procedures see article 2.4.10.

c. All other classes may only use the motorcycle presented for technical control.

1.18.5 Lap Times

All laps for all sessions will be timed. A new lap record for a circuit can only be established by a rider during a race. Both for practice and for races, the lap time is the subtraction of the time between two consecutive crossings of the plane of the finish line indicated by the line painted on the track.

1.18.6 Qualifying Results

The results will be based on the fastest time recorded by the riders in qualifying practice, qualifying and Superpole sessions. In the case where all qualifying and Superpole sessions have been cancelled, the results will be based on the fastest time recorded by the riders in all practices. In the event of a tie, riders' second and subsequent best times will be taken into account.

1.18.7 Qualification for the Race

a. Stock 1000, Twins and Junior Cup

To qualify for the race, a rider must achieve a time at least equal to 110% of the time recorded by the fastest rider of the qualifying session(s). Any rider who fails to achieve a qualifying time may be permitted to take part in the race provided that in any of the free practice sessions he has achieved a time at least equal to 110% of the fastest rider in the same session. Any decision made to permit a rider to take place in a race is dependent on space available as determined by Race Direction. Provisional starts may be applied for and approved by the Race Direction.

b. Supersport

To qualify for the Supersport a rider must achieve a time at least equal to 108% of the time recorded by the fastest rider of the qualifying session(s). Any rider who fails to achieve a qualifying time may take part in the race if he has achieved a time at least equal to 108% of the fastest rider in any of the practice sessions, dependent on space available as determined by Race Direction. Provisional starts may be applied for and must be approved by Race Direction.

c. Superbike

1. To qualify for the Superbike Race, a rider must achieve a time at least equal to 108% of the time recorded by the fastest rider in the Qualifying Practice 1 (QP1) session or the Qualifying Practice 2 (QP2) session.
2. Based on combined times from QP1 and QP2, the **nine (9)** fastest riders qualify for Superpole.
3. Any rider who fails to achieve a qualifying time from QP1 or QP2 may be provided a provisional start at the discretion of Race Direction and permitted to take part in the race provided that they have achieved a time at least equal to 108% of the fastest rider in Practice Session 3.
4. Provisional starts may be applied for and must be approved by the Race Direction.
5. Grid positions are dependent on space available as determined by Race Direction.
6. Substitute riders, replacing a rider after the event has started, are subject to the above conditions.
7. If a substitute rider only participates from practice session 3 onwards and does not achieve a lap time of 108% of the fastest rider then that rider may be provided a provisional start at the discretion of Race Direction.

1.19 GRID POSITIONS

a. The pole position, allocated to the fastest rider, will be determined during the homologation of the circuit.

b. For all classes, the grid will be arranged in the "in echelon" 3-3-3 configuration. Each line will be offset. There will be a distance of approximately nine (9) meters between each row.

c. In the event of a tie, riders' second and subsequent best times will be taken into account.

d. The final grid will be published after the warm up session for that class has been completed.

1.19.1 Grid positions for Supersport, Stock 1000, Twins and Junior Cup

a. Grid positions will be based on the fastest time recorded by the riders in all qualifying practices. In the case where all qualifying practices have been cancelled, the grid position will be based on the fastest time recorded by the riders in all free practices.

b. Riders that have been given a provisional start by Race Direction will go to the back of the grid regardless of lap times. In the case that multiple riders are given a provisional start their position will be determined by lap time at the back of the grid.

1.19.2 Grid positions for Superbike

a. Grid positions will be determined by the fastest lap time recorded by each rider in the practice sessions and Superpole sessions as follows:

1. The nine riders in Superpole will be assigned the first **nine (9)** grid positions according to their fastest lap time in Superpole.
2. If any riders that qualified for Superpole do not record a lap time in Superpole they will be classified as the last riders in Superpole according to their combined lap times of the QP1 and QP2 sessions.
3. In the case where Superpole is cancelled, the grid positions will be determined by the combined fastest lap times recorded by the riders of in the QP1 and QP2 sessions.
4. Any riders that did not qualify for Superpole but qualified for the race will be assigned grid positions behind all riders qualified for Superpole (position 10 and on) according to their combined lap times of the QP1 and QP2 sessions.
5. Any riders awarded a provisional start by Race Direction due to achieving 108% of the fastest rider in Practice Session 3 will be assigned grid positions according to their fastest lap times in practice session 3 <u>after</u> all riders qualifying for the race through combined QP1 and QP2.

1.20 RACES

a. Race Classes

Class	Min Distance	Max Distance
Superbike	40 miles	60 miles
Supersport	35 miles	55 miles
Twins/Stock 1000	25 miles	40 miles
Junior Cup	20 miles	40 miles

b. Race distance will be determined by the AMA and MotoAmerica after publication of the calendar. Races declared wet may be reduced by a certain number of laps (at the discretion of Race Direction).

c. The length of a race may only be varied by Race Direction.

d. A visible countdown board will be shown at the finish line to indicate the number of remaining laps in the race.

1.21 BEHAVIOR DURING PRACTICE AND RACE

a. Riders must obey the flag signals, the light signals, and the boards which convey instructions. Any infringement to this rule may be penalized according to the provisions of article 1.21/b.

b. Riders must ride in a responsible manner which does not cause danger to other competitors or participants, either on the track or in the pit lane. Any infringement of this rule may be penalized with one of the following penalties:

- fine
- drop of position(s)
- ride through
- time penalty
- drop of any number of grid positions at the rider's next race
- disqualification
- withdrawal of Championship points
- suspension or any other penalty at the discretion of Race Direction

c. Riders must not tour the track. Touring is defined as riding in a manner not compatible with general safety. This includes being on the racing line and not attempting to produce a fast lap time. A penalty may be imposed on any rider found to be touring. If marshals report that a rider is touring and this is collaborated by video or comparing consecutive sector times, then automatic penalties will apply as follows:

1. During practice, qualifying or Superpole:
   - First offence: official warning
   - Second offence: fastest qualifying session time disallowed
   - Third offence and subsequent offenses: next fastest qualifying session times disallowed in sequence
2. During a race:
   - exclusion
   - ride through
   - time penalty and/or fine, depending on the circumstances
3. Persistent acts of touring will be deemed more serious and will be penalized accordingly.

d. Riders should use only the track and the pit lane. However, if a rider accidentally leaves the track then he may rejoin it at the place indicated by the officials or at a place which does not provide an advantage. Any infringement of this rule during the practices or warm up will be penalized by the cancellation of the lap time concerned and during the race, by a drop of position(s) decided by the Race Direction. A board will be displayed for the rider on the finish line during a maximum of five (5) laps. If the rider did not go back after the board has been presented five (5) times, he will be penalized at the discretion of the Race Direction.

e. Any repairs or adjustments along the race track must be made by the rider working alone with absolutely no outside assistance. The marshals may assist the rider to the extent of helping him to lift the motorcycle and holding it while any repairs or adjustments are made. The marshal may then assist him to re-start the motorcycle.

f. If the rider intends to retire, then he must park his motorcycle in a safe area as indicated by the marshals.

g. If the rider encounters a problem with the motorcycle, which will result in his retirement from the practice or the race, then he should not attempt to tour at reduced speed to the pits but should pull off the track and park his motorcycle in a safe place as indicated by the marshals.

h. Riders who are returning slowly to the pits for remedial work should ensure that they travel as far as possible off the racing line.

i. Riders who stop their engines in the pits may be assisted to re-start their motorcycle by the mechanics.

j. Riders are not allowed to transport another person on their motorcycle or to be transported by another rider on his motorcycle (exception: Another rider or by another rider after the checkered flag or red flag).

k. Riders must not ride or push their motorcycles in the opposite direction of the circuit, either on the track or in the pit lane, unless doing so under the direction of an official.

l. No signal of any kind may pass between a moving motorcycle and the rider's team, or anyone connected with the motorcycle's team, entrant or rider, except for the signals of the timekeeping transponder, lap trigger, GPS, legible messages on a pit board, or body movements by the rider or team. Onboard TV camera signals are allowed, but only when such signals are for the purposes of and managed by the Championship promoter.

m. Riders may be required to carry "on-board" cameras on their motorcycle. The cameras and associated equipment must be carried during entirety of the practice or race sessions.

    1. Riders required to carry "on-board" cameras will receive an adjustment to the minimum weight equal to the weight of the camera and any mounting equipment.

    2. Teams must give reasonable access and assistance to the company designated for the supply of the camera equipment to facilitate the mounting of the equipment.

    3. The video recorded on the cameras is the sole property of MotoAmerica and must not be downloaded or copied.

n. A speed limit of 60 km/h (approximately 37 mph) will be enforced in the pit lane at all times during the event. Riders must respect the speed limit from where the sign 60 km/h is placed up to where the sign 60 Km/h crossed out is placed.

    1. Any rider found to have exceeded the limit during the practice will be subject to a fine of 150 USD.

    2. Any rider who exceeds the pit lane speed limit during a race will be penalized with a ride through.

    3. The Race Direction must communicate the offence to the pit of the rider after having received the information from the official in charge.

o. Stopping on the track during any session is forbidden with the exception of a practice start outlined in article 1.21/p.

p. Practice Starts:

    1. During the practice sessions, Superpole and warm ups, practice starts are permitted.

    2. When it is safe to do so, at the pit lane exit before joining the track.

    3. After passing the checkered flag at the end of practice sessions, Superpole and warm-ups when it is safe to do so. The rider must be off the racing line in the designated Practice Start Zone(s) and following the procedure, as communicated to teams prior to the first practice session.

    4. Any rider found to have infringed this rule may be subject to an instant fine of 150 USD. Further penalties may be applied.

q. If the winning rider wishes to parade a flag, he must ride to the side of the racing surface to collect the flag and then rejoin the circuit when it is safe to do so.

r. After the checkered flag, riders riding on the track must wear a safety helmet until they stop on the pit lane / parc fermé.

s. It is not permitted to ride racing motorcycles within the circuit other than in the pit lane or on the track.

t. Any rider or team whose motorcycle spills oil on the track causing interruption of practice, qualifying, warm up or race may be penalized with one (1) of the following penalties:

- fine
- disqualification
- withdrawal of Championship points
- suspension or any other penalty at the discretion of Race Direction

u. Any rider who enters the paddock during a race will be considered to have withdrawn from the race and may NOT re-enter the race.

v. All riders and team members must conduct himself or herself at all times in an appropriate, morally correct manner and in a manner to advance the positive goodwill and image of the AMA, FIM North America and MotoAmerica.

w. All riders and team members must follow policies and procedures presented in the Teams Handbook and Entrant Agreement.

1.22 START PROCEDURE

1.22.1 Normal start procedure

a. Approximately twenty (20) minutes before the start of a Superbike race or approximately fifteen (15) minutes before the start of all other races:

1. Pit lane exit opens for sighting laps.
2. Count-down boards of five (5), four (4), three (3), two (2), and one (1) minutes are shown at the pit exit.
3. Green light on and/or green flag waved at the pit lane exit.
   - Riders may complete more than one (1) sighting lap by passing through the pit lane.
   - Riders may make adjustments or refuel in pit lane.
4. Only riders who have completed at least one (1) sighting lap and started the warm up lap from the grid will be permitted to start the race from their position published on the final grid.
5. Under no circumstances may they push their motorcycle onto the grid from the pit lane.

b. Fifteen (15) minutes before the start of Superbike races or Ten (10) minutes before the start of all other races:

1. Pit lane exit closes, red light on and/or red flag waved at the pit lane exit.
2. Riders who did not make it out of pit lane before closure may start the warm up lap from the pit lane under the instructions of the marshal positioned at the pit lane exit.
3. Riders starting the warm up lap from the pit lane must start the race from the back of the grid.

c. When riders reach the grid after the sighting lap(s) they must take up their positions and may be attended by up to five (5) persons one (1) of whom may hold an umbrella. All riders must remove helmets, except in the case of a restarted or wet race. Officials may

display panels or cones, at the side of the track, indicating the row of the grid, to assist riders in locating their grid position.

d. Following participation in the sighting lap, if a rider does not join the grid due to mechanical issues or otherwise, they may elect to repair their motorcycle.

    1. Repairs can only be made in the hot pit
    2. Under no circumstances may they push their motorcycle onto the grid from the pit lane or ride counter course to proceed to the grid. In this case, riders must start the warm up lap from pit exit and start the race from the back of the grid.

e. The Race Director may choose at this time to declare the race as "wet" or "dry". The starter will indicate this to the riders on the grid and those who may still be in the pit lane by the display of a wet/dry board.

    1. If no board is displayed the race will automatically be declared "dry".

f. Riders on the grid may, at this stage, make adjustments to the motorcycle or change tires to suit the track conditions.

    1. Trolleys are allowed on the grid.
    2. Two (2) air blowers are allowed on the grid.
    3. Tire warmers may be used on the grid.
    4. Riders may use a generator to power tire warmers and air blowers on the grid.
    5. Only one (1) generator per motorcycle may be used.
    6. The generator must be of the "hand carried" type and have a maximum output capacity of two (2) kilowatts. The noise limit of the generator is 65 dB/A.
    7. Starter motors may also be used on the grid.
    8. Generators and starter motors should be located to the rear of the motorcycles.
    9. Refueling or changing a fuel tank on the grid is forbidden.

g. **Five (5) minutes before the start of the warm up lap:**

    1. Five (5) minute board is displayed on the grid.

h. **Three (3) minutes before the start of the warm up lap:**

    1. Three (3) minute board is displayed on the grid
    2. Immediate removal of tire warmers from motorcycles on the grid
    3. Generators, trolleys and air blowers must be disconnected and removed from the grid as quickly as possible.
    4. All persons except two (2) mechanics per motorcycle, one (1) person holding the umbrella for each rider, television crew of the host broadcaster and essential officials must leave the grid.
    5. Riders must put their helmets on.
    6. No person (except essential officials) is allowed to enter the grid area at this point.
    7. All adjustments must be completed by the display of the three (3) minute board.
    8. After this board is displayed, riders who still wish to make adjustments must push their motorcycle to the pit lane where accessible.
    9. If pit lane is not accessible from the grid the machine will be moved to a safe area. If the machine cannot be brought back to pit lane the team will be withdrawn from the race at the one (1) minute board.

10. Such riders and their motorcycles must be clear of the grid and in the pit lane before the display of the one (1) minute board, where they may continue to make adjustments. Such riders will start the warm up lap from the pit lane and may start the race from the back of the grid.
11. Working on the machine on the grid after the three (3) minute board is presented may result in a penalty.

i. One (1) minute before the start of the warm up lap:

1. One (1) minute board will be displayed on the grid
2. All team personnel will leave the grid
3. The mechanics will, as quickly as possible, assist the rider to start the machine and will then vacate the grid.

j. Thirty (30) seconds before the start of the warm up lap:

1. Thirty (30) second board is displayed on the grid
2. All riders must be in position on the grid with engines running. No further assistance from mechanics is permitted.
3. Any rider who is unable to start his motorcycle must remove it to the pit lane, where accessible, under the control of the grid marshals.
4. Any rider moved to pit lane may take further attempts to start it.
5. Such riders may start the warm up lap from the pit lane and must start the race from the back of the grid.
6. If pit lane is not accessible from the grid the machine will be moved to a safe area and the rider will be withdrawn from the race.

k. Approximately two (2) minutes before the start of the race:

1. Green flag waved to start warm up lap
2. In the interest of safety, should a rider stall his motorcycle, he may be assisted to restart by an official. If, after a reasonable period, the engine does not start then the rider will be pushed into the pit lane, where accessible, so his mechanics may provide assistance.
3. The riders will make one (1) lap, at unrestricted speed, followed by a safety car. The safety car will overtake slow riders.
4. As soon as the riders have passed the pit lane exit, the pit lane exit light will be turned green, and any rider waiting in the pit lane will be permitted to join the warm up lap. Thirty (30) seconds later the pit lane is closed and a marshal will display a red flag and/or red light.

l. On returning to the grid the riders must take up their positions with the front wheel of their motorcycle up to or behind the front line and between the side lines defining the grid position and keep their engines running.

1. If two (2) or more riders must start from the back of the grid, they will take up position in the order in which they qualified for the race.

m. An official will stand at the front of the grid holding a red flag motionless.

n. Any rider who arrives after the safety car has taken up its position at the back of the grid, must enter the pit lane and unless directed otherwise will start the race from pit out.

1. Any rider who encounters a problem with his motorcycle on the warm up lap may return to the pit lane and make repairs in the pit lane only.

2. Any rider who stalls his engine on the grid or who has other difficulties must remain on the motorcycle and raise an arm. It is not permitted to attempt to delay the start by any other means.
3. As each row of the grid is completed, the officials will lower the panels indicating that their row is complete. Panels will not be lowered when a rider in that row has indicated that he has stalled his motorcycle or has other difficulties. When all panels have been lowered an official at the rear of the grid will wave a green flag. The Starter will then instruct the official at the front of the grid, displaying the red flag, to clear the grid.

o. Start of the race:

1. A red light will be displayed for between two (2) and five (5) seconds.
2. The red light will go out to start the race.
   - If the red lights' device is fed by normal power (electricity) supply, it should also be connected to a U.P.S. (Uninterruptable Power System) to provide power to the starting lights' device in the event the primary electric power fails at the moment of the start.

p. Any rider who anticipates the start or who is deliberately not placed in his starting box will be required to carry out the ride through procedure described in article 1.24.

1. Anticipation of the start (jump start) is defined by the motorcycle moving forward when the red lights are on. Race Direction will be the sole judge of whether an advantage has been gained and decide if a penalty will be imposed and must arrange for the team to be informed of such penalty as soon as possible. A board may also be displayed in the pit lane indicating the same. The notification of a jump start on the timing monitor is one of fact.
2. If, after the start of the race, a rider stalls his motorcycle, then he may be assisted by being pushed along the track until the engine starts by an official. If, after a reasonable period, the engine does not start, then the rider will, where accessible, be pushed into the pit lane where his mechanics may provide assistance.

q. After the start signal has been given and the last rider has passed the pit exit, the pit exit will be opened.

1. Any riders still in the pit lane may then start the race.
   - Riders still in pit lane may not start the race after the lead rider has crossed the finish line to complete the first racing lap.

r. Should there be a problem that might compromise safety for the start of the warm up lap or the race the Starter will invoke either the “Start Delayed” procedure or the “Extended Start Delayed” procedure.

1.22.2 “Start Delayed” procedure

a. A red flag is waved from the Starter’s rostrum and the red light stays on:

1. The "Start Delayed" board is displayed from the Starter’s rostrum and marshals will wave a yellow flag at designated rows of the starting grid.
2. Riders must stay in their grid position with helmets on, engines may be switched off.
3. If a machine caused the start delay it will be removed to the pit lane, where accessible, regardless of what work is needed to restart the machine. If it can be restarted the rider may start the warm up lap from pit lane, and will start the race from the back of the grid.

4. Only essential officials may be allowed on the grid, no media, guests, umbrella-holders or other team personnel will be permitted, with the exception of camera crew(s) authorized by the organizers.

b. The start procedure will be re-commenced by a board displayed as soon as possible (normally as soon as all riders on the grid).

c. If the five (5) minute board or three (3) minute board is displayed, riders may be attended by a maximum of two (2) mechanics per rider.

1. Only tire warmers, stands, and hand-carried tools are allowed, no generators are allowed on the grid. The start procedure will re-commence as described in section 1.22.1/g-r.

d. If the one (1) minute board is displayed, riders may be attended by a maximum of two (2) mechanics per rider to assist the rider with starting the machine as quickly as possible and then immediately vacate the grid. The start procedure will re-commence as described in section 1.22.1/i-r.

e. If the thirty (30) second board is displayed, riders may not be attended by mechanics. Any rider who is unable to start his machine must remove it to the pit lane, where accessible, under the control of the grid marshals so he may make further attempts to start it. Such riders may start the warm up lap from the pit lane and will start the race from the back of the grid. The start procedure will re-commence as described in section 1.22.1/j-r.

f. Approximately two (2) minutes before the start of the race:

1. Green flag waved to start warm up lap.

2. In the interest of safety, should a rider stall his machine, he may be assisted to restart. If, after a reasonable period, the engine does not start, then the rider, where accessible, be pushed into the pit lane where his mechanics may provide assistance.

g. The race distance will be reduced by one (1) lap if the Start Delayed signal is after the warm up lap only. Any person who, due to his behavior on the grid is responsible for a “Start Delayed” may be further penalized

1.22.3 “Extended Start Delayed” procedure

a. A red flag is waved from the Starter’s rostrum and the red light stays on.

b. The "Start Delayed" board is displayed from the Starter’s rostrum and marshals will wave a yellow flag at designated rows of the starting grid.

c. Engines must be switched off.

d. After display of the Start Delayed, a maximum of two (2) mechanics per rider are allowed on the grid to assist riders in removing their bike to the pit area.

1. Refueling is allowed in the pit lane.

- Riders must be off the bike during refueling.
- The ignition must be off and the motorcycle must be on a rear stand before refueling is permitted to start.
- A crew member must be standing by with a fire extinguisher with the pin pulled and the nozzle aimed at the motorcycle.

e. No electrical devices such as battery chargers, fans, or tire warmers may be plugged in during any re-fueling operations.

1.22.4 Restart Procedure (Quick Start)

When a race is stopped, riders must return to the pit lane, unless otherwise instructed by officials. If the race is to be re-started, minor repairs may be carried out. The following procedure will take place:

a. Upon arrival in the pit lane, riders may make adjustments to their motorcycle, refueling is permitted in the pit lane. (Prior to the start of the race, teams should ensure that all necessary equipment is located in the pit lane service area in a safe position). Tire changes are not permitted unless the Race Director announces a change to the race status (i.e. Dry/Wet), or the Technical Director authorizes an exceptional tire change due to a verifiable technical problem. In the case of an exceptional tire change, the rider must start the restarted race from the back of the grid.

b. When all riders have entered the pit lane the Race Director will announce the time remaining to the re-opening of the pit lane and the race distance.

   1. The duration between the announcement and the actual opening of the pit exit will be a minimum of five (5) minutes.

   2. The time remaining to the opening of the pit exit will be displayed on timing screens and on the starting grid countdown clock.

   3. The rider should avail himself of his new grid position from the classification displayed on the timing screen or from officials.

   4. When the time period has elapsed, the pit lane exit will be opened for SIXTY (60) SECONDS. Riders will make one (1) lap at unrestricted speed to the starting grid, followed by a Safety Car. Any rider delaying the progress of the sighting lap will be overtaken by the Safety Car. Any rider arriving behind the Safety Car must go into the pit lane. Such riders will have to start the warm-up lap from the pit lane.

c. All riders will arrive back on the starting grid, and stop, with engines running, no adjustments may be made. Any rider encountering difficulties on the sighting lap must enter the pit lane.

d. Upon arrival back at the starting grid each rider may be directed to their grid position by ONE mechanic only (without tools) and the normal start procedure will be followed from 1.22.1 (n) as described above with the start signal given in the normal manner.

1.22.5 Accelerated Start Procedure

The start procedure may be accelerated by the Race Direction. This will be notified to teams on the timing monitor and by the display of the boards indicating the time remaining to the closure of the pit lane exit and to the start of the warm-up lap. This will be used in principle when there are time restraints due to television coverage or the circuit has limitations on time.

1.23 “WET” AND “DRY” RACE PROCEDURES

All races will be categorized as either wet or dry. A board may be displayed on the grid to indicate the status of the race. If no board is displayed, the race is automatically declared dry. The purpose of this classification is to indicate to riders the consequence of varying climatic conditions during a race.

1.23.1 Dry Races

A race classified as dry will be interrupted by the Race Director if he considers that climatic conditions affecting the surface of the track makes it likely that riders will wish to change tires.

1.23.2 Wet Races

a. A race classified as wet, usually commenced in varying or wet conditions, will not be interrupted for climatic reasons except for extraordinary events. Riders who wish to change tires or make adjustment must enter the pits and do so during the actual race.

b. In all cases where the first race is stopped for climatic reasons, then the restart will, automatically, be a "wet" race.

1.23.3 Wet Sighting Laps

1.23.3.1 SCENARIO A – Wet Sighting Laps (Prior to the starting procedure)

a. If all the official practices, the race day warm-up (and any previous races for the class during the event) are dry and the race is declared wet, **prior to the starting procedure**.

b. A time and duration for "Wet Sighting Laps" will be published. The duration may be specified as a time or number of laps:

   1. Display of boards from five (5) minutes, counting down to the start of wet sighting laps.
   2. Pit lane exit will open with a green flag or green light and the start of wet sighting laps will begin.
   3. Riders must pass through the pit lane to make multiple laps.

c. At the end of the Wet Sighting Laps period the pit lane exit will be closed and riders should complete their current lap stopping on the starting grid.

   1. Any rider still in the pit lane after the pit lane exit has closed must start the warm up lap from pit lane exit and the race from the back of the grid.
   2. Under no circumstances may they push their motorcycle onto the grid from the pit lane.

d. A normal countdown to the start of the warm up lap will be commenced. There will be a minimum period of five (5) minutes between the closing of the pit lane exit and the display of the five (5) minute board on the grid.

e. Any further work on the grid must be completed by the display of the three (3) minute board.

f. The race distance may be reduced accordingly.

g. To give riders more information about when the pit lane exit closes, a marshal will be positioned at the pit lane entrance for the duration of the start procedure with the following boards:

   - “Pit Lane Exit Closes In 1 Minute”
   - “Pit Lane Exit Closed”

h. Fuel may be added in the pit lane with the following restrictions:

   1. Riders must be off the bike.
   2. The ignition must be off and the motorcycle must be on a rear stand before fuel is added.
   3. A crew member must be standing by with a fire extinguisher with the pin pulled and the nozzle aimed at the motorcycle.
   4. No electrical devices such as battery chargers, fans, or tire warmers may be in use.

1.23.3.2 SCENARIO B – Wet Sighting Laps (After pit exit closed prior to warm up lap)

a. If all the official practices, the race day warm-up (and any previous races for the class during the event) were dry and the race is declared wet, during the starting procedure, after the pit lane exit has closed, and before the start of the warm up lap.

b. A time and duration for "Wet Sighting Laps" will be published. The duration may be specified as a time or number of laps.

1. Display of boards from five (5) Minutes, counting down to the start of Wet Sighting Laps.
2. Tires may be changed on the grid.
3. All work must be completed by, and all mechanics must have vacated the grid by the display of the thirty (30) second board.
4. Display of Green Flag from the starter's rostrum indicates the start of Wet Sighting Laps from the grid.
5. Once the riders have departed from the starting grid mechanics may return.
6. Riders must pass through the pit lane to make multiple laps according to the time remaining. As a minimum procedure, it will be one (1) pass through the pit lane.

c. At the end of the Wet Sighting Laps period the pit lane exit will be closed and riders should complete their current lap stopping on the starting grid.

1. Any rider still in the pit lane after the pit lane exit has closed must start the warm up lap from pit lane exit.

d. A normal countdown to the start of the warm up laps will be commenced. There will be a minimum period of five (5) minutes between the closing of the pit lane exit and the display of the five (5) minute board on the grid.

e. Any further work on the grid must be completed by the display of the three (3) minute board.

f. The race distance may be reduced accordingly.

g. To give riders more information about when the pit lane exit closes, a marshal will be positioned at the pit lane entrance for the duration of the start procedure with the following boards:

- "Pit Lane Exit Closes In 1 Minute"
- "Pit Lane Exit Closed"

h. Fuel may be added in the pit lane with the following restrictions:

1. Riders must be off the bike.
2. The ignition must be off and the motorcycle must be on a rear stand before fuel is added.
3. A crew member must be standing by with a fire extinguisher with the pin pulled and the nozzle aimed at the motorcycle.
4. No electrical devices such as battery chargers, fans, or tire warmers may be in use.

1.24 RIDE THROUGH PROCEDURE

a. During the race, the rider will be requested to ride through the pit lane, stopping is not permitted. He may then rejoin the race.

b. The rider must respect the speed limit (article 1.21/n) in the pit lane. In case of infraction of this speed limit, the ride through procedure will be repeated; in case of a second infraction of this speed limit, the rider will be shown the black flag and will be disqualified.

c. In the case of a race interrupted prior to the penalty being complied with, and if there is a second part, the rider will be required to ride through after the start of the second part of the race.

d. In the case of a rider carrying forward a penalty for anticipation of the start, into the second part of an interrupted race and subsequently found to have anticipated the second start, the rider will be shown the black flag and will be disqualified.

e. A yellow board (100cm horizontal x 80 cm vertical) displaying the rider's number (black color) will be shown at the finish line and the information will also be displayed on the time keeping monitors.

f. Failure by the relevant rider to ride through, having been shown the board five (5) times, will result in that rider being shown the black flag.

g. In the case where the organization has been unable to carry out the ride through penalty before the end of the race, the relevant rider will be inflicted with a time penalty of twenty (20) seconds.

1.25 PIT STOPS DURING A RACE

a. Riders may enter the pit lane (but must not cross the line into the rider's paddock area) during the race.

b. Refueling is strictly prohibited. Any infringement of this rule will be penalized with a disqualification.

c. Any rider who enters the paddock, the garage or cold side of the pit lane will be considered to have withdrawn from the race and may not re-enter the race or take part in any re-started race.

1.26 INTERRUPTION OF A RACE

If the Race Direction decides to interrupt a race, then red flags will be displayed at the finish line and at all marshals' posts and the red lights will be switched on around the circuit. Riders must immediately slow down and return to the pit lane.

a. Any rider who enters the paddock, the garage or cold side of the pit lane will be considered to have withdrawn from the race and may not re-enter the race.

b. If the results calculated show that two-thirds of the race distance rounded down to the nearest whole number of laps have been completed by the leader of the race and by all other riders on the same lap as the leader, then the race will be deemed to have been completed and full Championship points will be awarded.

c. The results will be **based on the order of last crossing the finish line prior to the showing of the red flag.**

d. Exception: After 2/3 distance is complete, if a rider crashes between the last crossing of the finish line and the red flag, the following applies:

1. Riders found to have not experienced a disadvantage during a crash, mechanical, or other event as determined by Race Direction, after applying the scoring protocol in section 1.26.c, the rider will have a 20 second time adjustment applied by Race Direction.

2. Race Direction may apply a longer time adjustment, a position adjustment or a penalty if deemed necessary.

3. The decision may be based on video footage, sector crossing data, or official's observation and will be final.

e. Exception: If the race is interrupted after the checkered flag, the following procedure will apply:

1. For all the riders to whom the checkered flag was shown before the interruption, a partial classification will be established at the end of the last lap of the race.
2. For all the riders to whom the checkered flag was not shown before the interruption, a partial classification will be established at the end of the penultimate lap of the race.
3. The complete classification will be established by combining both partial classifications as per the lap/time procedure.

f. If less than 2/3 distance is complete, follow procedures in 1.27 to restart the race.

1.27 RE-STARTING A RACE THAT HAS BEEN INTERRUPTED

1.27.1 If a race must be re-started, then it will be done as quickly as possible, consistent with track conditions allowing. As soon as the riders have returned to the pits, the Race Director will announce a time to begin, which, conditions permitting, should not be later than 10 minutes after the initial display of the red flag.

1.27.2 The results of the first race must be available to teams before the second part of a race can be started.

1.27.3 The Race Director will decide and announce whether the Normal Start procedure (1.22.1) or the Quick Start Procedure (1.22.4) will be used.

1.27.4 Conditions for the re-started race will be as follows:

a. In the case of **less than three (3) laps completed by the leader of the race and by all other riders on the same lap as the leader**:

1. All riders may re-start.
2. Motorcycles may be repaired and refueling is permitted.
3. Tire changes are not permitted unless the Race Director announces a change to the race status (i.e. Dry/Wet), the race was declared wet, or the Technical Director authorizes an exceptional tire change due to a verifiable technical problem. In the case of an exceptional tire change, the rider must start the restarted race from the back of the grid.
4. The number of laps will be at the discretion of Race Direction respecting schedules with a minimum of two-thirds of the original race distance rounded down to the nearest whole number of laps.
5. The grid positions will be as for the original race.

b. In the case of **three (3) laps or more and less than two-thirds (2/3) completed** (situation described in 1.26.1/f):

1. Only riders who are classified as finishers (have completed 75% of the first race distance in the first race may re-start.
2. Any rider who has crashed in the first part of the race who is eligible to take part in the re-start must be determined fit by a Medical Officer if there is suspicion that an injury has been sustained. The Race Director's decision is final in requiring any rider undertake a check to ascertain fitness to ride.
3. Motorcycles may be repaired, a Technical Official must clear repaired motorcycles.
4. Refueling is permitted.
5. Tire changes are not permitted unless the Race Director announces a change to the race status (i.e. Dry/Wet), or the Technical Director authorizes an exceptional

tire change due to a verifiable technical problem. In the case of an exceptional tire change, the rider must start the restarted race from the back of the grid.

6. The number of laps of the second race will be the number of laps required to complete two-thirds of the original race distance rounded down to the nearest whole number of laps with a minimum of one–third (1/3) of the original race distance rounded up. The decision is at the discretion of Race Direction respecting schedules.
7. The grid position will be based on the finishing order of the first race.
8. The final race classification will be established according to the position and the number of laps of each rider at the time he crossed the finish line at the end of the last part of the race.

1.27.5 Should a re-started race be interrupted and Race Direction deems it possible to re-start, then the conditions for a further re-start will follow Art. 1.27.4, with the race distance and results defined as follows:

a. If the re-started race is interrupted when one third (1/3) race distance or more has been completed, the race will be deemed to have been completed and full Championship points awarded. The race classification will be according to Art. 1.26.1/g.

b. If the re-started race is interrupted when less than one third (1/3) race distance has been completed, the race would be re-started a further time if possible, for the same number of laps as the first re-start.

c. If that further re-started race (third race) is interrupted when less than one third (1/3) race distance has been completed, Race Direction will determine if it is practical to re-start the race and will define the number of laps to be completed. If it is not possible to re-schedule the race the results will then be determined by the first part of the race and full Championship points awarded, provided that in the first part of the race one third (1/3) race distance or more had been completed.

d. If the first race is re-started and none of the races (original or subsequent re-starts) have completed one third (1/3) race distance or more, then the race is deemed to be cancelled and no Championship points will be awarded.

e. Race Direction may reschedule re-started races in the race program as necessary.

1.28 FINISH OF A RACE AND RACE RESULTS

a. When the leading rider has completed the designated number of laps for the race, a checkered flag will be shown by an official standing at the finish line, behind a first line of protection. The checkered flag will continue to be displayed to the subsequent riders.

1. When the checkered flag is shown to the leading rider, no other rider will be permitted to enter the track from the pit lane.
2. As soon as the checkered flag is shown to the leading rider, the red light will be switched on at the pit lane exit and a marshal showing a red flag will stand in the pit lane exit.
3. If a rider(s) closely precedes the leader during the final lap before the finish line, the official will show to the rider(s) and to the leader simultaneously the checkered flag and the blue flag. That means that the race is finished for the leader while the rider(s) closely preceding the leader has (have) to complete the final lap and take the checkered flag.

b. In case of a photo-finish between two (2), or more, riders, the decision shall be taken in favor of the competitor whose front wheel leading edge crosses the plane of the finish

line first. In case of ties, the riders concerned will be ranked in the order of the best lap time made during the race.

c. The results will be based on the order in which the riders cross the line and the number of laps completed.

d. To be counted as a finisher in the race and be included in the results a rider must:

   1. Complete 75% of the race distance.

   2. In the case of a race interrupted after two thirds (2/3) distance completed (art. 1.26 f), be actively participating at the time the red flag is displayed. For the purposes of these regulations “actively competing” is defined as the rider riding on track, or attempting to repair/restart the machine, or to rejoin the track or return to pit lane. Race Direction will be the sole judge of whether a rider is actively competing.

   3. Cross the finish line on the race track (not in the pit lane) within five (5) minutes of the race winner. The rider must be in contact with his motorcycle.

e. The riders classified in the first three (3) positions in the race will be escorted by officials, as quickly as possible, to the podium for the awards ceremony. Participation in the podium ceremony by these riders is compulsory.

1.29 CHECK AREA

a. At the end of the race, or the final part of a race that has been interrupted, all the classified motorcycles will be directed to a compulsory check area (parc fermé) pending inspection by the Technical Stewards or potential protests. It is the responsibility of the riders to ensure that the machine is in the parc fermé.

   1. Motorcycles will normally be released from the parc fermé 30 minutes after the finish of the race.

b. For all races, the top three (3) classified finishers will be held at the podium area, the remaining machines will be directed to the parc fermé.

c. In rare cases following race one of a double header that takes place on the same day, the remaining riders will return to their pit areas where the tire stickers will be inspected by the MotoAmerica Technical Director or his appointed staff, once confirmed correct the teams will be allowed to remove the wheels from the machines. Data can be downloaded from the data logger. No other work may be carried out until the time for a Technical protest notification has expired (15 minutes after the end of Race 1) (see art 3.4.5). Machine must remain fully visible during this period.

   1. Should a team have a technical protest lodged against them after Race 1 (in a same day double header event) then they have three options:

      - Immediate examination time allowing.
      - Replacement of suspected parts, with the replaced parts impounded for examination later.
      - Protested parts may be sealed by the Technical Director and use the machine ‘as is’ in Race 2 and for any infractions found then penalties will be applied to **both** races.

1.30 CHAMPIONSHIP POINTS AND CLASSIFICATION

a. Riders and manufacturers will compete for the FIM North America MotoAmerica AMA Road Racing Championship.

b. For riders, the points will be those awarded to finishers in each race.

c. For manufacturers, only the highest placed motorcycle of a manufacturer will gain points, according to the position in the race.

d. All races will count for the FIM North America MotoAmerica AMA Road Racing Championship classification.

e. In the event of a tie in the number of points, the final positions will be decided based on the number of best results in the races (number of first places, number of second places etc.). In the event that there is still a tie then, the date in the Championships at which the highest place was achieved will be taken into account with precedence going to the latest result.

f. In the case where a rider participates on different motorcycles, it is the make of the motorcycle with which he obtained the most points that will appear next to his name in the final classification, without, however, modifying the calculation for the manufacturers' classification.

g. The Champions in each category are obliged to attend an official awards ceremony.

1.30.1 Championship Points

All class championship points awarded for the race will be awarded based on the finishing position listed on the scale below.

Position	Points
1st	25 points
2nd	20 points
3rd	16 points
4th	13 points
5th	11 points
6th	10 points
7th	9 points
8th	8 points
9th	7 points
10th	6 points
11th	5 points
12th	4 points
13th	3 points
14th	2 points
15th	1 point

1.31 DEPOSITS IN CASE OF MOTORCYCLE CONTROL FOLLOWING A PROTEST

a. The deposit in case of dismantling and reassembling a motorcycle to measure the cylinder capacity, following a protest, is 200 USD (material included). The deposit in case of partial or complete dismantling of an engine or gearbox is 350 USD.

b. If the party who makes the protest is the losing party, the deposit shall be paid to the winning party.

c. If the party who makes the protest is the winning party, the deposit shall be reimbursed.

1.32 DEPOSITS FOR FUEL CONTROLS FOLLOWING A PROTEST

a. All requests for fuel control following a protest or an appeal must be accompanied by a deposit of 750 USD paid to FIM North America.

b. After the last control:

1. the winning party will have its deposit reimbursed.
2. the losing party will have to pay the costs of all the controls carried out after deduction of deposits which it has already paid.

1.33 NON-PARTICIPATION IN AN EVENT

a. Any rider who enters an event must inform the organizer if, subsequently, he decides not to participate in the event. A rider who has submitted an entry form and fails to participate must and inform MotoAmerica seven (7) days prior to the event. Failure to inform MotoAmerica may result in a fine from FIM North America up to 500 USD.

b. If a rider fails to participate after entering an event and is found to have participated in another event on the same day may be subject to suspension.

c. Riders may participate in a maximum of two (2) classes if they hold the required license(s), must attempt to qualify and participate in the race(s).

d. Riders are prohibited from participating in a second class for the sole purpose of obtaining additional practice time. If Race Direction deems this to have occurred, the rider may be subject to suspension.

1.34 RULES UNDER CONSIDERATION FOR 2021

1.16.4 Riders' number board (Under consideration for 2021)

Black board (70 cm horizontal X 50 cm vertical) which enables the competition number of a rider to be attached with a set of numbers in white, whose stroke width is minimum 4 cm and height minimum 30 cm. This board must be available at each flag marshal post.

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2.0 TECHNICAL REGULATIONS

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

During free practices, qualifying practices, Superpole for Superbike and warm up sessions: If a motorcycle is found not to be in conformity 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.

Races: If a motorcycle is found not to be in conformity 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 be motorcycles with a valid road homologation in one of the following areas: USA, EU or Japan.

These motorcycles must be available for sale to the public in the shops and the dealerships representing the manufacturer in at least one of the above areas before the third event of the current championship in order 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 the wheel spindles is forbidden. For wheel spindles, the use of light weight alloys is also forbidden. The use of titanium alloy nuts and bolts is 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 rubber covered.

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

c. The front wheel, tire and the 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 in order to prevent trapping of the rider's fingers (see diagrams A, B, C).

e. Repair by welding of light weight alloy handlebars 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 fitted equivalent 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 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, intended to protect the handlebar brake lever from being accidentally activated in case of 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 specification. 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 will illuminate in the event of oil pressure drop.

2.3.5 Wheels and rims

a. Any modification to the rim or spokes of an integral wheel (cast, molded, riveted) as 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 which at the preliminary examination have a tread depth of less than 1.5 mm are considered as non-treaded tires and the restrictions applying to slick tires will then apply to them.

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

c. All tires to be used must be easily identifiable with a color marking or a numerical system, to be applied by the official supplier at the time of manufacturing.

d. 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.

e. At the beginning of the event, the official supplier may be requested by the Technical Director to deliver to him four (4) samples of each type of tire to be used at the event.

f. Any modification of the tread pattern by the official supplier is not permitted after the start of the practices.

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

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

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

j. 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 safe keeping of the tire stickers.

k. The use of motorcycles without the official stickers will be immediately reported to the Race Direction whom will take appropriate action.

l. The allocation of individual tires will be made on a random basis, with no involvement of any representative from the tire supplier, teams or riders. Those tires will be individually identified and may not be exchanged between riders, including between teammates, and may not be exchanged by the tire supplier after the allocation, except with the permission of the Race Direction.

m. In exceptional cases, should the sticker be damaged or applied in the wrong way, up to 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 absolutely intact and unused.

n. 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.

2.3.7.1 Tire allocations by class

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

Class	Single Race Event	Two-Race Events
Superbike	N/A	16
Supersport	**10**	12
Stock 1000	8	10
Twins Cup	8	10
Junior Cup	**7**	8

2.3.7.1.1 Superpole participants

Superbike Only. The 12 competitors that are eligible to participate in Superpole will be allowed to use a qualifying tire which will be separate from the rider's standard allocation.

2.3.8 Ballast

a. The use of ballast is allowed in order 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.

2.3.9 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 manufacture suggested direction of the transponder should also be respected.**

d. It is the team's responsibility to ensure that the transponder is **located in an optimal position** and working properly. Any machine without a working transponder is not allowed on the circuit.

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

2.3.10 Wings and Aerodynamic Aids

Wings and other aerodynamic aids will only be considered legal if originally fitted to the homologated road specification machine in all of Europe, Japan and North America. 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' with the exception that the wing root and 10mm from the end face maybe 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 used by the homologated road machine in normal use - not the mechanical maximum.

The Technical Directors decision will be final.

2.3.11 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 see art. 2.3.10.

2.3.12 Homologated Parts

Homologated parts are the OEM parts supplied 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 but excepting when the part is superseded for production reasons and also accepted by the FIM.

See Appendix: 'Homologation Rules' for details

2.3.13 Approved Parts

All approved parts must be approved by the Technical Director before they are allowed to be used. The approved part list can be found at: http://www.motoamericaregistration.com/competitor-info/

SUPERBIKE TECHNICAL REGULATIONS

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2.4 SUPERBIKE TECHNICAL SPECIFICATIONS

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

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

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

2.4.1 Motorcycle specifications

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

2.4.2 Engine configurations and displacement capacities

The following engine configurations comprise the Superbike class.

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

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

2.4.3 Balancing various motorcycle concepts

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

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

A new 2-cylinder entry will not be included in the ‘Balancing various motorcycle concepts’ rules until the performance is proven during the first two years of use

in the MotoAmerica Superbike Championship. In the case that a new 2-cylinder entry wins a race in the Dry in the first year, restrictors will be applied from the start of the second year.

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

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

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

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

2.4.3.1 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 any 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, then the first restrictor size to be installed will be equivalent to a Ø52mm circular area. Air restrictor size will be adjusted in steps equivalent to a change of 2mm in diameter, between Ø52mm and to a minimum of Ø46mm (None <> Ø52mm <> Ø50mm <> Ø48mm <> Ø46mm), if needed during the Championship, as described below in Art. 2.4.3.4

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

The manufacturer must supply the FIM/MotoAmerica with 10 sets of plug-calibers (-gauges) to check the diameter of the air restrictor when using one of the prescribed sizes (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 the FIM/MotoAmerica with 10 sets of plug-calibers (-gauges) for measuring the restrictor during the technical verifications.

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

2.4.3.3 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 on the minimum weight of the motorcycle.

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

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

The use of ballast is allowed to stay over the minimum weight limit and may be required due to the handicap system. The use of ballast and weight handicap must be declared to the 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

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

2.4.6 Fuel

a. The designated fuel is VP Racing Fuels MGP.

b. Please refer to Article: 2.10 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: 2.3.7.1

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. After the third free practice session, the tire supplier will allocate one (1) rear ‘qualifying tire’ to all riders that will participate in Superpole.

e. Qualifying tires can only be used during Superpole. If the qualifying tire is used during any session (excluding Superpole), the rider will lose his qualifying time and must start from the back of the grid.

f. During free practices, qualifying practices, Superpole for Superbike, warm up sessions and races, front and rear tires are required to be marked with tire stickers.

g. See article. 2.3.7

2.4.8 Engine

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

a. The homologated engine design model cannot be changed.

b. The method of cam drive must remain as homologated.

c. The method of valve retention must remain the same as the homologated model. No pneumatic valve retention devices are allowed unless fitted to the homologated model.

d. The sequence in which the cylinders are ignited (i.e. 1-2-4-3), must remain as originally designed on the homologated model. Simultaneous firing of 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 regarded as 'simultaneous' firing.

2.4.8.1 Fuel injection systems

'Fuel injection systems' refers to the 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 mount is an integrated part of the air funnel, then those parts alone may be redesigned maintaining the exact geometry of the original parts.

2.4.8.2 Cylinder head

The cylinder head must be the originally fitted and a 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 normally associated with individual tuning such as gas flowing of the cylinder head, including the combustion chamber, is allowed. Epoxy may be used to shape the ports.

d. The throttle body intake insulators may be modified.

e. The compression ratio is free.

f. The combustion chamber may be modified.

g. Valves must remain as homologated.

h. Valve seats can be modified or replaced for repair. The material must remain as homologated.

i. Valve guides must remain as homologated. Modifications in the port area are allowed by machining.

j. Valve springs may be altered or replaced; their material must remain as homologated. An additional spring may be added or the spring may be removed.

k. Valve spring retainers, collets 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 by plates.

o. The shim buckets / tappets may be replaced but must be the same height, diameter, material type, surface finish and shim to top surface dimension as the homologated part. The weight must be equal to or greater than the homologated part.

p. The homologated cylinder head / cam cover may be replaced by a cosmetic replica of higher specific weight material (i.e. replace magnesium part with aluminum).

2.4.8.3 Camshaft

a. Camshafts may be altered or replaced from those fitted to the homologated motorcycle.

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

c. The cam chain may be altered or replaced but must remain the same type.

2.4.8.5 Cylinders

a. 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 may be altered or replaced from those fitted to the homologated motorcycle. The weight must be the same or greater than the original homologated part.

b. The material must be the same type as the homologated item (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.

From 2020 for any newly homologated machines:

g. **The connecting rod must the originally fitted and homologated part with no modification allowed.**

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

i. **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.

c. Balancing is allowed but only by the same method as the homologated crankshaft. For example, heavy metal (i.e. Mallory metal inserts), is not permitted unless originally specified in the homologated crankshaft.

d. The addition or reduction in weight of the crankshaft in order to reach a racing balance can be no higher than **3%** of the homologated weight without the tolerance as shown on the homologation specification of the crankshaft.

e. The balancing must be performed by the original method (e.g. drilling or machining) and in the same position (e.g. edge of flywheels).

f. Polishing of the crankshaft is not allowed.

g. Balance shaft must remain as homologated. No modifications are allowed.

2.4.8.11 Crankcase / Gearbox housing

a. Crankcases must be the originally fitted and homologated part with no modification allowed. If the crankcases have 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. Oil-pan (sump) may be altered or replaced 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.

e. See 2.4.10.1/k./iv.

f. 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 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.

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

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

2.4.8.12 Transmission / Gearbox

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

b. Undercutting and surface treatments are permitted.

c. OEM shift drum detent stars may be modified or replaced.

d. External quick-shift systems are permitted (including wire and potentiometer).

e. Countershaft sprocket, rear wheel sprocket, chain pitch and size can be changed. Chain master links must be rivet type.

f. Final drive system, if not by chain, may be modified to chain type using kits specified on the eligible equipment list.

g. The sprocket cover may be modified or eliminated

2.4.8.13 Clutch

a. Aftermarket or modified clutches are permitted including:

   i. Friction plates and steel plates

   ii. Clutch hub

   iii. Springs

   iv. Hardware

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

c. Back torque limiters are permitted.

d. 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.

e. Clutch system type (wet or dry / single or multi-plate) and method of operation (cable/hydraulic) must remain as homologated.

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. Oil lines containing positive pressure, if replaced, 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 appearance from the front, rear and profile of the motorcycle must in principle conform to the homologated shape after the addition of additional radiators or oil coolers.

2.4.8.16 Air box

a. The air box must be the originally fitted and homologated part with no modification allowed except as noted in the following:

   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 as the air box and must conform to its homologated shape excepting 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. No other external ignition/injection controllers, traction control modules or other active expansion modules or calculation units may be fitted.

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

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

e. **The wiring harness is free.**

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

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

g. 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.

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

i. 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. Lead time less than 8 weeks

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

g. The following sensors may be used:

   1. Throttle position (multiple)
   2. Map sensor, map sync (pressure sensor on the intake port used to synchronize the engine during the start)
   3. Air box pressure
   4. Engine pick-ups (cam, crank) (Crank trigger may be replaced.)
   5. Lambda
   6. Exhaust valve/motor position/feedback
   7. Twist grip position
   8. Front speed
   9. Rear speed
   10. Gearbox output shaft speed
   11. Gear position

12. Gear shift load cell
13. Front brake pressure
14. Rear brake pressure
15. Oil pressure
16. Air pressure
17. Water temperature
18. Air temperature
19. IMU (various signals)
20. Transponder / lap time signal
21. Knock sensor
22. Fuel pressure
23. Oil temperature
24. Fork position
25. Shock position
26. Tilt / tip-over switch
27. GPS unit
28. Rear tire temperature (external) (multiple)
29. Rear tire monitor (temperature and pressure)
30. **Front tire monitor (temperature and pressure)**

h. Sensors on the above list that are originally fitted to the standard machine may be replaced with alternative sensors, however they must be included in the Superbike Kit System and inside the total price (article 2.4.9.1.c).

i. 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.**

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

k. Analog/logic to CAN sensors are allowed.

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

m. When the following sensors are damaged through crashes they may be replaced by parts of the same function but do not have to be the same specific part from the “Superbike Kit” system:

   i. Fork and shock potentiometers

   ii. Brake pressure sensors

   iii. Gear shift sensor (but must remain the same type included with the kit – i.e. load cell, switch, etc.)

n. Before the pre-season test, before the mid-season test(s) or at the season midpoint and within three hours of the last race of the season any firmware / software updates being used by the factory teams must be made available to all same manufacturer customer SBK teams (more frequent updates are allowed).

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

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

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

r. Any essential hardware updates required must be made available to customer teams from the same race as the factory team and available free of charge to update those “Superbike Kit” systems purchased in the current season.

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

t. The selection of logged channels is free.

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

v. No other external ignition/injection controllers, traction control modules or other active expansion modules or calculation units may be fitted unless included in the Superbike System.

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

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

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

e. 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)**

f. 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).

g. 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.**

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

i. Analog/logic to CAN sensors are allowed.

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

k. 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.)

l. 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).

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

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

o. 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.

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

q. The selection of logged channels is free.

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

s. 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.

t. The factory teams must use the current season’s ‘’Superbike Kit System’’. No backdated parts may be used.

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

b. One (1) spare complete motorcycle is allowed per rider.

c. A team may opt to have one (1) spare machine shared by two or more riders.

Explanation of Procedures

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

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

At any time during the event the technical stewards, under the direction of the 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 or in any other incident and is declared unrepairable (safely and in the available time) by the Technical Director or his appointed staff then the seal on the damaged motorcycle will be destroyed by the technical staff and the chassis of this motorcycle must not be used for the remainder of the event. The new serial number will be recorded by the Technical Director.

During set up day (usually the day before first official practice session) no restrictions apply regarding the location of the spare motorcycle. From the start of the first practice session, any spare motorcycle must be kept out of view. It is recommended that team working areas incorporate an area for this purpose. During an event, minor adjustments may be made to the spare motorcycle, the intent being to allow teams to maintain parity with the primary bike.

In the event the spare motorcycle is used in competition, the primary machine is taken out of competition. At that time, the damaged machine must be kept out of view.

The spare machine can only be used in the next session to which the incident occurred rendering the primary bike not able to be used. In a race situation, if the primary bike is required to be replaced with the spare machine at any time during Race 1, the first opportunity to use the spare machine is the next session or race. A race will be deemed to have begun when the rider exits pit lane for the sighting laps. All restarts, including those three laps or less, are a continuation of the original race or session.

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 decision of the Technical Director regarding this is final.

The damaged frame may be impounded by the Technical Director for later examination

2.4.10.1 Frame body and rear sub-frame

a. The main frame must be the originally 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 is 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. Other positive retention mechanism may be allowed at the discretion of the Technical Director.**

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

i. **If the original chassis has a fixed steering stem position, then 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 is 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 is allowed for the purpose of making this modification, regardless of the technology used and the dimensions of the component or section of the frame (i.e.: cast, fabricated, etc.).**

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 / axles pass through the crankcases then the relevant crankcase mounting hole may be machined larger, no welding or other modifications will be permitted. Crankcases may be machined for swingarm clearance only.**

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. Front and rear sub frame 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. 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 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 as homologated).

2.4.10.3 Front Suspension

a. The front fork in whole or part may be changed but must be the same type homologated (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. 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 front wheel and 195 kg for rear wheel, K = 1.5 for front and rear wheels. Static radius of tire: front 0.301 m, rear 0.331 m.

e. Wheel manufacturers must provide copy of the certificate for their wheel(s) as proof of compliance to the 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 Foot rest and foot controls

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

b. Foot controls: gearshift and rear brake must remain operated manually by foot.

c. Foot rests may be rigidly mounted or a folding type which must incorporate a device to return them to the normal position.

d. The end of the foot rest must have at least an 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 one of the tank fitted to the homologated motorcycle.

d. All fuel tanks must be filled with fire retardant material (e.g. fuel cell foam), or be fitted with a fuel cell bladder.

e. Fuel tanks made of composite materials (carbon fiber, aramid fiber, glass fiber, etc.) must have passed the FIM Standards for fuel tanks or be lined with a fuel cell bladder.

f. Tanks made of composite material must bear the label certifying conformity with FIM Fuel Tank Test Standards. Fuel tanks without a fuel cell bladder must bear a label certifying conformity with FIM Fuel Tank Test Standards. Such labels must include the fuel tank manufacturer's name, date of tank manufacture and name of testing laboratory.

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).**

   This includes also that, as stated in 3, all fuel bladders should be supplied with a suitable fuel resistant polyurethane foam baffling, conforming to Mil Spec MIL-B-83054, SAE-AIR-4170 or equivalent. This foam shall fill a minimum of 80 % of the volume of the fuel bladder. Where rapid 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 may the tank be fixed to any parts of the streamlining (fairing) or any plastic part. The Technical Director has the right to refuse a motorcycle if he is of the opinion 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 (with the exception of aluminum) must be tested according to the test procedure prescribed by the FIM.

b. Each manufacturer is responsible for testing its own fuel tank model(s) and will certify that the fuel tank exceeds the FIM test standard, if it has passed the FIM test procedure for fuel tanks.

c. Each manufacturer must affix a quality and test label on each fuel tank type that is produced for competition use. This quality and test label will be the recognition of a fuel tank model which has passed the FIM test procedure.

d. All fuel tanks that are made to the same design, dimensions, number of fiber layers, grade of fiber, percentage of resin, etc., must be identified with the same quality and test label.

e. The quality and test label will include the following information on each label affixed to each fuel tank: name of the fuel tank manufacturer, date of fabrication, code or part number, name of testing laboratory, fuel capacity.

f. Each manufacturer is requested to inform the FIM/CCR Secretariat of its fuel tank model(s) which have passed the FIM test procedure, with a copy of the quality and test label.

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

2.4.10.11 Fairing / Bodywork

a. The fairing, mudguards and body work must conform in principle to the homologated shape as originally produced by the manufacturer. Headlights must be included even when considered external.

b. The fairing has a tolerance of +/-15mm from the original homologated road fairing, respecting the design and features of the homologated fairing, with the exception of the oil containing portion of the lower fairing, seat area and the area supporting the screen**. The 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 has to be constructed to hold, in case of an engine breakdown, at least half of the total oil and engine coolant capacity used in the engine (min. 5 liters). The lower edge of openings in the fairing must be positioned at least 70 mm above the bottom of the fairing.

g. There may not be exit air vents in the front half of the lower fairing 40mm below a horizontal centerline between the wheel axles of the machine. The Technical Director may give permission for the lower fairing to have additional vents added if vents have been filled to meet this and the oil containment requirements.

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 must conform in principle to the homologated shape originally produced by the manufacturer.

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. This light must be switched on any time the motorcycle is on the track or being ridden in the pit lane and the session is declared WET. All lights must comply with the following:

a. Lighting direction must be parallel to the machine center line (motorcycle running direction) and be clearly visible from the rear at least 15 degrees to both left and right sides of the machine center line.

b. The rear light must be mounted near the end of the seat/rear bodywork and approximately on the machine center line, in a position approved by the Technical Director. In case of dispute over the mounting position or visibility, the decision of the Technical Director will be final.

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

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

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

f. The Technical Director has the right to refuse any light system not satisfying this safety purpose.

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

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

b. Gaskets, **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. Tool box

f. Helmet hooks and luggage carrier hooks

g. Passenger foot rests

h. Passenger grab rails

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

SUPERSPORT TECHNICAL REGULATIONS

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2.5 SUPERSPORT TECHNICAL SPECIFICATIONS

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

EVERYTHING THAT IS NOT AUTHORIZED AND PRESCRIBED IN THIS 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 an FIM homologation (see Appendix FIM homologation procedure for Superstock, Supersport and Superbike motorcycles). All machines must be normally aspirated. All motorcycles must comply in every respect with all the requirements for road racing as specified in these technical regulations, unless they are already equipped as such on the homologated model.

For 2020: 2013-2020 Kawasaki ZX-6R (636) is accepted as homologated for MotoAmerica competition.

Once a motorcycle has obtained the homologation, it may be used for racing in the corresponding class for a maximum period of 8 years (see Homologation art 1.4.4), or until such time that the homologated motorcycle is disqualified by new rules or changes in the technical specifications of the corresponding class.

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

2.5.1 Motorcycle specifications

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

2.5.2 Engine configurations and displacement capacities

The following engine configurations comprise the Supersport class.

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

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

2.5.3 Balancing various motorcycle concepts

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

2.5.4 Minimum weight

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

For 2020: 2013-2020 Kawasaki ZX-6R (636) minimum weight - 161 kg (354.2 lbs.)

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

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

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

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

The use of ballast is allowed to stay over the minimum weight limit and may be required due to the handicap system. The use of ballast and weight handicap must be declared to the Technical Director at the preliminary checks.

2.5.5 Numbers and number plates

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

The sizes for all the front numbers are:	Minimum height:	140 mm
	Minimum width:	80 mm
	Minimum stroke:	25 mm
	Minimum space between numbers:	10 mm
The sizes for all the side numbers are:	Minimum height:	120 mm
	Minimum width:	70 mm
	Minimum stroke:	20 mm
	Minimum space between numbers:	10 mm

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

a. Once on the front, either in the center of the fairing or slightly off to one side. The number must be centered on the white background with no advertising within 25 mm in all directions.

b. Once on each side of the lower rear portion of the lower fairing. The number must be centered on the white background. Any change to this position must be pre-approved a minimum of two (2) weeks before the first race by the Technical Director.

c. The numbers must use the fonts as detailed after Art 2. Any numbers not using these fonts must have the design of the numbers and the layout pre-approved by the 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.

2.5.6 Fuel

a. The designated fuel is VP Racing Fuels MGP.

b. Please refer to Article 2.10 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 2.3.7.1.

b. A maximum of ten (10) 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, Superpole for Superbike, warm up sessions and races, front and rear tires are required to be marked with tire stickers.

e. See article 2.3.7

2.5.8 Engine

2.5.8.1 Fuel injection system

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

a. The original homologated fuel injection system must be used without any modification.

b. The fuel injectors must be stock and unaltered from the original specification and manufacture.

c. Air funnels must remain as originally produced by the manufacturer for the homologated motorcycle.

d. Butterfly valves cannot be changed or modified.

e. All parts of the variable intake tract device must remain exactly as homologated. Variable intake tract devices cannot be added if they are not present on the homologated motorcycle.

f. Secondary throttle valves and shafts may be removed or fixed in the open position and the electronics may be disconnected or removed.

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

h. Electronically controlled throttle valves, known as ‘ride-by-wire’, may only be used if the homologated model is equipped with the same system. Software may be modified but all the safety systems and procedures designed by the original manufacturer must be maintained.

2.5.8.2 Cylinder head

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

   i. Surface grinding of the cylinder head surface on the head gasket side

   ii. Polishing of the combustion chamber

   iii. Original valve seats must be used, but modifications are permitted to the shape of the seat.

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

   v. The valves must remain as originally equipped and homologated.

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

b. **Compression ratio is free, but the combustion chamber may be modified only by taking material off.**

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

2.5.8.3 Camshaft

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

b. The method of drive must remain as homologated.

c. At the technical checks: for direct cam drive systems, the cam lobe lift is measured; for non-direct cam drive systems (i.e. with rocker arms), the valve lift is measured.

2.5.8.4 Cam sprockets or cam gears

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

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

2.5.8.5 Cylinders

a. Cylinders must be the originally fitted and homologated parts with only the following modification allowed:

   i. Cylinder head gasket surface may be machined to allow the adjustment of compression ratio or resurfacing to repair a warped cylinder surface deck.

b. Homologated materials and castings for cylinders must be used. The surface finish of the cylinder bore must remain as homologated.

2.5.8.6 Pistons

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

b. Polishing and lightening is not allowed.

2.5.8.7 Piston rings

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

b. All piston rings must be fitted.

2.5.8.8 Piston pins and clips

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

2.5.8.9 Connecting rods

a. 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.

b. Polishing and lightening is not allowed.

c. Modifications of the flywheels are not allowed.

2.5.8.11 Crankcase / Gearbox housing

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

b. It is not allowed to add a pump used to create a vacuum in the crankcase. If a vacuum pump is installed on the homologated motorcycle, then it may be used only as homologated.

2.5.8.11.1 Lateral covers and protection

a. Lateral (side) covers may be altered, modified or replaced. If altered or modified, the cover must have at least the same resistance to impact as the original one. If replaced, the cover must be made in material of 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 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.

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

2.5.8.12 Transmission / Gearbox

a. Stock transmission shafts and gear set must be the originally fitted and homologated part. Shimming is allowed.

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

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

d. The sprocket cover may be modified or eliminated.

e. If it is not incorporated in the rear fender, the chain guard may be removed.

2.5.8.13 Clutch

a. Aftermarket or modified clutches are permitted, including plates, springs and back torque limiting capabilities.

b. 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.

c. Clutch system type (wet or dry / single or multi-plate) and method of operation (cable/hydraulic) must remain as homologated.

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

2.5.8.14 Oil pumps and oil lines

a. The originally fitted and homologated oil pump may be modified but the oil pump

housing, mounting points and oil feed points must remain as original.

b. Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of 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 water pump must remain as homologated.**

c. 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.

d. 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.

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

f. Radiator fan and wiring may be changed, modified or removed.

g. Additional oil coolers are not allowed.

h. The oil cooler must not be mounted on or above the rear 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 removed or replaced but if fitted must be mounted in the original position.

c. The air box drains must be sealed.

d. All motorcycles must have a closed breather system. All oil breather lines must be connected (may pass through an oil catch tank) and discharge in the air box.

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

e. Fuel vent lines may be replaced.

f. Fuel filters may be added.

2.5.8.18 Exhaust system

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

b. The number of final exhaust silencer(s) must remain as homologated. The silencer(s) must be on the same side(s) as on the homologated model.

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

d. Wrapping of exhaust systems is not allowed except in the area of the rider's foot or an area in contact with the fairing for protection from heat.

e. The noise limit for Supersport will be 107 dB/A (with a three (3) dB/A tolerance after the race only). The test will be carried out according to the details noted in article 2.14.

2.5.9 Electrics and electronics

2.5.9.1 Ignition/ Engine Control System (ECU)

a. **The engine control system (ECU) may be either:**

i. 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.

ii. **The FIM Supersport 600 approved ECU – the Mectronik MKE7 (part number WSS600_A) The sole official supplier of the ECU is Solo Engineering. www.soloengineering.com, sales@solengineering.com.**

2.5.9.2 If using a kit or OEM system:

a. The system may have FIM/DWO/MotoAmerica approved external ignition and/or injection module(s) added.

b. The total combined retail price (software and tuning tools included) on sale to the general public cannot be higher than €2500 (tax excluded).

c. Central unit (ECU) may be relocated.

d. 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.

e. 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.

f. 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.

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

h. The characteristics of approved data logging systems must be the following:

i. Maximum retail price of the unit (hardware + software, excluding sensors and wiring harness) cannot exceed €3000 (VAT excluded) if it is a standalone unit.

ii. The data logger unit must be available for sale to the public and on the list of FIM/DWO/MotoAmerica approved data loggers.

iii. A maximum of seven (7) simultaneously working sensors (connected to the additional data logger) may be added to the original sensors on the motorcycle.

iv. The sensors must be simple-function.

v. 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 2.5.9.1/i./vii.

vi. Type of sensor is free.

vii. 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.

i. The maximum total price of other active/control/calculation units such as lambda driver modules, quick shifter, analogue to CAN, air bleed control and traction control units is €750. These devices must be approved by FIM/DWO/MotoAmerica.

j. 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.

k. The addition of a GPS unit for lap timing/scoring purposes is allowed and considered in the seven (7) sensors.

l. Telemetry is not allowed.

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

n. Harness:

   i. The main wiring harness may be replaced by the kit wire harness as supplied for the kit ECU model that is produced and/or approved by the manufacturer of the motorcycle and by FIM/DWO/MotoAmerica. The kit wiring harness may incorporate the data logging harness.

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

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

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

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

o. Data logger harness:

   i. The data logger wire harness cannot include any other sensors with the exception of the seven (7) sensors that are allowed. The only function of the approved data logger wire harness is to connect the seven (7) sensors to the data logger, to transmit the data and supply the power.

p. For the Superstock kit to be approved, samples of the ECU kits, kit harnesses and external modules with their tuning tools must be sent by the manufacturers to the MotoAmerica Technical Director with technical data and selling price.

q. For the ignition and/or injection module, quick shifter or stand-alone data logger to be approved, samples must be sent by the manufacturer of the device to the MotoAmerica Technical Director with technical data and selling price.

r. The original speedometer and tachometer may be altered or replaced (see also 2.5.11).

s. Electric cables, connectors, battery and switches are free

t. Spark plugs, plug caps, coils and wires may be replaced

2.5.9.3 If using the FIM approved ECU:

a. **The firmware and manufacturer (engine) map must be championship approved and listed in the approved parts list.**

b. **External quick shift modules/sensors may be fitted it may only provide a signal to the Approved Supersport 600 ECU.**

c. **External control modules cannot be added.**

d. **No other external modules may be fitted (except when part of the datalogging system).**

e. **A CAN connection must be made available for Championships devices. One must be located in the rear of the seat unit of the bike. It 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).**

f. **The ECU may be freely located but must be fitted securely, in a damped mounting without vibration. During an event the Technical Director has the right to ask a team to substitute their ECU. The change must be done before Sunday warm up.**

g. **The following sensors must be connected directly to the ECU only.**

   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**
   7. **Rear speed**
   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) For 2020 all ECU's will feature crash detection by IMU.**
   14. **Gear shift load cell/switch (non-OEM parts must be from FIM approved parts list) (Shift controlled by ECU)**
   15. **Lambda - Bosch LSU4.9 only (for MV Agusta F3 in 2019 an external driver module may be used) one sensor only.**
   16. **Fork position**
   17. **Shock position**
   18. **Front brake pressure**
   19. **Rear brake pressure**
   20. **Fuel pressure (not temperature)**
   21. **Oil pressure**
   22. **Oil temperature**
   23. **Left and right switches**
   24. **Rear TPMS**
   25. **Front TPMS**

h. **Only the following may be connected directly to the logging system.**

   i. **GPS Unit (Lap timing and track position)**

ii. **Transponder / Lap time signal**

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

i. **The data logger must be from the FIM Approved Data Logger list. The characteristics of approved data logging systems must be the following:**

i. **Maximum retail price of the unit (hardware + software, excluding sensors and wiring harness) cannot exceed €3.000 Euro (VAT excluded). The "unit" may consist of multiple parts, input module, recording module etc.**

ii. **The Data Logger unit must be available for sale to the public and on the list of FIM approved data loggers.**

iii. **The data logger may ONLY be connected to the CAN bus and to those sensors listed in section 2.5.9.3/g.**

j. **The data logger may not be used for any strategy/control.**

k. The original speedometer and tachometer may be altered or replaced (see also 2.5.11).

l. Electric cables, connectors, battery and switches are free

m. Spark plugs, plug caps, coils and wires may be replaced

2.5.9.4 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.

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 pre-assembled spare frame

a. During the entire duration of the event, each rider can only use one (1) complete motorcycle, as presented for technical control, with the frame clearly identified with a seal.

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

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

i. Main frame **and swing-arm**

ii. Bearings (steering pipe, swing arm, etc.)

iii. **Rider controls (handle bars, rear sets, shift/brake linkage), front and rear mud guard.**

iv. Rear suspension linkage and shock absorber

v. Upper and lower triple clamps, **front forks, braking system and wheels.**

vi. Wiring harness, **ECU, dash associated electronics, throttles, airbox and associated cables.**

d. The spare frame will not be allowed in the pit box before the rider or the team has

received authorization from the Technical Director.

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

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

Explanation of Procedures

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

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

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

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

The spare frame may be pre-assembled with the following items: main frame assembly, swing-arm, **rider controls**, rear suspension linkage, shock-absorber, steering head bearings, upper and lower triple clamps, **front forks braking system, wheels, wiring harness, dash, ECU, associated electronics, throttles, airbox, front and rear mud guards.**

When a team decides that a crashed or damaged motorcycle requires a change of frame, the team must inform the Technical Director. Only at this point may the pre-assembled spare frame be brought into the pit box.

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

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

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

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

Any actions contrary to these procedures will result in a penalty as described in the sporting regulations.

2.5.10.1 Frame body and rear sub-frame

a. The frame must be the originally fitted and homologated part with no modification allowed.

b. Holes may be drilled on the frame only to fix approved components (i.e. fairing

brackets, steering damper mount, sensors).

c. The sides of the frame-body may be covered by a protective part made of a composite material. These protectors must fit the form of the frame.

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

e. All motorcycles must display a vehicle identification number punched on the frame body (a proper “legal VIN” or a unique designation by the team, 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 frames / fairing mounts may be changed or altered.

h. Rear sub frames may be changed or altered, but the type of material must remain as homologated, or of higher specific weight.

i. Additional seat brackets may be added; non-stressed protruding brackets may be removed if they do not affect the safety of the construction or assembly. Bolt-on accessories to the rear sub-frame may be removed.

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

2.5.10.2 Suspension - General

a. Participants in the Supersport class must only use the approved and listed suspension units for that season. The price limits are:

   i. Fork: For the fork kit, including all parts such as but not limited to cartridge, springs (1 set), adjusters, fork caps, blanking inserts, seals, bushes but excepting oil and fitting, the price limit is €2200 excluding tax.

   ii. Shock Absorber/RCU: For the complete shock absorber / RCU including but not limited to spring (1 of), pre-load adjuster and length/ride height adjuster, the price limit is €2000 excluding tax.

b. The approved products from the suspension manufacturers must be available to all participants at least one (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 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. Electronically-controlled suspension must be removed.

g. 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.

d. Fork springs may be modified or replaced.

e. Fork caps may be modified or replaced to allow external adjustment.

f. Dust seals may be modified, changed or removed if the fork is totally oil- sealed.

g. The original surface finish of the fork tubes (stanchions, fork pipes) may be changed. Additional surface treatments are allowed.

h. The upper and lower fork clamps (triple clamp, fork bridges, and stem) must remain as originally produced by the manufacturer on the homologated motorcycle.

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

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

k. Electronic forks may have their complete internal parts (including all electronic control) replaced with a conventional damping system and it will be considered as a mechanical fork.

2.5.10.4 Swing arm (rear fork)

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

   i. A chain guard must be fitted in such a way as to reduce the possibility that any part of the riders' body may become trapped between the lower chain run and the rear wheel sprocket.

   ii. 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.

   iii. A rear axle chain adjuster slot may be enlarged to allow the brake caliper bracket mounting to become captive by use of a sleeve. The slot may only be modified on the side the rear brake caliper is located. The enlarged slot may not increase or decrease the original wheel base.

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

b. The rear fork pivot bolt must be the originally fitted and homologated part with no modification allowed.

c. Rear axle chain adjusters may be modified or changed.

2.5.10.5 Rear suspension unit (shock)

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

b. All the rear suspension linkage parts must be the originally fitted and homologated parts with no modification allowed.

c. Removable top shock mounts must remain as homologated. A nut may be made captive on the top shock mount and shim spacers may be fitted behind it.

2.5.10.6 Wheels

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

allowed.

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

c. If the original design included a cushion drive for the rear wheel, it must be the originally fitted and homologated parts with no modification allowed.

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

2.5.10.7 Brakes

a. Front and rear brake discs may be replaced with aftermarket brake discs that must fit the original caliper and mounting. However, the outside diameter and the ventilation system must remain the same as on the homologated motorcycle. Internally ventilated discs are not allowed if not present on the homologated motorcycle.

b. The brake disc carriers may be changed, but they must retain the same off set and same type of mounting to the wheels of the homologated motorcycle.

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

d. Front and rear brake calipers as well as all the mounting points and mounting hardware (mount, carrier, hanger) must remain as originally produced by the manufacturer for the homologated motorcycle (see also Article 2.5.10.4/a./ii./iii.).

e. In order to reduce the transfer of heat to the hydraulic fluid, it is permitted to add metallic-shims to the calipers, between the pads and the calipers, and/or to replace light alloy pistons with steel pistons made by the same manufacturer of the caliper.

f. The front brake master cylinder may be replaced.

g. The rear brake master cylinder must be the originally fitted and homologated parts with no modification allowed.

h. Front and rear hydraulic brake lines may be changed. The brake fluid reservoir may be replaced and/or repositioned. Quick connectors may be used. The split of the front brake lines for both front brake calipers must be made above the lower edge of the fork bridge (lower triple clamp).

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

j. Additional air ducts are not allowed.

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

2.5.10.8 Handlebars and hand controls

a. Handlebars may be replaced.

b. Handlebars and hand controls may be relocated.

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

d. Throttle assembly and associated cables may be modified or replaced but the connection to the throttle body and to the throttle controls must remain as on the homologated motorcycle.

e. 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 is capable of stopping a running engine. The button or switch must be red.

2.5.10.9 Foot rest and foot controls

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

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

c. Foot rests may be rigidly mounted or a folding type which must incorporate a device to return them to the normal position.

d. The end of the foot rest must have at least an 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 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 (i.e. fuel tank foam).

c. Fuel tanks with tank breather pipes must be fitted with non-return valves that discharge into a catch tank with a minimum volume of 250 cc made of a suitable material.

d. Fuel caps may be changed. Fuel caps when closed, must be leak proof. Additionally, they must be securely locked to prevent accidental opening at any time.

e. A rider spacer/pad may be fitted to the rear of the tank with non-permanent adhesive. It may be constructed of foam padding or composite material.

f. The tank may not have a full cover fitted over it 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 a composite material. These covers must **follow** the shape of the fuel tank **exactly**.

h. The fuel tank may have heat reflective sheet attached to its bottom surface.

2.5.10.11 Fairing / Bodywork

a. Fairing, mudguards and body work must conform in principle to the homologated shape as originally produced by the manufacturer. The use of carbon fiber or Kevlar® materials is not allowed in fairing, fuel tank cover, seat, seat base and associated bodywork construction. Specific reinforcements in Kevlar® or carbon are allowed locally around holes and stressed areas. Headlights must be included even when considered external.

b. Windscreen may be replaced.

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

d. Original air ducts running between the fairing to the air box may be altered or replaced from those fitted to the homologated motorcycle.

e. The lower fairing has to be constructed to hold, in case of an engine breakdown, at least half of the total oil and engine coolant capacity used in the engine (min. 5

liters). The lower edge of openings in the fairing must be positioned at least 50 mm above the bottom of the fairing.

f. The lower fairing must incorporate one (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.

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

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

i. Original openings for cooling in the lateral fairing/bodywork sections may be partially closed only to accommodate sponsors' logos/lettering. Such modification shall be made using wire mesh or perforated 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. Motorcycles may be equipped with a radiator shroud to improve the air stream towards the radiator but the appearance of the front, the rear and the profile of the motorcycle must not be changed.

k. Front mudguards may be replaced with a cosmetic duplicate of the original parts and may be spaced upward for increased tire clearance. The use of carbon fiber or Kevlar® composites is allowed.

l. Rear mudguards fixed on the swing arm may be modified, changed or removed. The use of carbon fiber or Kevlar® composites is allowed.

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. This light must be switched on any time the motorcycle is on the track or being ridden in the pit lane and the session is declared WET. All lights must comply with the following:

a. Lighting direction must be parallel to the machine center line (motorcycle running direction) and be clearly visible from the rear at least 15 degrees to both left and right sides of the machine center line.

b. The rear light must be mounted near the end of the seat/rear bodywork and approximately on the machine center line in a position approved by the Technical

Director. In case of dispute over the mounting position or visibility, the decision of the Technical Director will be final.

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

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

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

f. The Technical Director has the right to refuse any light system not satisfying this safety purpose.

2.5.10.14 Fasteners

a. Standard fasteners may be replaced with fasteners of any material and design.

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

c. Titanium fasteners may be used in structural locations, but the strength and design must be equal to or exceed the strength of the standard fastener it is replacing.

d. Special steel fasteners may be used in structural locations, but the strength and design must be equal to or exceed the strength of the standard fastener it is replacing.

e. Fasteners may be drilled for safety wire, but intentional weight-saving modifications are not allowed.

f. Threads repairs may be made using inserts of different material such as Helicoils and Timeserts.

g. Fairing/bodywork fasteners may be changed to the quick disconnect type.

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

a. Any type of lubrication, brake or suspension fluid

b. Instruments, their supports(s) and associated cables

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

d. Gaskets, **seals** and gasket materials

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.

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. Tool box

f. Helmet hooks and luggage carrier hooks

g. Passenger foot rests

h. Passenger grab rails

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

STOCK 1000 TECHNICAL REGULATIONS

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2.6 STOCK 1000 TECHNICAL SPECIFICATIONS

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

EVERYTHING THAT IS NOT AUTHORIZED AND PRESCRIBED IN THIS 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.

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

In order 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 170kg (374 lbs.)

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

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

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

This includes all fluids.

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

The use of ballast is allowed to stay over the minimum weight limit and may be required due to the handicap system. The use of ballast and weight handicap must be declared to the 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 after Art. 2. Any numbers not using these fonts must have the design of the numbers and the layout pre-approved by the MotoAmerica Technical Director a minimum of 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

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

2.6.6 Fuel

a. The designated fuel is VP Racing Fuels MGP.

b. Please refer to Article 2.10 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 2.3.7.1.

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, Superpole for Superbike, warm up session and races, front and rear tires are required to be marked with tire stickers.

e. see article 2.3.7

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 be only used if the homologated model is equipped with the same system. Software may be modified but all the safety systems and procedures designed by the original manufacturer must be maintained.

2.6.8.2 Cylinder head

a. No modifications are allowed.

b. No material may be added or removed from the cylinder head.

c. The gaskets may be changed.

d. The valves, valve seats, guides, springs, tappets, oil seals, shims, cotter valve, rocker arms, spring base and spring retainers must be as originally produced by the manufacturer for the homologated motorcycle. Only normal maintenance interventions as prescribed by the manufacturer in the service manual of the motorcycle are authorized.

e. Valve spring shims are not allowed.

2.6.8.3 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 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. 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 shimming.

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

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

d. The sprocket cover may be modified or eliminated.

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

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 inside 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 profile of the motorcycle must not be changed. Extra mounting brackets to accommodate the additional radiator is permitted.

2.6.8.16 Air box

a. The air box must remain as originally produced by the manufacturer on the homologated motorcycle 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 exhausts pipe(s) outlet must be rounded to avoid any sharp edges.

d. Wrapping of exhaust systems is not allowed except in the area of the rider's foot or an area in contact with the fairing for protection from heat.

e. The noise limit for 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 version of the control software.**

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 the 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 with the

exception of 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 the use of a boost battery. No boost battery may be connected to the machine after the end of the session.

2.6.10 Main frame and pre-assembled spare frame

a. During the entire duration of the event, each rider can only use one (1) complete motorcycle, as presented for technical control, with the frame clearly identified with a seal.

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

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

   i. Main frame **and swing-arm**

   ii. Bearings (steering pipe, swing arm, etc.)

   iii. Rider controls (handle bars, rear sets, shift/brake linkage), front and rear mud guard.

   iv. Rear suspension linkage and shock absorber

   v. Upper and lower triple clamps, **front forks, braking system and wheels.**

   vi. Wiring harness, **ECU, dash associated electronics, throttles, airbox and associated cables.**

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

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

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

See 2.5.10 for complete explanation of procedures

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 €2200 excluding tax.

   ii. Shock absorber/RCU: For the complete shock absorber / RCU including but not limited to spring (1 of), pre-load adjuster and length/ride height adjuster the price limit is €2000 excluding tax.

b. The approved products from the suspension manufacturers must be available to all participants at least one month before the first round of the MotoAmerica 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. Rear pivot position must remain in the homologated position (as supplied on the production bike). If the standard bike has inserts then the orientation/position of the original insert may be changed but the insert cannot be replaced or modified.

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 swing-arm.

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

b. The originally fitted and homologated wheels may be exchanged with the wheels of the same manufacture and model year machine if that machine has also been homologated. (e.g. R1M wheels can be used on a R1S and vice versa)

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

d. If the original design includes a cushion drive for the rear wheel, it must remain as originally produced for the homologated motorcycle.

e. 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. Front master cylinder may be replaced with a maximum MSRP of $400.00 USD.

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-brake") 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. Additional air scoops or ducts are not allowed.

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 is capable of stopping a running engine. The button or switch must be red.

2.6.10.9 Foot rest / Foot controls

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

b. Foot controls: gear shift and rear brake must remain operated manually by foot.

c. Foot rests may be rigidly mounted or a folding type which must incorporate a device to return them to the normal position.

d. The end of the foot rest must have at least an 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 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.

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 with an after-market product. The height of the windscreen is free but must be within a tolerance of +/- 15 mm referred to the vertical distance from/to the upper fork bridge. The screen must conform to the same profile from the front as the original – no double bubble or wide types. From a top view, the length of the windscreen may be shortened by 25 mm to allow clearance for the rider. The edge of the screen must have no sharp edges.

d. Motorcycles that are not originally equipped with streamlining are not allowed to add streamlining in any form, 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 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. 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 appearance from the front, rear and profile must conform to the homologated shape.

b. The top portion of the rear bodywork around the seat may be modified to a solo seat.

c. The homologated seat locking system (with plates, pins, rubber pads etc.) may be removed.

2.6.10.13 Rear safety light

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

a. Lighting direction must be parallel to the machine center line (motorcycle running direction) and be clearly visible from the rear at least 15 degrees to both left and right sides of the machine center line.

b. The rear light must be mounted near the end of the seat/rear bodywork and approximately on the machine center line, in a position approved by the Technical Director. In case of dispute over the mounting position or visibility, the decision of the Technical Director will be final.

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

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

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

f. The Technical Director has the right to refuse any light system not satisfying this safety purpose.

2.6.10.14 Fasteners

a. Standard fasteners may be replaced with fasteners of any material and design but titanium fasteners cannot be used. The strength and design must be equal to or exceed the strength of the standard fastener.

b. Fasteners may be drilled for safety wire, but intentional weight-reduction modifications are not allowed.

c. Thread repairs may be made using inserts of different material such as Helicoils and Timeserts.

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

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

2.6.11 The following items MAY be altered or replaced from those fitted to the homologated motorcycle

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

b. Gaskets, **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 in other materials like fiber composite material if these parts do not replace original parts mounted on the homologated model.

2.6.12 The following items MAY BE removed

a. Emission control items (anti-pollution) in or around the air box and engine (O2 sensors, air injection devices)

b. Chain guard as long as it is not incorporated in the rear fender

c. Bolt-on accessories on a rear sub frame

2.6.13 The following items MUST BE removed

a. Headlamp, rear lamp and turn signal indicators (when not incorporated in the fairing). Openings must be covered by suitable materials.

b. Rear-view mirrors

c. Horn

d. License plate bracket

e. Toolkit

f. Helmet hooks and luggage carrier hooks

g. Passenger foot rests

h. Passenger grab rails

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

2.7 (blank)

TWINS CUP TECHNICAL REGULATIONS

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2.8 MOTOAMERICA TWINS CUP TECHNICAL SPECIFICATIONS

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

EVERYTHING THAT IS NOT AUTHORIZED AND PRESCRIBED IN THIS 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 a MotoAmerica homologation. (See MotoAmerica homologation procedure for Twins cup). All motorcycles must comply in every respect 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 period of **twenty (20)** years 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 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 600cc up to 800cc	4 stroke	2- cylinder air cooled

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

In order 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, 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 decisions made by the Technical Director at any time deemed necessary to ensure fair competition.

2.8.4 Minimum weight

2.8.4.1 The minimum weight will be:

Over 600cc up to 800cc 135 kg (297.6 lbs.)

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

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

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

includes all fluids.

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

The use of ballast is allowed to stay over the minimum weight limit and may be required due to the handicap system. The use of ballast and weight handicap must be declared to the 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. 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 after Art 2. 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 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.

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

2.8.6 Fuel

a. The designated fuel is VP Racing Fuels MGP.

b. Please refer to Article 2.10 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 2.3.7.1.

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 are required to be marked with tire stickers

e. See article. 2.3.7

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 butterflies.

e. Electronically controlled throttle valves, known as ‘ride-by-wire’, may be only used if the homologated model is equipped with the same system. Software may be modified but all the safety systems and procedures designed by the original manufacturer must be maintained.

2.8.8.2 Cylinder head

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

a. Porting and polishing of the cylinder head normally associated with individual tuning such as gas flowing of the cylinder head, including the combustion chamber, is allowed. Welding is not allowed. No machining or modification is allowed in the cam box / valve mechanism area.

b. The throttle body insulators may be modified.

c. Modifications of the inlet and exhaust ports by taking off or adding material (welding is forbidden). Epoxy may be used to shape the ports.

d. Surface grinding of the cylinder head surface on the head gasket side

e. Original homologated 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 be modified only by taking material off.

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

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

k. The valves 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. Cylinder coatings must remain as homologated or replaced with a steel sleeve.

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.

c. Balancing is allowed but 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 by the original method (e.g. drilling or machining) and in the same position (e.g. edge of counter weights).

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. 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.

2.8.8.11.1 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 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. **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.

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 are allowed (including wire and potentiometer).

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 of 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 changed with an aftermarket radiator or additional radiator.

f. Oil coolers may be modified. Heat exchangers (oil/water) may be replaced with an oil cooler.

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 air box design is free but must be able to allow the engine to operate in all climatic conditions at all times (i.e. 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 discharge in the air box.

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 in such a way that 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 €1500 (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: €1500 excluding data logger or €2750 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. These devices must be approved by FIM/DWO/MotoAmerica.

b. For the ignition and or injection module, or quick shifter to be approved, samples must be sent by the manufacturer of the device to the Technical Director with technical data and 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 done before Sunday warm up.

e. No extra sensors may be added for control strategies except shift rod sensors, wheel speed sensors and lambda sensors.

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

g. 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 (tax excluded) if it is a standalone unit and €3750 (tax excluded) if combined with the ECU.

   ii. The data logger unit must be available for sale to the public.

   iii. A maximum of seven (7) simultaneously working sensors (connected to the additional data logger) may be added to the original sensors on the motorcycle.

   iv. The sensors must be simple-function.

   v. 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.

   vi. Type of sensor is free.

   vii. 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.

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 whilst the engine is running or the bike is moving.

l. Harness:

i. 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 the use of a boost battery. No boost battery may be connected to the machine after the end of the session.

2.8.10 Main frame and pre-assembled spare frame

a. During the entire duration of the event, each rider can only use one (1) complete motorcycle, as presented for technical control, with the frame clearly identified with a seal.

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

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

   i. Main frame and **swing-arm**

   ii. Bearings (steering pipe, swing arm, etc.)

   iii. Rider controls (handle bars, rear sets, shift/brake linkage), front and rear mud guard.

   iv. Rear suspension linkage and shock absorber

   v. Upper and lower triple clamps, **front forks, braking system and wheels.**

   vi. Wiring harness, **ECU, dash associated electronics, throttles, airbox and associated cables.**

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

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

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

See 2.5.10 for a complete explanation of procedures

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 for the purpose of constructing a detachable front or rear sub-frame or attaching 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 sub frame may be changed, altered or removed. If the rear sub frame is integral to the main frame, 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 that are integral to the main frame may be removed and 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 of 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. 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. **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.

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 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.

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 must be used (i.e. dual or mono).

b. The rear suspension linkage may be modified or replaced.

c. The original fixing points on the frame (if any) must be used to mount the shock absorber, linkage and rod assembly fulcrum (pivot points).

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

2.8.10.6 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 a copy (or copies) of the certificate for their wheel(s) as proof of compliance to the Technical Director 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. 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:	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 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. 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 and rear brake calipers, as well as all the 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 that the systems originated from. (i.e. rear brakes may be converted to underslung if the caliper was made for that purpose and vice versa)

e. Brake pads or shoes may be altered or replaced from those fitted to the homologated motorcycle.

f. 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).

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

h. 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. 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 is capable of stopping a running engine. The button or switch must be RED.

2.8.10.9 Foot rest and foot controls

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

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

c. Foot rests may be rigidly mounted or a folding type which must incorporate a device to return them to the normal position.

d. The end of the foot rest must have at least an 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 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.

2.8.10.10 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 with a minimum volume of 250cc made of a suitable material.

d. Fuel caps may be changed. Fuel caps, when closed, must be leak proof. Additionally, they must be securely locked to prevent accidental opening at any time.

e. A rider spacer/pad may be fitted to the rear of the tank with non-permanent adhesive. It may be constructed of foam padding or composite material.

f. **The tank may have a fitted cover.**

g. The sides **and rear** of the fuel tank may be protected with a cover made of a composite material.

2.8.10.11 Fairing / Bodywork

a. The fairing and body work 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. 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.

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 to the 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 no excessive aerodynamics that may interfere with the safe operation of the motorcycle. The decision will be made by the Technical Director and is final.**

i. **The rear fender design and material are free, may be added or removed. No excessive aerodynamics that may interfere with the safe operation of the motorcycle. The decision will be made by the Technical Director and 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 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 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. This light must be switched on any time the motorcycle is on the track or being ridden in the pit lane and the session is declared WET. All lights must comply with the following:

a. Lighting direction must be parallel to the machine center line (motorcycle running direction) and be clearly visible from the rear at least 15 degrees to both the left and right sides of the machine center line.

b. The rear light must be mounted near the end of the seat/rear bodywork and approximately on the machine center line, in a position approved by the Technical Director. In case of dispute over the mounting position or visibility, the decision of the Technical Director will be final.

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

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

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

f. The Technical Director has the right to refuse any light system not satisfying this safety purpose.

2.8.10.14 Fasteners

a. Standard fasteners may be replaced with fasteners of any material and design.

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. See article 2.8.10.6/j.

d. Special steel fasteners may be used in structural locations but the strength and design must be equal to or exceed the strength of the standard fastener it is replacing.

e. Fasteners may be drilled for safety wire, but intentional weight-saving modifications are not allowed.

f. Threads repairs may be made using inserts of different material such as Helicoils and Timeserts.

g. Fairing/bodywork fasteners may be changed to the quick disconnect type.

2.8.11 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). Openings must be covered by suitable materials.

b. Rear-view mirrors

c. Horn

d. License plate bracket

e. Tool box

f. Helmet hooks and luggage carrier hooks

g. Passenger foot rests

h. Passenger grab rails

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

JUNIOR CUP TECHNICAL REGULATIONS

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2.9 MOTOAMERICA JUNIOR CUP TECHNICAL SPECIFICATIONS

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

EVERYTHING THAT IS NOT AUTHORIZED AND PRESCRIBED IN THIS 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

Junior Cup motorcycles require an FIM 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. FIM homologated machines must also enter into a participation agreement with MotoAmerica to be eligible for the class.

Once a motorcycle has been homologated, 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 Junior Cup 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.

2.9.1 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 machines sold in Europe as A2 class machines and excluding the A1 class machines. The MotoAmerica/FIM Commission has the right to decide which machines will be eligible in the class.

For 2020 the following will be legal (this list can be amended at any time by the MotoAmerica Commission):

- Honda CBR500R
- Kawasaki Ninja 300
- Kawasaki Ninja 400
- KTM RC390
- KTM RC390 R
- **Yamaha YZF-R3 (Euro 3)**
- **Yamaha YZF-R3A (Euro 4)**
- **Yamaha YZF-R3 2020 (Euro 3 and 4)**

2.9.3 Balancing various motorcycle concepts

The MotoAmerica/FIM Commission reserve the right to apply balancing to the machines in the class as they see fit in order to maintain equality amongst machines. Methods may include but are not limited to the following:

- rev limit
- weight limit changes

- restrictor plates/throttle stops
- approved parts **(see approved parts list including restrictors at: http://www.motoamericaregistration.com/competitor-info/)**

The decision to apply the handicap will be taken by the MotoAmerica/FIM Commission at any time deemed necessary to ensure fair competition. Balancing parts and modifications will be documented in the approved parts list published on www.motoamericaregistration.com and supersede all following regulations.

2.9.4 Minimum weight

The minimum weight for each model is as follows:

	Bike Weight		Combined Minimum Bike and Rider Weight*
Brand	Hard Minimum	Soft Maximum	
CBR500R	147 kg	160 kg	210
KTM RC 390 R	133 kg	146 kg	202
Ninja 300	133 kg	146 kg	200
Ninja 400	137 kg	150 kg	210
YZF-R3 (All)	137 kg	150 kg	204

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.

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 and riders will be weighed in the condition they finished the race, and the established weight limit must be met in this condition. Nothing may be added to the motorcycle. This includes all fluids.

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

The use of ballast is allowed to stay over the minimum weight limit and may be required due to the handicap system. The use of ballast and weight handicap must be declared to the Technical Director at the preliminary checks.

2.9.5 Numbers and number plates

Numbers must be easily legible, in a clear simple font and contrast strongly with the background color. Backgrounds must be 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 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 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 after Art 2. Any numbers not using these fonts must have the design of the numbers and the layout pre-approved by the MotoAmerica Technical Director a minimum of 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.

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

2.9.6 Fuel

a. The designated fuel is VP Racing Fuels MGP.

b. Please refer to Article 2.10 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: 2.3.7.1

b. For the Junior Cup race only, wet tires will not need to be marked with a tire sticker. They will not be considered in the total number of tires available for use, however normal allocation limits still apply.

c. During free practices, qualifying practices, Superpole for Superbike, warm up session and races, front and rear tires are required to be marked with tire stickers

d. See article. 2.3.7

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 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. Secondary throttle valves may be removed or fixed in the open position and the electronics may be disconnected or removed. Secondary throttle shafts must remain in place.

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.

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 only be used if the homologated model is equipped with the same system.

2.9.8.2 Cylinder head

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

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

c. Valve spring shims maybe changed freely.

d. Head and base gasket – see approved parts list for allowed head gaskets (per manufacturer).

e. A restrictor may be required to be fitted between the cylinder head and inlet manifold. It will be a flat plate. No blending or filling will be allowed with sealant or otherwise. See approved parts list: http://www.motoamericaregistration.com/competitor-info/

f. The minimum squish clearance (per machine) will be listed in the approved parts list available at http://www.motoamericaregistration.com/competitor-info/

2.9.8.3 Camshaft

a. The camshaft(s) must be the originally fitted and homologated part with no modification allowed.

b. At the technical checks: for direct cam drive systems, the cam lobe lift is measured; for non-direct cam drive systems (i.e. with rocker arms), the valve lift is measured.

2.9.8.4 Cam sprockets or gears

a. Cam gears may be slotted or replaced with an adjustable part. Cam sprockets must be on the approved parts list.

b. The cam chain must remain as homologated.

c. 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 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 must be secured with steel 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.

2.9.8.12 Transmission / Gearbox

a. **Must be the originally fitted and homologated parts with no modification allowed except:**

   i. Shimming is allowed.

   ii. Undercutting and surface treatments are permitted.

   iii. Shift star and detent may be replaced but must function as originally designed.

b. Downshift auto-blipping is not allowed.

c. The 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 as long as it is not incorporated in the rear fender may be removed.

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 assembly may be modified or replaced by an aftermarket clutch, also may include back torque limiting capabilities (slipper type).

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. Radiator fans and wiring may be removed. Thermal switches, water temperature sensors and thermostats may be removed inside the cooling system.

e. The radiator cap is free.

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

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 modified or replaced but not eliminated 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 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. Fuel lines from the fuel tank up to the delivery pipe assembly (delivery pipe excluded) may be replaced and must be located in such a way that they are protected from crash damage.

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

e. Fuel vent lines may be replaced.

f. Fuel filters may be added.

2.9.8.18 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) is free.

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

d. Wrapping of exhaust systems is not allowed except in the area of the rider's foot or an area in contact with the fairing for protection from heat.

e. The noise limit for the Junior Cup will be 110 dB/A (with a three (3) dB/A tolerance after the race only).

f. The test RPM will be as follows:

Machine:	Test rpm
Honda CBR500R	5,000rpm
Kawasaki Ninja 300 /400	6,500rpm
Yamaha YZF-R3	7,500rpm
KTM RC390	5,500rpm

2.9.9 Electrics and electronics

2.9.9.1 Ignition / Engine Control System (ECU)

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

   i. **The Supersport 300 Control Electronics System. See Art. 2.9.9.2.**

   ii. **The original system (with homologated ECU and software or MotoAmerica approved software) with a MotoAmerica/DWO approved external fuel injection module and data logger added. See Art 2.9.9.3**

b. The maximum rpm for each machine is as follows (start of 2020):

Machine:	Max rpm
Honda CBR500R	10,000 rpm
Kawasaki Ninja 300 (EX300ADF)	13,000 rpm
Kawasaki Ninja 400	10,350 rpm
KTM RC390	11,000 rpm
KTM RC390 R	11,000 rpm
Yamaha YZF-R3	13,000 rpm

2.9.9.2 Supersport 300 Control Electronics System

a. **The ECU/Dashboard/Harness must be the Supersport 300 approved Control Electronic System. The sole official supplier of the Control Electronics System is Solo Engineering. www.soloengineering.com,** sales@solengineering.com **as documented in the approved parts list.**

b. **The software and firmware used must be from the list of legal software/firmware versions published at www.fim-live.com.**

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 make a team substitute their ECU with an FIM sample.**

e. **Sensors may not be replaced, modified or substituted unless noted and the allowed OEM ECU sensors/channels are:**

   1. **Throttle position sensor(s)**

2. **Map sensor, map sync (pressure sensor on the intake port used to synchronize the engine during the start)**
3. **Airbox pressure**
4. **Engine pick-ups (cam, crank)**
5. **Twist grip position**
6. **Front speed (from ABS sensor)**
7. **Rear speed (from ABS sensor)**
8. **Gearbox output shaft speed**
9. **Gear position**
10. **Barometric air pressure**
11. **Water temperature**
12. **Air temperature**
13. **Oil pressure switch**
14. **Tip-over switch (Internal to ECU)**

The following may be added:

1. **Gear shift load cell/switch (signal to ECU only)**
2. **Lambda sensor (Bosch LSU4.9)**
3. **Left- and Right-Hand switches (may be replaced from kit)**
4. **Fork position (teams' choice)**
5. **Shock position (teams' choice)**
6. **Front brake pressure sensor (teams' choice)**
7. **Transponder/lap time signal**
8. **GPS receiver unit**

f. **No external modules may be fitted (except as part of a quickshifter where it may only provide a signal to the approved ECU and only be connected to the battery and the quick shift connector on the approved harness.**

g. **The data logger must be:**

   i. **From the DWO/FIM approved Supersport 300 approved logger list.**
   ii. **The firmware/software of any data logging units must be an FIM/DWO approved version.**
   iii. **A copy of the software and documentation must be submitted by the manufacturer to the Technical Director before it can be approved for use.**
   iv. **An external logger may only connect to the 'CAN' connections in the harness. These 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. **Plug cap must remain as homologated.**

i. **Spark plugs may be replaced.**

j. **Battery is free.**

2.9.9.3 Original Electronics System

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

   i. **The original system as homologated, with no change of software or with a manufacturer approved software.**

   ii. **The original system (with the homologated ECU and software or MotoAmerica approved software) (option i) with an FIM/DWO approved external fuel injection module added.**

   iii. **During an event FIM/DWO will exchange ECU's with samples held by FIM/DWO. The exchange will take place on the grid or in a holding area before the pit lane opens. The team will have the option to use the same ECU in the morning warm up and it will be impounded between warm up and the race. Also see point g.**

b. **The software and the firmware must be supplied and approved by the machine's manufacturer or a MotoAmerica approved supplier. The Technical Director must be supplied with the software/firmware and it must be added to the approved parts list before it may be used.**

c. **The manufacturer or approved supplier must provide MotoAmerica with the tools/software to perform software checks.**

d. **Throughout the season the manufacturer may update the software and the updates must be made available simultaneously to all users of the system with no charge, updating by a team is not compulsory.**

e. **Central unit (ECU) may be relocated.**

f. **Optional equipment sold by the motorcycle manufacturer for the homologated model is considered not homologated with the bike and must follow the requirements for approved electronics/data loggers.**

g. **At any time during an event the Technical Director has the right to make a team substitute their ECU or external module with the MotoAmerica sample.**

h. **Sensors may not be replaced, modified or substituted unless noted and the allowed OEM ECU sensors/channels are:**

   1. **Throttle position (multiple allowed)**
   2. **Map sensor, Map Sync (pressure sensor on the intake port used to synchronize the engine during the start)**
   3. **Airbox pressure**
   4. **Engine pick-ups (Cam, crank)**
   5. **Twist grip position**
   6. **Rear speed only (from ABS sensor)**
   7. **Gearbox output shaft speed**
   8. **Gear position**
   9. **Air pressure**
   10. **Water temperature**
   11. **Air temperature**
   12. **Tip-over Switch (No lean angle)**
   13. **Gear shift load cell/switch (Championship approved part – see Art 2.9.9.3/k.)**

14. **Lambda sensor (may be OEM or a replacement sensor see Art. 2.9.9.3/j. It may be connected to the original harness/ECU or to the FIM/DWO approved lambda control module).**

i. **No extra sensors may be added for control strategies except the shift rod sensor of the FIM/DWO approved rev-limiter/quickshifter.**

j. **The FIM/DWO 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. No fuel module may add traction control strategies. The modules may only connect to the fuel injectors, lambda sensor, power supply and "piggyback the Throttle Position, Gear and RPM signals". Lambda closed loop/auto tuning is permitted. ONLY FIM/DWO approved auto tuning units may be used.**

k. **A compulsory FIM/DWO rev limiter/quick shift unit must be fitted, it is the team's discretion whether to use the quick shift function. This must always remain fitted and active. It must only be installed as detailed in the supplied instructions.**

l. **The FIM/DWO quick shift unit is €500 + taxes + delivery.**

m. **Contact: barry@tawperformance.com**

- **Machine: Part Number**
- **Honda CBR500R HMGP-HO1016**
- **Kawasaki Ninja 300 (EX300A/D/F) HMGP-KA1016**
- **Kawasaki Ninja 400 (EX400) HMGP-KA1712**
- **Yamaha YZF-R3 HMGP-YA1016**
- **KTM RC390 No ABS HMGP-KT1016A**
- **KTM RC390 ABS HMGP-KT1016B**
- **KTM RC390R 2017 (Euro 4) HMGP-KT1712**
- **HM Quickshifter wheel speed kits may be fitted as noted on the FIM approved parts list.**

n. **It is the team's responsibility to inform the Technical Director or his appointed staff if they believe that the rev limiter is not acting correctly.**

o. **The following strategies are NOT allowed:**

  i. **Traction control (including anti-spin/rate of change of rpm)**
  ii. **Launch Control**
  iii. **Anti-Wheelie**
  iv. **Closed loop Engine Brake Control**
  v. **Corner by Corner/Distance based adjustments**
  vi. **Rider adjusted trims**

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

q. **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.**

r. **The characteristics of DWO/FIM approved Supersport 300 complete data logging systems must be the following:**

   i. **Must be from the DWO/FIM approved Supersport 300 logging Kit list. The firmware/software of any data logging units must be an FIM/DWO approved version. A copy of the software and documentation must be submitted to the Technical Director before it can be used.**

   ii. **Maximum retail price of the complete kit (hardware, software, sensors and wiring harness) cannot exceed €1500 Euro (VAT excluded). The sum price of the components individually cannot exceed €1650 (VAT excluded)**

   iii. **If any sensors are supplied as options, then the total price including ALL options must respect 2.9.9.3/r/ii).**

   iv. **The Data Logger system must be available for sale to the public. The datalogging system supplier must apply to the FIM for approval before January 31st.**

   v. **The system may only include following sensors:**

      1. **Fork position**
      2. **Shock position**
      3. **Front brake pressure switch (not pressure sensor)**
      4. **Transponder/Lap time signal**
      5. **GPS Unit (Lap timing and track position)**
      6. **Rear wheel speed (if not fitted to OEM machine)**

   vi. **The system may only log the following channels (by connecting to or "piggybacking" in the case of the original sensors unless noted otherwise):**

      1. **Fork position**
      2. **Shock position**
      3. **Front brake pressure switch (not pressure sensor)**
      4. **Lap time**
      5. **Rear wheel speed (allowed from K-Line)**
      6. **Engine RPM (allowed from K-Line)**
      7. **Throttle Position (allowed from K-Line)**
      8. **Water temperature (allowed from K-Line)**
      9. **Transponder/Lap time signal**
      10. **GPS Position/time/speed**

s. **Telemetry is not allowed.**

t. **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.**

u. **Harness:**

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

   ii. **Cutting and removal of excess and unused wiring in the original wiring harness is allowed. All connectors must remain as originally fitted. No wires may be added.**

iii. **DWO/FIM approved manufacturer Kit Harness is allowed.**

v. **Data logger Harness:**

i. **The Data Logger wire harness cannot connect any sensors other than those specified. The harness may connect to or "piggyback" the OEM sensors that it is allowed to log. The only function of the approved data logging wiring harness is to connect the specified sensors to the Data Logger, to transmit the data and supply the power. It CANNOT be connected to the motorcycles CAN bus but may be connected to the K-line only to receive signals noted in 2.9.9.3/r/vi).**

w. **To be approved samples of external modules with their tuning tools must be sent by the Manufacturers to the Technical Director at least 3 weeks before the beginning of the Championship, with technical data and selling price. The manufacturer must provide MotoAmerica with the tools to control the module.**

x. **Dashboard is free however it may only replace the functions of the standard dashboard (including switch logic and display) and may not perform any other logic function on the bike. It may incorporate the datalogger then it is part of the logging system and the "Supersport 300 datalogging kit" price limit will be applied to the whole system – not just to the logging option/upgrade in the dashboard, (the complete unit price will be considered). The dashboard may only display those channels noted in 2.9.9.3/r). There must remain a working tachometer display.**

y. **A lap timer may be fitted.**

z. **Plug cap must remain as homologated.**

aa. **Spark plugs may be replaced.**

bb. **Battery is free.**

2.9.9.4 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 the use a boost battery. No boost battery may be connected to the machine after the end of the session.

2.9.10 Main Frame

a. During the entire duration of the event, each rider can only use one (1) complete motorcycle, as presented for technical control, with the frame clearly identified with a seal.

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

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

i. Main frame **and swing-arm**

ii. Bearings (steering pipe, swing arm, etc.)

iii. **Rider controls (handle bars, rear sets, shift/brake linkage), front and rear mud guard.**

iv. Rear suspension linkage and shock absorber

v. Upper and lower triple clamps, **front forks, braking system and wheels.**

vi. Wiring harness, **ECU, dash associated electronics, throttles, airbox and associated cables.**

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

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

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

For a full explanation of the procedures see article 2.5.10

2.9.10.1 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 in 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: 30 mm). Without exception, the wheel axles cannot be modified.**

e. **The side stand bracket may be cut or removed.**

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

g. All motorcycles must display a vehicle identification number punched on the frame body (chassis number).

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

i. The front sub frame / fairing mount may be changed or altered.

j. The rear sub frame may be changed or altered, but the type of material must remain as homologated or be material of a higher specific weight.

k. 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.

l. The paint scheme is not restricted but polishing the frame body or sub frame is not allowed

2.9.10.2 Suspension - General

a. Participants in the Junior Cup class must only use the approved and listed suspension units for that season. The price limits are:

i. Forks: 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 €700 excluding tax.

ii. Shock Absorber/RCU: For the complete shock absorber / RCU including but not limited to spring (1 of), the price limit is €850 excluding tax. **The pre-load adjuster is free and excluded from 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. 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. Electronically-controlled suspension must be removed.

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

2.9.10.3 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 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.

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 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). 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.

d. A chain guard must be fitted in such a way as to reduce the possibility that any part of the riders' body may become trapped between the lower chain run and the rear wheel sprocket.

e. Rear wheel stand brackets may be added to the rear fork by welding or by bolts. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed. An anchorage system or point(s) to keep the original rear brake caliper in place may be added to the rear swing-arm.

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

2.9.10.5 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 no modification allowed.

c. Removable top shock mounts must be the originally fitted and homologated parts with no modification allowed. A nut may be made captive on the top shock mount and shim spacers may be fitted behind it to adjust ride height.

d. Rear suspension unit and spring may be changed.

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. Non-floating or single piece discs may be replaced with floating discs. The disc carrier must be the same material as the homologated carrier, steel or aluminum.

   iii. The outside and inner diameters of the brake disc must not be larger than the homologated disc.

   iv. The fixing of the carrier on the wheel must remain the same as on the homologated disc.

   v. 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.

b. The front and rear brake calipers (mount, carrier, hanger) must be the originally fitted and homologated parts with no modification allowed.

c. In order to reduce the transfer of heat to the hydraulic fluid it is permitted to add metallic shims to the calipers, between the pads and the calipers, and/or to replace light alloy pistons with steel pistons made by the same manufacturer of the caliper.

d. The rear brake caliper bracket may be mounted fixed on the swing-arm, but the bracket must maintain the same mounting (fixing) points for the caliper as used on the homologated motorcycle.

e. The swing-arm may be modified for this reason to aid the location of the rear brake caliper bracket, by welding, drilling or by using Helicoils.

f. The front and rear master cylinders must be the originally fitted and homologated parts with no modification allowed.

g. Front and rear brake fluid reservoirs may be changed.

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

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

j. "Quick" (or "dry-break") connectors in the brake lines are not allowed.

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

l. Additional air scoops or ducts are not allowed.

m. If equipped the anti-lock brake system (ABS) must be removed. **The ABS units electronic board may remain fitted to stop ECU errors.**

2.9.10.8 Handlebars and hand controls

a. Handlebars may be replaced (except for the brake master cylinder).

b. Handlebars and hand controls may be relocated.

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

d. 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. 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. Clutch and brake lever may be replaced with an after-market model. An adjuster to the brake lever is allowed.

f. Switches may be changed but the electric starter switch and engine stop switch must be located on the handlebars.

g. Motorcycles must be equipped with a functional ignition kill switch or button mounted on the right-hand handlebar (within reach of the hand while on the hand grips) that is capable of stopping a running engine. The button or switch must be RED.

2.9.10.9 Foot rest / Foot controls

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

b. Foot controls; gear shift and rear brake must remain operated manually by foot.

c. Foot rests may be rigidly mounted or a folding type which must incorporate a device to return them to the normal position.

d. The end of the foot rest must have at least an eight (8) mm solid spherical radius. (see diagram A & C).

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

2.9.10.10 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 (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 250cc made of a suitable material.

d. Fuel caps may be changed. Fuel caps when closed must be leak proof. Additionally, they must be securely locked to prevent accidental opening at any time.

e. A rider spacer/pad may be fitted to the rear of the tank with non-permanent adhesive. It may be constructed of foam padding or composite material.

f. The tank may not have a **full** cover fitted over it 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 **vinyl or** a composite material. These covers must **follow** the shape of the fuel tank **exactly**.

h. **Fuel tank cannot have heat reflective sheet attached to its bottom surface.**

2.9.10.11 Fairing / Bodywork

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

b. **For all bodywork paint and decal design is free.**

c. Overall size and dimensions must be the same as the original part, with a tolerance of ± 5 mm, respecting the design and features of the homologated fairing as far as possible. The overall width of the frontal area may be +5 mm maximum. The decision of the Technical Director is final.

d. **The wind screen may be replaced.**

e. Fairing brackets may be altered or replaced.

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

g. The original air ducts running between the fairing and the air box may be altered or replaced. Carbon fiber composites and other exotic materials are forbidden. Particle grilles or “wire-meshes” originally installed in the openings for the air ducts may be removed.

h. The lower fairing must be constructed to hold, in case of an engine breakdown, a minimum of four (4) liters. The lower edge of all the openings in the fairing must be positioned at least 70 mm above the bottom of the fairing.

i. The upper edge of the rear transverse wall of the lower fairing must be at least 70 mm above the bottom. The angle between this wall and the floor must be ≤ 90°.

j. Original openings for cooling in the lateral fairing/bodywork sections may be partially closed only to accommodate sponsors' logos/lettering. Such modification shall be made using wire mesh or perforated 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%.

k. Motorcycles may be equipped with a radiator shroud (inner ducts) to improve the air stream towards the radiator but the appearance of the front, the rear and the profile of the motorcycle must not be changed.

l. The lower fairing must incorporate a single opening of Ø 25 mm diameter in the front lower area. This hole must remain sealed in dry conditions and must be opened only in wet race conditions as declared by the race director.

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

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

2.9.10.12 Seat

a. The seat, seat base and associated bodywork may be replaced

b. The appearance from the front, rear and profile must conform to the homologated shape

c. The top portion of the rear bodywork around the seat may be modified to a solo seat.

d. The homologated seat locking system (with plates, pins, rubber pads etc.) may be removed.

e. The same material as the fairing must be used (article 2.9.10.11.a)

f. All exposed edges must be rounded.

2.9.10.13 Rear safety light

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

a. Lighting direction must be parallel to the machine center line (motorcycle running direction) and be clearly visible from the rear at least 15 degrees to both the left and right sides of the machine center line.

b. The rear light must be mounted near the end of the seat/rear bodywork, and approximately on the machine center line, in a position approved by the Technical Director. In case of dispute over the mounting position or visibility, the decision of the Technical Director will be final.

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

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

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

f. The Technical Director has the right to refuse any light system not satisfying this safety purpose.

2.9.10.14 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 be equal to or exceed the strength of the standard fastener.

b. Fasteners may be drilled for safety wire, but intentional weight-reduction modifications are not allowed.

c. Thread repair may be made using inserts of different material such as Helicoils and Timeserts.

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

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

2.9.11 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. Painted external surface finishes and decals.

d. 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.

e. 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.

2.9.12 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. **Bolt-on accessories on a rear sub-frame or rear portion of the frame.**

2.9.13 The following items MUST BE removed

a. Headlamp, rear lamp and turn signal indicators (when not incorporated in the fairing). Openings must be covered by suitable materials.

b. Rear-view mirrors

c. Horn

d. License plate bracket

e. Toolkit

f. **The following if not welded to the frame:**

   i. Helmet hooks and luggage carrier hooks

   ii. Passenger foot rests

   iii. Passenger grab rails

g. Safety bars, center and side stands must be removed (fixed brackets must remain **excepting side stand bracket**).

2.10 FUEL, OIL AND COOLANTS

2.10.1 Fuel

a. The designated fuel is VP Racing Fuels MGP.

b. No other additives or fuels are permitted for use**.**

2.10.1.2 Fuel technical details

a. Fuel physical properties are:

Color	Yellow
Specific Gravity	0.753 @ 60F/ 15.6C
MON	88
RON	101
R+M/2	94.5
RVP	7.98psi/55kpa
Oxygen Content	2.56% by weight
Oxygenated	Yes
Oxidation Stability (MIN)	1440+
Distillation	37.1% evap @ 158F/70C 47.2% evap @ 212F/100C FBP @ 310.5F/157.3C
H:C Ratio	1.89
O:C Ratio	0.01
Stoichiometric Ratio	14.38

2.10.3 Air

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

2.10.4 Primary tests

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

2.10.4.2 The fuel company supplying fuel to participating teams must submit ten (10) liters (2 x 5 L) to the laboratory appointed by the AMA/FIMNA for analysis in accordance with the specification. Provided that the fuel is within the specification, a certificate containing a test report number will be issued to the fuel company. The contact for fuel analysis is: technicaldirector@motoamerica.com

2.10.5 Fuel sampling and testing

a. The Technical Director has the sole responsibility for the administration and supervision during the taking of 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 is 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. If other test methods are required, fuel samples will be transported to the 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 bottles will be closed, sealed and labelled by the Technical Director and/or the fuel analysts.

g. The fuel sample declaration form will be filled out immediately, containing all information as shown on the sample sheet including the rider's name and race number, date and location of fuel sampling. A responsible team member will sign this declaration after verifying that all the information is correct.

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. Costs for the analyses of samples A and B will be paid by MotoAmerica.

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

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

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

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

m. The Race Direction will take a decision at the Superbike, Supersport, Junior Cup, Twins Cup and Stock 1000 event immediately following the notification of the results of the final expertise. Any appeal against the decision of the Race Direction will be heard by the FIMNA stewards appointed for the Superbike, Supersport, Junior Cup, Twins Cup and Stock 1000 event at which the Race Direction decision is taken. The decision will take place after the C sample has been analyzed.

2.10.6 Fuel storage

a. Fuel must only be stored in metal, sealable containers in the competitors' pit.

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

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

2.10.7 Coolants

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

AMA / FIM NORTH AMERICA ROAD RACING
FUEL SAMPLE DECLARATION FORM

DATE FUEL SAMPLES TAKEN
FOR LAB ANALYSIS ….. /….. / …..

RIDER #:

_____

SESSION:

_____

RIDER NAME:

_____

Sample Can "A"	
Can Label #	Can Seal #

Sample Can "B"	
Can Label #	Can Seal #

Sample Can "C"	
Can Label #	Can 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 60 minutes pending any protest.

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

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

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

(print Name): _____

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

Time: Signature: _____

Team Position: _____
(OWNER/MANAGER/MECHANIC)

2.11 PROTECTIVE CLOTHING AND HELMETS

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

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

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

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

2.11.5 Use of a back protector is highly recommended.

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

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

- Europe ECE 22-05 ‘P’
- Japan JIS T 8133:
- USA SNELL M2015, **M2020D and M2020R**
- FIM FRHP (Circuit Racing Certification)

2.11.8 All helmets used by season riders in competition must be equipped with either a manufacture 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 manufacture does not have an incorporated emergency cheek pad removal device. If used, riders will be responsible for ensuring that the Eject device is properly installed and operable during all on-track activities. The inflation tube must exit at the left chin bar. Riders must attach the provided Eject logo installed on the helmet's left chin bar. Helmets with a manufacture installed emergency cheek pad removal system must have either manufacture labeling on both chin bars or labeling provided MotoAmerica.

2.11.9 Visors must be made of a shatterproof material.

2.11.10 Disposable "tear-offs" are permitted.

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

2.11.12 Any question concerning the suitability or condition of the riders clothing and/or helmet shall be decided by the Technical Director, who may, if he so wishes, consult with the manufacturers of the product before making a final decision.

2.12 PROCEDURES FOR TECHNICAL CONTROL

A rider is at all times responsible for his motorcycle.

2.12.1 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. The gates and the area are under the control of marshals when the parc fermé is in use (e.g. after practice/qualifying/race).

   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 staying in the parc fermé

   vi. Up to two (2) team mechanics until dismissed by the technical stewards

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

2.12.1.1 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

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

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

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

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

2.12.6 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.

2.12.7 The Technical Director will refuse any motorcycle that does not have an operational transponder and team radio (listen only).

2.12.8 At the conclusion of the check, the technical stewards will place a sticker on the motorcycle indicating that it has passed the safety checks.

2.12.9 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.

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

2.12.11 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 inspection of a motorcycle following a protest on a technical matter.

2.12.12 At the end of the qualifying, qualifying practices, superpole and races, the Technical Director will ensure that all classified motorcycles are placed in the parc fermé for a period of at least 30 minutes from the end of the 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 hot pit when the session ended, work to the machine must be stopped (including data download) and the machine must be taken to parc fermé immediately.

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

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

2.12.14 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 together with helmet and clothing.

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

2.12.15 Noise may be checked at any time of the event by request of the Technical Director. On request of rider, team or mechanic, noise of their own motorcycles can be checked at any time during the event.

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

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

2.12.17 The parc fermé session may be reduced to 15 minutes and/or be held in hot pit if time constraints deem it necessary. A shortened parc fermé session will be referred to as quick parc fermé. The decision will be made by the Technical Director and posted before the start of the session. In the case that quick parc fermé is imposed the time limit for protests will also be modified (see art. 3.4.2)

2.13 VERIFICATION GUIDELINES FOR TECHNICAL STEWARDS

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

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 for pre-race checking in the technical control area.

2.13.1.1 In general

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

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

c. The riders and teams must be aware that the weight and noise may be checked at random during practice or qualifying in the pit-lane, at the end of Superpole 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 pit row during any timed session. This can occur at any time during a free practice and in the first two-thirds (2/3) of any qualifying session. This 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. At the conclusion of the inspections, the results will be recorded electronically indicating that the motorcycle has passed or failed the inspection

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

h. The technical stewards must be available, based on instructions from the Technical Director or the technical manager, to re-inspect any motorcycle for compliance during the meeting.

2.13.1.2 Dry Superpole

a. Each motorcycle that participated in Superpole may be checked.

b. The minimum checks are weight and noise.

c. The Technical Director may request other checks.

2.13.1.3 Superbike Race 1

a. The first five (5) motorcycles plus one (1) at random from six through fifteen (6-15) can be checked for the following compliance points:

   i. Weight: The weight will be checked in the condition that the motorcycle has finished the race. No elements can be added to the motorcycle: this includes fuel, oil, water and tires.

   ii. Noise

   iii. Throttle bodies / injection: Homologation points

   iv. Tire, fuel, air box and electric starter: Compliance

b. The Technical Director may request other checks.

2.13.1.4 Superbike Race 2

a. The first ten (10) motorcycles plus one (1) at random from eleven through fifteen (11-15) can be checked for the following compliance points:

   i. Weight: The weight will be checked in the condition that the motorcycle has finished the race. No elements can be added to the motorcycle: includes fuel, oil, water and tires.

   ii. Noise

   iii. Throttle bodies/injection: measurement and inspection of both inlet and outlet tract. (homologation points)

   iv. Tire, fuel, air box and electric starter: compliance

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

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

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

d. The Technical Director may request other checks.

2.13.1.5 Supersport 600/ Stock 1000/ Twins Cup /Junior Cup qualifying and races

a. The first ten (10) motorcycles plus one (1) at random from eleven through fifteen (11-15) can be checked for the following compliance points:

   i. Weight: the weight will be checked in the condition that the motorcycle has finished the qualifying or race. No elements can be added to the motorcycle: this includes fuel, oil, water and tires.

   ii. Noise

   iii. Throttle bodies/injection: measurement and inspection of both inlet and outlet tract.

   iv. Engine: one (1) engine and up to a maximum of five (5) engines, chosen at random, can be checked internally for capacity, cams, valve size, timing, etc.

   v. Tire, fuel, air box and electric starter: compliance

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

2.13.2 Timetable

The technical stewards must be present and available during the opening hours of the technical control area. 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.

2.13.3 Equipment list

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

2.13.4 Documents list

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

2.14 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 2.14.5 may be used.

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

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

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

2.14.4 The rider shall keep his engine running out of gear and shall increase the engine speed until it reaches the specified revolutions per minute (RPM). Measurements must be taken when the specified RPM is reached.

2.14.5 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.

2.14.6 Sound control after the competition

a. In a competition which requires a final examination of motorcycles before the results are announced, this examination must include a sound control measurement of at least the first three (3) motorcycles listed in the final classification.

b. At this final test, there will be a three (3) dB/A tolerance.

2.14.7 Noise control during a competition

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

2.14.8 Guidelines for use of sound meters

a. The technical stewards must arrive in sufficient time for discussions with the Technical Director and other technical stewards in order to agree upon a suitable test site and testing policy.

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

c. Two (2) sets of equipment must be available in case of failure of tachometer, sound level meter or calibrator during technical control.

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

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, that is: 110.9 dB/A = 110.9 dB/A.

2.14.9 Corrections

a. Type 1 meter: deduct one (1) dB/A

2.14.10 Precision of the method (tolerances)

a. All corrections are accumulative.

b. Action and decisions will depend on the sporting discipline concerned, and decisions taken during prior discussions with the Technical Director.

2.15 APPROVED NUMBER FONTS

Futura Heavy

0123456789

Futura Heavy Italicy

0123456789

Univers Bold

0123456789

Univers Bold Italic

0123456789

Oliver Med.

0123456789

Oliver Med. Italic

0123456789

Franklin Gothic

0123456789

Franklin Gothic Italic

0123456789

2.16 HOMOLOGATION

MotoAmerica homologation procedures will follow the requirements of the FIM homologation rules for Superbike, Superstock, Supersport and Junior Cup.

2.16.1 MotoAmerica Twins Cup homologation procedures will follow the requirements of MotoAmerica.

2.16.2 For the complete homologation rule go to:

www.fim-live.com/en/library/download/60181/no_cache/1/

2.16.3 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 Junior Cup: 8 years

   iii. Twins Cup: 20 years*

   iv. or until such time that the homologated motorcycle no longer complies with the technical rules.

b. A homologation will be granted only if the fee has been paid.

c. 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.

DISCIPLINARY AND ARBITRATION CODE

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3.0 DISCIPLINARY AND ARBITRATION CODE

3.1 PRINCIPLES

The obligations incumbent upon the participants, officials and organizers are set out in these Regulations. Violations or non-observance of these obligations will be subject to the penalties laid down in this chapter.

3.2 PENALTIES

The penalties are:

- warnings
- fines
- penalty points
- drop of position
- ride through
- time penalties
- grid penalty
- disqualification
- points loss (withdrawal of Championship points)
- suspension
- exclusion

3.2.1 Definition and application of penalties

Warnings:	Can be made privately or publicly.
Penalty points:	May be imposed by Race Direction on a rider in any number from 1 to 10, points are cumulative and expire after a period of 365 days from the date they were imposed. Automatic sanctions apply to a rider accumulating points as follows: • 4 Points - Start the next race from last grid position. • 7 Points - Start the next race from pit lane. • 10 Points - Disqualification from participation at the next event (or from the race results if this occurs at the last event of the season). Points re-set to 0 after a rider reaches 10 points and serves a serves a disqualification.
Fines:	Cash penalty up to 10,000 USD
Drop of Position:	The rider must go back the number of positions decided by the Race Direction.
Ride through:	See Art. 1.24
Time penalties:	The imposition of time affecting the rider's actual result up to 2 minutes and the cancellation of time.
Grid penalty:	The imposition of a drop of any number of grid positions or the imposition of starting the race from the pit exit at the rider's next race.
Disqualification:	Disqualification from an event, practice sessions (black flag, black flag with orange disc), race (black flag, black flag with orange disc) or from its results.
Points loss:	The loss of points from the Championship races already run.

Suspension:	The loss of rights to participate in the Championship may be applied to one or more races.
Exclusion:	The final and complete loss of all rights of participation in any activity under FIMNA or AMA control.

3.2.2 Plurality of Penalties

Any offender may have several penalties pronounced against him according to the circumstances.

3.3 THE DISCIPLINARY AND ARBITRATION BODIES

The disciplinary and arbitration bodies of FIM North America, qualified to deal with disciplinary and arbitration matters, are:

- The Race Direction
- The FIM North America Stewards
- The Permanent Bureau
- The Court of Arbitration for Sports (CAS)

3.3.1 The Race Direction

3.3.1.1 Composition

The Constitution of the Race Direction is in accordance with the requirements laid down in Article 1.6.

3.3.1.2 Authority and Competence

The Race Direction has the authority to penalize riders, teams' personnel, officials, promoters, organizers and all the persons involved in any capacity whatsoever in an event or in the Championship for infringements of the Regulations, including the following:

- Any voluntary or involuntary action or deed accomplished by a person or a group of persons during a meeting, contrary to the current regulations or instructions given by an official of the meeting.
- Any corrupt or fraudulent act, or any action prejudicial to the interests of the meetings or of the sport, carried out by a person or a group of persons occurring during an event.
- Having been unable to ensure the smooth and efficient running of the event or for serious breaches of the Regulations.

The Race Direction is competent to adjudicate upon a protest relating to infringements of the regulations.

3.3.1.3 Penalties that may be pronounced by the Race Direction

a. The following penalties may be pronounced by the Race Direction:

- penalty points
- warnings
- fines
- drop of position
- ride through
- time penalties
- grid penalty
- disqualification
- points loss (withdrawal of Championship points)

- suspension

b. Hearings should be held (if applicable) and penalties issued immediately after the session if practical. If not practical, the parties involved should be notified that an incident is under review immediately after the session. The notification must take place no later than the same calendar day.

3.3.2 The FIM North America Stewards Panel

3.3.2.1 Composition

The Composition of the FIMNA Stewards Panel is in accordance with the requirements laid down in Article 1.7.

3.3.2.2 Competence

The FIM North America Stewards Panel will hear any appeals against decisions taken by the Race Direction.

3.3.2.3 Penalties that may be pronounced by the FIMNA Stewards Panel only following an appeal:

- fines
- warnings
- time penalties
- grid penalty
- disqualification
- points loss (withdrawal of Championship points)
- suspension

3.4 PROTESTS AND APPEALS

3.4.1 Right of protest

a. Unless specifically excluded herein, any rider affected by dangerous, unfair or fraudulent behavior, riding or act, has the right to protest against such a behavior, riding or act. Such matters may also include the conformity of a machine with these rules or the eligibility of a rider.

b. There are two types of protests: technical and administrative. Technical protests relate to the legality of motorcycles and components used in competition. All other protests will be defined as administrative.

3.4.2 Procedure and time limit for protests

All protests must be submitted and signed only by the person directly concerned. Each protest must refer to a single subject only and the intention to protest must be notified to Race Direction within 30 minutes of the publication of the results.

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

Protests must be handed to a responsible official (Race Director or any member of Race Direction) together with the security deposit of 750 USD or equivalent, returnable if the protest is justified.

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

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

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

If the protest entails dismantling a motorcycle, the protest fee must be accompanied by an additional deposit of US $200. This fee must be paid by the losing party to the mechanic of the rider who had to perform the dismantling procedure.

Following race one of a double header that takes place on the same day, the intention to protest other riders for technical reasons must be submitted within 15 minutes of the end of the race. For sporting protests the time limits remain as above.

If the “quick parc fermé” procedure takes place the intention to protest other riders for technical reasons must be submitted within 15 minutes of the end of the session. For sporting protests, the time limits remain as stated above.

3.4.3 Hearing of a protest

After a hearing, the Race Direction must make a decision on any protest presented. The protest has to be judged according to the provisions of the Regulations.

3.4.4 Effect of the decision upon a protest

The decision of the Race Direction and determination of penalty is immediate.

3.4.5 Right of appeal to the FIM North America Stewards against a decision of the Race Direction

No appeal may be lodged against a decision entailing or not:

- a change of position.
- a time penalty given in lieu of either: a ride through penalty or a change of position penalty.
- a ride through.
- a disqualification from the practice sessions or races by means of a black flag or black flag with orange disc.
- a fine for speeding in the pit lane **or a practice start violation**.
- a photo finish.

When no appeal may be lodged the decision of the Race Direction is final.

3.4.6 Right of appeal to the MotoAmerica Permanent Bureau against a decision of the FIM North America Stewards

No appeal may be lodged if the FIM North America Stewards confirm the previous decision of the Race Direction. In this case, the decision of the FIM North America Stewards is final.

3.4.7 Right of appeal to the Court of Arbitration for Sport (CAS) against a decision of the MotoAmerica Permanent Bureau

No appeal may be lodged against a decision entailing or not:

- a drop of position.
- a ride through.
- a disqualification from the practice sessions or races by means of a black flag or black flag with orange disc.
- a fine for speeding in the pit lane.
- a photo finish.

The decision of the CAS is final.

3.4.8 All rules herein may be appealed in accordance with the procedure stated in the MotoAmerica AMA Road Racing Series FIM North America Championship Regulations except for those rules that the regulations specify may not be appealed. The participants recognize the need for officials to make decisions that require judgment and the exercise

of discretion, often instantaneously, with events as they are occurring. The exercise of judgment by the officials during an event with respect to any penalty or lack of penalty shall only be appealable in accordance with the regulations. By submitting an application to participate in an AMA FIM North America sanctioned MotoAmerica event, and in consideration of receiving the numerous benefits available, each participant agrees that the final and binding decisions of the officials are non-litigable, and shall not be appealable to any court or other tribunal other than the AMA or FIM North America. The participants to any protest or appeal further agree that the protest and appeal procedures provided for in the MotoAmerica AMA Road Racing Series FIM North America Championship Regulations are the exclusive remedy for the resolution of any disputes and renounce the right to, and shall not pursue, recourse to any arbitrator, court or other tribunal not provided for in the MotoAmerica AMA Road Racing Series FIM North America Championship Regulations. No court action of any kind may be taken by any participant. By reason of participation in an event, each participant waives any rights such participant may otherwise have to be a party to or take any action in court seeking legal or equitable relief against any decision, lack of decision or action of any kind by the officials or anyone acting on their behalf or the appeal panel. Each participant acknowledges that participation in an event by other participants is, in part, on reliance on this waiver. If a participant initiates or participates in litigation in violation of this rule, all participant privileges may thereupon be suspended and subject to disciplinary action deemed warranted by the AMA or FIM North America.

3.4.9 Time limits for the lodging of an appeal

The time limit for lodging a statement of appeal is:

against a decision of the Race Direction	30 minutes
against a decision of the FIM North America Stewards	1 hour
statement of appeal before the CAS	5 days

The time limits shall be taken from the date and time of receipt of the decision by the appellant.

3.4.10 Lodging of an appeal

To be admissible, the statement of appeal must be submitted in writing (appeal before the FIM North America Stewards) or, sent by registered letter, special courier or email to the AMA/FIM North America to be forwarded to the MotoAmerica Permanent Bureau. It is the appellant's responsibility to assure receipt of the appeal within the time limits.

The correct security deposit for appeal must be handed to FIM North America Chief Steward for an appeal before the FIM Stewards or paid to FIM North America for an appeal to the MotoAmerica Permanent Bureau.

3.4.10.1 Security deposit for appeals

The amount of the security deposit is 1,500 USD.

Teams and riders contracted to compete in the Championships may submit a letter of guarantee.

Within 10 days following the statement of appeal before the MotoAmerica Permanent Bureau, the appellant assigns to FIM North America a brief of appeal stating the facts.

If the appeal was not lodged and/or the security deposit for the appeal was not paid within the deadline specified in article 3.4.9, the appeal will be declared inadmissible without hearing.

3.4.10.2 Security deposit payable upon an adjournment

If an adjournment to call further witnesses is ordered upon the request of one of the parties involved, this party must provide an additional financial guarantee within a time limit to be fixed by the disciplinary body. The hearing will not be continued until this guarantee has been paid. In case of no provision of the guarantee within the time limit, the disciplinary body will make a determination on the appeal based on the evidence of the original witness.

3.4.10.3 Time limits to be observed for appeal hearings

The FIM North America Stewards must be convened to examine an appeal immediately after the brief of appeal is received. The FIM North America Stewards must in all cases announce a decision immediately following the hearing of the appeal.

The MotoAmerica Permanent Bureau must be convened to examine an appeal not later than 6 weeks after the brief of appeal is received.

3.4.11 Effect of an appeal

On request of the appellant, the FIM North America Stewards Panel may decide a stay of the provisional execution adjudicated by the Race Direction by injunction or in its decision.

On request of the appellant, the MotoAmerica Permanent Bureau may decide a stay of the provisional execution adjudicated by the FIM North America Stewards Panel by injunction or in its decision.

3.5 DISCIPLINARY PROCEDURES

3.5.1 Right to a hearing

It shall be the unquestionable right of any person or body charged with any offense under the Regulations to defend themselves, either in person or by proxy.

Any party convened before a disciplinary or arbitration body has the right to be represented by one defense counsel of its own choice and at its own expense. Adequate notice of this intention must be given in order that this may also be notified to all other parties in the case. Failure to do so may result in the disciplinary or arbitration body upholding an objection to such representation.

If any of the parties duly convened do not appear, judgment can be rendered by default.

The disciplinary or arbitration bodies may decide that the hearing take place by means of a telephone conference call or through any other means of communication using a telephone or electronic device. Such a method of conducting a hearing shall only take place with the consent of all parties involved**.**

3.5.2 The Hearing

The hearing shall be public unless the disciplinary or arbitration body itself decides otherwise in exceptional circumstances.

The hearing shall be conducted in English. Should one of the parties wish to use another language, it shall provide the necessary interpreters at its own expense.

The appellant must be present or duly represented, failing which, the protest will not be admissible and the costs shall be borne by the appellant.

Once the proceedings have begun, each of the parties involved will state their respective cases without the witnesses being present.

After statements of the parties concerned, the disciplinary or arbitration body shall hear the various witnesses and experts in order to complete the evidence. The parties involved in the case shall have the right to question all witnesses and experts on their evidence.

Any member of the disciplinary or arbitration body may, at any time during the hearing question any of the parties involved, the witnesses and experts.

3.5.3 Witnesses and Experts

Each party is responsible for the convening and appearance of its own witnesses, as well as their expenses unless decided otherwise by the Court.

The disciplinary or arbitration body has no authority to oblige the witnesses to swear on oath; therefore, testimony shall be given freely. The witnesses may only testify to the facts they know and shall not be allowed to express an opinion, unless the disciplinary or arbitration body should regard them as experts on a particular subject and should ask them to do so. After having made their statements, the witnesses may not leave the room and shall not be allowed to speak to any other witness who has to give evidence.

The arbitration body may summon experts.

3.5.4 Judgment

Decisions of all disciplinary or arbitration bodies will be reached by a simple majority of votes. All members will have equal voting rights which must be exercised when a decision is required. Abstention is not permitted.

Each member of the disciplinary or arbitration body binds himself to keep all deliberations secret.

3.5.5 Notification of Judgments

The decisions of the Race Direction or of the FIM North America Stewards must be notified directly at the event venue, or failing that, addressed by registered letter with acknowledgement of receipt. All judgments of the MotoAmerica Permanent Bureau must be notified, in writing, by registered letter with acknowledgement of receipt in order to inform all parties concerned.

3.5.6 Publication of Judgments

The disciplinary or arbitration body imposing a penalty or adjudicating a protest or an appeal must have its findings published and quote the names of all parties concerned. The persons or bodies quoted in these statements have no right of action against FIM North America nor against any person having published the statement.

Furthermore, final decisions will be published in the media center unless the arbitration body itself decides otherwise.

3.6 COSTS OF PROCEDURE

The costs of a disciplinary or arbitration decision will be assessed by the FIMNA and will be awarded against the losing party, unless the arbitration body decides otherwise.

3.6.1 Payment of fines and costs

If the penalty is definitive, all fines and costs must be paid to FIM North America within 30 days of notification of the judgment decision according to Article 3.5.5. The person or body affected by the decision shall be automatically suspended from participation in all FIM North America and AMA activities, until such time as full payment has been received.

3.7 LAW OF MERCY

FIM North America, after consultation with the MotoAmerica Bureau may mitigate or completely forgive the penalty of a person or group of persons after having exhausted all the appeal procedures.

3.8 ARBITRATION CLAUSE

Final decisions made by the disciplinary bodies (exception art. 3.4.4) may be submitted exclusively to the Court of Arbitration for Sport by way of appeal within the time limit as laid down in article 3.4.9, which shall have exclusive authority to impose a definitive settlement in accordance with the Code of Arbitration applicable to sport.

FIM North America Appeal Form

When filling in this form, please give details concerning, the identity of the person(s) concerned, his/her function (rider, FMN, entrant, manufacturer, official, starting and/or licence number, etc), as well as References to Rules, Articles, etc.

Event: _____

Venue: _____

Session: _____

Date: _____ **Time:** _____

Decision being appealed: _____

Rider or Team Manager: _____

Rider or Team Manager Signature: _____

FIM North America Stewards Panel

FIM North America Chief Steward: _____

FMNR Steward: _____

Other Participants

Name / First name: _____

Position: _____

Name / First name: _____

Position: _____

Reasons:

FOR FIMNA USE / To be completed by the FIMNA Chief Steward

☐ **Appeal** ☐ **Hearing ex officio**

Date of appeal: _____ **Time of appeal:** _____

Appeal letter added to the decision of the FIMNA Stewards Panel ☐ **Yes** ☐ **No**

Appeal fee paid 1,500 USD ☐ **Yes** ☐ **No**

Appeal fee guaranteed by MotoAmerica: ☐ **Yes** ☐ **No**

MotoAmerica Signature: _____

4.0 CIRCUIT STANDARDS

Circuit standards will be guided by the “FIM STANDARDS FOR ROAD RACING CIRCUITS" (SRRC).

MEDICAL CODE

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5.0 MEDICAL CODE

5.1 INTRODUCTION

This Medical Code prescribes the Medical Service available for the competitors and their teams during an AMA FIM North America MotoAmerica event. The intent of this Medical Code is to help insure that any medical emergency can be met with all of the necessary skilled resources and treatments to prevent possible mortality and minimize morbidity. This Medical Code is modeled after the FIM Road Racing Medical Code.

5.2 MEDICAL PANEL

A Medical Panel shall be authorised by MotoAmerica and comprise as a minimum the series Chief Medical Officer (CMO), the Race Director and one (1) MotoAmerica representative. The Medical Panel will set the conditions for the medical service at events.

5.3 MEDICAL SERVICES

The medical service at an event shall comprise of two (2) parts; the track medical service and the public medical service.

a. The Track Medical Service (TMS) shall provide medical cover and pre- hospital trauma care to riders injured during the event. The TMS shall also provide appropriate assistance to riders, officials and other authorised persons injured or taken ill during the event.

b. The venue operator shall provide a Public Medical Service (PMS) for the public, contractors, guests and all other visitors on-site. Personnel and equipment for the PMS are strictly separate from the TMS.

   1. The PMS is not described in this code but shall conform to any regulations or guidelines published by the relevant authority and reflect the size of crowd expected.

   2. The co-ordinator of the Public Medical Service shall be in direct contact with and answerable to the Chief Medical Officer (CMO).

c. Only the CMO in conjunction with Race Direction may make statements to any third party, other than immediate relatives, about the condition of injured riders.

d. The basic AMA FIM North America MotoAmerica Medical Services will be comprised of:

   1. Medical Intervention Vehicles

   2. Advanced Life Support (ALS) Ambulances

   3. Medical Center

5.4 CHIEF MEDICAL OFFICER (CMO)

The CMO shall be a Doctor with full, restriction-free, registration and a licence to practice from the jurisdiction in the state of the event. They shall hold personal medical indemnity insurance and have informed their insurer of their current practice.

The CMO coordinates medical decisions with Race Direction as necessary.

The Series CMO and the Event CMO may be the same person.

5.5 CHIEF MEDICAL OFFICER DUTIES

5.5.1 Chief Medical Officer Duties – Pre-Event

The pre-event duties of the CMO shall include as follows:

a. The CMO shall have a list of appropriate hospitals in the vicinity of the event with contact numbers and details of specialist services.

b. At least thirty days prior to the event, the venue operator shall contact all appropriate local hospitals to give information concerning the event including dates and times of practice and racing and estimated size of crowd.

c. The above information shall be available, in writing, to Race Direction prior to the first official practice session of the event.

d. The CMO shall brief the medical centre, vehicle and trackside medical staff to be fully prepared prior to the start of the first practice session of the event.

e. The CMO in consultation with the Race Direction is responsible for the deployment of Doctors and Paramedical staff alongside the circuit.

f. The CMO together with Race Direction shall inspect the deployment of the Track Medical Services approximately twenty minutes before the start of track activities on each day of the event.

5.5.2 Chief Medical duties – During Event

The duties of the CMO during the event shall include as follows:

a. The CMO shall have executive responsibility for all medical services during the event.

b. The CMO, together with Race Direction, shall prepare a list of injured riders.

c. The CMO shall ascertain whether riders fallen during the event are fit, at his/her discretion. Riders who fall in the first part of an interrupted race shall be examined before the re-start. Any riders who fall during the event and who refuse a medical examination shall be added to the list of unfit riders.

d. The CMO shall attend meetings of the Event Management at the request of the Race Director.

e. The FIM North America Safety Officer is responsible for all matters of safety and will take responsibility for the investigation of any incident, liaising with all concerned including the CMO.

5.5.3 Chief Medical Officer duties – Post Event

The post-event duties of the CMO shall include as follows:

a. The CMO, together with Race Direction, shall prepare a list of unfit riders.

b. The FIMNA Stewards or their representative, in conjunction with the CMO and Race Direction will complete the incident statistics form for presentation at the Event Management meetings.

c. The CMO shall ensure that a room, suitably private, shall be made available for any drug testing that may be requested.

d. The CMO shall inform Race Direction of the condition of injured riders under his/her care, and keep the information updated in the period following the event.

e. Media statements will not be made about the condition of an injured rider without the express agreement of the CMO and Race Direction.

5.6 PROCEDURE IN THE EVENT OF AN INJURED RIDER

The management of an injured rider is under the control of the CMO.

5.7 MEDICAL PERSONNEL AND EQUIPMENT

The Medical Panel will set the conditions for the Track Medical Service at events including numbers of doctors and paramedics, number of medical cars and ambulances. The Track Medical Service shall be separate to the Public Medical Service.

a. Individual medical staff must be suitably clothed and carry equipment for initiating resuscitation. Doctors and Paramedics working trackside or in medical cars must be identified by wearing a red safety protection suit with the word DOCTOR or PARAMEDIC written in red on the rear of the suit.

b. Supporting trackside staff including medical car drivers and authorised trainee/assessing persons must equivalent protective clothing suitably marked with DRIVER or OBSERVER. The organizer may provide protective clothing for the medical team.

c. Ambulance personnel will be identified in the uniform of the organization they are appointed by.

5.7.1 Medical Personnel

a. Doctors shall hold full, registration and a licence to practice from the government agency that has jurisdiction for the event location. They may not be restricted to working within an approved practice setting. Any other licence restriction must be communicated to the Medical Panel and will be considered on an individual basis. The doctors shall also hold personal indemnity insurance and have informed their insurer of their current practice.

b. Paramedics shall be registered as 'Paramedic' with the government agency that has jurisdiction for the event location. The Medical Panel may judge a paramedic to be eligible on provision of evidence of continuing education and maintenance of standards. The paramedics shall have indemnity insurance either in the form of a personal policy or provided by the event organizer.

5.7.2 Vehicles

The number, type and track position of the vehicles will be decided by the Medical Panel in conjunction with the Race Director.

5.7.2.1 Medical Intervention Vehicle

a. This high performance vehicle will be staffed with a local physician or paramedic, as well as a driver familiar with the lay out of the course, all access roads and gates. The Rapid Intervention Vehicle will have radio communication with Race Control and will be positioned so that a rapid response is possible to any section of the track. It will be equipped with advance trauma and airway management equipment. This vehicle will be deployed by the Race Director in the event of a Red Flag during a session, supporting the trackside ambulance in incidents that suspect;

- an unconscious rider
- a spinal injury
- a serious injury
- a rider requiring immobilization and/or stabilization before being moved
- a rescue needing longer than 3 minutes
- a need for medical intervention on the track

b. The role of the Medical Intervention Vehicle is to provide the initial evaluation and triage as well supporting the trackside ambulance paramedics and EMTs, supplementing their capabilities with advanced modalities. The Medical Intervention Vehicle will also follow the grid of riders for the warm-up and first lap of each race.

c. Medical Equipment

- Portable oxygen supply
- Supraglotic, endotracheal intubation and surgical airway equipment
- Suction equipment

- Manual ventilator
- Equipment for chest decompression
- Equipment for vascular access, infusion, circulatory support and hemorrhage control.
- Blood pressure monitoring equipment
- Pulse oximeter
- Equipment to remove race suits and helmet

5.7.2.2 Medical Intervention Vehicle Grid Procedure

a. The Medical Intervention Vehicle should stage at Pit Out when riders are released for their sighting lap. When Pit Exit is closed for riders, the Medical Intervention Vehicle will enter the track, taking a lap and staging at the center of the track 2 rows behind the last rider on the grid. At the start of the Warm-Up lap, the Medical Intervention Vehicle will follow at speed the grid of riders for that lap, repositioning again in the center of the track 2 rows behind the last gridded rider. With the start of the race, the Medical Intervention Vehicle will follow at speed the grid of riders, returning to Pit Out, at the completion of the first lap.

b. In the event that a rider runs of course, and returns behind the Medical Intervention Vehicle, the vehicle will continue at same speed.

5.7.2.3 Advanced Life Support (ALS) Ambulance

a. There should be 1 paramedic and 1 EMT in each of the trackside ambulances. Each ambulance will have radio communication with Race Control. The ambulances will be positioned per the individual event medical plan requirements. These personnel should be skilled in helmet removal, with/without an Eject helmet removal system, supraglotic and endotracheal airway management.

b. The Medical Service must have exclusive access at any time to a minimum of two ambulances that are registered as an ambulance with the appropriate authorities and insured to transport casualties on public roads.

c. Medical Equipment

- Portable oxygen supply
- Supraglotic and endotracheal intubation equipment
- Suction equipment
- Manual ventilator
- Equipment for vascular access, infusion, circulatory support and hemorrhage control
- Blood pressure monitoring equipment
- Pulse oximeter
- Equipment to remove race suits and helmets
- Equipment to immobilize limbs and spine
- Stretcher
- Scoop Stretcher
- ECG monitor and defibrillator

5.7.2.4 Air Ambulance (Medical Helicopter)

a. A medical helicopter should be available and capable of transporting an injured rider to a Level 1 Trauma Center. The helicopter should have a cold-start to arrival time of < 30 min. The helicopter should be staffed by one Flight Nurse, one Flight Paramedic and one pilot. It is equipped to manage advanced cardiac and trauma

resuscitation. The helicopter may be IFR rated, but may be limited by a 1000ft minimum ceiling. The helipad should be positioned in a secure area where aircraft prop wash will not have an effect on racing activities.

b. Medical Equipment

- Oxygen supply
- Supraglottic, endotracheal intubation and surgical airway equipment
- Suction equipment
- Manual and automatic ventilator
- Equipment for chest decompression
- Equipment for vascular access, infusion, circulatory support and hemorrhage control.
- Blood pressure monitoring equipment
- Pulse oximeter
- Stretcher
- ECG monitor and defibrillator

c. The Medical Panel will establish the circumstances and procedures at each event for the summoning of an Air Ambulance.

5.8 MEDICAL CENTER

a. The Medical Center should be staffed with a physician and at least one assistant, (EMT, paramedic or nurse). The Medical Center may be used in some cases to stabilize a critically injured rider before transportation as well as treat minor wound and orthopedic injuries as well as minor illnesses. It may be a permanent or temporary structure, ideally with an entrance for EMS that is separate from the public.

b. Medical Center should be capable of basic:

- Burn treatment
- Wound treatment
- Fracture treatment
- General medical care
- Adult and pediatric resuscitation

c. The Medical Center will serve:

- Any injured rider
- Any team member/pit crew
- Any MotoAmerica personnel
- Spectators

5.9 HOSPITALS

a. A hospital network must be identified so as to manage all potential spectrum of trauma utilizing the services ranging from Level 1 to Level 3 Trauma Center capabilities.

b. Each hospital as well as the helicopter service will receive a fax notification of the upcoming event seven days before the race. Confirmation of receipt of these notifications will be retained by MotoAmerica. MotoAmerica will also send to each hospital and department confirmation of rider insurance coverage so that there is no delay in care. Maps will be available to these hospitals for officials, team members, and family.

5.9.1 Level 3 Hospital Services

a. Services for a Level 3 hospital should include:

- Onsite Helipad.
- Emergency Medical Services
- Imaging capability with X-ray, CT, and Ultrasound
- Available Specialist in General Surgery and Orthopedics.
- Medical ICU

b. Transportation time by ground ambulance should be within 30 minutes.

5.9.2 Level 1 Hospital Services

a. Services for a Level 1 hospital should include:

- Onsite Helipad
- Emergency Medical Services
- Full imaging services with X ray, CT, MRI and Ultrasound
- Medical ICU
- Trauma/Surgical ICU

b. Additional specialty services should include:

- Trauma Anesthesia, Surgery and General Surgery
- Orthopedics
- Cardiology, Cardiothoracic and Vascular Surgery
- Neurosurgery/Spine
- Plastic Surgery
- Maxillofacial Surgery
- Internal Medicine

c. Transportation time by helicopter should be within 30 minutes.

d. There should also be an identified Pediatric Trauma Center, with a transportation time of 30 minutes.

5.10 TRAINING

There will be a meeting prior to each day of the event. These meetings will familiarize all members of the Medical Team with the goals of MotoAmerica as well as the philosophy of care. These meetings will review with all members of the Medical Team helmet removal and airway management in a suspected cervical injury, and there will also be a review of basic motorcycle racing mechanisms of injury and injury types. Ninety second response times to any section of the track will be the goal, striving for the highest level of medical care for riders, regardless of severity, and to minimize/eliminate unwanted outcomes**.**

5.11 CONCUSSION POLICY

a. Introduction

Concussion was defined by the “Consensus Statement on Concussion in Sport, Zurich, 2012”, and as used by the FIM, as a “complex pathophysiological process affecting the brain, induced by traumatic biomechanical forces”. This simply means, an alteration in the way in which the brain functions secondary to an impact to the brain, either direct or indirect. This alteration occurs on a cellular level, and is not observable with either a CT or MRI scan of the brain. A loss of consciousness is not a requirement for this condition, and up to 90% of all concussions do not involve a

loss of consciousness. The alterations in brain function may be subtle or dramatic.

b. Signs and symptoms

Signs can be observed, and symptoms are reported by the rider.

Clear signs are a Loss of Consciousness – LOC, a profoundly unstable gait/walk – ataxia, confusion, repetitive questioning indicating retrograde amnesia or vomiting.

Common symptoms of a concussion may include headache – the most common, nausea, “pressure in head”, dizziness/balance problems, sensitivity to light or sound, blurred/double vision, difficulty in concentrating/remembering/focusing, fatigue/drowsiness, confusion, sleep disturbances and changes in emotion/irritability, as well as other vaguer symptoms such as “not feeling right”.

Even impacts that are away from the head may produce a concussive event, for example, loading the spine axially.

Symptoms typically are self-limited to 7-10 days. 10-15% of the time this can be longer.

c. Criteria for Suspicion of a Concussion

- Observation of Loss of Consciousness on CCTV in Race Control, or the rider is slow to get up off the ground.
- Observation of profound ataxia/staggering, unsteadiness, balance difficulty or falling again after getting up.
- Observed confusion or inability to communicate by initial responding Medical Personnel or Corner Marshals. (These personnel are asked to report these signs only, and are not making a diagnosis).
- Observed vomiting.
- Suspicion of the physician in the Medical Center.
- Self-reporting of Symptoms of a Concussion.
- Determination of a Concussion

Concussions do not effect brain tissue in the way found in more significant Traumatic Brain Injury, TBI. Therefore, there are not any detectable changes on standard CT or MRI scans that can help determine if a Concussion has occurred. These scans however, are commonly used to detect the presence of a more serious TBI, because Concussion and these more serious head injuries share many common signs and symptoms.

Currently MotoAmerica, and the FIM, use the Sport Concussion Assessment Tool, **5th Edition - SCAT 5**, with a Balance Error Scoring System - BESS to confirm the presence of an alteration in brain function that is consistent with a Concussion. MotoAmerica will also use Vistibulo Occulo Motor Screening – VOMS, with or without computer aid. These tests, in combination, have excellent sensitivity and very good specificity in detecting the presence of a Concussion.

ImPACT neurocognitive testing, when used, is a helpful tool in determining the level of continued neurocognitive disability from a concussive injury and rehabilitation strategy. It cannot be used as a stand lone determinant for Return to Competition.

d. Exclusion from Competition

When a concussion has been suspected, a rider is removed from competition and placed on the Unfit Rider List until a review can be completed. This review will include, at a minimum, evaluating the video of the incident by the CMO after the session.

The CMO will determine the rider fit/unfit status and communicate to Race Direction utilizing the “Fit To Ride Certificate” form. It is the team/rider responsibility to provide the form to Race Direction prior to participating in any session.

The rider will not be able to return immediately to the current session, even with favorable testing. The rider may be held out from competition for 24 hours.

e. Return to Competition

It is always important for riders to observe a graduated increase in activity before returning to full competition to help avoid persisted symptoms.

1. Complete mental and physical rest until all symptoms have resolved. Usually 72hrs.
2. Light aerobic activity - walking.
3. Moderate aerobic activity – bicycling/swimming.
4. Strenuous aerobic activity – HR > 60% MPHR. Preferably low impact.
5. Full Training – MX, FT, MTB
6. Return to full Competition

Symptoms should not recur as activity is advanced. If symptoms do occur, then return to the next lower level of activity for 24hrs and try to advance again. If symptoms continue to occur, a head scan may be needed to investigate further for a more serious Traumatic Brain Injury.

f. Conclusion

The understanding and management of concussion in athletes is rapidly evolving. Serious consequences can occur from the mismanagement of concussions, and it is important for all riders to have a thorough understanding of this condition and how it may potentially affect them. Since the symptoms are mostly self-reported, this policy relies heavily on self-implementation. The rider and their teams need to honestly identify rider symptoms and alert the Chief Medical Officer. Though an injury to the brain is not externally apparent in a concussion, the need for the competent management of this injury should be viewed equally as important as that of a seriously broken bone or other serious injury.

5.12 INTRAVENOUS HYDRAYTION

a. At no time during the meet will a rider receive any type of intravenous hydration unless such hydration is deemed medically necessary by medical personnel as a result of an emergency medical situation (e.g. heat stroke) encountered by a rider, during, or as a result of competing in the meet.

b. Once a rider receives such hydration during the meet, the rider will be permitted to compete only after the CMO has deemed the rider safe and has released them to continue in the meet.

5.13 ALCOHOL POLICY

The Alcohol Policy and testing procedures will follow the FIM Alcohol Policy listed in the FIM Medical Code.

FIT TO RIDE CERTIFICATE

TO: RACE DIRECTION

FROM: MEDICAL CENTER

RIDER NAME	
RIDER COMPETITION NUMBER	
CLASS	

The rider named above has been evaluated at the Medical Center and is judged fit to compete in motorcycle circuit racing.

CIRCUIT	
TIME	
DATE	

CHIEF MEDICAL OFFICER

NAME	
SIGNED	

INFORMATION TO RIDER/TEAM: You must take this certificate and present it to RACE DIRECTION. Failure to do so may result in you being unable to participate in a practice session to race.

DATABASE INPUT COMPLETED	

6.0 ANTI-DOPING CODE

The regulations will be governed by the US Anti-Doping Agency (USADA).

7.0 ENVIRONMENTAL CODE

The regulations will be guided by the FIM Environments Code.

AMERICAN MOTORCYCLIST ASSOCIATION

MOTOAMERICA

FIM NORTH AMERICA