



FÉDÉRATION INTERNATIONALE  
DE MOTOCYCLISME

**ROAD RACING FIM SUPERBIKE  
& SUPERSPORT WORLD CHAMPIONSHIPS  
& FIM SUPERSTOCK CUP REGULATIONS**

**2015**

*RÈGLEMENTS DU CHAMPIONNAT DU MONDE FIM  
SUPERBIKE & SUPERSPORT  
ET DE LA COUPE FIM SUPERSTOCK  
DE COURSES SUR ROUTE*

**SBK**™ SUPERBIKE  
FIM WORLD CHAMPIONSHIP

**SUPERSPORT**™  
FIM WORLD CHAMPIONSHIP

**SUPERSTOCK1000**™  
FIM CUP

# **ROAD RACING FIM SUPERBIKE AND SUPERSPORT WORLD CHAMPIONSHIPS AND FIM SUPERSTOCK CUP REGULATIONS**

Technique

SBK

This book (hereinafter collectively referred to as the “Regulations”) has been printed on 31.01.15. Successive editions can be printed for supplementing and/or amending. The new editions will be numbered (2<sup>nd</sup> edition, 3<sup>rd</sup> edition, etc.), dated and issued to all relevant Bodies.

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**THIS BOOK PREVAILS OVER ALL OTHER FIM RULE BOOKS EXCEPT THOSE REFERRED TO AS AN APPENDIX**

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## CONTENTS

GENERAL UNDERTAKINGS AND CONDITIONS.....	4
1. SPORTING REGULATIONS.....	5-53
2. TECHNICAL REGULATIONS .....	53-168
3. DISCIPLINARY AND ARBITRATION CODE.....	180-193
4. CIRCUIT STANDARDS .....	194
5. MEDICAL CODE .....	194-208
6. CODE ANTIDOPAGE .....	214
7. ENVIRONMENTAL CODE .....	214
HOMOLOGATION RULES .....	169-180

Articles amended as from 1.1.2015 are in bold type



<b>GENERAL UNDERTAKINGS AND CONDITIONS.....</b>	<b>4</b>
<b>1. SPORTING REGULATIONS.....</b>	<b>5</b>
1.1 INTRODUCTION .....	5
1.2 EVENTS .....	5
1.3 THE PADDOCK.....	7
1.4 OFFICIALS .....	7
1.5 INTERNATIONAL JURY .....	10
1.6 RACE DIRECTION.....	11
1.7 THE FIM STEWARDS .....	12
1.8 THE CALENDAR .....	13
1.9 CLASSES .....	13
1.10 ELIGIBLE COMPETITORS .....	14
1.11 ENTRIES AND WILD CARDS .....	14
1.12 STARTING NUMBERS.....	17
1.13 SCHEDULE .....	17
1.14 TECHNICAL CONTROL - MEDICAL CONTROL - DOPING CONTROL	19
1.15 PRACTICE.....	19
1.16 GRID POSITIONS .....	22
1.17 RACES.....	24
1.18 START PROCEDURE .....	25
1.19 RIDE THROUGH PROCEDURE .....	35
1.20 “WET” AND “DRY” RACES.....	36
1.21 BEHAVIOUR DURING PRACTICE AND RACE .....	37
1.22 PIT STOPS .....	41
1.23 FLAGS AND LIGHTS .....	41
1.24 MEDICAL CAR .....	45
1.25 FINISH OF A RACE AND RACE RESULTS .....	45
1.26 INTERRUPTION OF A RACE .....	46
1.27 RE-STARTING A RACE THAT HAS BEEN INTERRUPTED.....	48
1.28 CHECK AREA/PARC FERMÉ .....	50
1.29 CHAMPIONSHIP POINTS AND CLASSIFICATION .....	50
1.30 INSTRUCTIONS AND COMMUNICATIONS TO COMPETITORS .....	52
1.31 EXTRA DEPOSITS IN CASE OF MOTORCYCLE CONTROL FOLLOWING A PROTEST .....	52
1.32 EXTRA DEPOSIT FOR FUEL CONTROLS FOLLOWING A PROTEST .	52
1.33 NON-PARTICIPATION IN AN EVENT.....	53



<b>2.</b>	<b>TECHNICAL REGULATIONS .....</b>	<b>53</b>
2.1	INTRODUCTION .....	53
2.2	CLASSES .....	54
2.3	GENERAL ITEMS .....	54
2.4	SUPERBIKE TECHNICAL SPECIFICATIONS .....	60
2.5	SUPERSPORT TECHNICAL SPECIFICATIONS.....	96
2.6	SUPERSTOCK TECHNICAL SPECIFICATIONS.....	120
2.7	FUEL, OIL AND COOLANTS .....	143
2.8	PROTECTIVE CLOTHING AND HELMETS .....	148
2.9	PROCEDURES FOR TECHNICAL CONTROL .....	148
2.10	VERIFICATION GUIDELINES FOR TECHNICAL STEWARDS .....	152
2.11	SOUND LEVEL CONTROL .....	157
2.12	GUIDELINES FOR USE OF SOUND LEVEL METERS .....	159
	APPENDIX .....	169
	FIM HOMOLOGATION PROCEDURE FOR SUPERBIKE SUPERSTOCK, SUPERSPORT AND MOTORCYCLES .....	169
<b>3.</b>	<b>DISCIPLINARY AND ARBITRATION CODE .....</b>	<b>180</b>
3.1	Principles .....	180
<b>4.</b>	<b>CIRCUIT STANDARDS .....</b>	<b>194</b>
<b>5.</b>	<b>MEDICAL CODE .....</b>	<b>194</b>
5.1	INTRODUCTION .....	194
5.2	SPECIAL MEDICAL EXAMINATION.....	194
5.3	MEDICAL SERVICES AT EVENTS.....	194
5.4	MEDICAL MALPRACTICE INSURANCE .....	208
<b>6.</b>	<b>ANTI-DOPING CODE .....</b>	<b>214</b>
<b>7.</b>	<b>ENVIRONMENTAL CODE.....</b>	<b>214</b>



## **AMENDMENTS TO THE FIM ROAD RACING SUPERBIKE & SUPERSPORT WORLD CHAMPIONSHIPS AND FIM SUPERSTOCK CUP REGULATIONS (HEREINAFTER COLLECTIVELY REFERRED TO “REGULATIONS”).**

The FIM, through the Superbike Commission and the Superbike 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:

- One Representative of the Fédération Internationale de Motocyclisme (FIM).
- One Representative of DWO.

which shall meet on a regular basis to discuss and decide on all issues pertinent to the respective interests of the members.

The procedures for the calling of meetings of the Permanent Bureau and for procedures during such meetings (which may be held by telephone or other electronic means) and for the appointment and/or vacancy of representatives and all procedures for their deliberations shall be as mutually agreed by the members from time to time provided always that a decision of the Permanent Bureau shall only be effective with and upon the unanimous vote of the members.

The SBK Commission is competent to study any proposal of changes to the FIM Road Racing World Championship SBK Regulations.

### The SBK Commission consists of:

- One Representative appointed by the Fédération Internationale de Motocyclisme (FIM).
- One Representative appointed by the manufacturers, through MSMA.
- One Representative appointed by DWO who will be the Chairman of the SBK Commission.

Any resolution voted by the SBK Commission shall require the simple majority and the Chairman will have the casting vote in case of a tie. The resolutions of the SBK Commission shall be effective subject to the approval of the Permanent Bureau. The parties shall procure that the meetings of the SBK Commission take place no later than fourteen (14) days following the request of any Representative for that meeting.



## **GENERAL UNDERTAKINGS AND CONDITIONS**

All riders, team personnel, officials, promoters/organizers and all the persons involved in any capacity whatsoever participating in the Road Racing FIM Superbike & Supersport World Championship and Superstock Cup (hereinafter collectively referred to “Championship”) undertake, on behalf of themselves, their employees, and agents, to observe all the provisions of:

1. SPORTING REGULATIONS
2. TECHNICAL REGULATIONS
3. DISCIPLINARY AND ARBITRATION CODE
4. CIRCUIT STANDARDS
5. MEDICAL CODE
6. ANTIDOPING CODE
7. ENVIRONMENTAL CODE

as supplemented and amended from time to time (hereinafter collectively referred to as the “Regulations”).

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

Whilst these Regulations may be translated into other languages, in case of any dispute regarding interpretation the Official English text will prevail.

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.

## **ANTIDOPING CODE**

All the persons concerned must at all times observe the FIM Anti-Doping Code and may be penalised accordingly.



## **1. SPORTING REGULATIONS**

### **1.1 INTRODUCTION**

**1.1.1** A series of motorcycle races counting toward the Championship for Riders and Constructors will be organised.

### **1.2 EVENTS**

**1.2.1** The 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.

The 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 Stewards during that period.

**1.2.2** Events must be staged on race circuits that have been approved by the FIM for the Championship.

**1.2.3** Events must not include any other races except for support races approved by DWO and FIM.

**1.2.4** Any activity involving 4 wheels racing vehicular use of the track during the event, including “demonstrations”, displays or the suchlike must receive prior approval from FIM and DWO.

**1.2.5** Organisers will be nominated by DWO and FIM.

**1.2.6** The Organiser is responsible for providing the facilities and personnel to ensure the smooth and efficient running of the event.

**1.2.7** DWO shall obtain or shall arrange for the provision by each organiser of an insurance for third party liability for each meeting to cover DWO liability and that of all participants, the manufacturers, riders, sponsors, teams, service companies and officials in case of accidents to third parties during a meeting or during the practices.

The insurance policy shall also cover any possible liability of the FIM and the organiser to third parties. A copy of the policy written in English or French shall be made available to the organiser, DWO and to the FIM Executive Secretariat not later than 20 days prior to the event.



The cover provided for each event shall be US \$ 6 million, with the exception of the USA and Canada, where the cover shall be different.

The validity of the insurance must start a 08:00 hrs on the Tuesday (or Monday in case of Saturday races) before the race and finish at 24:00 hrs on the Monday (or Sunday in the case of Saturday races) after the race.

In case the organiser subscribes his own Third Party Liability Insurance in full conformity with the above specification of the present art. 1.2.7, the organiser may send the certificate of insurance duly filled in, signed and stamped by an authorised Representative of the Insurance Company, to DWO and to the FIM Executive Secretariat.

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

**1.2.8** At least 90 days prior to the Event, the Organisers of the event must submit the following information to the FIM and DWO:

- a) Confirmation of the name and address of the Promoters/Organisers, including telephone & facsimile numbers and e-mail addresses for correspondence.
- b) The date and place of the Event.
- c) A detailed plan of the circuit, its direction, clockwise or anticlockwise, and length.
- d) The location at the circuit of the rider information centre and the official notice board.
- e) The name and address of the company providing the third party liability insurance cover and the number of the policy.
- f) Name and address of FMNR.
- g) The name of the Clerk of the Course (with FIM Clerk of the Course licence).
- h) The name, address and telephone number of the Chief Medical Officer.
- i) The name, address and telephone number of the hospitals designated for the event.

N.B. The Organiser is not required to produce or publish any Supplementary Regulations for the event.



**1.2.9** At least 60 days before the Event, DWO must publish the above information and post it to all teams with an entry for the Event.

### **1.3 THE PADDOCK**

**1.3.1** The Paddock, pit boxes and all other facilities should be available to teams at least on the Tuesday prior to a Sunday race and remain available to competitors for at least one day and, if possible, two days after the event. Subject to the DWO event schedule as notified in the Teams Handbook.

**1.3.2** Access must be available for teams arriving to set up between the hours of 08:00 and 20:30. Subject to the DWO event schedule as notified in the Teams Handbook.

**1.3.3** 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.

**1.3.4** When the Paddock is occupied there must be an adequate medical and firefighting service available to all riders, teams, manufacturers, sponsors, service companies, officials, FIM, DWO, etc.

At minimum the services must be available from 08.00 - 18.00hrs on the day prior to the “setting up of teams day”, and on a 24 hour basis for the remainder of the event, ending at midnight on the day..

**1.3.5** Full security must be supplied to the Paddock area from at least midnight of the Tuesday prior to a Sunday race until midnight of the Monday following the race.

### **1.4 OFFICIALS**

All the following Officials must be present and available at the time necessary to ensure smooth and efficient running of the Event:

#### **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 the officials will be expected to be present at each event.

**Race Director:** Responsible for ensuring proper observance of the Regulations and efficient running of the practice and races. The Race Director is also responsible for all communications between the International Jury and the FIM Stewards.

The Clerk of the Course shall work in permanent consultation with the Race Director. The Race Director shall have overriding authority in the following matters and the Clerk of the Course may give orders in respect of them only with his express agreement:

- a) The control of practice and the race, adherence to the timetable and, if he deems it necessary, the making of any proposal to the Race Direction to modify the timetable in accordance with the Sporting Regulations.
- b) 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.
- c) The starting procedure.
- d) The use of medical cars/fast interventions vehicles.

**Technical Director:** Responsible for ensuring that technical Regulations are correctly enforced and supervising scrutineering and protests of a technical nature.

**Medical Director:** Responsible for liaison with the Chief Medical Officer appointed by the Organisers to ensure compliance with the Medical Code.

**FIM Safety Officer:** Responsible for the supervision of all aspects of safety.

**Starter:** Responsible to start the race.

## 1.4.2 Individual Event officials

All individual Event Officials shall be appointed for each event.

They are:

### A) Officials appointed by the FIM

1. The President and two members of the International Jury (3<sup>rd</sup> member of the Intl Jury being proposed by the FMNR)

They are (with FIM Sporting Steward licence) responsible for ensuring that the event is conducted according to the Regulations

### B) Officials appointed by the FMNR/Organiser.

#### 2. Clerk of the Course

Responsible for:

- a) Ensuring that the circuit is suitably prepared for and maintained during the Event and that all legal requirements applicable for the running of the event have been complied with.
- b) Ensuring that all officials and services are in place.

The stationing of all track personnel and equipment (i.e. marshals, fire-fighting services, Moto-taxi, recovery/intervention vehicles, flags, etc.) alongside the Circuit no later than 30 minutes prior to the beginning of all practice sessions and warm-ups. Once the morning medical Inspection is finished, medical personnel should stand 5 meters behind the track marshals or leave. Only sportive personnel should stay at the edge of the track for the “sporting” inspection.

The Race Director, the FIM Safety Officer, the Clerk of the Course and the Medical Director will make the final inspection of the Circuit to ensure this regulation is complied with, 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 Safety Officer.

- c) Taking decisions to ensure the smooth and efficient running of the event.



- d) Ensuring that the event is run within the Regulations.
- e) Notification of protests to the Race Direction.
- f) Immediate approval and signature with time of provisional results (practices, Superpoles, warm-ups, starting grids and races) and presentation of reports to the International Jury.

### **3. Secretaries**

Responsible for:

- a) During the event effecting communications between the various officials.
  - b) Providing secretarial support for the International Jury, the Race Direction and the FIM Stewards.
4. Other Officials Stewards, Technical Stewards, Security Personnel, Medical Staff etc., as required for the efficient running of the event.

All communications between the individual Event Officials must be made via the relevant Permanent Officials.

#### **1.4.3 The Race Direction**

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

#### **1.4.4 The FIM Stewards**

The FIM Stewards shall be appointed for each event by the FIM.

### **1.5 INTERNATIONAL JURY**

**1.5.1** The management of the event will be carried out by the International Jury which will comprise the following delegates:

The President appointed by the FIM - who will chair the meetings

Two Jury Members appointed by the FIM

The Delegate appointed by DWO

The Race Director

The Technical Director

The Medical Director

The Clerk of the Course

The FIM Safety Officer



**1.5.2** At any time the duties of the members of the International Jury are:

- a) To ensure the smooth and efficient running of the event.
- b) To make recommendations to the Race Direction concerning any matter that is in contradiction to the Regulations.
- c) To report to the Race Direction any infringements of the Regulations.

**1.5.3** The International Jury will meet at any time required during the event, but at least:

- a) Prior to the first practice session.
- b) At the end of each practice day.
- c) At the end of the event.

**1.5.4** The quorum for a meeting of the International Jury is three persons.

**1.5.5** All the Members have one vote. Decisions are based on a simple majority. In the case of a tie, then the President will exercise a casting vote.

**1.5.6** The Technical and the Medical FIM Observer as well as the Environmental Steward may attend the meetings of the International Jury. The International Jury President may also invite the participation of Officials or other persons to assist in the meetings. However, the FIM Observers, the Environmental Steward and the invited officials or other persons will have no right of vote.

**1.5.7** The duties of the International Jury are:

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

## **1.6 RACE DIRECTION**

**1.6.1** The Race Direction will comprise the following persons:

- The FIM Representative - who will chair the meetings.
- The DWO Representative
- The Race Director



- 1.6.2** The quorum for a meeting of the Race Direction is two persons.
- 1.6.3** Each member has one vote. Decisions are based on a simple majority.
- 1.6.4** The Race Direction will meet at any time required during the event.
- 1.6.5** The duties of the Race Direction are:
- a) To take decision as provided in the Regulations.
  - b) To impose penalties for any infringements of the Regulations.
  - c) A 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 absolutely necessary to resolve a situation not foreseen in the Regulations. In such exceptional cases, such decision may prevail over specific provisions of the Regulations.
  - d) 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.
  - e) To impose penalties on organisers for having been unable to ensure the smooth and efficient running of the event or for serious breaches of the Regulations.
  - f) To adjudicate on any protest relating to infringements of the Regulations.

## **1.7 THE FIM STEWARDS**

- 1.7.1** There will be a panel of three FIM Stewards (with FIM Sporting Stewards licence) supervised by the Chief Steward who will chair the meetings.
- 1.7.2** The Chief Steward and the other 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.
- 1.7.3** The quorum for a meeting of the FIM Stewards is two persons.
- 1.7.4** If the Chief Steward is indisposed during the Event then the second FIM Steward will fill the vacancy.



- 1.7.5** Each member has one vote. Decisions are based on a simple majority. In the case of a tie, the Chairman will exercise a casting vote.
- 1.7.6** The FIM Stewards have no executive role in the running of the events.
- 1.7.7** The FIM Stewards will meet at any time required during the event.
- 1.7.8** The FIM 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.
- 1.7.9** All decisions of the FIM Stewards must be communicated in writing to the Race Direction and all affected parties.

## **1.8 THE CALENDAR**

- 1.8.1** The **provisional** calendar of races counting for the Championships will be, in principle, published by no later than **30<sup>th</sup> November** of the preceding year.
- 1.8.2** The **Superbike Commission** reserves the right to propose the inclusion, substitution or cancelation of events in the provisional calendar.

## **1.9 CLASSES**

- 1.9.1** Classes will be for the following categories:

Superbike	4 stroke	2, 3 or 4 cylinders
Supersport	4 stroke	2, 3 or 4 cylinders
Superstock	4 stroke	2, 3 or 4 cylinders

- 1.9.2** Technical Regulations governing the three classes are provided under chapter 2 of the Regulations.



## 1.10 ELIGIBLE COMPETITORS

1.10.1 The rider must be in possession of the adequate FIM Licence (Superbike, Supersport and Superstock) issued by a FMN. Licences are issued to riders designated by the FIM and DWO and can, in certain circumstances, be for a single event. To receive a licence, the rider must be in possession of a national licence of a FMN at no additional cost to the rider.

The teams must be in possession of the appropriate “FIM Team Licence”.

The constructors must be in possession of the appropriate “FIM Manufacturer Licence”.

### 1.10.1.1 Minimum age

Superstock	16 years
Supersport	16 years
Superbike	18 years

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

### 1.10.1.2 Maximum age Superbike and Supersport

The limit for the maximum age finishes at the end of the year in which the rider reaches the age of 50.

### 1.10.1.3 Maximum age Supertock 1000

The maximum age is 28 years at the 1<sup>st</sup> of January of the corresponding Championship year.

## 1.11 ENTRIES AND WILD CARDS

1.11.1 Each team, must submit to the Secretariat of DWO by 15 November of the previous season for the FIM Superbike and Supersport World Championships and by 15<sup>th</sup> January of the year in question for the FIM Superstock 1000cc Cup an entry for their team which will, except when special dispensation is granted, be valid for all races in the FIM Road Racing World Championship Superbike or Supersport or in the FIM Superstock Cup. At the same time, the team must indicate the riders designated and the class in which they will participate. **Additionally Supersport teams must indicate their (1) designated testing circuit and Superstock teams must indicate their three designated Testing Circuits (see art 1.15.1).**



**1.11.2** Each entry must specify, for each rider, the insurance company providing the minimum cover specified by FIM, the number of the policy and the expiry date of the policy.

**1.11.3** Each entry commits the team to designate a rider to compete in all the events of the FIM Superbike or Supersport Championship and of the Superstock FIM Cup in the chosen class. Exceptions can only be made as follows:

- i) A team may withdraw a rider from an event which has already started, due to injury of the rider, irreparable damage to the motorcycle(s) or in case of “Force Majeure”. A withdrawal for medical reasons must be supported by a letter from the Chief Medical Officer of the meeting or the Medical Director.
- ii) A team may withdraw a rider from additional events in the FIM Road Racing World Championship Superbike or Supersport or in the FIM Superstock Cup only for medical reasons or other reasons of “Force Majeure”. Withdrawals for medical reasons must be supported by a letter from a qualified Doctor.

Teams must make every reasonable effort to provide a qualified substitute rider, approved by FIM and DWO, to fulfil their entry obligations within 10 days of the withdrawal. However no substitution or replacement of the entered rider may be made after **the day prior the race at 08.30 am. In the same time the Teams must communicate in writing to the Race Direction, the name of the substitute or replacing rider.**

- iii) For reasons not being medical reasons and not being reasons of “Force Majeure”, and subject to the Team obtaining the approval of FIM and DWO (neither of whom shall be obliged to give reasons for any refusal to approve), a Team may replace a rider which that Team has entered in the FIM Road Racing World Championship Superbike or Supersport or in the FIM Superstock Cup with another rider (“replacement rider”) for remaining rounds of the FIM Road Racing World Championship Superbike or Supersport or in the FIM Superstock Cup. Only one replacement of a rider will be permitted per season. Exceptional circumstances will be examined by the FIM and DWO.



**1.11.4** If a team is unable to provide a substitute rider, then the FIM and DWO may decide to allow another team to enter a rider, on an event by event basis, to reach the required number of entries. Article 1.10 will apply to all replacement and substitute riders.

**1.11.5** A rider, entered in a round of the Superstock 1000cc FIM Cup, cannot participate in a support race during the same event and on the same track.

**1.11.6** Each Event host Federation (FMNR) may nominate 4 wild card entries for the Superbike and Supersport and 2 wild card entries for the Superstock classes, in their own event only. Once the wild cards have been nominated by the FMNR, DWO can nominate “one event” riders. Wild card and one event riders must be holders of an FIM “one event Road Racing Superbike or Supersport or Superstock” licence issued by any FMN and wild card entries must be submitted by the FMNR to the FIM, on the official entry form issued by the FIM, at least 30 days before the event. Exceptions may be granted by FIM / DWO.

All entries will be submitted to the approval of the Superbike Commission.

Wild card entries are subject to the insurance requirements under 1.11.2. Insurance of the wild card riders is the responsibility of the FMNR (Federation organising the event).

When a wild card licence is confirmed and issued, the cost of this licence will not be reimbursed to the rider who withdraws its participation to the race.

Accepted entries will be required to pay to DWO a fee to cover the costs of materials provided for their participation.

**1.11.7** A compulsory briefing will be held for all the riders who will be participating for the first time in the current Championship, at 17:00 hrs the day before the first practice session is scheduled.

Failure to attend the briefing in full **may result in a penalty.**

A waiver can be granted to a rider by the Race Direction.

**1.11.8** A rider shall be deemed to have taken part in the event when he enters the race track in at least, one practice session.



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

## **1.12 STARTING NUMBERS**

**1.12.1** Each rider accepted for the FIM World Championship Superbike or Supersport or for the FIM Superstock Cup will be allocated a specific starting number which will be valid for the whole Championship. In general, the starting number will be based on the result of the rider in the previous year's Championship.

## **1.13 SCHEDULE**

**1.13.1** The Event schedule will be as follows:

**From Tuesday to Thursday:** arrival and setting up of the teams.

### **Thursday**

16.00 - 18.00	120'	SUPERSPORT	TECHNICAL/SPORTING CHECKS
17.00		WILD CARDS RIDERS	BRIEFING

### **Friday**

08.45 - 10.15	90'	SUPERBIKE & SUPERTOCK 1000	TECHNICAL/SPORTING CHECKS
<b>09.15 - 09.45</b>	<b>30'</b>	<b>SUPERSTOCK 1000</b>	<b>FREE PRACTICE 1</b>
10.00 - 10.45	45'	SUPERSPORT	FREE PRACTICE 1
11.45 - 12.30	45'	SUPERBIKE	FREE PRACTICE 1 TIMED FOR QUALIFYING
<b>13.15 - 14.00</b>	<b>45'</b>	<b>SUPERSPORT</b>	<b>FREE PRACTICE 2</b>
<b>14.15 - 14.45</b>	<b>30'</b>	<b>SUPERSTOCK 1000</b>	<b>FREE PRACTICE 2</b>
<b>15.00 - 15.45</b>	<b>45'</b>	<b>SUPERBIKE</b>	<b>FREE PRACTICE 2</b> <b>TIMED FOR QUALIFYING</b>



## Saturday

09.00 - 09.30	30'	SUPERSTOCK 1000	FREE PRACTICE 3
09.45 - 10.30	45'	SUPERBIKE	FREE PRACTICE 3 TIMED FOR QUALIFYING
10.45 - 11.30	45'	SUPERSPORT	FREE PRACTICE 3
12.30 - 13.00	30'	SUPERBIKE	FREE PRACTICE 4 NOT TIMED FOR QUALIFYING
14.15 - 14.45	30'	PIT WALK	PIT WALK
15.00 - 15.15	15'	SUPERBIKE	SUPERPOLE 1 (SP1)
15.25 - 15.40	15'	SUPERBIKE	SUPERPOLE 2 (SP2)
15.55 - 16.40	45'	SUPERSPORT	QUALIFYING PRACTICE
16.55 - 17.25	30'	SUPERSTOCK 1000	QUALIFYING PRACTICE

## Sunday

08.40 - 08.55	15'	SUPERBIKE	WARM UP
09.05 - 09.20	15'	SUPERSPORT	WARM UP
09.30 - 09.40	10'	SUPERSTOCK 1000	WARM UP
10.30		SUPERBIKE	RACE 1
11.40		SUPERSPORT	RACE
13.10		SUPERBIKE	RACE 2
14.15		SUPERSTOCK 1000	RACE

**1.13.2** The above schedule can only be varied as follows:

- i) Prior to the event by the FIM and DWO;
- ii) During the event by the Race Direction.

**1.13.3** The SBK Commission reserves the right to modify the number of races per event for each class.

**1.13.4** The schedule may include an allotted time for riders and teams to make familiarisation laps by scooter, bicycle or on foot. All traffic at this time must be in the circuit direction and all people using a scooter on track must wear a safety helmet.

## **1.14 TECHNICAL CONTROL-MEDICAL CONTROL-DOPING CONTROL**

**1.14.1** All motorcycles should be checked by the Technical Stewards prior to first participation in practice on safety aspects, according to the published schedule. At the Discretion of the Technical Director, machines may be checked earlier than the schedule if the machines are ready.

Teams may present for Technical Control one (1) motorcycle per rider for the Superbike, Supersport and Superstock classes, which will be specially identified by the Technical Controllers.

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

**1.14.2** The procedure for Technical Control is described in the Technical Regulations, articles 2.9 thru 2.11. The procedure for Medical Control is described in the Medical Code.

**1.14.3** All articles regarding anti-doping procedures are mentioned in the FIM Anti-Doping Code.

## **1.15 PRACTICE**

### **1.15.1 Practice Restrictions**

- A)** Practice by riders and teams contracted to compete in the FIM Superbike and Supersport World Championship is prohibited from the **21<sup>st</sup>** of December until the **4<sup>th</sup>** of January (both dates inclusive).
- B)** Practice between the end of one season and the beginning of the subsequent season cannot take place at any circuit outside the Continental Zone where the team is based. (Europe, Asia/Oceania, Africa, the Americas).
- C)** Practice by riders and teams contracted to compete in the Superbike Championship is prohibited at any circuit, after the running of the **first European** event until the completion of the last race of the season, with the following exceptions:
  - a) Free or qualifying practices at the event.
  - b) Official practice sessions organised by DWO, with the approval of the FIM.



- c) Participation in any other FIM World Championship-or Prize event at circuit not included in the current Championship calendar.
  - d) Wild cards and one event riders.
  - e) Any activity allowed by the Race Direction.
  - f) Practice by a contracted team with a non-contracted rider at a Circuit not forthcoming in the current Championship calendar.
  - g) **Practice at the Testing Circuit designated by each team until Sunday before the race's week. See art. 1.11.1 (only Supersport and Superstock)**
- D) Exceptions to this rule may be granted, with the approval of the SBK Commision, 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 practised unwittingly at a circuit included in the Championships.
- E) Scooters are the only two-wheel motorised vehicles on which the riders participating in the event, are allowed to ride on the track. This allowance is valid on Thursday from 16:00 to 18:00 only.
- Exceptions may be granted with the approval of the Race Direction.  
**Infringement to these rules may be penalised.**
- F) Practice for contracted riders in a different discipline than Road racing, is permitted for training purposes.

#### **1.15.2 Practice Sessions (Superpoles and warm-up inclusive)**

- i) Riders will commence practice from the pit lane when the green light is displayed at the exit of the pit lane.
- ii) The duration of practice will commence from the illumination of the green light. A visible board or count-down will be shown in the pit lane to indicate the minutes of practice remaining.
- iii) The end of practice will be indicated by the waving of two chequered flags, at which time the pit exit will be closed. A rider's time will continue to be recorded until he passes the official chequered flag at the finish line after the allotted time has elapsed. After the chequered flags riders may complete the lap to the pit entry.



- iv) 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 marshals posts. All riders must return slowly to the pit lane. When practice is restarted, the time remaining will be that shown on the count-down device in the pit lane and on the monitors of the official timekeepers at the moment the red flags were displayed.
- v) After practice has started, the condition of the racing surface of the circuit should not be altered except on instruction from the Race Director and the FIM Safety Officer in response to a localised change in conditions.

### **1.15.3 Motorcycles**

During the event a rider may only use one motorcycle, as presented for Technical Control, according to the procedures described in articles 2.4.10, 2.5.10 and 2.6.10 of the Technical Regulations.

### **1.15.4 Lap Time**

All laps of the riders 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 race, 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.

### **1.15.5 Qualifying practices results**

The results 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 results will be based on the fastest time recorded by the riders in all free practices.

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

## 1.15.6 Qualification for the Race

### A) Supersport and Superstock 1000cc

To qualify for the race, a rider must achieve a time at least equal to 107% of the time recorded by the fastest rider of his class.

Any rider who fails to achieve a qualifying time will be permitted to take part in the race provided that in any of the free practice sessions and/or warm up he/she has achieved a time at least equal to 107% of the fastest rider in the same session. Such riders will start the race from the back of the grid, according to their free practice and/or warm up times.

### B) Superbike Class

- i) Riders are automatically qualified for the race if they participate in Superpole Practices SP1 or SP2 (refer to Art. 1.16.3.2).
- ii) To participate in Superpole Practices and races a rider must achieve a lap time at least equal to 107% of the time recorded by the fastest rider in the same session, in any one of the four Free Practice sessions (FP1, FP2, FP3, FP4).
- iii) Substitute riders, replacing a rider after the event has started, are subject to the above conditions if they have participated in two of the first three Free Practice sessions.
- iv) If a substitute rider only participates from FP3 onwards and does not achieve a lap time of 107% of the fastest rider in the same session of either FP3 or FP4, but is classified in the top 20 positions overall from FP1, FP2, FP3, then that rider may participate in SP1, where he/she must achieve a lap time of at least 107% of the fastest rider in SP1 to be allowed to start the race (unless SP1 is cancelled in which case the rider may start the race).

## 1.16 GRID POSITIONS

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

1.16.2 For all classes, the Grid will be arranged in the “in echelon” 3-3-3-3 configuration.

Each line will be offset.

There will be a distance of 9 metres between each row.

### **1.16.3.1 Grid positions for Supersport and Superstock 1000cc**

Grid positions will be based on the fastest time recorded by the riders in all qualifying practice.

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

### **1.16.3.2 Grid positions for Superbike Class**

- i) Grid positions will be determined by the fastest lap time recorded by each rider in the Free Practice (FP) sessions and two Superpole (SP) sessions as follows:
- ii) Based on combined practice times, the ten fastest riders in FP1, FP2, and FP3 go through to SP2.
- iii) Riders classified in positions 11<sup>th</sup> through 20<sup>th</sup> in the combined Free Practice sessions will take part in SP1 (provided they are qualified according to Art. 1.15.6.B).

The fastest two riders from SP1 progress to SP2.

- iv) The twelve riders in SP2 will take the first 12 grid positions according to their fastest lap time in SP2.

If any riders do not record a lap time in SP2 they will be classified as the last riders in SP2 according to their combined lap times of FP1, FP2 and FP3.

- v) The riders not in the first two positions of SP1 will take the grid positions from 13<sup>th</sup> position according to their fastest lap time in SP1.

If any qualified riders do not record a lap time in SP1 they will be classified as the last riders in SP1 according to their combined lap times of FP1, FP2 and FP3.

- vi) **If a qualified rider for Superpole practices cannot participate, for whatever reason, in one of the SP, he will not be replaced. His place for the Superpole will remain vacant.**



vii) In the case where SP1 or SP2 or both are cancelled, the grid positions will be determined by the combined fastest lap times recorded by the riders of the affected group, in FP1, FP2 and FP3.

In the case of only SP1 being cancelled, then the 11<sup>th</sup> and 12<sup>th</sup> fastest riders from FP1, FP2 and FP3 combined will go through to SP2.

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

**1.16.5** The final grid will be published after the warm up has been completed, at the latest one hour before the start of the race.

## **1.17 RACES**

Superbike:	minimum 85 km	maximum 110 km
Supersport:	minimum 80 km	maximum 110 km
Superstock:	minimum 40 km	maximum 70 km

and will be determined by the FIM and DWO after publication of the calendar.

Superbike and Supersport races declared wet may be reduced by a certain number of laps (at discretion of the Race Direction).

**1.17.2** The length of a race may only be varied by the Race Direction.

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

**1.17.4** If the Timekeeping rooms are fed by normal power (electricity) supply, they must also be permanently connected to an U.P.S. (Uninterruptable Power System) and to a generator.



## 1.18 START PROCEDURE

### 1.18.1 Normal Start procedure

1. Only riders who have completed at least one sighting lap will be permitted to start the race from their position published on the final grid. Under no circumstances may they push their motorcycle onto the grid from the pit lane.
2. Approximately 20 Minutes (10 minutes in the case of a restarted or rescheduled race before the Start of the Superbike race - Pit lane exit opens for sighting lap.

Approximately 15 Minutes (10 minutes in the case of a restarted or rescheduled race before the Start of the Supersport or Superstock race - Pit lane exit opens for sighting lap.

Green lights on and green flags waved at the pit lane exit.

Count-down boards of 5, 4, 3, 2 and 1 minutes are shown at the pit exit.

Riders may complete more than one sighting lap by passing through the pit lane where they may make adjustments or refuel.

3. Approximately 15 Minutes (5 minutes in the case of a restarted or rescheduled race before the Start of the Superbike race - Pit lane exit closes.

Approximately 10 Minutes (5 minutes in the case of a restarted or rescheduled race before the Start of the Supersport or Superstock - Pit lane exit closes.

Red lights on and red flag waved at the pit lane exit.

4. Riders who do not go on to the grid may start the warm up lap from the pit lane under the instructions of the marshal positioned at the pit lane exit.

Riders starting the warm up lap from the pit lane must start the race from the back of the grid.

5. When riders reach the grid after the sighting lap(s) they must take up their positions and may be attended by up to five persons one of whom may hold an umbrella. All attendants on the grid must wear a "Grid Pass". Having taken up their grid position, riders must take off their helmets, except in the case of a restarted or wet race.



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

6. The Race Director may, at this stage, choose to declare the race as “wet” or “dry” and 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 board. If no board is displayed the race will automatically be “dry”.
7. Riders on the grid may, at this stage, make adjustments to the motorcycle or change tyres to suit the track conditions.

Trolleys, as shown in the SBK Organisation Rules published by DWO, are allowed on the grid.

Two air blowers, as shown in the SBK Organisation Rules published by DWO, are allowed on the grid.

Tyre warmers may be used on the grid.

Riders may use a generator to power tyre warmers and air blowers on the grid.

Only one generator per motorcycle may be used. The generator must be of the “hand carried” type and have a maximum output capacity of two kilowatts. The noise limit of the generator is 65 dB/A.

Starter engines may also be used on the grid.

Generators and starter engines should be located to the rear of the motorcycles.

All adjustments must be completed by the display of the 3 minutes board. After this board is displayed, riders who still wish to make adjustments must push their motorcycle to the pit lane. Such riders and their motorcycles must be clear of the grid and in the pit lane before the display of the 1 minute board, where they may continue to make adjustments. Such riders will start the warm up lap from the pit lane and will start the race from the back of the grid.

Working on the machine on the grid after the 3 minutes board is presented may be penalised.

8. Refuelling or changing fuel tank on the grid is forbidden.



9. 5 Minutes Before the Start of the Warm Up Lap - Display of 5 Minute Board on the grid.
10. 3 Minutes Before the Start of the Warm Up Lap - Display of 3 Minute Board on the grid.

Generators must be disconnected and removed from the grid as quickly as possible.

Trolleys and air blowers must be removed from the grid as quickly as possible.

Immediate removal of tyre warmers from motorcycles on the grid or in the pitlane.

At this point, all persons except maximum two mechanics per motorcycle, the person holding the umbrella for the rider, the television crew of the host broadcaster and essential officials must leave the grid.

Riders must put their helmets on.

No person (except essential officials) is allowed to go on the grid at this point.

11. 1 Minute Before the Start of the Warm Up Lap - Display of 1 Minute Board on the grid.

At this point, all team personal except the mechanics will leave the grid.

12. 30 Seconds Before the Start of the Warm Up Lap - Display of 30 Second Board on the grid.

All riders must be in position on the grid with engines running. No further assistance from mechanics is permitted. Any rider who is unable to start his motorcycle must remove it to the pit lane, under the control of the grid marshals, where 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.

13. 2 Minutes Before the Start of the Race - Green flag waved to start warm up lap.

**The minimum pit Intervention time for the SBK class is active from this moment.**



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

The riders will make one lap, at unrestricted speed, followed by a safety car. The safety car will overtake slow riders.

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 seconds later, the light will turn red and a marshal will display a red flag closing the pit lane exit.

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. If two 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.

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

Any rider who arrives after the safety car has taken up its position at the back of the grid must stop will be directed by grid marshals to the last place on the grid and will start the race from there.

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 not in the box.**

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.

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 and the safety car has taken up its position, an, 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 walk to the side of the track.

14. A red light will be displayed for between 2 and 5 seconds.

The red light will go out to start the race

A safety car will follow behind the motorcycles for the whole of the first lap. The safety car must overtake slow riders.

If the red lights' device is fed by normal power (electricity) supply, it must also be connected to a set of car batteries or to an U.P.S. (Uninterruptable Power System) to provide power to the starting lights' device if the electric line breaks down just at the moment of the start.

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 at following article.-

**The motorcycle must be stationary at the time the red lights are turned off.** Anticipation of the start is defined by the motorcycle moving forward at the time the red lights are turned off.

**In the case of a minor movement and subsequent stop whilst the red lights are on, the Race Direction will be the sole judge of whether an advantage has been gained.**

Race Direction will decide if a penalty will be imposed for **taking advantage by anticipating the start** and must **communicate the penalty to the rider** before the end of the fourth lap.

15. 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.

If, after a reasonable period, the engine does not start, then the rider will be pushed into the pit lane where his mechanics may provide assistance.

16. After the riders have passed the exit of the pit lane, the official situated at this exit will display a green light to start any riders still in the pit lane. **The Race direction may apply a delay before the display of the green light according to the layout and distance of the pit exit. In that case an official information will be circulated.**



17. Should there be a problem that might prejudice safety for the start, of the warm up lap or the race the Starter will invoke one of the following procedures:

#### 17.1 START DELAYED

- A red flag is waved from the Starter's rostrum and the red light stays on.
- The "Start Delayed" board is displayed from the Starter's rostrum and a marshal will wave a yellow flag at each row of the starting grid from the signaling platform.
- Riders must stay in their grid position with helmets on, engines may be switched off.
- The machine(s) which caused the Start Delayed procedure will be removed to the pit lane, regardless of what work is needed to restart the machine. If they 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.
- After display of the Start Delayed board, a maximum of 2 mechanics per rider is allowed on the grid (3 mechanics in Superbike). Only tyre warmers, stands, and hand-carried tools are allowed, no generators are allowed on the grid.
- Only essential officials are allowed on the grid, no media, guests, umbrella-holders or other team personnel will be permitted, with the exception of camera crew(s) authorised by the Organisers.
- The start procedure will be re-commenced at the 3 minutes board which the Starter will order to be displayed as soon as possible (normally as soon as all riders on the grid are attended by their team).
- Display of 1 Minute Board on the grid: Immediate removal of tyre warmers from machines on the grid. The mechanics will, as quickly as possible, assist the rider to start the machine and then vacate the grid. At this point, all team personnel leave the grid
- Display of 30 Second Board on the grid: All riders must be in position on the grid with engines running. No further assistance from mechanics is permitted. Any rider who is unable to start his machine must remove it to the pit lane, under the control of the

grid marshals, where 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.

- Green flag waved to start warm up lap. 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 will be pushed into the pit lane where his mechanics may provide assistance.
- The race distance will be reduced by one lap only if the **Start Delayed** signal is after the warm up lap.
- For a restarted race the race distance may not be reduced.

Any person who, due to his behaviour on the grid is responsible for a “start delayed” may be further penalised.

## **17.2 START DELAYED “RAIN”**

- A red flag is waved from the Starter’s rostrum and the red light stays on.
- The “Start Delayed Rain” board is displayed from the Starter’s rostrum and a marshal will wave a yellow flag at each row of the starting grid from the signaling platform.
- Riders must stay in their grid position, engines must be switched off.
- After display of the Start Delayed Rain board, a maximum of 5 mechanics per rider is allowed on the grid. Works on bike are allowed.
- Only essential officials are allowed on the grid, no media, guests, umbrella-holders or other team personnel will be permitted, with the exception of camera crew(s) authorised by the Organisers.
- The start procedure will be re-commenced at the 5 minutes board which the Starter will order to be displayed as soon as possible (normally as soon as all riders on the grid are attended by their team).
- Display of 3 Minute Board on the grid: Generators must be disconnected and removed from the grid as quickly as possible.



- **Trolleys and air blowers must be removed from the grid as quickly as possible.**
- **Immediate removal of tyre warmers from motorcycles on the grid or in the pitlane.**
- **At this point, all persons except maximum two mechanics per motorcycle, the television crew of the host broadcaster and essential officials must leave the grid.**
- **Riders must put their helmets on.**
- **Display of 1 Minute Board on the grid: The mechanics will, as quickly as possible, assist the rider to start the machine and then vacate the grid. At this point, all team personnel leave the grid.**
- **Display of 30 Second Board on the grid: All riders must be in position on the grid with engines running. No further assistance from mechanics is permitted. Any rider who is unable to start his machine must remove it to the pit lane, under the control of the grid marshals, where he may make further attempts to start it. Such rider may start the sighting lap from the pit lane and rejoin his grid position.**
- **Green flag waved to start the sighting lap. 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 will be pushed into the pit lane where his mechanics may provide assistance.**
- **Any rider starting the sighting lap from the pitlane/back of the grid may rejoin his grid position.**
- **After the sighting lap the start procedure will be re-commenced at the 5 minutes board which the Starter will order to be displayed as soon as possible (normally as soon as all riders on the grid are attended by their team).**
- **The race distance will be reduced by one lap if the Start Delayed Rain signal is after the sighting lap and by two laps if its declared after the warm up lap.**



- For a restarted race the race distance will not be reduced.
- Any person who, due to his behaviour on the grid is responsible for a “start delayed” may be further penalized.

### 17.3 START DELAYED “BOX”

- A red flag is waved from the Starter’s rostrum and the red light stays on.
- The “Start Delayed Box” board is displayed from the Starter’s rostrum and a marshal will wave a yellow flag at each row of the starting grid from the signaling platform.
- Engines must be switched off.
- After display of the Start Delayed Box board, a maximum of 2 mechanics per rider is allowed on the grid to help riders to take the bike into the garages.
- Race Direction will communicate the new Event schedule on the Official Time keeping monitors.

### 1.18.2 Quick Restart procedure

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

1. Upon arrival in the pit lane, riders may make adjustments to their motorcycle, Refuelling is permitted in the pit lane for teams with no garages. (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).
2. When all riders have entered the pit lane the Race Director will announce the time remaining to the re-opening of the pit lane.
  - a) The duration between the red flag and the actual opening of the pit exit will be 10 minutes or more.
  - b) The time remaining to the opening of the pit exit will be displayed on timing screens and in the starting grid countdown clock.



3. When the time period has elapsed, the pit lane exit will be opened for SIXTY SECONDS only. Riders will make one 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 and will start the race from the back of the grid.
4. Any riders remaining in the pit lane after it has been closed will have to start the warm up lap from the pit exit and start the race from the back of the grid.
5. After the closure of the pit lane exit, tyre warmers must be removed from all machines remaining in the pit lane.
6. ONE mechanic only, per rider, may go onto the grid (without tools) to primarily indicate to his rider his position on the grid. In the case of a race impacting new grid positions, the mechanic should avail himself of his riders' new grid position from the classification displayed on the timing screen or from officials who will be positioned at the entry point to the grid with the revised starting grid information.
7. 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 "out lap" from the pit exit must enter the pit lane.
8. As soon as the Safety Car arrives on the back of the grid, a 30 seconds board will be shown. At this point the mechanics must immediately leave the grid by the quickest route. **The 30 seconds may be reduced at the discretion of the Race Direction when the grid is cleared and it is considered safe.**
9. After 30 seconds have elapsed a green flag will be shown to start the warm up lap.
10. The warm up lap will be completed at unrestricted speed, followed by a Safety Car. When the last rider has passed the pit exit it will be opened for a period of 30 seconds to release any rider waiting. The pit lane exit will remain closed until after the start of the race. Any rider delaying the progress of the warm up lap will be overtaken by the Safety Car.



11. Any rider not able to leave the pit exit has a final option of starting the race from the pit exit.
12. Upon arrival back at the starting grid the normal start procedure will be followed, with the start signal given in the normal manner.
13. Riders who started the warm up lap from the pit lane must start the race from the back of the grid as directed by officials. **If two 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 or, in case of a restarted race, according to the position they qualified in the previous red flagged race.**

Any rider arriving after the Safety Car will also start from the back of the grid.

14. After the start signal has been given and the last rider has passed the pit exit, the pit exit will be opened. Any riders still in the pit lane may then start the race up until the point when the lead rider has crossed the finish line to complete the first racing lap.

#### **1.19 RIDE THROUGH PROCEDURE**

During the race, the rider will be requested to ride through the pit lane, stopping is not permitted.

He may then rejoin the race.

The rider must respect the speed limit (Art. 1.21.13) 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 black flag will be shown to the rider.

In the event of a restarted race, the above regulation will also apply.

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.

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.

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

Failure by the relevant rider to ride through, having been shown the board 5 times, will result in that rider being shown the black flag. In the case where the organisation 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 20 seconds.

## **1.20 "WET" AND "DRY" RACES**

All races will be categorised 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 dry. The purpose of this classification is to indicate to riders the consequence of varying climatic conditions during a race.

### **1.20.1 Supersport and Superstock races**

**1.20.1.1 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 tyres.

**1.20.1.2 Wet Races** - A race classified as wet, usually commenced in varying or wet conditions, will not be interrupted for climatic reasons and riders who wish to change tyres or make adjustment must enter the pits and do so during the actual race.

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

### **1.20.2 Superbike races**

A race will not be interrupted for climatic reasons except for extraordinary events and riders who wish to change tyres or make adjustments must enter the pits and do so during the actual race.



## 1.21 BEHAVIOUR DURING PRACTICE AND RACE

1. Riders must obey the flag signals, the light signals, and the boards which convey instructions. Any infringement to this rule will be penalised according to the provisions of article 1.23.
2. 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 will **may** be penalised with one of the following penalties: **penalty points** - 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.
3. Riders should use only the track and the pit-lane. However, if a rider accidentally leaves the track then he may re-join it at the place indicated by the officials or at a place which does not provide an advantage to him.

Any infringement of this rule during the practices or warm up will be penalised by the cancellation of the lap time concerned and during the race, by a **penalty** decided by the Race Direction.

**If a drop of position penalty is imposed** a board will be displayed for the rider on the finish line during a maximum of 5 laps. If the rider did not go back after the board has been presented 5 times, he will be penalised by a ride through.

Further penalties (such as penalty points - fine - ride through - disqualification - withdrawal of Championship points) may also be imposed.

4. 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 whilst any repairs or adjustments are made. The marshal may then assist him to re-start the motorcycle.
5. If the rider intends to retire, then he must park his motorcycle in a safe area as indicated by the marshals.



6. 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.
7. Riders who are returning slowly to the pits for remedial work should ensure that they travel as far as possible off the racing line.
8. Riders who stop their engines in the pits may be assisted to re-start their motorcycle by the mechanics.
9. 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 chequered flag or red flag).
10. 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.
11. 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.
12. Riders in the Superbike class are required to carry "on-board" cameras on their motorcycle, with the exception of wild card or "one event" riders.

The cameras and associated equipment must be carried during all practice sessions and the race.

Where it is impractical to supply cameras and associated equipment for every motorcycle being used by the rider in practice or racing, then the company designated for the supply of the equipment will provide dummy equipment of equivalent weight, size and mounting location to the functioning equipment.

Cameras and other equipment, functioning or dummy, will be supplied to the designated Teams by, at the latest, 14h00 on the day preceding the first day of practice at an event.

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.

13. A speed limit of 60 km/h 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.

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

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

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

14. Stopping on the track during practices and races is forbidden.
15. During the practice sessions, Superpoles and warm ups, practice starts are permitted;
  - a) when it is safe to do so, at the pit lane exit before joining the track and
  - b) after passing the chequered flag at the end of practice sessions, Superpoles and warm-ups when it is safe to do so, off the racing line and only in the designated Practice Start Zone(s) and following the procedure, as communicated to teams prior to the first practice session.

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

16. 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.
17. After the chequered flag, riders riding on the track must wear a safety helmet until they stop on the pit lane/parc fermé.
18. It is not permitted to ride racing motorcycles within the circuit other than in the pit lane or on the track.



19. Any rider or team whose motorcycle spill oil on the track causing interruption of practice, warm up or race twice in the same event may be penalised by the Race Direction.
20. Any rider who enters the pit box during a race will be considered to have finished the race and may NOT re-enter the track.
21. The pit lane exit road will be defined by Safety officer and marked with painted lines. A dotted white line (interrupted line) will signify the end of the pit lane road, which is the point where the track starts and racing may commence. Riders must stay inside the painted lines defining the pit exit road until passing the dotted white line, during all track sessions (practice and race).

Infractions may be penalised with an instant penalty by Race Direction.

22. Penalties for infringement of Engine allocation articles:

- Infringement before the race: the rider will start the next race from the pit lane 5 seconds after the green light is on at the pit lane exit (2 races in a row for the Superbike class).
- **Infringement for a red flagged race with 3 or less laps completed: rider will start the restarted race from pit lane.**

23. Should a Superbike Team have a Technical Protest lodged against them after Superbike Race 1 then they have three options;

- i) Immediate Examination time allowing.
- ii) Replacement of Suspected parts, with the replaced parts impounded for examination later.
- iii) Checking of all seals, use the machine 'as is' in Race 2 and for any infractions found then penalties will be applied to BOTH Superbike races.

24. Penalties for infringement of tyre sticker rules during the season:  
**First offence: warning,**  
**Second offence: €250 fine,**  
**further offences €250 plus penalty points.**



## 1.22 PIT STOPS

Riders may enter the pits lane (**but must not cross the line into the pit box**) during the race.

Refuelling is strictly prohibited. Any infringement of this rule will be penalised with a disqualification.

For the Superbike class only, the following procedure will also apply:

- Riders who wish to change tyres in the pit lane must stop in front of their garage and turn off the engine. The use of power tools (maximum two at the same time, electric or pneumatic) is allowed.
- Stands or lifts must operate manually and cannot be power assisted.
- The use of an auxiliary starter and/or of a booster battery is allowed to restart the motorcycle.
- A marshal will monitor the situation and report any infringement of this rule which will be penalised by the Race Direction with a ride through.
- Intervention time for a pit stop for tyre(s) change is fixed to 30 seconds plus the necessary time to cross pit lane from entrance to exit (set time). This intervention will be monitored by the Official timekeeping company. Any rider whose pit stop is below the set time will be penalized by the Race Direction with a Ride Through.
- During the pit stop, adjustments to the motorcycle are allowed.
- A pit stop without a tyre change is not affected by this rule.

## 1.23 FLAGS AND LIGHTS

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

All flags are presented waved.

### 1.23.1 Flags and Lights Used to Provide Information:

- **Green Flag**  
The track is clear  
This flag must be waved at each flag marshal post for the first lap of each practice session and of the warm up, for the sighting lap and for the warm up lap.  
This flag must be shown waved at the flag marshal post immediately after the incident that necessitated the use of one or more yellow flags.
- **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.
- **White Flag with diagonal red cross  
(stroke width of the cross: between 10 and 13 cm)**  
Drops of rain on this section of the track.  
This flag must be waved at the flag marshal post.
- **White Flag with diagonal red cross  
(stroke width of the cross: between 10 and 13 cm)  
+ Yellow and Red Striped Flag**  
Rain on this section of the track.  
These flags must be waved together at the flag marshal post.
- **White Flag**  
Waved at all the flag marshal posts, this flag indicates that it is raining at some parts of the circuit.  
Only the Race Direction can take the decision.
- **Blue Flag**  
Waved at the flag marshal post, this flag indicates to a rider that he is about to be overtaken.  
During the practice 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. He must allow the following rider(s) who are lapping him to pass him at the earliest opportunity and passing within a group of lapped riders is forbidden under the blue flag.  
Any Infringement of this rule may be penalised by the Race Direction.



- **Chequered Black/White Flag**  
This (these) flag(s) will be waved at the finish line on track level to indicate the finish of race or practice session.
- **Chequered Black/White Flag and Blue Flag**  
The chequered black/white flag(s) will be waved together with the blue flag at the finish line on track level when a rider(s) closely precedes the leader during the final lap before the finish line (see art. 1.25.1).
- **Green Light**  
This light must be switched on at the pit lane exit to signal the start of each practice session and of the warm up, the start of the sighting lap(s) and the start of the warm up lap.
- **Flashing Blue Lights**  
Will be switched on at the pit lane exit at all time during practices and races.

### 1.23.2 Flags Which Convey Information and Instructions:

- **Yellow Flag**  
Waved at each row of the starting grid, this flag indicates that the start of the race is delayed.  
A single yellow flag waved at the flag marshal post indicates that there is a danger ahead beside the track.  
Two yellow flags waved together at the flag marshal post indicate that there is a hazard wholly or partly blocking the track.  
The riders must slow down and be prepared to stop. Overtaking is forbidden 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 5 laps. If the rider did not go back after the board has been presented 5 times, he will be penalised by a ride through.  
In both cases, further penalties may also be imposed.  
If immediately after having overtaken, the rider realises that he **committed** an infraction, he must raise his hand and let pass the rider(s) that he has overtaken. In this case, no penalty will be imposed.

During the final inspection lap, this flag must be waved at the exact place where the flag marshal will be positioned during the practices, the warm ups and races.

- **Red Flag and Red Lights**

When the race or practice 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.

When the pit-lane exit is closed, the light will be switched on. Riders are not allowed to exit the pit lane.

**Any Infringement of this rule** may be penalised by the Race Direction. The red flag will be shown motionless on the starting grid at the end of the warm up lap.

The red flag may also be used to close the track.

The red lights will be switched on at the start line for between 2 and 5 seconds to start each race.

- **Black Flag**

This flag is used to convey instructions to one rider only and is waved at each 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**.

**Any Infringement of this rule** may be penalised by the Race Direction. This flag can also be presented to a rider for a reason other than a penalty (ie. for checking or changing a transponder).

- **Black Flag with orange disk (Ø 40 cm)**

This flag is used to convey instructions to one rider only and is waved at each flag marshal post 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.

**Any Infringement of this rule** may be penalised by the Race Direction.

### 1.23.3 Flag Dimension

The flag dimension should be 80 cms in the vertical and 100 cms in the horizontal.

The flag dimension will be checked the day preceding the day of the first practice session.

#### **1.23.4 Flag Colour**

The Pantones for the colours are as follows:

Orange: Pantone 151C  
Black: Pantone Black C  
Blue: Pantone 298C  
Red: Pantone 186C  
Yellow: Pantone Yellow C  
Green: Pantone 348C

The flags' colours will be checked the day preceding the day of the first practice session.

#### **1.23.5 Rider' s number board**

Black board (70 cm horizontal x 50 cm vertical) which enables the race 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.

#### **1.23.6 Flags Marshals posts**

The location will be fixed during the circuit homologation.

#### **1.23.7 Marshals Uniforms**

It is strongly recommended the marshals' uniforms to be in white or orange (Ref. Pantone: 151C) and the rain coat to be transparent.

#### **1.24 MEDICAL CAR**

The medical cars must be equipped with yellow flashing lights. The words "MEDICAL" should be clearly indicated on the back and the sides of the car.

#### **1.25 FINISH OF A RACE AND RACE RESULTS**

**1.25.1** When the leading rider has completed the designated number of laps for the race, he will be shown a chequered flag by an official standing at the finish line, behind a 1<sup>st</sup> protection line. The chequered flag will continue to be displayed to the subsequent riders.

When the chequered flag is shown to the leading rider, no other rider will be permitted to enter the track from the pit lane.

As soon as the chequered 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.

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 Chequered 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 Chequered flag.

**1.25.2** In case of a photo-finish between two, or more, riders, the decision shall be taken in favour 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.

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

**1.25.4** To be counted as a finisher in the race and be included in the results a rider must:

- a) Complete 75% of the race distance.
- b) Cross the finish line on the race track (not in the pit lane) within five minutes of the race winner. The rider must be in contact with his motorcycle.

**1.25.5** The riders classified in the first three 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.

## **1.26 INTERRUPTION OF A RACE**

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

The results will be the results taken at the last point where the leader and all other riders on the same lap as the leader had completed a full lap without the red flag being displayed

Exception: if the race is interrupted after the chequered flag, the following procedure will apply:

1. For all the riders to whom the chequered 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 chequered 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.

At the time the red flag is displayed, riders who are not actively competing in the race will not be classified.

Within 5 minutes after the red flag has been displayed, riders who have not entered the pit lane, pushing or riding on their motorcycle, will not be classified.

**1.26.2** If the results calculated show that less than three 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 null and void and a completely new race will be run **according to the article 1.27.4**. If it is found impossible to re-start the race, then it will be declared cancelled and the race will not count for the Championship.

**1.26.3** If three laps or more have been completed by the leader of the race and all other riders on the same lap as the leader, but less than two-thirds of the original race distance, rounded down to the nearest whole number of laps, then the race will be re-started according to article 1.27.4. If it is found impossible to re-start the race, then the results will count and half points will be awarded in the Championship.

**1.26.4** If the results calculated show that two-thirds of the current 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.



## 1.27 RE-STARTING A RACE THAT HAS BEEN INTERRUPTED

**1.27.1** If a race has to 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 Clerk of the Course will announce a time and the start procedure type (Normal Start or Quick Start) for the new start procedure 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 start procedure will be identical to a normal start with sighting laps, warm up lap etc.

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

- i) In the case of situation described in 1.26.2 (less than 3 laps completed) above:
  - a) All riders may re-start.
  - b) Motorcycles may be repaired.  
Refuelling is permitted.
  - c) The number of laps will be two-thirds of the original race distance rounded down to the nearest whole number of laps.
  - d) The grid positions will be as for the original race.
- ii) In the case of situation described in 1.26.3 (3 laps or more and less than two-thirds completed) above:
  - a) Only riders who are classified as finishers in the first race may re-start.
  - b) Motorcycles may be repaired.  
Refuelling is permitted.
  - c) 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 of the original race distance rounded up. The decision is at the discretion of Race Control respecting schedules.**



- d) The grid position will be based on the finishing order of the first race.
- e) 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. Provisions of Art. 1.25.4 will apply.

**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 5 or more laps have been completed, the race will be deemed to have been completed and full Championship points awarded. The race classification will be according to Art. 1.27.4. ii) e)
- b) If the re-started race is interrupted when less than 5 laps have 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 5 laps have 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, with a minimum of 5 laps. If it has been not possible to re-schedule the race the race 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 5 laps 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 5 or more laps, 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 programme as necessary.

## 1.28 CHECK AREA/PARC FERMÉ

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 teams and riders to ensure that the machine is in the parc fermé.** Motorcycles will normally be released from the parc fermé 30 minutes after the finish of the race.

For the Supersport and Superstock races the top three classified finishers will be held at the podium area, the remaining machines will be directed to the Parc Fermé.

For Superbike races the top three classified finishers in Superbike and the winner of the EVO class will be directed to the podium area.

Following Superbike race one, the remaining riders will return to their garages where the tyre stickers will be inspected by the Superbike 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 Superbike Race 1) (see art 3.4.3). Garage door must remain fully open during this period.

## 1.29 CHAMPIONSHIP POINTS AND CLASSIFICATION

**1.29.1** Riders and Constructors will compete for the FIM Road Racing World Championship Superbike or Supersport or for the FIM Superstock Cup.

**1.29.2** For riders, the points will be those gained in each race.

**1.29.3** For Constructors, only the highest placed motorcycle of a Constructor will gain points, according to the position in the race.



**1.29.4** For each race, Championship points will be awarded on the following scale:

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

**1.29.5** All races will count for the FIM Road Racing World Championship Superbike or Supersport or for the FIM Superstock Cup classification.

**1.29.6** In the event of a tie in the number of points, the final positions will be decided on the basis of 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.

**1.29.7** 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 Constructors' classification.

**1.29.8** The World Champions in each category and winner of the FIM Cup are obliged to attend an official FIM ceremony.

## 1.30 INSTRUCTIONS AND COMMUNICATIONS TO COMPETITORS

**1.30.1** Instructions may be given by the Race Director and/or Clerk of the Course 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 given to each team representative. Posting on the official notice board and giving to the team representative will be deemed as proof of delivery.

**1.30.2** 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.

**1.30.3** Any communication from the Race Direction, the Permanent Officials or the Clerk of the Course to a team or rider must be communicated in writing or by **Time keeping monitors**. Similarly, any communication from a team or rider to the Race Direction, the Permanent Officials or the Clerk of the Course must also be made in writing.

### 1.31 EXTRA DEPOSITS IN CASE OF MOTORCYCLE CONTROL FOLLOWING A PROTEST

The deposit in case of dismantling and reassembling a motorcycle to measure the cylinder capacity, following a protest, is 150 € (material included)

The deposit in case of partial or complete dismantling of an engine or gearbox is 300 €.

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

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

### 1.32 EXTRA DEPOSIT FOR FUEL CONTROLS FOLLOWING A PROTEST

All requests for fuel control following a protest or an appeal must be accompanied by a deposit of 600 € paid to the FIM.

After the last control:

- the winning party will have its deposit reimbursed.
- 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

Any rider who enters an event must inform the organiser if, subsequently, he decides not to participate in the event. A rider who has submitted an entry form and fails to participate will be reported by the International Jury to the FIM, who will impose the following penalties:

- First offence: fine of 150 €.
- Subsequent offences in the same season: suspension from the next event counting towards the Championship.

Upon receipt of the International Jury's report, the Executive Secretariat will send a letter to the rider's FMN asking the reasons for the non-participation; a reply should be sent within 15 days at the latest and a decision will be taken regarding the penalty.

A suspension could also be pronounced against a rider who takes part in another event on the same day.

## 2. TECHNICAL REGULATIONS

Amendments to the technical regulations may be made by the Superbike Commission at any time.

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

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

### 2.1 INTRODUCTION

#### 2.1.1 Motorcycles for the Road Racing Superbike & Supersport World Championships must be motorcycles with a valid road homologation in one of the following areas: USA, EU or Japan.

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

## 2.2 CLASSES

2.2.1 The production based racing classes will be designated by engine capacity.

## 2.3 GENERAL ITEMS

### 2.3.1 Materials

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

- a) Titanium test to be performed on the track: Magnetic test (titanium is not magnetic).
- b) The 3 % nitric acid test (titanium does not react. If metal is steel, the drop will leave a black spot).
- c) Specific weight of titanium alloys is between 4.5 and 5.0 kg/dm<sup>3</sup> vs. over 7.48 kg/dm<sup>3</sup> of steel and can be ascertained by weighing the part and measuring its volume in a calibrated glass filled with water (intake valve, rocker, connecting rod, etc.)
- d) In case of doubt, the test must take place at a Materials Testing Laboratory.

### 2.3.2 Handlebars

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

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

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

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

Repair by welding of light alloy handlebars is prohibited.

**Composite handlebars are not allowed in any class.**

### 2.3.3 Control levers

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

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

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

### 2.3.4 Wheel and rims (See Table 1)

1. Any modification to the rim or spokes of an integral wheel (cast, moulded, riveted) as supplied by the manufacturer or of a traditional detachable rim other than for spokes, valve or security bolts is prohibited, except for tyre retention screws sometimes used to prevent tyre movement relative to the rim. If the rim is modified for these purposes bolts, screws etc. must be fitted.
2. The distance between the rim walls is measured inside the flange walls in accordance with ETRTO.

### 2.3.5 Tyres

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

Only tyres distributed by the Official Supplier at the event are authorised.

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

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

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

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

### **2.3.6 The use of tyre warmers is allowed.**

### **2.3.7 Use of tyres**

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

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

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

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

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

During free practices, qualifying practices, Superpole for Superbike, warm up session and races, front and rear tyres may be required to be marked with tyre stickers (see Art. 2.4.7/ 2.5.7/ 2.6.7).

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

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

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

### **2.3.8 Ballast**

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

The ballast must be made of solid metallic piece/s, firmly and securely connected, either through an adapter or directly to the main frame or engine, with a minimum of 2 steel bolts (min. 8 mm diameter, 8.8 grade or

over). Other equivalent technical solutions must be submitted to the FIM Superbike Technical Director for his approval.

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

### 2.3.9 Engine Sealing

- a) **The total number of engines that a rider may use during the entire championship is limited the “allocated number”. When a permanent rider changes teams during the championship their engine limit will not change.**
- b) **The total number of engines that a team may use during the entire Championship is limited to the “allocated number” per permanent entry”. When a permanent rider is replaced or substituted during the Championship, the total engine allocation for the teams’ entry will not change. Should a new team enter the championship part way through the season the number of engines allowed will be proportional to the season remaining.**
- c) **Wild card riders (and one event riders) will be allowed to use two (2) sealed engines during the event in which they take part. Should the same rider choose to enter a second meeting as a wildcard, one (1) extra engine will be added. For any further entries the rider and/or team will be considered a permanent entry.**
- d) **Should the number of race meetings change during the season then the Superbike Commission will convene to consider updating the number of allocated engines.**
- e) **A team or rider that uses more than the allocated number of engines during the Championship will receive a penalty (according to Art. 1.21.21).**
- f) **The FIM technical Director or his appointed staff must be notified of all engine changes and therefore know at all times which engine is in current use.**
- g) **The number of engines that may be used during each event is only limited by the remaining allocation.**
- h) **Each engine will be sealed by the FIM Superbike Technical Director or by his appointed staff before it can be used during any event.**



- i) An engine is considered in use or active from the moment it crosses the pit exit line, until that point it may be unsealed with no penalty.
- j) Engines can only be sealed when not installed in the chassis.
- k) Seals will bear a serial number, which will be recorded.
- l) Any attempt made to remove the seal will damage it irreparably. The seals can only be broken at the track under the supervision of the Technical Director or his appointed staff.
- m) A broken or damaged seal will be considered as if the engine has been used and will be counted as part of the rider's allocation for the season.
- n) A team must request sealing of an engine/engines before its/their use.
- o) A previously sealed engine may be resealed following repair or refreshment; this will be considered a new engine and count towards the total number of engines allowed.
- p) The seals on an engine that has completed its life cycle or is in need of repair can only be broken in front of the Technical Director or his appointed staff. At the time of the breaking of the seals the Technical Director may ask for this engine to be disassembled to check for compliance of the technical rules for the relevant class.
- q) The crankcases will be sealed in such a way not to allow the disassembly for repair, replacement or adjustment of the crankshaft, connecting rods and/ or associated bearings, pistons, piston pins or piston rings.
- r) The cylinder, cylinder head(s) and head cover/cam cover will be sealed to prevent repairs, replacement or adjustment on the cylinder head, valve, valve seats or any other repairs or service work on the valve train.
- s) The cassette gearbox door and/or crankcases will be sealed to control the gearbox use.
- t) The right and left hand engine side covers will not be sealed as to allow repair or adjustment to the ACG, clutch system, water pump or other accessory systems located behind these covers.
- u) **If an engine is found not to be in compliance with the regulations, any penalties imposed will apply retrospectively to each race this engine was used in.**

- v) **Schedule for sealing (and unsealing):**
  - i) **Thursday from 10:00 until 18:00**
  - ii) **Friday from 9:00 until 18:00**
  - iii) **Saturday from 9:00 until 18:00**
  - iv) **10 minutes before first warm up till 16:00**

### **2.3.10 Engine Inspection**

- a) **When any engine is unsealed and stripped for inspection following a protest and found to be fully compliant with the rule(s) which is (are) the subject of the protest(s), then the team will be given one additional seal allocation to reseal the rebuilt engine OR a new engine.**
- b) **The FIM Technical Director, Race Direction or the Permanent Officials (FIM Stewards) reserve the right to suspend any technical engine protest if it is felt to be a violation of the above rule. That engine will then be stripped at “end of life”.**
- c) **When an engine has reached an agreed “end of life” then the Technical Director may at his discretion choose to have that engine stripped to check for compliance.**
- d) **If any engine is found to have been opened or its seals removed or if any (sealed) engine is inspected by the technical director or his appointed staff and found to be in breach of the technical rules the rider will be disqualified from ALL races when this engine was used. The points earned will be removed in the riders championship and if applicable the manufacturers championship.**

### **2.3.11 Timekeeping instruments**

All motorcycles must have a correctly positioned timekeeping transponder. The transponder must be approved by the official Timekeeper and fixed to the motorcycle in the longitudinal centre of the motorcycle (typically close the swing-arm pivot), on either the left or right side, as low as possible and avoiding being shielded by carbon bodywork.



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

### 2.3.12 Wildcard technical specification

Wildcards will be allowed to enter using machines with components not featuring on the approved component lists. The parts must be declared at the time of entry to the Superbike Technical Director and must be or have been generally available parts. They must of a lower or equal performance level than those allowed in the rules. No “factory” parts will be considered and the technical Directors decision on eligibility will be final.

## 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 AUTHORISED AND PRESCRIBED IN THIS RULE IS STRICTLY FORBIDDEN**

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

Superbike 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.

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

### 2.4.2.1 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 FIM Superbike World Championship competition. In the case that a new 2-cylinder entry wins a race in the Dry in the first year, the ~~minimum weight adjustments~~ 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 2.4.2.4: 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 Superbike Commission can at any time modify the handicap system to ensure fair competition.

### 2.4.2.2 Balancing Calculation

1. After three events, the best manufacturers of the 1000cc 4 cylinders and 1200cc 2 cylinders will be selected according to the sum of the points of the best two riders for each manufacturer.
2. By taking the race points of the riders of the selected 1000cc 4 cylinder manufacturer and of the selected 1200cc 2 cylinder manufacturer in each race, an average will be calculated after every event, the “event average”.

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

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

If neither race has any finishers from one of the selected manufacturers, the event will not be considered.

3. “Wet” races (as declared by the Race Director) are not taken in account for the calculation of an “event average”.

#### 2.4.2.3 Air restrictors for 1200cc 2 cylinders

Application: Only the 1200cc 2-cylinder engines may be fitted with air restrictor. **Should a restrictor be required then the first restrictor size to be installed will be equivalent to a Ø52 mm circular area.** Air restrictor size will be adjusted in steps equivalent to a change of 2 mm in diameter, **between Ø52 mm and to a minimum of Ø46 mm (None <> Ø52 mm <> Ø50 mm <> Ø48 mm <> Ø46 mm)**, if needed during the Championship, as described below in Art. 2.4.2.4

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

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

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

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

#### 2.4.2.4 Air restrictor adjustment

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

1. If the gap in the average value of “event averages”, calculated as described in Art. 2.4.2.2 is more than 5 points in favour of the 1000cc 4-cylinder manufacturer, and

If a rider of a 1000cc 4-cylinder motorcycle is leading the riders’ FIM Superbike World Championship standings at that time:

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

2. If the resulting gap of the average value of “event averages”, calculated as described in Art. 2.4.2.2, is more than 5 points in favour of the 1200cc 2-cylinder manufacturer, and

If a rider of a 1200cc 2-cylinder motorcycle is leading the riders’ FIM Superbike World Championship standings at that time:

then, the air restrictor size of the 1200cc 2-cylinder manufacturers will be reduced by one size to a minimum of Ø46 mm (or the equivalent area 1661.9 mm<sup>2</sup>).

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 update is higher than 5.

The FIM Superbike Technical Director will inform all the teams about the possible air restrictor size adjustments, within 24 hours from the end of the last event (the last meeting of the International Jury), where the average value of the “event averages” was calculated. The new air restrictor size adjustments must be applied from the first following event.



### 2.4.3 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.

All machines must be normally aspirated.

### 2.4.4 Minimum weight

#### 2.4.4.1 The minimum weight will be:

All machines      **168 kg**

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 FIM Superbike Technical Director at the preliminary checks.

## 2.4.5 Number plate colours

The background colours and figures (numbers) for Superbike are white background with black numbers.

The size for all the front numbers is:

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:	<b>70 mm</b>
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:

- Once on the front, either in the centre of the fairing or slightly off to one side; the number must be centred on the white background with no advertising within 25 mm in all directions.
- Once, on each side of the fairing or on the lower rear portion of the lower fairing. The number must be centred on the white background.

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

## 2.4.6 Fuel

All engines must function on normal unleaded fuel with a maximum lead content of 0.005 g/l (unleaded) and a maximum MON of 90 (see also Art. 2.7 for full fuel specifications).

## 2.4.7 Tyres

- The maximum number of tyres, of any type, available to each rider during the event will be 24 (10 front tyres- 14 rear tyres).
- A maximum of 13 tyres per rider can be mounted per rider at any time.



- c) For both Superbike races only, wet and intermediate tyres will not need to be marked with a tyre sticker. They will not be considered in the total number of tyres available for use; however normal allocation limits still apply.
- d) The two riders passing from **Superpole 1 to Superpole 2** will be allocated one (1) extra rear tyre (15 rear tyres overall, 25 total).
- e) Every tyre used during the event must be marked with an adhesive sticker with a number allocated by the FIM Superbike Technical Director. The sticker will be a different colour front and rear.
- f) The tyre stickers will be delivered to the teams in a sealed envelope, on the day before the first practice after which the teams will be responsible for their use.
- g) The stickers must be applied to the left sidewall of the tyre.
- h) The use of motorcycles without the official stickers will be immediately reported to the Race Direction whom will take appropriate action.
- i) After the third free practice session, the tyre supplier will allocate one (1) rear “qualifying tyre” to the riders taking part in Superpole 2 and two (2) to the riders taking part in Superpole 1.
- j) Qualifying tyres can only be used during Superpole sessions.
- k) Riders in Superpole 1 can only use one qualifying tyre and only the two riders passing to Superpole 2 can use the second qualifying tyre. The unused **qualifying** tyre from riders not passing to Superpole 2 must be returned to the tyre supplier.
- l) If the second **qualifying** tyre is used during Superpole 1, the rider will lose his qualifying time and must start from the back grid.
- m) **Any modification or treatment (cutting, grooving) is forbidden.**
- n) At the beginning of the event, the Official Supplier may be requested by the FIM Superbike Technical Director to deliver to him four (4) samples of each type of tyre to be used at the event.



- o) The allocation of individual tyres will be made on a random basis, with no involvement of any representative from the tyre supplier, teams or riders. Those tyres will be individually identified and may not be exchanged between riders, including between team mates, and may not be exchanged by the tyre supplier after the allocation, except with the permission of the Race Direction.
- p) In exceptional cases, should the sticker be damaged or applied in the wrong way, up to 2 extra stickers may be provided at the sole discretion of the FIM Superbike Technical Director. However, the damaged sticker must be returned to the FIM Superbike Technical Director and/or the tyre it was applied to, must be absolutely intact.

#### 2.4.8 Engine

The allocated number of engines per permanent entry is **((Race events in Season)/2) rounded UP.**

See Art. 2.3.8 For Sealing and Usage Details.

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) Homologated materials and castings for the crankcase, cylinder, cylinder head and gear-box housing must be used.
- c) The method of cam drive must remain as homologated.
- d) The method of valve retention must remain as the homologated model. No pneumatic valve retention devices are allowed unless fitted to the homologated model.
- e) The sequence in which the cylinders are ignited (i.e. 1-2-4-3), must remain as originally designed on the homologated model. Simultaneous (\*) firing of 2 cylinders is also forbidden if not adopted on the homologated motorcycle. \*up to 5 degrees firing difference in 2 cylinders is regarded as “simultaneous” firing.

### 2.4.8.1 Fuel injection system **\*\*until 2016 inclusive**

“Fuel injection system” refers to throttle bodies, fuel injectors, fuel pump and fuel pressure regulator and variable length intake tract devices.

- a) The original homologated throttle body must be used.
- b) Electronically controlled throttle valves, known as ‘ride-by-wire’, may be added or changed.
- c) Modifications are allowed to the throttle body exterior to add or change the “ride-by-wire”. Sensors, bell cranks, pulleys, shaft mounts or clamps may be added changed or removed. However the safety systems and procedures must always be present and fully functional **and must include spring closing and/or ignition cut.**
- d) **The ride-by-wire kit (to modify the standard throttle bodies) must be approved and at least 50 units must be available (if ordered). Only the machine manufacturer or one approved partner can submit a system for approval. The throttle grip position sensor must be included in this kit. The maximum price for the kit is € 2500 (excluding taxes). The maximum lead time is 8 weeks. The approved supplier may optionally charge up to € 500 to fit the system to the throttle bodies.**
- e) The use of an optional homologated throttle body is not allowed.
- f) Fuel Injectors must be stock, **in the homologated position** and unaltered from the original specification and manufacture.
- g) 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.
- h) Variable intake tract devices cannot be added if they are not present on the homologated motorcycle.
- i) 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.
- j) Variable intake tract devices must function with the same mechanical system as the homologated system.
- k) The throttle body intake insulators may be modified.
- l) Bell mouths (including their fixing points) may be altered or replaced.
- m) Vacuum slides may be fixed in the open position.

- n) Secondary throttle valves and shafts may be removed or fixed in the open position and the electronics may be disconnected or removed.
- o) Air and air/fuel mixture can go to the combustion chamber exclusively through the throttle body butterflies.

#### 2.4.8.1 Fuel injection systems **\*\*from 2017 inclusive**

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

- a) The original homologated fuel injection system must be used without any modification.
- b) The fuel injectors must be stock and unaltered from the original specification and manufacture.
- c) Bell mouths may be altered or replaced.
- d) Primary throttle valves cannot be changed or modified.
- e) Secondary throttle valves and shafts may be removed or fixed in the open position and the electronics may be disconnected or removed.
- f) Variable intake tract devices cannot be added if they are not present on the homologated motorcycle and they must remain identical and operate in the same way as the homologated system. All the parts of the variable intake tract device must remain exactly as homologated (excepting the bellmouths)
- g) Air and air/fuel mixture must go to the combustion chamber exclusively through the throttle body valves.
- h) Electronically controlled throttle valves, known as “ride-by-wire”, may be only used if the homologated model is equipped with the same system.

#### 2.4.8.2 Cylinder Head

The homologated cylinder head may be modified as follows:

- a) **The cylinder head must begin as a finished production part using homologated materials and castings. Material may only be added by epoxy or removed by machining. No machining or modification is allowed in the cam box/valve mechanism area.**



- b) The induction and exhaust system including the number of valves and or ports (intake and exhaust) must be as homologated.
- c) Porting and polishing of the cylinder head normally associated with individual tuning such as gas flowing of the cylinder head, including the combustion chamber is allowed. Epoxy may be used to shape the ports.
- d) The compression ratio is free.
- e) The combustion chamber may be modified.
- f) **Valves must remain as homologated.**
- g) **Valve seats can be modified or replaced for repair. The material must remain as homologated.**
- h) **Valve guides must remain as homologated. Modifications in the port area are allowed by machining.**
- i) **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.**
- j) **Valve spring retainers, collets, spring seats may be altered or replaced.**
- k) **Valves must remain in the homologated location and at the same angle as the homologated valves.**
- l) **Rocker arms (if any) must remain as homologated.**
- m) **The exhaust air bleed system must be blocked and the external fittings on the cam cover(s) may be replaced by plates.**
- n) **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.**
- o) **The homologated cylinder head/cam cover may be replaced by a cosmetic replica of higher specific weight material (i.e. replace magnesium part with aluminium)**

### **2.4.8.3 Camshaft**

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

### **2.4.8.4 Cam sprockets or cam gears**

- a) Camshaft sprockets, pulleys or gears may be altered or replaced to allow degreeing of the camshafts (see also Art. 2.4.8).
- b) The cam chain or cam belt tensioning device(s) can be modified or changed.
- c) The cam chain may be altered or replaced but must remain the same type.

### **2.4.8.5 Cylinders**

No modifications are allowed. The cylinder base gasket(s) may be changed.

### **2.4.8.6 Pistons**

No modifications are allowed (including polishing and lightening).

No “oversize” pistons may be used.

### **2.4.8.7 Piston rings**

No modifications are allowed.

### **2.4.8.8 Piston pins and clips**

No modifications are allowed.

### **2.4.8.9 Connecting rods**

- a) Connecting rod may be altered or replaced from those fitted to the homologated motorcycle. The weight must be the same or greater than the original homologated part.
- b) The material must be the same type as the homologated item (i.e. steel, titanium, alloy) or steel.
- c) If the original connecting rod is fitted with a little end insert then the replacement connecting rods may also have an insert of the same material as fitted in the original homologated connecting rod.



- d) **The centre to centre (little end to big end) length of the rod must be the same as the original homologated item.**
- e) **Connecting rod bolts are free.**

#### 2.4.8.10 Crankshaft

**Only the following modifications are allowed to the homologated crankshaft:**

- a) **Bearing surfaces may be polished or a surface treatment may be applied.**
- b) **Balancing is allowed but only by the same method as the homologated crankshaft. For example heavy metal, i.e.: Mallory metal inserts, are not permitted unless they are originally specified in the homologated crankshaft.**
- c) **Balancing is allowed, the addition or reduction in weight of the crankshaft in order to reach a racing balance can be no higher than 5% of the homologated weight without the tolerance as shown on the homologation drawing of the crankshaft.**
- d) **The balancing must be performed by the original method i.e. drilling or machining and in the same position (i.e. edge of flywheels).**
- e) **Polishing of the crankshaft is not allowed.**
- f) **Balance shaft may be altered, removed or modified.**

#### 2.4.8.11 Crankcase/Gearbox housing

- a) **Crankcases must remain as homologated. If the crankcases have an integral cylinder then the top face of the cylinder may be ground to adjust deck height. Oil Spray nozzles may be modified. No other modifications are allowed (including painting, polishing and lightening).**
- b) **It is not allowed to add a pump used to create a vacuum in the crankcase. If a vacuum pump is installed on the homologated motorcycle then it may be used only as homologated.**
- c) **Oil-pan (sump) may be altered or replaced and oil pick up may be altered or replaced.**
- d) **One thread may be altered for direct oil pressure/temperature sensor fitting in the crankcases or engine covers.**
- e) **See 2.4.10.1 g)**

### 2.4.8.11.1 Lateral covers and protection

- a) Lateral (side) covers may be altered, modified or replaced (**excluding pump covers**). If altered or modified, the cover must have at least the same resistance to impact as the original one. If replaced, the cover must be made in material of same or higher specific weight and the total weight of the cover must not be less than the original one.
- b) **Titanium bolts may be used to fasten lateral covers.**
- c) All lateral covers/engine cases containing oil and which could be in contact with the ground during a crash, must be protected by a second cover made from metal such as aluminium alloy, stainless steel, steel or titanium, **composite covers are not permitted.**
- d) **The secondary cover must cover a minimum of 1/3 of the original cover. The Technical Directors decision on suitability is final.**
- e) Plates or crash bars from aluminium or steel also are permitted in addition to these covers. All of these devices must be designed to be resistant against sudden shocks, abrasions and crash damage.
- f) FIM approved covers will be permitted without regard of the material or dimensions.
- g) These covers must be fixed properly and securely **with a minimum of three (3) case cover screws** that also mount the original covers/engine cases to the crankcases.
- h) The Technical Director has the right to **refuse any cover not satisfying this safety purpose.**

### 2.4.8.12 Transmission/Gearbox

- a) **Only one (1) set of gearbox ratios will be allowed for the whole season. The ratios can be freely chosen.**
- b) **The chosen ratios must be declared before the start of the first event.**
- c) **External Quick-shift systems are permitted (including wire and potentiometer).**
- d) **Only the homologated primary gear ratio may be used (see art. 2.4.8.13)**



- e) The layout of the transmission shafts must be the same as on the homologated motorcycle.
- f) The gear design and material is free.
- g) The selector drum and complete gear index mechanism are free.
- h) The selector forks may be changed. However the forks must engage with the same gears and function in the same way as on the homologated motorcycle.
- i) Countershaft sprocket, rear wheel sprocket, chain pitch and size may be changed.
- j) The sprocket cover may be modified or eliminated.
- k) It will not be allowed to change the gearboxes at the track - a broken Gearbox will equal a broken engine

#### 2.4.8.13 Clutch

- a) Aftermarket or modified clutches are permitted.
- b) Back torque limiter is permitted.
- c) Any power source (i.e. hydraulic or electric) cannot be used for clutch operation, if not installed in the homologated model for road use. Human power is excluded from the ban.
- d) Clutch system (wet or dry type), **type (multiplate)** and method of operation (cable/hydraulic) must remain as homologated.  
**(For clarity)**
- e) **For 2015: Clutch basket may be changed. If the clutch basket has the primary gear integrated then the primary gear must retain the original number of teeth and tooth form.**
- f) **From 2016: Clutch basket and primary gear must remain as homologated.**

#### **2.4.8.14 Oil pumps and oil lines**

- a) Homologated oil pumps may be modified, only the original pump parts may be modified, and or shims/spacers added. Modifications include:
  - i) Blueprinting
  - ii) Changing the oil pressure relief spring.
  - iii) Reducing gear and/or housing thickness.
- b) The external appearance must remain as homologated.
- c) Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of metal reinforced construction with swaged or treaded connectors.

#### **2.4.8.15 Radiator/Oil cooler**

- a) The only liquid engine coolants permitted will be water or water mixed with ethyl alcohol.
- b) The original radiator or oil cooler may be altered or replaced from those fitted to the homologated motorcycle.
- c) Additional radiators or oil coolers may be added.
- d) The original oil/water heat exchanger may be modified, replaced or removed.
- e) The cooling system hoses and catch tanks may be changed.
- f) Radiator fan and wiring may be changed, modified or removed.
- g) The oil cooler must not be mounted on or above the rear mudguard.
- h) The appearance from the front, rear and profile of the motorcycle must in principle conform to the homologated shape after the addition of additional radiators or oil coolers.

#### **2.4.8.16 Air box**

- a) The air box must remain as originally produced by the manufacturer on the homologated motorcycle.
- b) If the homologated air box is used to mount top type fuel injectors, then the air box and the attached systems must remain as homologated.



- c) If the homologated air box is used to mount variable intake tract devices, then the air box and the attached systems must remain as homologated and function in the same way.
- d) Variable intake tract devices must function in the same way as on the homologated system.
- e) Air filters, internal flap type valve, sensors and vacuum fittings may be removed, modified or replaced with aftermarket parts.
- f) Any holes in the air box to the outside atmosphere resulting from the removal of components must be completely sealed from incoming air.
- g) The air box drains must be sealed.**
- h) External airbox body features may be modified for clearance and to mount other parts if it results in no changes to the internal structure of the airbox. Permission must be given by the Superbike Technical Director in each case.**
- i) 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.
- j) All motorcycles must have a closed breather system. All the oil breather lines must be connected and discharge in the air box.
- k) If the top of the airbox is formed by the bottom of the tank then that part of the tank will be considered as the airbox and must conform to **its homologated shape excepting 2mm variance in corner radii and must be the same volume. A dry break/quick release connector may be fitted. See art 2.4.8.17**

#### **2.4.8.17 Fuel supply**

- a) 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 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) The pressure tolerance at the technical control is +0.5 bar in respect to the maximum pressure of the homologated motorcycle.

- e) 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.**
- f) Fuel petcock may be altered, replaced or removed from those fitted to the homologated motorcycle.
- g) Quick connectors or dry break quick connectors may be used.
- h) Fuel vent lines may be replaced.
- i) Fuel filters may be added.

#### **2.4.8.18 Exhaust system**

- a) Exhaust pipes, catalytic converters and silencers may be altered or replaced from those fitted to the homologated motorcycle. Catalytic converters may 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.
- e) The noise limit for Superbikes will be 107 dB/A (with a 3 dB/A tolerance after the race only).

#### **2.4.9 Ignition and 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 DWO/FIM approved "Superstock 1000" kit model plus DWO/FIM approved data logger. See art 2.4.9.2
- b) No other external ignition/injection controllers, traction control modules or other active expansion modules or calculation units may be fitted.
- c) Central unit (ECU) may be relocated.



- d) Telemetry (remote signals to or from the bike) is not allowed.
- e) No remote or wireless connection to the bike for any data exchange or setting is allowed whilst the engine is running or the bike is moving.
- f) Spark plugs, spark plug caps and HT leads (if applicable) are free.
- g) Battery is free.

**2.4.9.1** The DWO/FIM approved “Superbike Kit System” must meet the following:

- a) The system must be a complete package including all electrical/electronic parts not supplied on the homologated motorcycle required for full operation of all strategies - excepting the wiring harness.
- b) Only the machine manufacturer or one approved partner can submit a single system for approval.
- c) The total price of the complete system including ECU, dashboard/display, all additional sensors essential for full operation of all strategies, IMU, software, enable codes, datalogging, analysis software, ECU “tuning” or “setting” software, datalogger, 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 available worldwide, if ordered, through authorised distributors or dealers. They 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 synchronize the engine during the start)
  3. Airbox Pressure
  4. Engine pick-ups (Cam, crank) (Crank trigger may be replaced)
  5. Lambda
  6. Twist grip position
  7. Front speed
  8. Rear Speed
  9. Gearbox output shaft speed
  10. Gear position
  11. Gear shift load cell
  12. Front brake pressure
  13. Rear brake pressure
  14. Oil pressure
  15. Air pressure
  16. Water temperature
  17. Air temperature
  18. IMU (various signals)
  19. Transponder/Lap time signal
  20. Knock Sensor
  21. Fuel pressure
  22. Oil temperature
  23. Fork position
  24. Shock position
  25. Tilt/Tip-Over Switch
  26. GPS Unit
- h) 3 further additional sensor channels (that are not included in the above list) may be added to the machine.**
- i) Redundant/doubled sensors are allowed but must be included in the Superbike Kit System if they are required for safe operation.**
- j) Analogue/Logic to CAN sensors are allowed.**
- k) The sensors originally fitted to the homologated machine and used as homologated, will not be included in the price limit.**



- l) When the following sensors are damaged through crashes they may be replaced by parts of the same function but do not have to be the same specific part from the Superbike Kit System:**
  - i) Speed Sensors**
  - ii) Fork and Shock Potentiometers**
  - iii) Brake pressure sensors**
  - iv) Gear shift sensor (but must remain the same type included with the kit - i.e. Load cell, switch etc.)**
- m) Before the final 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 WSBK teams (more frequent updates are allowed).**
- n) The manufacturer must provide current strategies but may remove the ability to change or see these settings, base mapping must be provided.**
- o) Only firmware and software from the FIM/DWO approved software and firmware list may be used.**
- p) Factory Teams may use any development firmware and software which will be made available to teams according to the update schedule.**
- q) Transponder is NOT included in the “Superbike Kit System”**
- r) The selection of logged channels is free.**
- s) Coils and coil drivers are free and must be included in the Superbike Kit System if altered.**
- t) No other external ignition/injection controllers, traction control modules or other active expansion modules or calculation units may be fitted unless included in the Superbike System.**

**Manufacturer nominated Superbike Kit System suppliers please also see “Superbike Kit System Approval Requirements” documentation.**



#### 2.4.9.2 DWO/FIM approved “Superstock 1000” kit model.

- a) The ECU must be from the approved Superstock Kit.
- b) The Kit includes all parts necessary to operate including ECU activations.
- c) The ECU software may be changed.
- d) Sensors and coils must remain as homologated, only wheel speed sensors may be added for strategy functions.
- e) No inertial platforms are allowed if an inertial platform is not installed on the original homologated motorcycle. If an inertial platform is fitted to the homologated motorcycle then the original sensor must be used. If the approved data logger is fitted with internal inertial sensors the inertial data cannot be logged or transmitted.
- f) The characteristics of approved data logging units must be the following:
  - i) Maximum retail price of the unit (hardware + software, excluding sensors and wiring harness) cannot exceed € 3000 (VAT excluded).
  - ii) Maximum retail price of the complete system, including logger, sensors and harness, is € 5000.
  - iii) The unit must be available for sale to the public and listed in the FIM/DWO list of approved data loggers.
  - iv) A maximum of 8 simultaneous working sensors (connected to the additional data logger) may be added to the original sensors on the motorcycle.
  - v) The sensors must be simple-function. The type of sensor is free.
  - vi) Data Logging wiring harness design is free.
  - vii) CAN communication between the ECU and approved data logger is allowed without any limitation in CAN channel logger number.
  - viii) Sensors changed but of the same function i.e. Lambda will be considered in the 8 sensors.
  - ix) The addition of a IR receiver and/or GPS unit and/or transponder lap timing signal for lap timing/scoring/logging purposes is allowed and will be considered one of the 8 sensors.



### **2.4.9.3 Generator, alternator, electric starter**

- a) The stator/coils must remain as homologated.
- b) The flywheel may be modified or replaced.
- c) The electric starter must operate normally and always attempt to start the engine during the event. The starter must crank the engine at a suitable speed for starting for a minimum of 2 seconds.
- d) The starter motor gear system must remain as homologated.
- e) 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).
- f) The use of a “booster” battery is permitted.

### **2.4.9.4 Wiring harness**

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

### **2.4.10 Main frame and spare motorcycle**

- a) During the entire duration of the event, each rider may only use one (1) complete motorcycle, as presented for Technical Control, with the frame clearly identified with a seal. In case the frame needs to be replaced, the rider or the team must request the use of a spare frame to the FIM Superbike 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. The fitted engine must be sealed but not allocated to a rider in this case.

#### **EXPLANATION OF THE PROCEDURES:**

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



- The frame of this motorcycle will be officially sealed with by the FIM Superbike 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 FIM Superbike 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, **on the steering-head.**
- If the **primary or active** motorcycle is damaged in a crash or in any other incident and is **declared un-repairable or inoperable (safely and in the available time)** by the Technical Director or his appointed staff then the seal on the damaged motorcycle will be destroyed by the technical staff and the chassis of this motorcycle must not be used for the remainder of the event. The new serial number will be recorded by the FIM Superbike Technical Director. The spare machine may then be presented for scrutineering before the next session.
- **The spare bike will not be allowed in the front of the pit box before the rider or the team has received authorization from the FIM Superbike 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 front of the pit box as soon as possible and put in storage at the back of the pit box out of view of pit lane.
- **Once a rider exits the pitlane for any session including the race the spare machine can no longer be used.**
- Any actions contrary to these procedures will result in a penalty as described in the Technical Regulations.
- The damaged frame may be impounded by the Technical Director for later examination.



### 2.4.10.1 Frame body and rear sub-frame

- a) The main frame must be as originally produced by the manufacturer for use on the homologated motorcycle.
- b) The main frame may only be altered by the addition of gussets or tubes. No gussets or tubes may be removed, other modifications are allowed within the following section of these rules.
- c) Holes may be drilled on the frame only to fix approved components (i.e. fairing brackets, steering damper mount).
- d) The engine must be mounted in the homologated position.
- e) Suspension linkage mounting points on the frame must remain as homologated.
- f) **The steering stem axis/position may be adjusted by moving the steering head bearings. The fore and aft position (along the plane of the original bearing seat) of each bearing can be a maximum +/- 6 mm in respect to the original bearing location (excluding tolerances)**
  - a) **If the homologated machine has exchangeable bearing inserts/bushes: The bushings/inserts are free to make the above adjustment and the homologated position is considered as the position in which the production motorcycle is supplied.**
  - b) **If the homologated motorcycle has fixed bearing positions for the steering stem: Steering angle changes are permitted by fitting inserts onto the bearing seats of the original steering head. The original bearing seats may be modified (ovaled) or increased in diameter to insert special bushings. No part of these special bushings may protrude axially more than 3 mm from the original steering head pipe location nor may the bearing be inset. The steering head pipe can be reinforced in the area of the bearing seats. Welding and machining is allowed for the purpose of making these modifications.**



- g) The swing arm pivot axis may be moved a maximum of 5 mm radially (excluding tolerances) measured from the homologated axis. Modifications may be made to the frame at the swing arm pivot area to allow this. Welding and machining is allowed for the purpose of making this modification, regardless of the technology used and the dimensions of the component or section of the frame (i.e.: cast, fabricated, etc.). The method of adjustment is free - 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. Should this pivot/axles pass through the crankcases then the relevant crankcase mounting hole may be machined larger, no welding or other modifications will be permitted. Crankcases may be machined for swingarm clearance only.**
- h) 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.**
- i) No polishing or surface refinishing is allowed but the paint scheme is not restricted.**
- j) Front and rear sub frame may be changed altered or removed.**

#### **2.4.10.2 Suspension - General**

- a) Participants in the Superbike class must only use the approved and listed suspension units for that season.**
- b) The approved products from the manufacturers must be available to all participants at least one month before the first round of the World Superbike season, and remain available all season. The products must be available within 6 weeks of a confirmed order.**
- c) Setting parts and tuning parts must be provided by the suspension manufacturers to all customers/teams/participants using the manufacturer’s products. These parts can be used by all participants during the season. These parts shall be available for immediate delivery to all teams/customers.**



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

#### **2.4.10.3 Front Suspension**

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

#### 2.4.10.4 Rear fork (Swing-arm)

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

#### 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 in the frame (if any) must be used to mount the shock absorber, linkage and rod assembly fulcrum (pivot points).

#### 2.4.10.6 Wheels

- a) Wheels may be replaced (see Art. 2.3.4) and associated parts may be altered or replaced from those fitted to the homologated motorcycle.
- b) Aftermarket wheels must be made from aluminium alloys.**
- c) The use of the following alloy materials for the wheels is not allowed: Beryllium ( $\geq 5\%$ ), Scandium ( $\geq 2\%$ ), Lithium ( $\geq 1\%$ ).
- 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 tyre: front 0.301 m, rear 0.331 m.



- e) Wheel manufacturers must provide copy of the certificate for their wheel(s) as proof of compliance to the Technical Director when requested.
- f) **From 2016: 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 must remain on the rear wheel when the wheel is removed.
- h) Bearings, seals, and axles may be altered or replaced from those fitted to the homologated motorcycle. The use of titanium and light alloys is forbidden for wheel spindles (axles).
- i) Wheel balance weights may be discarded, changed or added to.
- j) Any inflation valves may be used.

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

#### 2.4.10.7 Brakes

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



- f) Rear brake master cylinder may be altered or replaced from those fitted to the homologated motorcycle.
- g) Rear brake calipers may be altered or replaced from those fitted to the homologated motorcycle.
- h) Brake pads or shoes may be altered or replaced from those fitted to the homologated motorcycle.
- i) Brake hoses and brake couplings may be altered or replaced from those fitted to the homologated motorcycle. The split of the front brake lines for both front brake calipers must be made above the lower fork bridge (lower triple clamp).
- j) Brake discs may be altered or replaced from those fitted to the homologated motorcycle. Only ferrous materials are allowed for brake discs. The use of exotic alloy materials for brake calipers (i.e. aluminium-beryllium, etc.) is not allowed.
- k) The Anti-Lock Brake System (ABS) may be used only if installed in the homologated model for road use. However, it must be completely standard (any mechanical or electronic part must remain as homologated, brake discs and master cylinder levers excluded), and only the software of the ABS may be modified.
- l) The Anti-Lock Brake System (ABS) can be disconnected and its ECU can be dismantled. The ABS rotor wheel can be deleted, modified or replaced.
- m) Motorcycles must be equipped with brake lever protection, intended to protect the handlebar brake lever from being accidentally activated in case of collision with another motorcycle. **Composite guards are not permitted. FIM approved guards will be permitted without regard to the material.**
- n) **The Technical Director has the right to refuse any guard not satisfying this safety purpose.**

#### 2.4.10.8 Handlebars and hand controls

- a) Handlebars, hand controls (**Subject to Art. 2.4.8.1 e)**) and cables may be altered or replaced from those fitted to the homologated motorcycle.
- b) Motorcycles must be equipped with a functional ignition kill switch or button mounted **on the right hand handlebar (position to be applied from 2016)** (within reach of the hand while on the hand grips) that is capable of stopping a running engine. **The button or switch must be RED.**

#### 2.4.10.9 Foot rest and foot controls

- a) Foot rest/foot controls may be relocated, but the original mounting points must be used.
- b) Foot rests may be rigidly mounted or a folding type which must incorporate a device to return them to the normal position.
- c) The end of the foot rest must have at least an 8mm solid spherical radius. (See diagram A & C).
- d) Non folding footrests must have an end (plug) which is permanently fixed, made of aluminium, plastic, Teflon® or equivalent type of material (min. radius of 8 mm). The plug surface must be designed to reach the widest possible area of the footrest. The FIM Superbike 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 maintain the homologated appearance and location; however its actual shape can be slightly changed to suit the rider's preference. The tank may be modified below the upper frame line and under the seat.
- b) The material of construction of the fuel tank may be altered from the one of the tank fitted to the homologated motorcycle.
- c) All fuel tanks must be filled with fire retardant material, or be fitted with a fuel cell bladder.
- d) Fuel tanks made of composite materials (carbon fibre, aramid fibre, glass fibre, etc.) must have passed the FIM Standards for fuel tanks or be lined with a fuel cell bladder.



- e) 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.
- f) Such labels must include the fuel tank manufacturer's name, date of tank manufacture, and name of testing laboratory.
- g) Each manufacturer is requested to inform the FIM/CCR Secretariat of its fuel tank model(s) which have passed the FIM test standards, together with a copy of the fuel tank label. Full details of the FIM Fuel Tank Test Standards and Procedures are available from the FIM (See "Fuel Tank Test Standards" below).
- h) Fuel cell bladders must conform to or exceed the specification FIM/FCB-2005. Full details of this standard are available from the FIM.
- 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 FIM Superbike Technical Director has the right to refuse a motorcycle if he is of the opinion that the fuel tank fixation is not safe.
- j) The original tank may be modified to achieve the maximum capacity of 24 litres, 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 250cc 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.



### **Fuel tank homologation**

- a) Any fuel tanks, made of non-ferrous materials (with the exception of aluminium) 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 fibre layers, grade of fibre, percentage of resin, etc., must be identified with the same quality and test label.
- e) The quality and test label will include the following information on each label affixed to each fuel tank: name of the fuel tank manufacturer, date of fabrication, code or part number, name of testing laboratory, fuel capacity.
- f) Each manufacturer is requested to inform the FIM/CCR Secretariat of its fuel tank model(s) which have passed the FIM test procedure, with a copy of the quality and test label, according to point 5.
- g) Only fuel tanks that have passed the FIM test procedure will be accepted.

#### **2.4.10.11 Fairing/Bodywork**

- a) The fairing, mudguards and body work must conform in principle to the homologated shape as originally produced by the manufacturer.
- b) The windscreen may be replaced.
- c) The original air ducts running between the fairing to the airbox may be altered or replaced from those fitted to the homologated motorcycle.
- d) The lower fairing has to be constructed to hold, in case of an engine breakdown, at least half of the total oil and engine coolant capacity used in the engine (min. 5 litres). The lower edge of openings in the fairing must be positioned at least 50 mm above the bottom of the fairing.

- e) 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.
- f) Minimal changes are allowed in the fairing to permit the use of an elevator (stand) for wheel changes and to add plastic protective cones to the frame or the engine.
- g) 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.
- h) Original openings for cooling in the lateral fairing/bodywork sections may be partially closed only to accommodate sponsors' logos/lettering. Such modification shall be made using wire mesh or perforated plate. The material is free but the distance between all opening centres, circle centres and their diameters must be constant. Holes or perforations must have an open area ratio > 60%.
- i) The front mudguard must conform in principle to the homologated shape originally produced by the manufacturer.
- j) 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.
- k) A rear mudguard may be added or removed.
- l) Material of construction of the front mudguard, rear mudguard and fairing may be altered or replaced from those fitted to the homologated motorcycle.
- m) The exact appearance, shape, size and location of the front headlights of the homologated motorcycle must be respected, and should be obtained by applying a plastic or metallic film on the front of the motorcycle.

#### 2.4.10.12 Seat

- a) 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) The appearance from both front, rear and profile must conform in principle to the homologated shape.
- d) The seat/rear cowl must allow for proper number display.
- e) 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.
- f) Material of construction of the seat may be altered or replaced from those fitted to the homologated motorcycle.

#### **2.4.10.13 Rear Safety Light**

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

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

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

- a) Any type of lubrication, brake or suspension fluid may be used.
- b) Gaskets and gasket material.
- c) Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used.



- d) Fasteners (nuts, bolts, screws, etc.), **internal engine bolts must remain of standard homologated materials or materials of higher specific weight.**
- e) **Thread repair using inserts of different material such as helicoils and timeserts.**
- f) External surface finishes and decals.

#### 2.4.12 The following items **MAY BE** removed

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

#### 2.4.13 The following Items **MUST BE** Removed

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

#### 2.4.14 The following items **MUST BE** altered

- a) Motorcycles must be equipped with a functional ignition kill switch or button mounted **on the right hand** handlebar (**position to be applied from 2016**)(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.**
- b) Throttle controls must be self-closing when not held by the hand.
- c) All drain plugs must be wired. External oil filter(s) screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases).
- d) All motorcycles must have a closed breather system. The oil breather line must be connected and discharge in the airbox.



- e) 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.
- f) **Motorcycles must be equipped with a red light on the instrument panel that will illuminate in the event of oil pressure drop.**

## 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 AUTHORISED AND PRESCRIBED IN THIS RULE IS STRICTLY FORBIDDEN**

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

Supersport 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.

Once a motorcycle has obtained the homologation, it may be used for racing in the corresponding class for a maximum period of 8 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 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 Balancing various motorcycle concepts

In order to equalize the performance of motorcycles used in the Supersport World 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 Superbike Commission at any time deemed necessary to ensure fair competition.

## 2.5.3 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.

### 2.5.4.1. Minimum weight

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

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 FIM Superbike Technical Director at the preliminary checks.

### 2.5.5 Number plate colours

The background colours and figures (numbers) for Supersport are a white background with blue 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:

- Once on the front, either in the centre 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.
- Once, on each side of the fairing or on the lower rear portion of the lower fairing. The number must be centered on the white background.

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

### 2.5.6 Fuel

All engines must function on normal unleaded fuel with a maximum lead content of 0.005 g/l (unleaded) and a maximum MON of 90 (see also Art. 2.7 for full fuel specifications).

### 2.5.7 Tyres

- Tyres must be a fully moulded type carrying all size and sidewall marking of the tyres for commercial sale to the public. The depth of the tyre treads must be at least 2.5 mm over the entire tyre pattern width at a pre-race control. The tyres must have a positive and negative tread of 96% positive and minimum 4% negative (land and sea ratio). The maximum distance from the external edge of the tyre to 50% of the tread elements is 35 mm.



- b) One (1) size for the front and two (2) sizes for the rear are allowed. Each tyre, front and rear, must be available with the same size and tread pattern for all riders. The manufacturers may only submit one front and rear pattern for approval. The previously approved tyre pattern will remain valid until one year after the introduction of a new approved tyre pattern.
- c) All tyres to be used must be easily identifiable with a colour marking or a numerical system to be applied by the Official Supplier at the time of manufacture.
- d) At the discretion of the rider, intermediate or wet weather tyre may be used. Wet-weather tyres must be a fully moulded tyre. The use of hand cut tyres is not allowed. Wet-weather tyres must be marked “Not for Highway Use” or “NHS”.
- e) The maximum number of tyres, of any type, available to each rider during the event will be 18 (8 front tyres - 10 rear tyres).
- f) A maximum of 11 tyres per rider can be mounted per rider at any time.
- g) For the Supersport race only, Wet and Intermediate tyres will not need to be marked with a tyre sticker. They will not be considered in the total number of tyres available for use, however normal allocation limits still apply.
- h) Every tyre used during the event must be marked with an adhesive sticker with a number allocated by the FIM Superbike Technical Director. The sticker will be a different colour front and rear.
- i) The tyre stickers will be delivered to the teams in a sealed envelope, on the day before the first practice after which the teams will be responsible for their use.
- j) The stickers must be applied to the left sidewall of the tyre. Officials will check that all the motorcycles in the pit lane are fitted with tyres carrying the sticker.
- k) The use of motorcycles without the official stickers will be immediately reported to the Race Direction whom will take appropriate action.
- l) For both Supersport race only, Wet and Intermediate tyres will not need to be marked with a tyre sticker. They will not be considered in the total number of tyres available for use, however normal allocation limits still apply.

- m) Any modification or treatment (cutting, grooving) is forbidden.
- n) At the beginning of the event, the Official Supplier may be requested by the FIM Superbike Technical Director to deliver to him four (4) samples of each type of tyre to be used at the event.
- o) The allocation of individual tyres will be made on a random basis, with no involvement of any representative from the tyre supplier, teams or riders. Those tyres will be individually identified and may not be exchanged between riders, including between team mates, and may not be exchanged by the tyre supplier after the allocation, except with the permission of the Race Direction.
- p) In exceptional cases, should the sticker be damaged or applied in the wrong way, up to 2 extra stickers may be provided at the sole discretion of the FIM Superbike Technical Director. However, the damaged sticker must be returned to the FIM Superbike Technical Director and/or the tyre it was applied to, must be absolutely intact.

## **2.5.8 Engine**

**The allocated number of engines per permanent rider is 6.**

**See Art. 2.3.8 For Sealing and Usage Details**

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) Homologated materials and castings for the crankcase, cylinder, cylinder head and gear-box housing must be used.

### **2.5.8.1 Fuel injection system**

**2.5.8.1.1** 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) The throttle body intake insulators may be modified.
- d) Bell mouths (including their fixing points) may be altered or replaced.

- e) Butterflies cannot be changed or modified.
- 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) Vacuum slides may be fixed in the open position.
- h) Secondary throttle valves and shafts may be removed or fixed in the open position and the electronics may be disconnected or removed
- i) Air and air/fuel mixture can go to the combustion chamber exclusively through the throttle body butterflies.
- j) 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.

#### 2.5.8.2 Cylinder head

Cylinder head must be as homologated. 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) Modifications of the inlet and exhaust ports by taking off or adding material (welding is forbidden) epoxy may be used to shape the ports.
- c) Surface grinding of the cylinder head surface on the head gasket side.
- d) Original homologated valves guides may be cut or modified, but only on the intake or exhaust port side
- e) Polishing of the combustion chamber
- f) Original valve seats must be used, but modifications are allowed to the shape
- g) Compression ratio is free, but the combustion chamber may be modified only by taking material off.



- h) It is forbidden to add any material to the cylinder head unless as described above.
- i) Rocker arms (if any) must remain as homologated.
- j) The valves must remain as homologated.**
- k) Valve springs may be changed **but the number must remain as homologated.**
- l) Valve spring retainers may be replaced or modified, but their weight must be the same as, or higher than, the original ones.
- m) The shim buckets/tappets must remain as homologated.**

#### **2.5.8.3 Camshaft**

- a) The method of drive must remain as homologated.
- b) The duration is free but the maximum lift must remain as homologated.
- c) The cam chain or cam belt tensioning device(s) can be changed or modified.
- d) 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**

Cam sprockets or cam gears may be modified or replaced to allow the degreeing of camshafts.

#### **2.5.8.5 Cylinders**

- a) Cylinders must remain as homologated.
- b) Only the following modifications to the cylinders are allowed. Cylinder head gasket surface may be machined to allow the adjustment of compression ratio or resurfacing to repair a warped cylinder surface deck.
- c) 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 remain as homologated. No modifications are allowed.
- b) **No oversized pistons may be used.**
- c) Polishing and lightening is not allowed.

### 2.5.8.7 Piston rings

- a) Piston rings must remain as homologated. No modifications are allowed.
- b) **All piston rings must be fitted.**

### 2.5.8.8 Piston pins and clips

Piston pins and clips must remain as homologated. No modifications are allowed.

### 2.5.8.9 Connecting rods

- a) Connecting rods must remain as homologated. No modifications are allowed.
- b) Polishing and lightening is not allowed.

### 2.5.8.10 Crankshaft

- a) Crankshaft must remain as homologated without any modification.
- 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 remain as homologated. No 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) Other engine cases must be made of the homologated material with exclusion of lateral side covers.



### 2.5.8.11.1 Lateral covers and protection

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

### 2.5.8.12 Transmission/Gearbox

- a) Only one (1) set of gear ratios will be allowed for the whole season. These ratios can be freely chosen.
- b) The team must declare the gearbox ratios before the first event.
- c) **The gear design and material is free.**
- d) It will not be allowed to change the gearboxes at the track - a broken Gearbox will equal a broken engine.
- e) The number of gears must remain as homologated.
- f) Primary gears must remain as homologated.
- g) Quick-shift systems are allowed.



- h) The layout of the transmission shafts must be the same as on the homologated motorcycle and only the material and the ratios can be changed.
- i) The shift drum must **remain as homologated but may be polished or surface treated.**
- j) The selector forks may be changed. However the forks must engage with the same gears and function in the same way as on the homologated motorcycle.
- k) Countershaft sprocket, rear wheel sprocket, chain pitch and size may be changed.
- l) Chain guard as long as it is not incorporated in the rear fender may be removed.-

#### 2.5.8.13 Clutch

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

#### 2.5.8.14 Oil pumps, water pumps and oil lines

- a) Modifications are allowed but oil pump housing, mounting points and oil feed points must remain as original.
- b) Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of metal reinforced construction with swaged or treaded connectors.
- c) The water pump must remain as homologated.

### **2.5.8.15 Radiator/Oil cooler**

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

### **2.5.8.16 Air box**

- a) The air box must remain as originally produced by the manufacturer on the homologated motorcycle.
- b) The air filter element may be removed or replaced.
- c) The air box drains must be sealed.
- d) All motorcycles must have a closed breather system. All oil breather lines must be connected and discharge in the air box only. The lines must discharge above the throttles, they cannot discharge into the inlet tract, or exhaust air inlet system.
- 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.

### **2.5.8.17 Fuel supply**

- a) 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 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 may be removed.
- b) The number of final exhaust silencer(s) must remain as homologated. The silencer(s) must be on the same side(s) as on the homologated model.
- c) For safety reasons, the exposed edge(s) of the exhaust pipe(s) outlet(s) must be rounded to avoid any sharp edges.
- d) Wrapping of exhaust systems is not allowed except in the area of the rider's foot or an area in contact with the fairing for protection from heat.
- e) The noise limit for Supersport will be 107 dB/A (with a 3 dB/A tolerance after the race only).

#### **2.5.9.1 Electrics and electronics**

- a) **The ECU must be from the DWO/FIM Approved Supersport ECU list. All approved ECU's must have manufacturer supplied firmware (and or settings) available to operate all of the homologated Supersport machines. The ECU must be freely available in the open market. (For future approvals the price of the ECU including logging and all activations must be less than € 5000.00) \*\*\*all currently used ECU's will be legal.**
- b) **The software in the ECU may be changed.**
- c) **Central unit (ECU) may be relocated.**
- d) **Any inertial measurement units must be from the DWO/FIM approved list. The retail price of the unit must be € 600 or less. If more than one unit is used then the total retail price must be less than € 600.**



- e) **The data logger, if not incorporated in the ECU must be from the DWO/FIM Supersport Approved logger list or the DWO/FIM Superbike EVO Data Logger list. \*same as 2014 EVO + other units**
- f) Data logging sensors are free.
- g) 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.
- h) The addition of a GPS unit for lap timing/scoring purposes is allowed.
- i) Telemetry is not allowed.
- j) **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.**
- k) Electric cables, harness, connectors, battery and switches are free.
- l) Spark plugs, plug caps, coils and wires may be replaced.

#### **2.5.9.2 Generator, alternator, electric starter**

- a) Generator may be modified or replaced.
- b) The electric starter must operate normally and always be able to start the engine during the event.

**For 2016 onwards:**

- a) **The stator system must remain as homologated.**
- b) **The electric starter must operate normally and always be able to start the engine during the event.**

#### **2.5.9.3 Additional equipment**

**\*\*moved to 2.5.9.1**

#### **2.5.10 Main frame and pre-assembled spare frame**

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



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

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

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

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

### **EXPLANATION OF THE PROCEDURES**

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

The frame of this motorcycle will be officially sealed by the FIM Superbike 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 FIM Superbike Technical Director, may check the seal and verify that it conforms to the motorcycle and rider it was assigned to. For cross reference, every frame must have a unique number punched on it, preferably on the steering-head.

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

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



When a team decides that a crashed or damaged motorcycle requires a change of frame, it must inform the FIM Superbike 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 FIM Superbike 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 FIM Superbike 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 Technical Regulations

#### **2.5.10.1 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.



- 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.

#### 2.5.10.2 Front forks

- a) Forks must remain as originally produced by the manufacturer for the homologated motorcycle.
- b) Original internal parts of the homologated forks may be modified or changed.
- c) No aftermarket or prototype electronically-controlled suspension parts may be used, unless such suspension is already present on the production model of the homologated motorcycle, and it must remain completely standard (all mechanical or electronic parts must remain as homologated). The original suspension system must work safely in the event of an electronic failure.
- d) After market damper kits or valves may be installed.
- e) Fork springs may be modified or replaced.
- f) Fork caps may be modified or replaced to allow external adjustment.
- g) Dust seals may be modified, changed or removed if the fork is totally oil-sealed.
- h) The original surface finish of the fork tubes (stanchions, fork pipes) may be changed. Additional surface treatments are allowed.
- i) The upper and lower fork clamps (triple clamp, fork bridges) must remain as originally produced by the manufacturer on the homologated motorcycle.



- j) A steering damper may be added or replaced with an aftermarket damper.
- k) The steering damper cannot act as a steering lock limiting device.

#### **2.5.10.3 Rear fork (swing arm)**

- a) The rear fork must remain as originally produced by the manufacturer for the homologated motorcycle.
- b) Rear fork pivot bolt must remain as originally produced by the manufacturer for the homologated motorcycle.
- c) Rear axle chain adjuster may be modified or changed.
- d) A chain guard must be fitted in such a way to reduce the possibility that any part of the riders' body may become trapped between the lower chain run and the rear wheel sprocket.
- 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 calliper in place may be added to the rear swing-arm.

#### **2.5.10.4 Rear suspension unit**

- a) Rear suspension unit (shock absorber) may be changed or modified. The original attachments of the frame and rear fork must be as homologated.
- b) Rear suspension unit spring(s) may be changed.
- c) No aftermarket or prototype electronically-controlled suspension unit maybe used, unless such suspension is already present on the production model of the homologated motorcycle, and it must remain completely standard (all mechanical or electronic parts must remain as homologated). The original suspension system must work safely in the event of an electronic failure.
- d) Rear suspension linkage must remain as originally produced by the manufacturer for the homologated motorcycle.

### 2.5.10.5 Wheels

- a) Wheels must remain as originally produced by the manufacturer for the homologated motorcycle.
- b) **A non-slip coating/treatment may be applied to the bead area of the rim.**
- c) If the original design included 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.**
- e) The speedometer drive may be removed and replaced with a spacer.
- f) Wheel balance weights may be discarded, changed or added to.
- g) Any inflation valves may be used.

### 2.5.10.6 Brakes

- a) Front and rear brake discs may be replaced with aftermarket brake discs that must fit the original calliper 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) Replacement brake discs must be of ferrous material.
- d) Front and rear brake callipers 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 Art. 2.5.10.3).
- e) In order to reduce the transfer of heat to the hydraulic fluid it is permitted to add metallic-shims to the callipers, between the pads and the callipers, and/or to replace light alloy pistons with steel pistons made by the same manufacturer of the calliper.
- f) The front brake master cylinder must remain as originally produced by the manufacturer for the homologated motorcycle, excluding the hand lever.



- g) The rear brake master cylinder must remain as originally produced by the manufacturer for the homologated motorcycle.
- 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 callipers 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 Antilock Brake System (ABS) may be used only if installed in the homologated model for road use. However, it must be completely standard (any mechanical or electronic part must remain as homologated, brake discs and master cylinder levers excluded), and only the software of the ABS may be modified.
- l) The Anti-Lock Brake System (ABS) can be disconnected and its ECU can be dismantled. The ABS rotor wheel can be deleted, modified or replaced.
- m) Motorcycles must be equipped with brake lever protection, intended to protect the handlebar brake lever from being accidentally activated in case of collision with another motorcycle. **Composite guards are not permitted. FIM approved guards will be permitted without regard to the material.**
- n) **The Technical Director has the right to refuse any guard not satisfying this safety purpose.**

#### 2.5.10.7 Handlebars and hand controls

- a) Handlebars may be replaced (except for the brake master cylinder).
- b) Handlebars and hand controls may be relocated.
- c) Throttle controls must be self closing when not held by the hand.
- d) Throttle assembly and associated cables may be modified or replaced but the connection to the throttle body and to the throttle controls must remain as on the homologated motorcycle.



- e) Clutch and brake lever may be replaced with an after-market model. An adjuster to the brake lever is allowed.
- f) Switches may be changed but the electric starter switch and engine stop switch must be located on the handlebars.
- g) **Motorcycles must be equipped with a functional ignition kill switch or button mounted on the right hand handlebar (within reach of the hand while on the hand grips) that is capable of stopping a running engine. The button or switch must be RED.**

#### 2.5.10.8 Foot rest and foot controls

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

#### 2.5.10.9 Fuel tank

- a) Fuel tank must remain as originally produced by the manufacturer for the homologated motorcycle.
- 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.

## 2.5.10.10 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 fibre 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.
- b) Wind screen may be replaced.
- c) Original air ducts running between the fairing to the airbox may be altered or replaced from those fitted to the homologated motorcycle.
- d) The lower fairing has to be constructed to hold, in case of an engine breakdown, at least half of the total oil and engine coolant capacity used in the engine (min. 5 litres). The lower edge of openings in the fairing must be positioned at least 50 mm above the bottom of the fairing.
- e) 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.
- f) Minimal changes are allowed in the fairing to allow clearance for protective engine covers.
- g) 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.
- h) Original openings for cooling in the lateral fairing/bodywork sections may be partially closed only to accommodate sponsors' logos/lettering. Such modification shall be made using wire mesh or perforated plate. The material is free but the distance between all opening centres, circle centres and their diameters must be constant. Holes or perforations must have an open area ratio > 60%.
- i) Front mudguard must conform in principle to the homologated shape originally produced by the manufacturer. Front mudguards may be replaced and the use of carbon fibre or Kevlar® composites are allowed.

- j) Front mudguard may be spaced upward for increased tyre clearance.
- k) Rear mudguard fixed on the swing-arm may be replaced with cosmetic duplicates of the original parts. The use of carbon fibre or Kevlar® composites are allowed.
- l) Rear mudguards fixed on the swing-arm which incorporate the chain guard may be modified to accommodate larger diameter rear sprockets.
- m) The existing rear mudguard under the seat may be removed. A mudguard may be fitted directly onto the swing-arm however it may not cover more than 120 degrees of the wheel.

#### **2.5.10.11      Seat**

- a) Seat, seat base and associated bodywork may be replaced with parts of similar appearance as originally produced by the manufacturer for the homologated motorcycles.
- b) The top portion of the rear body work around the seat may be modified to a solo seat.
- c) Holes may be drilled in the seat or rear cowl to allow additional cooling. Holes which are bigger than 10 mm must be covered with metal gauze or fine mesh. Mesh must be painted to match the surrounding material.  
  
The appearance from both front, rear and profile must conform in principle to the homologated shape.
- d) All exposed edges must be rounded.

#### **2.5.10.12      Fasteners**

- a) Standard fasteners may be replaced with fasteners of any material and design.
- b) Aluminium 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) **Thread repair using inserts of different material such as helicoils and timeserts.**
- g) Fairing/bodywork fasteners may be changed to the quick disconnect type.

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

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

- a) Any type of lubrication, brake or suspension fluid.
- b) Instruments, their supports(s) and associated cables.
- c) Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used.
- d) Gaskets and gasket materials.
- e) Painted external surface finishes and decals.



### 2.5.12 The following items **MAY BE** removed

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

### 2.5.13 The following items **MUST BE** removed

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

### 2.5.14 The following items **MUST BE** altered

- a) 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.**
- b) All drain plugs must be wired. External oil filter(s) screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases).
- c) All motorcycles must have a closed breather system. The oil breather line must be connected and discharge in the air box.



- d) 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.
- e) **Motorcycles must be equipped with a red light on the instrument panel that will illuminate in the event of oil pressure drop.**

## 2.6 SUPERSTOCK 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 AUTHORISED AND PRESCRIBED IN THIS RULE IS STRICTLY FORBIDDEN**

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

Superstock 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.

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

#### 2.6.1 Motorcycle specifications

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

#### 2.6.2 Balancing various motorcycle concepts

In order to equalize the performance of motorcycles with different engine configurations, changes in the minimum weight may be applied according to their respective racing performances. The decision to apply the handicap will be taken by the Superbike Commission at any time deemed necessary to ensure fair competition.

The application of the handicap will follow the system described in 2.4.4.2 of the Superbike regulations but will be adapted to the Superstock class.



### 2.6.3 Engine configurations and displacement capacities

The following engine configurations comprise the Superstock class:

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

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

### 2.6.4 Minimum weight

The minimum weight for each model is calculated by FIM by determining the “dry weight” of the homologated motorcycle.

The “dry weight” of a homologated motorcycle is defined as the total weight of the motorcycle as produced by the manufacturer (after removal of fuel, vehicle number plate, tools, main stand and side stand when fitted, but with oil and radiator liquid at prescribed levels). To confirm the “dry weight” a minimum of three (3) motorcycles will be weighed and compared. The result will be rounded off to the nearest digit.

The minimum weight for each model will be calculated by reducing the “dry weight” of the motorcycle by 8% and rounding off the result to the lower whole number.

In any case the minimum weight cannot be lower than **170 Kg**.

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 FIM Superbike Technical Director at the preliminary checks.

### 2.6.5 Number plate colours

The background colours and figures (numbers) for Superstock are red background with white numbers:

The sizes for all the front numbers are:

Minimum height:	<b>140 mm</b>
Minimum width:	<b>80 mm</b>
Minimum stroke:	<b>20 mm</b>
Minimum space between numbers	<b>10 mm</b>

The size for all the side numbers is:

Minimum height:	<b>120 mm</b>
Minimum width:	<b>70 mm</b>
Minimum stroke:	<b>20 mm</b>
Minimum space between numbers	<b>10 mm</b>

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

- Once on the front, either in the centre of the fairing or slightly off to one side. The number must be centred on the red background with no advertising within 25 mm in all directions.
- 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 centred on the red background.

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

### 2.6.6 Fuel

All engines must function on normal unleaded fuel with a maximum lead content of 0.005 g/l (unleaded) and a maximum MON of 90 (see Art. 2.7 for full specifications).

### 2.6.7 Tyres

The rider may use a maximum of four (4) front and four (4) rear dry-weather tyres for each event.

On the race day, depending on the weather conditions, one extra front and one extra rear intermediate tyre may be distributed by the official tyre supplier. These tyres may be used at the rider's discretion only during the race and provided that the race has been declared wet by the Race Director.

Intermediate tyres must be clearly identified by the Official Supplier.

The wet-weather tyres must be provided by the Official Supplier, their quantity is unrestricted.

Wet-weather tyres and intermediate tyres may only be used after the race or practice has been declared "wet" by the Race Direction.

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

The dry-weather tyres used in the free practices, qualifying practices, warm-up and race must be marked with an adhesive sticker.

The sticker will show an identification number for each rider and it will have a different colour depending on whether it is applied to the front or rear tyre. At each race the FIM Superbike Technical Director will assign a number of his choice to the competitor, while the colours will change for each race.

The stickers will be handed to the teams in a sealed envelope, 4 for the rear tyres and 4 for the front tyres, on the day before the first practice session in accordance with a timetable decided by DWO and the FIM Superbike Technical Director. The timetable will be mailed to the teams by the DWO at least a week before the event. In extraordinary situations the FIM Superbike Technical Director can/may alter this program.

After delivery of the stickers, the teams will be responsible for their safekeeping and use.

The stickers must be applied to the left sidewall of the tyre. Personnel nominated by the FIM Superbike Technical Director will check that all the motorcycles in the pit line are fitted with tyres carrying the sticker.

The use of motorcycles with unmarked tyres (e.g. without the official stickers) will be immediately reported to the Race Direction which will take appropriate action.

In exceptional cases, should the sticker be damaged or applied in the wrong way, up to 1 extra sticker may be provided at the sole discretion of the FIM Superbike Technical Director. However, the damaged sticker must be returned to the FIM Superbike Technical Director and/or the tyre it was applied to must be absolutely intact.

In case of a red flag, a damaged tyre found on motorcycles checked in pit lane, may be replaced with a new tyre. The damage must be confirmed by the Official Supplier.

## **2.6.8 Engine**

The allocated number of engines per permanent rider is 3.

See Art. 2.3.8 For Sealing and Usage Details

### **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) Bell mouths 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.
- e) Only normal maintenance interventions as prescribed by the Manufacturer in the service manual of the motorcycle are authorised.
- f) Valve spring shims are not allowed.

#### **2.6.8.3 Camshaft**

- a) No modifications are allowed.
- b) At the technical checks: for direct cam drive systems, the cam lobe lift is measured; for non direct cam drive systems (i.e. with rocker arms), the valve lift is measured.

#### **2.6.8.4 Cam sprockets or gears**

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

#### **2.6.8.5 Cylinders**

No modifications are allowed.

#### **2.6.8.6 Pistons**

No modifications are allowed (including polishing and lightening).

#### **2.6.8.7 Piston rings**

No modifications are allowed.

#### **2.6.8.8 Piston pins and clips**

No modifications are allowed.

#### **2.6.8.9 Connecting rods**

No modifications are allowed (including polishing and lightening).

#### **2.6.8.10 Crankshaft**

No modifications are allowed (including polishing and lightening).



## 2.6.8.11 Crankcase/Gearbox housing

- a) Crankcases must remain as homologated. No 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.

### 2.6.8.11.1 Lateral covers and protection

- a) Lateral (side) covers may be altered, modified or replaced. If altered or modified, the cover must have at least the same resistance to impact as the original one. If replaced, the cover must be made in material of same or higher specific weight and the total weight of the cover must not be less than the original one.
- b) All lateral covers/engine cases containing oil and which could be in contact with the ground during a crash, must be protected by a second cover made from metal, such as aluminium alloy, stainless steel, steel or titanium, **composite covers are not permitted.**
- c) **The secondary cover must cover a minimum of 1/3 of the original cover. It must have no sharp edges to damage the track surface.**
- d) Plates or crash bars made from aluminium or steel also are permitted in addition to these covers. All of these devices must be designed to be resistant against sudden shocks, abrasions and crash damage.
- e) FIM approved covers will be permitted without regard of the material **or its dimensions.**
- f) These covers must be fixed properly and securely **with a minimum of three (3) case cover screws** that also mount the original covers/engine cases to the crankcases.
- g) 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.
- b) Quick-shift systems are allowed (including wire and potentiometer)
- c) Countershaft sprocket, rear wheel sprocket, chain pitch and size may be changed.
- d) The sprocket cover may be modified or eliminated.
- e) Chain guard as long as it is not incorporated in the rear fender may be removed.

### **2.6.8.13 Clutch**

- a) No modifications are allowed.
- b) Only friction and drive discs may be changed, but their number must remain as original.
- c) Clutch springs may be changed.

### **2.6.8.14 Oil pumps and oil lines**

- a) No pump modifications are allowed.
- b) Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of metal reinforced construction with swaged or threaded connectors.

### **2.6.8.15 Radiator, cooling system and oil cooler**

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

- 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 are 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 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 and discharge in the airbox.

#### **2.6.8.17 Fuel supply**

- a) 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 Superstock be 107 dB/A (with a 3 dB/A tolerance after the race only)

## 2.6.9 Electrics and electronics

### 2.6.9.1 Ignition/Engine Control System (ECU)

- a) The engine control system (ECU) must be either:
  - i) The original system as homologated, with a change of software being allowed.
  - ii) The original system (with the production ECU) (option i) may have FIM/DWO approved external ignition and/or injection module/s added. The total combined retail price (software and tuning tools included) on sale to the general public cannot be higher than € 3000 (VAT excluded). A special connector may be used to connect the module/s and the ECU.
  - iii) An FIM/DWO approved “Superstock Kit” model (produced and/or approved by the motorcycle manufacturer) may be used. A special connector/adaptor may be used to connect the ECU(s) and the original wiring harness. The combined retail price of the full system including software, tuning tool, download/connection cable any activations, upgrades and wiring harness(s) must be less than:
    - 1. € 3000 (VAT excluded) if the system excludes data logging
    - 2. € 3750 (VAT excluded) if the system includes data logging.

The ECU (with software and activations) and harness parts must be individually priced and available separately. The separate ECU and harness total must respect the above limits.

- b) Central unit (ECU) may be relocated.
- 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 has to be done before Sunday warm up.



- e) No extra sensors may be added for control strategies except shift rod sensor and wheel speed sensors. Wheel speed sensors must be included in the Kit ECU and Harness package if required.
- 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) Maximum retail price of the unit (hardware + software, excluding sensors and wiring harness) cannot exceed € 1.000 Euro (VAT excluded) if it is a standalone unit.
  - ii) Maximum retail price of the unit if incorporated into the ECU (hardware + software, excluding sensors and wiring harness) See article 2.6.9.1 a) iii) 2.
  - iii) The Data Logger unit must be available for sale to the public and on the list of FIM/DWO “Superstock 1000” approved data loggers.
  - iv) A maximum of 7 simultaneous working sensors (connected to the additional data logger) may be added to the original sensors on the motorcycle.
  - v) The sensors must be simple-function. No inertial platforms are allowed (if an inertial platform is not installed originally on the homologated motorcycle).
  - vi) Type of data logging sensor is free.
  - vii) CAN (or other data protocol, k-line, lin) communication from the ECU to an approved data logger is allowed without any limitation in CAN channel logger number.
- h) The maximum total price of other active/control/calculation units such as lambda driver modules, quick shifter and analogue to CAN is € 750 (VAT excluded). These devices must be approved by FIM/DWO.
- i) The addition of a device for infrared (IR) transmission of a signal between the racing rider and his team, used exclusively for lap timing, is allowed and considered in the 7 sensors.



- j) The addition of a GPS unit for lap timing/scoring purposes is allowed and considered in the 7 sensors.
- 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:
  - a) 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
  - b) The Kit wiring harness may incorporate the data logging harness.
  - c) A kit harness that incorporates the data logging harness may only accommodate 7 additional sensors.
  - d) The key/ignition lock may be relocated, replaced or removed.
  - e) Cutting of the original main wiring harness is allowed.
- n) Data logger Harness:
  - a) The Data Logger wire harness cannot include any other sensors with the exception of the seven sensors that are allowed. The only function of the approved Data Logger wire harness is to connect the seven sensors to the Data Logger, to transmit the data and supply the power.
- o) To be approved, samples of the ECU kits, kit harnesses and external modules with their tuning tools must be sent by the Manufacturers to the FIM Technical Director at least 3 weeks before the beginning of the Championship, with technical data and selling price.
- p) The original speedometer and tachometer may be altered or replaced (see also 2.6.11).
- q) Spark plugs may be replaced.
- r) Battery is free.

#### **2.6.9.2 Generator, alternator, electric starter**

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

## 2.6.10 Main frame

During the entire duration of the event, each rider can only use one (1) complete motorcycle, as presented for Technical Control, with the frame clearly identified with a seal. In case the frame will need to be replaced the rider or the team can request the use of a spare frame to the FIM Superbike Technical Director.

The pre-assembled spare part frame must be presented to the FIM Superbike Technical Director for the permission of rebuilding. The pre-assembly shall be strictly limited to:

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

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

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

### 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 (chassis number).



- f) Engine mounting brackets or plates must remain as originally produced by the manufacturer for the homologated motorcycle.
- g) Front sub frame/fairing mount may be changed or altered.**
- h) Rear sub frame 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 Front Forks

- a) Forks (stanchions, stem, wheel spindle, upper and lower crown, etc.) must remain as originally produced by the manufacturer for the homologated motorcycle.
- b) The upper and lower fork clamps (triple clamp, fork bridges) must remain as originally produced by the manufacturer on the homologated motorcycle.
- c) Steering stem pivot position must remain in the homologated position (as supplied on the production bike). 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 on the mechanical forks may only be modified or replaced to allow external adjustment. (This does not include the mechanical fork leg that is part of the homologated electronic fork set)
- g) Dust seals may be modified, changed or removed if the fork remains totally oil-sealed
- h) Mechanical forks:** Original internal parts of the homologated forks may be modified or changed. After market damper kits or valves may be installed. The original surface finish of the fork tubes (stanchions, fork pipes) may be changed. Additional surface treatments are allowed.

- i) **Electronic forks:** No aftermarket or prototype electronically-controlled suspension parts may be used. 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) with the exception of shims and springs. The original suspension system must work safely in the event of an electronic failure. The electronic front suspension may be replaced with a mechanical system from a similar homologated model from the same manufacturer.
- j) **Electronic forks may have their complete internal parts (including all electronic control) replaced with a conventional damping system and it will be considered as a mechanical fork.**

#### **2.6.10.3 Rear fork (Swing arm)**

- a) The rear fork must remain as originally produced by the manufacturer for the homologated motorcycle.
- b) Rear fork pivot bolt must remain as originally produced by the manufacturer for the homologated motorcycle.
- c) **Rear swingarm 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 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 calliper in place may be added to the rear swing-arm.

#### **2.6.10.4 Rear suspension unit**

- a) Rear suspension unit (shock absorber) may be modified or replaced, but the original attachments to the frame and rear fork (swing arm) must be as homologated.
- b) All the rear suspension linkage parts must remain as originally produced by the manufacturer for the homologated motorcycle.

- c) **Mechanical suspension:** Rear suspension unit and spring may be changed.
- d) **Electronic suspension:** No aftermarket or prototype electronically-controlled suspension parts may be used. 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) with the exception of shims and springs). The original suspension system must work properly safely in the event of an electronic failure. The electronic shock absorber can be replaced with a mechanical one.

#### 2.6.10.5      **Wheels**

- a) Wheels must remain as originally produced by the manufacturer for the homologated motorcycle.
- b) **A non-slip coating/treatment may be applied to the bead area of the rim.**
- c) If the original design includes a cushion drive for the rear wheel, it must remain as originally produced for the homologated motorcycle.

**Wheel axles must remain as homologated, wheel spacers may be modified or replaced.**

- d) Wheel balance weights may be discarded, changed or added to.
- e) Any valves may be used.

#### 2.6.10.6      **Brakes**

- a) Brake discs may be replaced by aftermarket discs which comply with following requirements:
  - i) Brake discs and carrier must retain the same material as the homologated disc and carrier.
  - ii) The outside and inner diameters of the brake disc must not be larger than the ones on the homologated disc.
  - iii) The thickness of the brake disc may be increased but the disc must fit into the homologated brake calliper without any modification. The number of floaters is free.
  - iv) The fixing of the carrier on the wheel must remain the same as on the homologated disc.



- b) The front and rear brake calliper (mount, carrier, hanger) must remain as originally produced by the manufacturer for the homologated motorcycle.
- c) In order to reduce the transfer of heat to the hydraulic fluid it is permitted to add metallic shims to the callipers, between the pads and the callipers, and/or to replace light alloy pistons with steel pistons made by the same manufacturer of the calliper.
- d) The rear brake calliper bracket may be mounted fixed on the swing-arm, but the bracket must maintain the same mounting (fixing) points for the calliper as used on the homologated motorcycle.
- e) The swing-arm may be modified for this reason to aid the location of the rear brake calliper bracket, by welding, drilling or by using a helicoil.
- f) The front and rear master cylinder must remain as originally produced by the manufacturer for the homologated motorcycle. Front and rear brake fluid reservoirs may be changed with aftermarket products.
- g) Front and rear hydraulic brake lines may be changed.
- h) The split of the front brake lines for both front brake callipers must be made above the lower fork bridge (lower triple clamp).
- i) “Quick” (or “dry-brake”) connectors in the brake lines are allowed.
- j) Front and rear brake pads may be changed. Brake pad locking pins may be modified for quick change type.
- k) Additional air scoops or ducts are not allowed.
- l) The Antilock Brake System (ABS) may be used only if installed in the homologated model for road use. However, it must be completely standard (any mechanical or electronic part must remain as homologated, brake discs and master cylinder levers excluded), and only the software of the ABS may be modified.
- m) The Antilock Brake system (ABS) can be disconnected and its ECU can be dismantled. The ABS rotor wheel can be deleted, modified or replaced.
- n) Motorcycles must be equipped with brake lever protection, intended to protect the handlebar brake lever from being accidentally activated in case of collision with another motorcycle. **Composite guards are not permitted. FIM approved guards will be permitted without regard of the material.**



- o) **The Technical Director has the right to refuse any guard not satisfying this safety purpose.**

#### **2.6.10.7 Handlebars and hand controls**

- a) Handlebars may be replaced (except for the brake master cylinder).
- b) Handlebars and hand controls may be relocated.
- c) Throttle controls must be self closing when not held by the hand.
- d) Throttle assembly and associated cables may be modified or replaced but the connection to the throttle body and to the throttle controls must remain as on the homologated motorcycle.
- e) Clutch and brake lever may be replaced with an after-market model. An adjuster to the brake lever is allowed.
- f) Switches may be changed but the electric starter switch and engine stop switch must be located on the handlebars.
- g) Motorcycles must be equipped with a functional ignition kill switch or button mounted **on the right hand** handlebar (within reach of the hand while on the hand grips) that is capable of stopping a running engine. **The button or switch must be RED.**

#### **2.6.10.8 Foot rest/Foot controls**

- a) Foot rest/foot controls may be relocated but brackets must be mounted to the frame in the original mounting points. Foot rests may be rigidly mounted or a folding type which must incorporate a device to return them to the normal position.
- b) The end of the foot rest must have at least an 8 mm solid spherical radius. (See Diagram A & C).
- c) Non folding footrests must have an end (plug) which is permanently fixed, made of aluminium, plastic, Teflon<sup>®</sup> or an equivalent type material (minimum radius 8 mm). The plug surface must be designed to reach the widest possible area. The FIM Superbike Technical Director has the right to refuse any plug not satisfying this safety aim.

### 2.6.10.9 Fuel tank

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

### 2.6.10.10 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 fibre 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) Wind screen may be replaced with an aftermarket product. The height of the windscreen is free, within a tolerance of +/- 15 mm referred to the vertical distance from/to the upper fork bridge. The screen must conform to the same profile from the front as the original - no double bubble or wide types. From a top view the length of the windscreen may be shortened by 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, with the exception of 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 fibre composites and other exotic materials are forbidden. Particle grills or “wire-meshes” originally installed in the openings for the air ducts may be taken away.
- g) The lower fairing must to be constructed to hold, in case of an engine breakdown minimum 6 litres. 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  $\leq 90^\circ$ .
- i) Original openings for cooling in the lateral fairing/bodywork sections may be partially closed only to accommodate sponsors’ logos/lettering. Such modification shall be made using wire mesh or perforated plate. The material is free but the distance between all opening centres, circle centres 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  $\varnothing 25$  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 mudguards may be replaced with a cosmetic duplicate of the original parts and may be spaced upward for increased tyre clearance.
- l) Rear mudguard 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.

### 2.6.10.11 Seat

- a) Seat, seat base and associated bodywork may be replaced with parts of similar appearance as originally produced by the manufacturer for the homologated motorcycle. The appearance from front, rear and profile must conform to the homologated shape
- b) The top portion of the rear bodywork around the seat may be modified to a solo seat.
- c) The homologated seat locking system (with plates, pins, rubber pads etc.) may be removed.

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

### 2.6.10.13 Fasteners

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

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

- a) Any type of lubrication, brake or suspension fluid may be used.
- b) Gaskets and gasket materials.
- c) Instruments, instrument bracket(s) and associated cables.
- d) Painted external surface finishes and decals.
- e) Material for brackets connecting non original parts (fairing, exhaust, instruments, etc) to the frame (or engine) cannot be made from titanium or fibre reinforced composites.
- f) Protective covers for the frame, chain, footrests, etc. may be made in other materials like fibre composite material if these parts do not replace original parts mounted on the homologated model.

### 2.6.12 The following items **MAY BE Removed**

- a) Emission control items (anti-pollution) in or around the air box and engine (O2 sensors, air injection devices).
- b) Tachometer.
- c) Speedometer.
- d) Chain guard as long as it is not incorporated in the rear fender.
- e) 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, centre and side stands must be removed (fixed brackets must remain).

### 2.6.14 The following items **MUST BE Altered**

- a) 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.**
- b) All drain plugs must be wired. External oil filter(s) screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases).
- c) All motorcycles must have a closed breather system. The oil breather line must be connected and discharge in the airbox.
- d) 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.
- e) **Motorcycles must be equipped with a red light on the instrument panel that will illuminate in the event of oil pressure drop.**

## 2.7 FUEL, OIL AND COOLANTS

- a) All motorcycles must be fuelled with unleaded petrol, as this term is generally understood.
- b) All riders/teams must declare to the Superbike Technical Director the make and type of fuel to be used during practices and race(s), by Thursday before technical control begins.

### 2.7.1 Physical properties for unleaded fuel

2.7.1.1 Unleaded petrol must comply with the FIM specification.

2.7.1.2 Unleaded petrol will comply with the FIM specification if:

- a) It has the following characteristics:

Table is replaced from 2014 but cannot be struck through

Property	Units	Min.	Max.	Test Method
RON		95.0	102.0	EN ISO 5164
MON		85.0	90.0	EN ISO 5163
Oxygen	% (m/m)		2.7	EN ISO 22854* or EN 13132 ()
Nitrogen	% (m/m)		0.20	ASTM D4629
Benzene	% (V/V)		1.00	EN ISO 22854* or EN 238
Vapour pressure (DVPE)	kPa		95.0	EN 13016-1
Lead	mg/L		5.0	ICP-OES or AAS
Manganese	mg/L		2.0	ICP-OES or AAS
Density at 15 °C	kg/m <sup>3</sup>	720.0	775.0	EN ISO 12185
Oxidation stability	minutes	360		EN ISO 7536
Existent gum	mg/100 mL		5	EN ISO 6246
Sulphur	mg/kg		10.0	EN ISO 20846* or 20884
Copper corrosion	Rating		Class 1	EN ISO 2160
<b>Distillation:</b>				EN ISO 3405
At 70 °C	% (V/V)	20.0	52.0	
At 100 °C	% (V/V)	46.0	72.0	
At 150 °C	% (V/V)	75.0		
Final Boiling Point	°C		210	
Residue	% (V/V)		2.0	
Appearance	Clear and bright			Visual inspection
Olefins	% (V/V)		18.0	EN ISO 22854
Aromatics	% (V/V)		35.0	EN ISO 22854
Total diolefins	% (V/V)		1.0	GC-MS or HPLC

Oxygenates:				EN ISO 22854* or EN 13132
Methanol	% (V/V)		3.0	
Ethanol (1)	% (V/V)		5.0	
Isopropanol	% (V/V)		12.0	
Isobutanol	% (V/V)		15.0	
tert-Butanol	% (V/V)		15.0	
Ethers (C5 or higher)	% (V/V)		22.0	
Others <sup>(2)</sup>	% (V/V)		15.0	

## Notes:

\* Preferred method.

(1) Ethanol must be blended according to EN 15376.

(2) GC-MS methods may also be applied to fully deconvolute the GC traces.

b) The total of individual hydrocarbon components present at concentrations of less than 5% (m/m) must constitute at least 30% (m/m) of the fuel. The test method will be gas chromatography and/or GC-MS.

c) The total concentration of naphthenes, olefins and aromatics classified by carbon number must not exceed the values given in the following table:

% (m/m)	C4	C5	C6	C7	C8	C9+
Naphthenes		5.0	10.0	10.0	10.0	10.0
Olefins	5.0	20.0	20.0	15.0	10.0	10.0
Aromatics			1.2	35.0	35.0	30.0

The total concentration of bicyclic naphthenes and bicyclic olefins may not be higher than 1% (m/m). The test method used will be gas chromatography.

d) Only the following oxygenates are permitted:

Methanol, Ethanol, n-Propyl alcohol, Isopropyl alcohol, n-Butyl alcohol, sec-Butyl alcohol, Isobutyl alcohol, tert-Butyl alcohol; Methyl tertiary butyl ether, Ethyl tertiary butyl ether, Tertiary amyl methyl ether, Diisopropyl ether.



- e) Manganese is not permitted in concentrations above **2.0 mg/L**. For the present this is solely to cover possible minor contamination by other fuels.

Lead replacement petrols, although basically free of lead, are not an alternative to the use of unleaded petrol. Such petrols may contain unacceptable additives not consistent with the FIM Fuel Regulations.

### **2.7.3 Air**

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

### **2.7.4 Primary Tests**

- 2.7.4.1** The FIM 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.

- 2.7.4.2** Fuel companies supplying “race” fuels (fuels other than those obtained at public fuel stations) to participating teams must submit ten litres (2 x 5 L) to the laboratory appointed by the FIM/DWO for analysis in accordance with the specification. Providing the fuel is within the specification, a certificate containing a test report number will be issued to the fuel company. The fuel company must provide a copy of the test report number to the appropriate rider/teams before they take part in a race. Contact for fuel analysis: [fimfuels@intertek.com](mailto:fimfuels@intertek.com)

### **2.7.5 Fuel Sampling and Testing**

1. The FIM Superbike Technical Director has the sole responsibility for the administration and supervision during the taking of fuel samples.
2. The preferred fuel test method is gas chromatography or GC Fingerprint method.

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

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



3. If other test methods are required, fuel samples will be transported to the appointed laboratory by an official courier, using the appropriate containers.
4. Riders selected for fuel controls will be directed with their motorcycles to the inspection area.
5. Only new sample bottles will be used for the fuel samples.
6. The fuel to be tested will be transferred into three bottles (3 small sample containers), marked A, B and C, and identified by reference to the motorcycle from which the sample was taken. The bottles will be closed, sealed and labelled by the FIM Superbike Technical Director and/or the Fuel Analysts.
7. The Fuel Sample Declaration form will be filled out immediately, containing all information as shown on the sample sheet, including the riders' name and race number, date and place of fuel sampling. A responsible team member will sign this declaration, after verifying that all the information is correct.
8. Sample A and B will be given to the appointed laboratory staff, present at the event for analysis or be sent to the respective laboratory by the organiser if no trackside laboratory is available. Sample B will be kept by the laboratory staff as a retained sample in case of a dispute. All samples will be accompanied by a copy of the Fuel Sample Declaration form. Costs for the analyses of sample A and B will be paid by the FIM.
9. Sample C will be handed over to the FIM for safeguarding in case of protests and/or requirement of a counter-expertise by the FIM appointed laboratory, accompanied by a copy of the Fuel Sample Declaration form. Costs for the analyses of sample C will be paid by the team concerned.
10. As soon as possible after receipt of the samples and completing the testing, the Fuel Analyst/FIM appointed laboratory will ~~inform~~ report the results of the fuel sample analyses directly to the FIM Superbike Technical Director, with a copy to the FIM CCR and CTI Secretariat ([sbk.technical.director@fim.ch](mailto:sbk.technical.director@fim.ch), [ccr@fim.ch](mailto:ccr@fim.ch), [cti@fim.ch](mailto:cti@fim.ch)).



11. In the case of non-conformity, the FIM Superbike Technical Director must notify the results to- the FIM, the Race Direction and the rider/ team representative concerned. Failure of the sample to correspond to the FIM fuel specifications will result in the disqualification of the competitor. The result of the competitor's fuel sample analysis ("A" or "B" sample) more favourable to the competitor will be taken into account.
12. Within 48 hours of the receipt of the notification of the results of the test of sample A and/or B, the team must notify the FIM and the FIM Superbike Technical Director if a counter-expertise is required (or not required) for sample C.
13. The Race Direction will take a decision at the Superbike, Supersport and Superstock Cup 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 FIM Stewards appointed for the Superbike, Supersport and Superstock Cup event at which the Race Direction decision is taken. This will take place after the C sample has been analysed.

#### **2.7.6 Fuel Storage**

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

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

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

#### **2.7.7 Coolants**

The only liquid engine coolants permitted other than lubricating oil shall be water or water mixed with ethyl alcohol.



## 2.8 PROTECTIVE CLOTHING AND HELMETS

- 2.8.1 Riders must wear a complete leather suit with additional leather padding or other protection on the principal contact points, knees, elbows, musters, hips etc.
- 2.8.2 Linings or undergarments must not be made of a synthetic material which might melt and cause damage to the riders' skin.
- 2.8.3 Riders must also wear leather gloves and boots, which with the leather suit provide complete coverage from the neck down.
- 2.8.4 Leather substitute materials may be used, providing they have been checked by the Chief Technical Steward.
- 2.8.5 Use of a back protector is highly recommended.
- 2.8.6 Riders must wear a helmet which is in good condition, provides a good fit and is properly fastened.
- 2.8.7 Helmets must be of the full face type (integral) and conform to one of the recognised international standards:
- Europe ECE 22-05 "P"
  - Japan JIS T 8133:
  - USA SNELL M 2010
- 2.8.8 Visors must be made of a shatterproof material.
- 2.8.9 Disposable "tear-offs" are permitted.
- 2.8.10 Any question concerning the suitability or condition of the riders clothing and/or helmet shall be decided by the FIM Superbike Technical Director, who may, if he so wishes, consult with the manufacturers of the product before making a final decision.

## 2.9 PROCEDURES FOR TECHNICAL CONTROL

A rider is at all times responsible for his motorcycle.

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

a) **Parc fermé**

The parc fermé is a restricted access area sealed with fences or other physical divisions with one or more gates.



The gates and the area are under the control of marshals when the parc fermé is in use (e.g. after practice/race).

The parc fermé area must be sufficiently large to give shelter to all participating motorcycles.

The only persons allowed to enter the parc fermé are the:

- FIM Superbike Technical Director and Technical Stewards
- Race Direction Members
- FIM Stewards
- Tyre Manufacturer's staff
- Riders and Team Managers of motorcycles staying in the parc fermé
- Three mechanics per motorcycle - until dismissed by the technical stewards

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

#### b) Inspection area

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

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

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

Any other persons may enter or stay in the inspection area at the sole discretion of the FIM Superbike Technical Director.

In case of an engine inspection, the inspected entrant has the right to request a reserved area where other entrants cannot watch closely.



In the inspection areas, under the control of the Chief Technical Steward and the supervision of the FIM Superbike Technical Director, suitable equipment will be installed to conduct the various tests, e.g.

- i) Equipment for measuring the noise of the motorcycle
- ii) Weighing scales with check weights for calibration purposes
- iii) Instruments for measuring engine capacity
- iv) Rulers and degree discs and gauges for measuring other dimensions.

**2.9.2** 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 FIM Superbike Technical Director.

**2.9.3** 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.

**2.9.4** The motorcycle will be inspected under the name of the rider.

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

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

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

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



- 2.9.9** The Chief Technical Steward will prepare a report on the results of technical control which, will be submitted to the International Jury via the FIM Superbike Technical Director.
- 2.9.10** The Technical Stewards must re-inspect any motorcycle that has been involved in an accident. This would normally be carried out at the pit of the rider concerned.
- 2.9.11** The Technical Stewards must be available, based on instructions from the FIM Superbike 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.
- 2.9.12** At the end of Superpole 1, the Chief Technical Steward will ensure that the last 8 classified motorcycles are placed in the parc fermé for a period of at least 30 minutes after the end of the session.

At the end of Superpole 2, the Chief Technical Steward will ensure that all motorcycles are placed in the parc fermé for a period of at least 30 minutes after the end of the session.

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

At the end of Superbike Race 1 (one) the machines will be allowed to return to their garages where following confirmation of tyre stickers by the Technical Director or his approved staff the wheels may be removed. Data may be downloaded, NO other work may be carried out until 15 minutes after the end of Superbike Race 1 (see art. 3.4.3). The garage doors must remain fully open at all times during this period.

The motorcycles must be checked for compliance according to the Verification Guidelines (Art. 2.10), and any other technical requirement if requested by the FIM Superbike Technical Director.

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



**2.9.13** The FIM Superbike Technical Director may require a team to provide such parts or samples as he may deem necessary.

**2.9.14** If a motorcycle is involved in an accident, the FIM Superbike 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 Chief Technical Steward must arrange to retain this helmet. The IMS must send this helmet, together with the accident and medical report (and pictures and video, if available) to the Federation of the rider, with a copy to the CMI and to the CTI. If there are head injuries stated in the medical report, the helmet then must be sent to a neutral institute for examination.

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

**2.9.16** The random weight check during practices will be held with minimum disturbance to the riders. The weight scales will be placed in the pit-lane. The actual place is decided by the FIM Superbike Technical Director.

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

## **2.10 VERIFICATION GUIDELINES FOR TECHNICAL STEWARDS**

### **2.10.1 Verification for the three classes (SBK, SS, SST)**

- Make sure all necessary measures and administrative equipment are in place at least 1 hour before the Technical control (see separate list) is due to open.
- Decide who is doing what and note decisions. “Efficiency” must be the watchword. Always keep cheerful and remember the reasons for Technical controls: SAFETY AND FAIRNESS.
- Be well informed. Make sure your FMN has supplied you with all technical “updates” that may have been issued subsequent to the printing of the Technical Regulations. Copies of all homologation documents must be in your possession.



- Inspection must take place under cover with a large enough area (min. surface 100 sq. metres).
- Weighing apparatus must be accurate and practical. The scale must be certified in the current year.
- Rules regarding noise level and measurement must be respected.
- The scales and noise meter will be available to the teams or riders for pre-race checking in the technical control area.

### **In general**

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

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

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

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

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

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

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

The FIM Superbike Technical Director/Chief Technical Steward must re-inspect any motorcycle that has been involved in an accident.

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



### **Dry Superpole**

Each motorcycle which completed the Superpole may be checked.

The minimum checks are weight and noise.

The FIM Superbike Technical Director may request other checks.

### **Superbike Race 1**

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

- Weight: The weight will be checked in the condition that the motorcycle has finished the race. No elements can be added to the motorcycle neither fuel, oil, water nor tyres.
- Noise
- Throttle bodies/injection: Homologation points

The FIM Superbike Technical Director may request other checks.

### **Superbike Race 2**

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

- Weight: The weight will be checked in the condition that the motorcycle has finished the race. No elements can be added to the motorcycle neither fuel, oil, water nor tyres.
- Noise
- Throttle bodies/injection: Measurement and inspection of both inlet and outlet tract. (Homologation points)
- Engine: One engine and up to a maximum of three engines, chosen at random, can be checked internally for capacity and compliance with the regulations.

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



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

The FIM Superbike Technical Director may request other checks.

### **Supersport & Superstock Race**

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

- **Weight:** The weight will be checked in the condition that the motorcycle has finished the race. No elements can be added to the motorcycle neither fuel, oil, water or tyres.
- **Noise**
- **Throttle bodies/injection:** Measurement and inspection of both inlet and outlet tract.
- **Engine:** One engine and up to a maximum of three engines, chosen at random, can be checked internally for capacity, cams, valve size, timing, etc.
- **Tyre, air box and electric starter - compliance**

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

### **2.10.2 Timetable**

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



**The day before the practice sessions: Technical control from 15h00 to 18h00:**

For all riders in Superbike: in pit 2 people

For all riders in Supersport 2/3 people

Tasks: Inspection of motorcycle safety, clothing and helmets  
(NO NOISE OR WEIGHT CONTROL)

Administration tasks: 1 person

**During practice days: From 08h30 until 18h00**

Technical control: Practice, qualifying and Superpole sessions

Task: Inspection of motorcycle safety;  
Noise and Weight after the Superpole 4 people

Inspection of crashed motorcycles and technical controls 2 people

Administration tasks: 1 person

**Technical control on race day: From 08h00 until 18h00:**

Before the race: safety checks on starting grid at the request of the FIM  
Superbike Technical Director

After the race: Technical control noise weight and  
carburation instruments 8 people

Displacement checks 2 people

Administration 1 person

This is the required minimum of Technical Stewards. The number may of course be higher.

### 2.10.3 Equipment list

- Revolution meter
- Sound meter and calibrator
- Slide calliper
- 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
- Colour for marking parts
- Magnet for materials testing
- Computer with Homologation Documents

### 2.10.4 Documents list

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

## 2.11 SOUND LEVEL CONTROL

### Sound limits in force:

The maximum sound level 107 dB/A, shall be measured at a mean piston speed of 11 m/sec. The fixed RPM specified in Art. 2.11.6 may be used.

**2.11.1** With the microphone placed at 50 cm from the exhaust pipe at an angle of 45° measured from the centre-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.

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

**2.11.3** 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.



**2.11.4** 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.

**2.11.5** The RPM depends upon the mean piston speed corresponding to the stroke of the engine.

The RPM will be given by the relationship:

$$N = \frac{30,000 \times cm}{l}$$

in which: N = prescribed RPM of engine  
 cm = fixed mean piston speed in m/s  
 l = stroke in mm

### **2.11.6 Noise control**

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

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

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

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

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

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

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

**2.11.11** The “slow response” setting must always be used.



## **2.11.12 Sound control after the competition**

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

## **2.11.13 Noise control during a competition**

In a competition which requires noise control tests during the event, motorcycles must comply with the noise limits without the tolerance in Article 2.11.

## **2.12 GUIDELINES FOR USE OF SOUND LEVEL METERS**

**2.12.1** The Sound Control Officer (NCO) must arrive in sufficient time for discussions with the FIM Superbike Technical Director and other Technical Stewards in order that a suitable test site and testing policy can be agreed.

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

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

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

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

**2.12.5** “Slow” meter response must be used.

**2.12.6** “A” weighted setting on sound level meter.

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

## **2.12.8 Corrections**

Type 1 meter: deduct 1 dB/A



### **2.12.9 Precision of the method (tolerances)**

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



**FIM ROAD RACING  
SUPERBIKE & SUPERSPORT  
WORLD CHAMPIONSHIPS  
FIM AND SUPERSTOCK CUP**

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

<b>RIDER N°:</b>	<b>Sample Can "A"</b>	
	Can Label N°	Can Seal N°
<b>SESSION:</b>	<b>Sample Can "B"</b>	
	Can Label N°	Can Seal N°
<b>RIDER NAME:</b>	<b>Sample Can "C"</b>	
	Can Label N°	Can Seal N°

**MOTORCYCLE MAKE:** \_\_\_\_\_

**TEAM:** \_\_\_\_\_

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

Sample "A" will go to the laboratory appointed by the FIM/IMS for analysis.  
Sample "B" will be safeguarded by the FIM in case a counter-expertise is required.

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

(print name): \_\_\_\_\_

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

Time: \_\_\_\_\_  

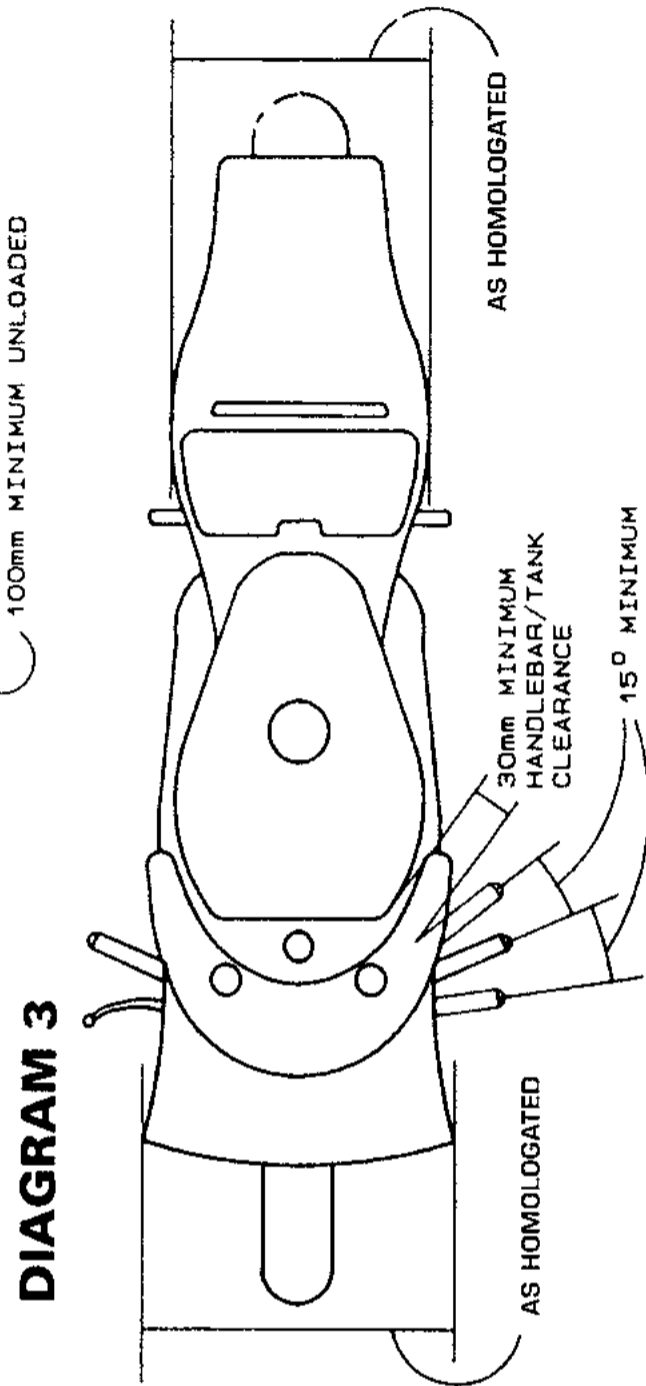
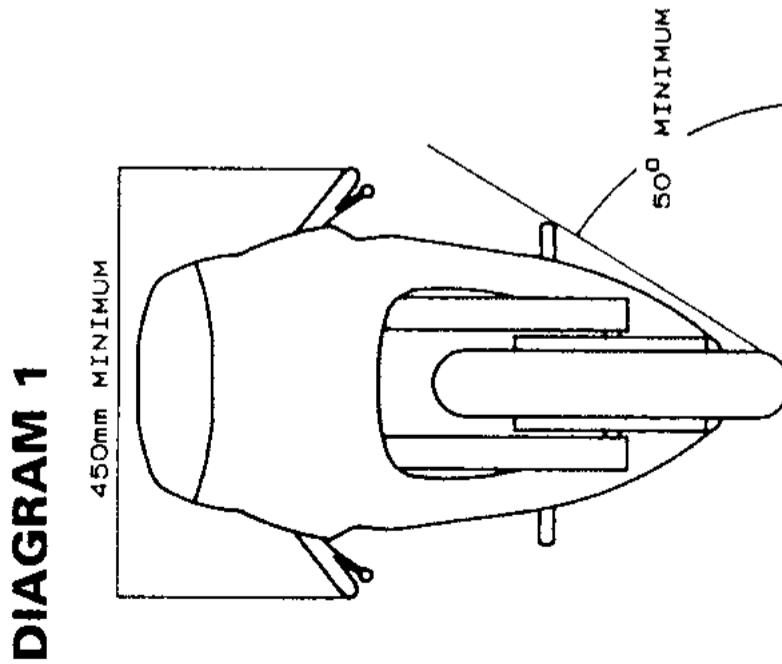
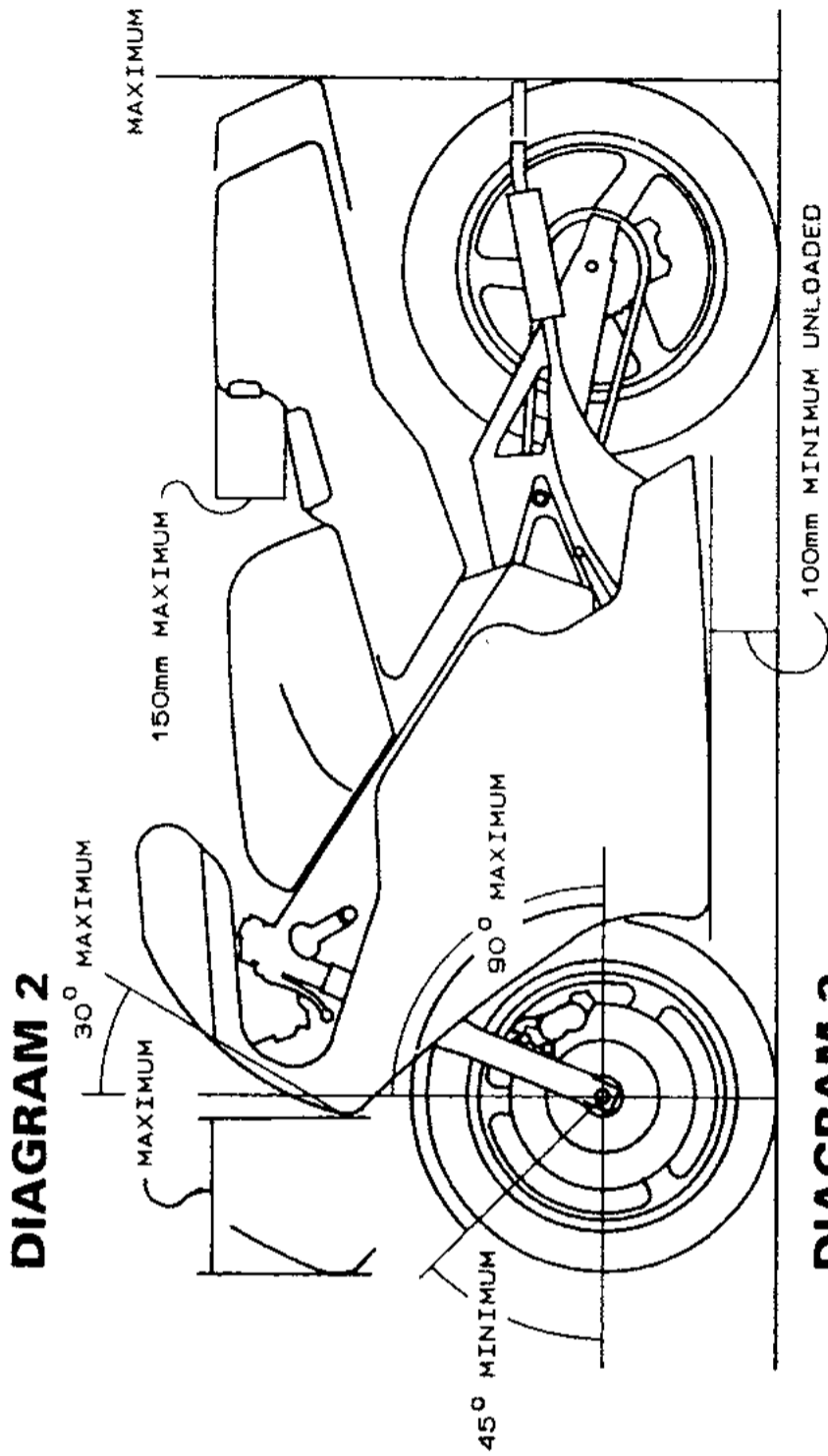
(Signature)

Position in team: \_\_\_\_\_  

(OWNER/MANAGER/MECHANIC)

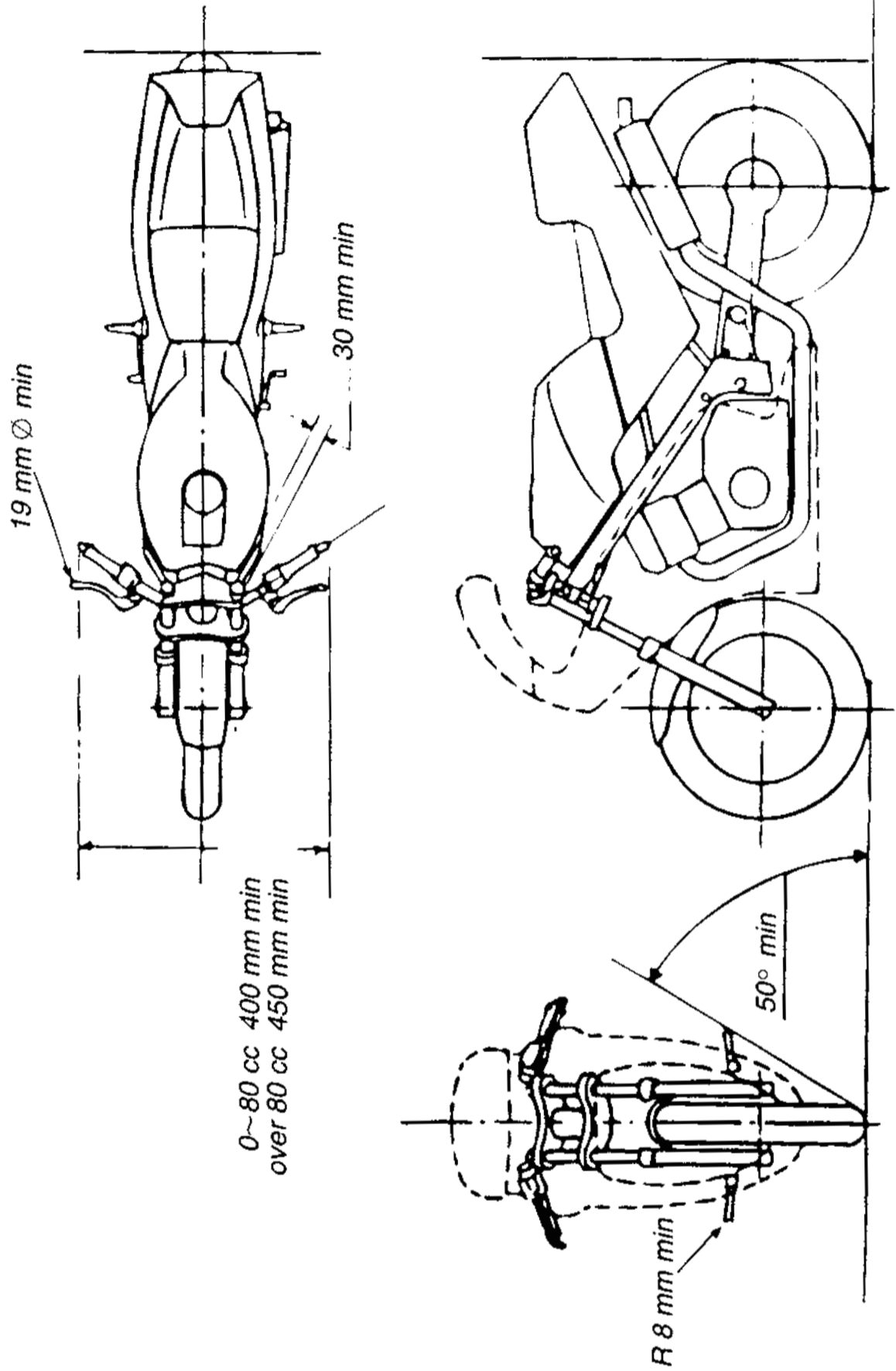
# ROAD/ROUTE

**A**



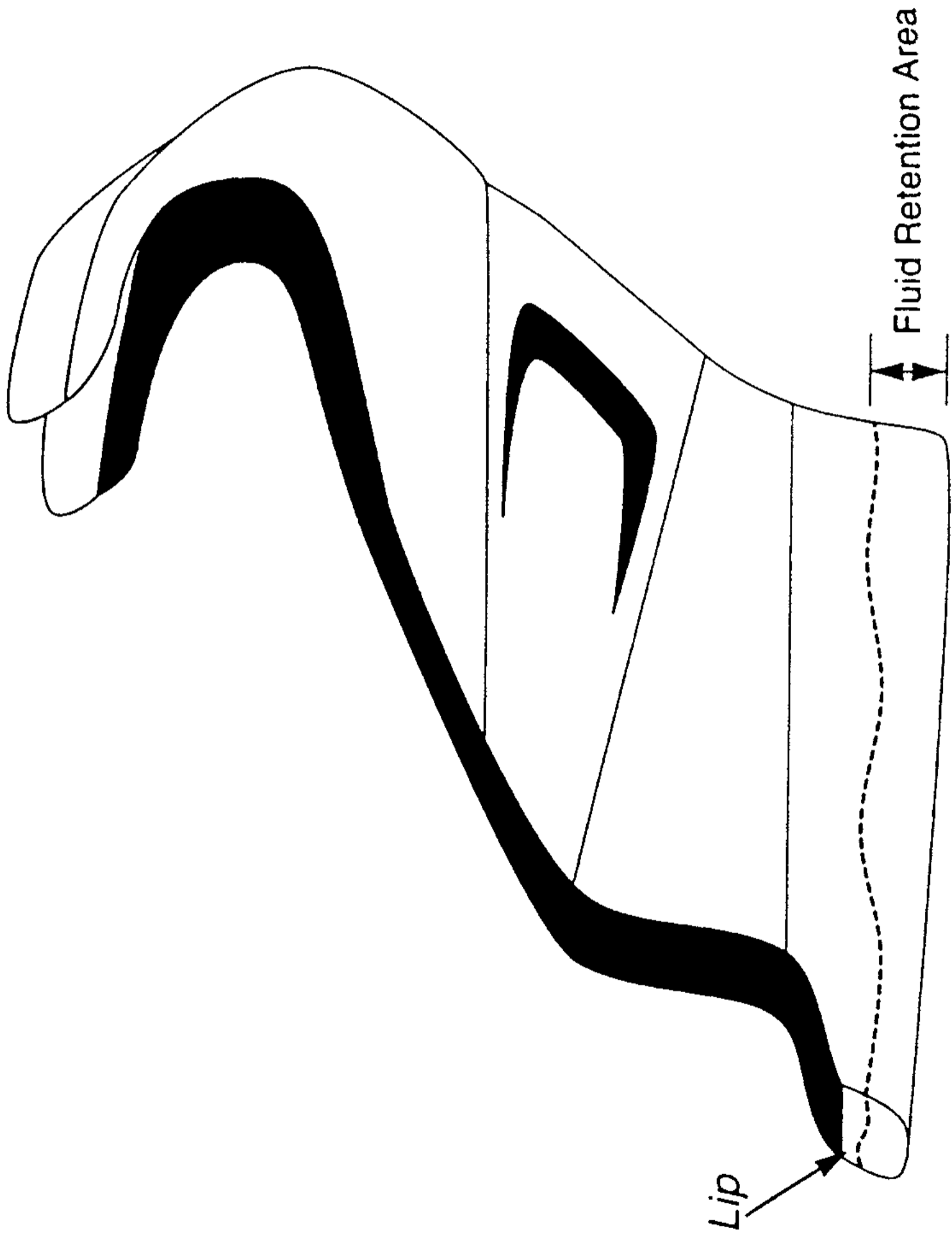
# SPORTS PRODUCTION

C



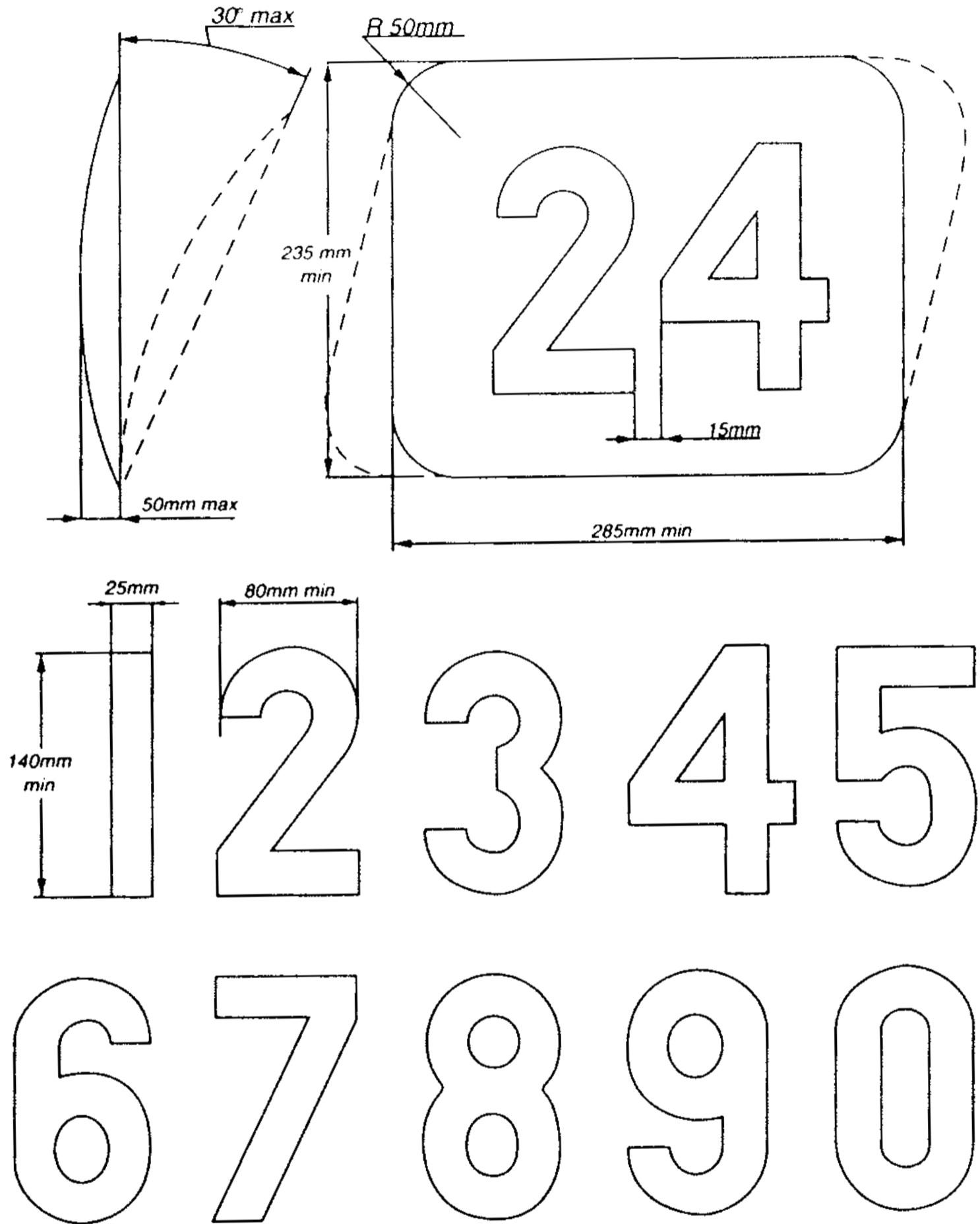
# ROAD/ROUTE

C



# NUMBERS/NUMEROS

0





**Futura Heavy**

**0 1 2 3 4 5 6 7 8 9**

**Futura Heavy Italic**

***0 1 2 3 4 5 6 7 8 9***

**Univers Bold**

**0 1 2 3 4 5 6 7 8 9**

**Univers Bold Italic**

***0 1 2 3 4 5 6 7 8 9***

**Oliver Med.**

**0 1 2 3 4 5 6 7 8 9**

**Oliver Med. Italic**

***0 1 2 3 4 5 6 7 8 9***

**Franklin Gothic**

**0 1 2 3 4 5 6 7 8 9**

**Franklin Gothic Italic**

***0 1 2 3 4 5 6 7 8 9***

## **TEN FITTING TESTS FOR HELMETS** **DIX TESTS D'ADAPTATION POUR LES CASQUES**

1. *Obtain correct size by measuring the crown of the head*  
Avoir la bonne grandeur en mesurant le sommet de la tête
2. *Check there is no side to side movement*  
Vérifier qu'il n'y ait pas de déplacement d'un côté à l'autre
3. *Tighten strap securely*  
Serrer solidement la jugulaire
4. *With head forward, attempt to pull up back of helmet to ensure helmet cannot be removed this way*  
Tête en avant, essayer de soulever le casque pour s'assurer qu'il ne peut pas être enlevé de cette façon



5. *Check ability to see clearly over shoulder*  
Vérifier si vous pouvez voir clairement par-dessus l'épaule
6. *Make sure nothing impedes your breathing in the helmet and never cover your nose or mouth*  
S'assurer que rien ne gêne votre respiration dans le casque et ne jamais couvrir le nez ou la bouche
7. *Never wind scarf around neck so that air is stopped from entering the helmet. Never wear scarf under the retention strap*  
Ne jamais enrouler une écharpe autour du cou, car cela empêche l'air d'entrer dans le casque. Ne jamais porter d'écharpe sous la jugulaire
8. *Ensure that visor can be opened with one gloved hand*  
S'assurer que la visière peut être ouverte avec une main gantée
9. *Satisfy yourself that the back of your helmet is designed to protect your neck*  
S'assurer que l'arrière de votre casque a une forme telle qu'il vous protège la nuque
10. *Always buy the best you can afford*  
Toujours acheter le meilleur que vous pouvez vous offrir

# INTERNATIONAL HELMETS STANDARDS

## NORMES INTERNATIONALES DES CASQUES

### ECE 22 - 05 "P" (EUROPE)

The ECE mark consists of a circle surrounding the letter E followed by the distinguishing number of the country which has granted approval.



**E1** for Germany, **E2** for France, **E3** for Italy, **E4** for Netherlands, **E5** for Sweden, **E6** for Belgium, **E7** for Hungary, **E8** for Czeck Republic, **E9** for Spain, **E10** for Yugoslavia, **E11** for UK, **E12** for Austria, **E13** for Luxembourg, **E14** for Switzerland, **E15** (- vacant), **E16** for Norway, **E17** for Finland, **E18** for Denmark, **E19** for Roumania, **E20** for Poland, **E21** for Portugal, **E22** for the Russian Federation, **E23** for Greece, **E24** for Ireland, **E25** for Croatia, **E26** for Slovenia, **E27** for Slovakia, **E28** for Bielo Russia, **E29** for Estonia, **E30** (- vacant), **E31** for Bosnia and Herzegovina, **E32** for Letonie, **E34** for Bulgaria, **E37** for Turkey, **E40** for Macedonia, **E43** for Japan, **E44** (- vacant), **E45** for Australia, **E46** for Ukraine, **E47** for South Africa, **E48** New Zealand.

Below the letter **E**, the **approval** number should always begin with 05. Below the approval number is the serial production number. (Label on retention system or comfort interior).



(JAPAN) JIS T8133



(USA) SNELL M2010

For more details consult the F.I.M. Technical Rulebook



## APPENDIX

### HOMOLOGATION RULES

#### 1. FIM HOMOLOGATION PROCEDURE FOR SUPERBIKE SUPERSTOCK, SUPERSPORT AND MOTORCYCLES

Homologation is the official assessment made by the FIM for a particular model of motorcycle for which a sufficient number of series production motorcycles have been built and put on sale to the public to justify classification in the relevant Sport Production class.

#### REQUIREMENTS FOR AN FIM HOMOLOGATION

##### Application

Any manufacturer of mass production motorcycles may apply for an FIM homologation of one or more of his models in order to qualify for competing in the Road Racing Superbike & Supersport World Championship and the Superstock Cup as long as the model belongs to one of these classes.

##### Eligibility requirements

Motorcycles must have a valid international homologation for road use or a national homologation for road use in one of these countries or regions: USA, EU or Japan. The motorcycles must represent machines of mass production.

- a) The motorcycles must be of current production.
- b) The motorcycles are to be sold for every day public use.
- c) At the time of the FIM inspection for homologation, the motorcycles must be completely equipped with all road-using equipment (e.g. full lighting equipment).
- d) Only the original manufacturer may present the motorcycle for homologation.
- e) The manufacturer must be a holder of an FIM licence for manufacturers.
- f) If the motorcycle is presented with an engine from a motorcycle manufacturer different from the manufacturer requesting the homologation, a permission or commercial agreement must be presented at the time of the homologation request.
- g) The motorcycle must have a manufacturer's certificate of origin.



## **1.2 MINIMUM PRODUCTION QUANTITIES AND MARKET AVAILABILITY**

Evidence of production quantities must be provided to the FIM, certified by the manufacturer's auditing firm and/or any other institution which may provide reliable documentation. This certificate must be written in English or French and the model/type must be specified.

Market availability and sale to the public may be demonstrated by waybills, bills of lading and/or any other import, export or customs documents duly certified by the relevant authority.

Proof must be provided to the FIM by means of a business/manufacturing plan for the model in question that the requirements listed below will be met.

### **1.2.1 Homologations for Superbike, Supersport and Superstock.**

- a) The maximum retail price for Homologation:
  - i) The maximum retail price for Superbike 1000 class Homologation is 40.000 Euro
  - ii) The maximum retail price for Superstock 1000 class Homologation machine is 33.000 Euro
  - iii) The maximum retail price for Supersport & Superstock 600 class machine is 20.000 Euro
- b) The minimum number of motorcycles to be produced are:
  - i) 125 units of the motorcycle model intended to be raced at the time of homologation inspection visit.
  - ii) and 250 units on the 31<sup>st</sup> December of the homologation visit/year (of combined models respecting 50% of the one intended to race)
  - iii) and 1000 units on the 31<sup>st</sup> December of the following year (of combined models respecting 50% of the one intended to race)

**1.2.2** Manufacturers may compete with their Machine in the World Superbike Championship without earning points until 125 units have been produced. Should the minimum required number (125 units) of the motorcycle-to-be-homologated not have been produced within FOUR (4) months of its first outing in a Superbike/Supersport/Superstock event OR the minimum production number not be produced then the SBK Commission reserves the right to refrain the team/manufacturer from participation for a period of time to be determined.

**1.2.3** The homologated machine may be fitted with any components respecting **Art. 1.2.1 a)** However to compete in the World Superbike Championship the machine must comply with the prevailing regulations, for example by utilising “approved components” where applicable.

**1.2.4** With the exception of the initial quantity required to be produced (125), during the first two years of the model homologation, different cosmetic ‘versions’ of the base ‘model’ may also be counted towards the homologation number for quantities of **Art. 1.2.1 b) ii) > 1.2.1 b) iii)**, however at least 50% of the homologation number (ie. 125,500 units) must be of the model intended to race.

To be included in the production numbers the “versions” must share engine (excepting regional variations and clutch differences, BUT including airbox, fuel injection systems and electronics) and main frame and be of the same style of machine. For example superbike and naked motorcycle models cannot be counted together.

**1.2.5** The SBK Commission reserves the right to include the note \*STH (Subject to homologation) on the official entry lists of the championship until the minimum required number (125 units) are produced.

### **1.3 HOMOLOGATION PROCEDURE, CALENDAR FOR APPLICATIONS, SUBMISSIONS & PUBLICATIONS**

A homologation inspection is a complete verification and check of all drawings of the corresponding parts, as well as the documentation for the necessary minimum quantities. These checks will be carried out by the FIM.

- a. The deadline for receiving requests for homologation at the FIM CCR/CTI Secretariat is 30 days before the homologation inspection is to take place.
- b. At the latest four (4) weeks before the inspection for homologation by the FIM, manufacturers are required to send by e-mail the completed and signed homologation forms **A, B and C** together with all relating documentation and drawings (**see Art. 1.6**) to the FIM CCR/CTI Secretariat (with the exception of workshop manuals, that can be delivered when they are released to the importers). Missing or incomplete documents and/or drawings will postpone the homologation inspection until a full corrected set is available. The documents and drawings have to be sent in paper and in electronic form (\*.pdf, \*.jpg, \*.doc, \*.txt and **form C** as **.xlsx** to [ccr@fim.ch](mailto:ccr@fim.ch) and [cti@fim.ch](mailto:cti@fim.ch)).



- c. At the latest 3 days before the date of the inspection by the FIM, manufacturers are required to send to the FIM by e-mail, proof of production quantities of the first lot of motorcycles, according to Art. 1.2.1.
- d. If the inspection fails, the homologation is postponed until the established shortcomings have been resolved and at least for one (1) month.
- e. In case of failing the inspection, the original manufacturer may apply for a new homologation, a maximum of 2 more times in the same year, in each racing class.
- f. The homologation forms will be studied by the technical members and the CTI Secretariat, to confirm that they are complete and correct prior to granting the homologation.
- g. The manufacturer shall at all times be responsible for completing the homologation documents with the correct information. All dimensions must be given according to the metric system, excluding wheel dimensions, and with the actual manufacturing tolerances.
  - i) **Chassis (frame)                    ISO2768-c (coarse)**
  - ii) **Engine Parts                        ISO2768-m (medium)**
- h) **All currently accepted drawings may be requested to be re-submitted with updated tolerances and missing dimensions. Any drawings not re submitted will be assumed to comply with the tolerances in Art. 1.3 g).**
- i) **The homologation drawings must fully dimension ALL centres and dimensions to surfaces (including machined faces on frame) allowing a fully resolved 3 dimensional model to be created.**
- j) **Manufacturers may optionally supply (compulsory from 2016 >) 3 dimensional models of the homologated parts. These do not have to include material details (file formats to be decided).**
- k) The manufacturer is entitled to request a notice in order to know whether the documents and drawings submitted by him are formally correct two (2) weeks before the homologation inspection date.
- l) At the latest within fifteen (15) days after having successfully passed the homologation inspection, an updated list of the valid homologations is published including the new homologation.



- m) Within 21 days of the homologation inspection, copies of the 1, 2 & 3 homologation forms and drawings will be available on the FIM website.
- n) These motorcycles must be available for sale to the public in the shops and dealerships representing the manufacturer in at least one of the following countries or regions: USA, EU or Japan, before the end of April of the current year, to be allowed to be used in the remaining Championship events.
- o) Any machine that is intended to be raced before 125 units are produced under the exemption in 1.2.2 must have all the relevant documentation submitted in accordance with article 1.3 and the parts requested in article 1.4 in order for permission to race to be granted.
- p) One complete example of the production machine must be supplied in road specification.
- q) The FIM may request, at its discretion, to make a homologation inspection before the 125 machines are built.
- r) A machine that is given permission to race before 125 units are produced will be considered 'Subject to homologation'.

#### **1.4 HOMOLOGATION APPLICATION, INSPECTION AND CONTROL**

- a) The inspection of the motorcycle and the parts consigned by the manufacturer for homologation will be carried out according to the information requested on the forms produced by the FIM (homologation forms **A, B and C**).
- b) The manufacturer must consign to the FIM the following parts (**to be received by the FIM at least 2 weeks before the first race in which the machine will be used**):

##### **1.4.1. Engine parts:**

- E1.1 Throttle bodies and variable intake tract devices if used
- E1.2 Injector(s); sample of all different injectors,
- E2 Fuel pump and fuel pressure regulator
- E3/1 Crankcases - upper (Left)
- E3/2 Crankcases - center (Right)
- E3/3 Crankcases - lower
- E4/1 Cylinderhead



E4/2	Cylinder if separate
E4/3	Cylinder liner if removable
E5	Intake camshaft
E6	Exhaust camshaft
E7	Intake valve
E7/2	Intake valve spring inner
E7/2	Intake valve spring outer
E7/4	Intake valve spring collet and retainer
E7/5	Intake valve spring seat
E7/6	Intake tappet/bucket/follower
E8	Exhaust valve
E8/2	Exhaust valve spring inner
E8/3	Exhaust valve spring outer
E8/4	Exhaust valve spring collet and retainer
E8/5	Exhaust valve spring seat
E8/6	Exhaust tappet/bucket/follower
E9	Piston
E9/1	Piston Ring Assembly
E9/2	Piston Pin
E10	Con-rod
E11	Crankshaft
E13	Primary Gear if separate
E13/1	Gearbox (complete view)
E14	Clutch Assembly including Basket
E15	ACG Assembly, stator and flywheel
E16	Oil Pump and drive system
E17	Water pump and drive
E18/1	Right side cover
E18/2	Left side cover
E18/3	Head or Valve or Cam cover

#### 1.4.1. Chassis parts:

F1/1	Main frame
F2	Sub frame (if separate)
F4	Airbox including injectors
F9/1	Fork bridge* (top)
F9/2	Fork bridge* (bottom) including stem
F10	Front fork assembly
F11	Swing Arm
F13	Rear suspension linkage assembly complete



- F14/1 Rear Axle
- F14/2 Front Axle
- F15 Front brake discs

- a) These parts will be stored by the FIM in sealed boxes and moved by the Promoter to the SBK Championship events at the discretion of the Superbike Technical Director.
- b) The inspector/s must satisfy him/them that the statements made on the production certificate (Form 2) are correct.
- c) At the end of the parts and documents inspection, the inspector/s will sign the completed certificate of homologation. These signed homologation forms indicate that the manufacturer complies with the specifications mentioned **documented** on the homologation forms.
- d) The FIM may check motorcycles of the homologated model chosen at the manufacturer, or from dealerships' or importers' showrooms. The motorcycles must be in conformity with the homologated model. The expenses for the disassembling of maximum two (2) units will be borne by the manufacturer.
- e) In case of not achieving minimum production numbers after the first or second years, all the points counting towards the Manufacturers' Championship in the current year will be withdrawn and further penalties may also be imposed.
- f) Once a motorcycle has obtained the homologation, it may be used for racing in the corresponding class for a maximum period of 8 years, or until such time that the homologated motorcycle no longer complies with the technical rules.
- g) A homologation will be granted only if the fee has been paid.
- h) 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. No fee will be charged for a homologation extension.



## 1.5 NEW HOMOLOGATION, PARTS AND PRODUCT UPDATE

Any change in the specifications of the following parts of a FIM homologated motorcycle will require a new homologation of the model:

- a) New range of engine prefix numbers
- b) New range of frame prefix numbers
- c) Crankcase(s)
- d) Throttle body assembly
- e) Air box (complete, with injectors if change of injector model)
- f) Frame: main dimensions [in relation to wheelbase, caster, steering head angle, relative location of the swing-arm, relative location of rear shock absorber(s) and linkages] weight, **construction method** and technology.
- g) ECU or electronic system is changed.**

FIM can **consider** granting a part and product update differing from above rule, purely for the scope of production cost saving provided that **at least the** following provisions are kept:

- Crankcase is not lighter\* than the original homologated unit. The positions of crankshaft, gearbox, frame attachments, main shafts and position of cylinders remain unchanged (\*apart casting method for mass production)

### 1.5.1 Homologation of Parts and Production Update

- a) Product updates on **any homologated parts (those included in x-,e-,f- drawings, form C and any sample parts)** require a homologation update.
- b) **The FIM will consider if the part requested for update can be homologated.**



- c) **Application:**
- i) The manufacturer must send a notice to the FIM CCR/CTI Secretariat requesting for a homologation update not later than 30 days before the first race in which the model containing new parts will compete.
  - ii) **The application for homologation of these parts will require a copy of the accompanying “Technical Bulletin/Part Update” issued by the Manufacturer to their official dealership network in every country or region where the homologated model is available to the public.**
  - iii) With the formal notice, the manufacturer is required to send the 1, 2 and 3 homologation forms, together with all relating documentation about the parts and product update (the drawings of the old and new products/parts, etc.) including a statement with the VIN-Number pertinent to the updated parts and product, to the FIM CCR/CTI Secretariat, both in paper and electronic form.
- d) **If an inspection is necessitated then at the latest within one (1) week before the homologation inspection by the FIM, manufacturers must ensure themselves that the parts requested by the FIM are received at the indicated place which will be in a European state.**
- e) Only motorcycles that have higher VIN numbers than those stated by the manufacturer are allowed to race using the new updated parts. If a manufacturer adopts a numbering system out of sequence, they will supply the FIM with the list of the motorcycles produced after the product update.
- f) **All updated parts (assemblies) shall be accepted to be fitted on all units of the homologated model, without any further modifications to other standard fitted parts of the homologated model.**
- g) **Part updates due to multiple suppliers; For a part that is updated because of multiple suppliers the part must be fitted to a minimum of 250 units of the homologated machine and to 250 units of any version that is sharing the minimum production quantity requirements. The manufacturer will be required to provide proof of production.**



- h) **Homologation of factory build option parts:** Any part that is considered an option but is fitted on the normal production line AND supplied for road use can have an application made for homologation but must be fitted to a minimum of 250 units of the homologated bike.
- i) The FIM will withdraw the homologation if these rules are not respected.

## 1.5 List of Required Drawings

Assemblies may be individually represented on one page. Extra drawings should be supplied if required by the machines specifics. Any drawings that don't apply should be ignored:

### 1.6.1 Engine drawings:

- E1.1 Throttle bodies and variable intake tract devices if used
- E1.2 Injector(s); sample of all different injectors, if used
- E2 Fuel pump and fuel pressure regulator
- E3/1 Crankcases - upper (Left)
- E3/2 Crankcases - center (Right)
- E3/3 Crankcases - lower
- E4/1 Cylinderhead
- E4/2 Cylinderhead, Cross section
- E4/2 Cylinder if separate
- E4/3 Cylinder liner if removable
- E5 Intake camshaft
- E6 Exhaust camshaft
- E7 Intake valve
- E7/2 Intake valve spring inner
- E7/3 intake valve spring outer
- E7/4 Intake valve spring collet and retainer
- E7/5 Intake valve spring seat
- E7/6 Intake tappet/bucket/follower
- E8 Exhaust valve
- E8/2 Exhaust valve spring inner
- E8/3 Exhaust valve spring outer
- E8/4 Exhaust valve spring collet and retainer
- E8/5 Exhaust valve spring seat
- E8/6 Exhaust tappet/bucket/follower
- E9 Piston
- E9/1 Piston Ring Assembly



E9/2	Piston Pin
E10	Con-rod
E11	Crankshaft
E11/1	Crankshaft machined area detail
E12	Method camdrive
E13	Primary Gear
E13/1	Gearbox
E14	Clutch Assembly including Basket
E15	ACG Assembly including stator and flywheel
E16	Oil pump and drive system
E17	Water pump and drive
E18/1	Right side cover
E18/2	Left side cover
E18/3	Head or valve or Cam cover

#### 1.6.2 Frame Drawings:

F1/1	Main frame
F1/2	Main frame
F1/3	Headstock detail
F2	Sub frame (if separate)
F3	Fuel tank
F4	Airbox including injectors
F5	Fairing Front
F5/2	Fairing Front
F5/3	Fairing Left
F5/4	Fairing Right
F6	RAM opening
F7	Seat
F8	Front fender
F8/1	Rear fender
F9/1	Fork bridge* (top)
F9/2	Fork bridge* (bottom) including stem
F10	Front fork assembly
F11	Swing Arm
F12	Rear suspension unit
F13	Rear suspension linkage assembly
F13/1	Rear Suspension linkage detail
F13/2	Rear Suspension linkage detail
F14/1	Rear Axle
F14/2	Front Axle

F15	Front brake discs
F15/1	Rear brake discs
F16	Front brake calliper
F16/1	Rear brake calliper
F17	Rear calliper hanger
F18	Front master cylinder
F18/1	Rear master cylinder
F19	Front wheel (type)
F19/1	Rear wheel (type)
F19/3	Cushion drive
F20	Oil cooler
F21	Radiator
F22	Intercooler

### **1.6.3 General View:**

X1	Front view (faired)
X3	Rear view (faired)
X5	Left view (faired)
X7	Right view (faired)
X9	Top view (faired)
X10/1	Vin Location Frame
X10/2	Vin Location Engine

### **1.7 List of Required Pictures**

According to the list of drawings.

For certain parts, extra pictures of the part may be required to show special features.

## **3. DISCIPLINARY AND ARBITRATION CODE**

### **3.1 Principles**

The obligations incumbent upon the participants, officials and organisers are set out in these Regulations published by the FIM.

Proven violation or non-observance of these obligations will be subject to the penalties laid down in this chapter.



## 3.2 Penalties

The penalties are:

- warnings
- **Superbike Penalty Points**
- fines
- drop of position
- ride through
- time penalties
- grid penalty
- disqualification
- withdrawal of Championship points
- suspension
- exclusion

### 3.2.1 Definition and application of penalties

Warnings: can be made privately or publicly.

**Superbike Penalty points:** may be imposed by the **SBK 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 disqualification. **A penalty of up to 3 points can be imposed without a prior hearing being necessary. However, the right of protest remains as set out in Article 3.4.1.**

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Fines:	cash penalty up to 50'000 € <b>A fine of up to 1'000 Euros can be imposed without a prior hearing being necessary. However, the right of protest remains as set out in Article 3.4.1.</b>
Change of position:	the rider must go back the number of positions decided by the Race Direction.
Ride through:	see Art. 1.19
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 at the rider's next race. <b>In the case of an infraction of Art. 1.21.2, a drop of up to 3 grid positions may be imposed without a prior hearing being necessary. However, the right of protest remains as set out in Article 3.4.1.</b>
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.
Withdrawal of championship points:	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 FIM 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 the FIM, qualified to deal with disciplinary and arbitration matters, are:

- The Race Direction
- The FIM Stewards
- The International Disciplinary Court (CDI)

#### **3.3.1 The Race Direction**

##### **3.3.1.1 Constitution**

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 penalise automatically riders, teams' personnel, officials, promoters/organisers and all the persons involved in any capacity whatsoever in an event or in the Championship for:

- Infringements of the Regulations.
- 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**

The following penalties may be pronounced by the Race Direction:

- a warning
- **an imposition of penalty points**
- a fine
- a drop of position
- a ride through
- a time penalty
- a grid penalty
- a disqualification
- a withdrawal of Championship points
- a suspension

Furthermore, the Race Direction can refer the case to the International Disciplinary Court (CDI) in order to impose a higher penalty than the Race Direction is empowered to do.

## **3.3.2 The FIM Stewards Panel**

### **3.3.2.1 Constitution**

The Constitution of the FIM Stewards Panel is in accordance with the requirements laid down in Article 1.7.

### **3.3.2.2 Competence**

The FIM Stewards Panel will hear any appeals against decisions taken by the Race Direction.



### **3.3.2.3 Penalties that may be pronounced by the FIM Stewards Panel only following an appeal:**

- a warning
- a fine
- a time penalty
- a grid penalty
- a disqualification
- a withdrawal of Championship points
- a suspension

Furthermore, the FIM Steward Panel can refer the case to the International Disciplinary Court (CDI) in order to impose a higher penalty than the FIM Stewards Panel is empowered to do.

### **3.3.3 The International Judicial Panel**

The International Judicial Panel (CJI) is composed of qualified persons from which the members of the CDI are nominated.

#### **3.3.3.1 Constitution**

The International Judicial Panel shall consist of members nominated by FMNs. Each FMN may nominate one or several members having the nationality of that FMN. The appointments shall be confirmed by the General Assembly for 4-year periods.

#### **3.3.3.2 Qualifications**

In order to qualify for appointment to the International Judicial Panel, a candidate must be in possession of a diploma in Law studies of University level. He must be able to express himself in at least one of the official languages of the FIM. He cannot however be an officer or a licence holder of the FIM.

### **3.3.4 The International Disciplinary Court (CDI)**

#### **3.3.4.1 Appointment of the Members**

The President of the International Judicial Panel of the FIM will appoint, each time, the President and the members who will constitute the CDI.

### **3.3.4.2 Procedures**

The names of the members appointed must be communicated to all interested parties in the case, who have the right to make a duly documented objection to the composition of the Court, either in total or in part, within three days after having received the information. If the Executive Board of the FIM considers that a reasonable objection is made, he must appoint the necessary replacements. Otherwise he rejects the objection and fixes the date for the hearing.

The court may request the opinion of an expert or summon a witness who it considers useful.

### **3.3.4.3 Authority and Competences**

The CDI will hear any appeals against decisions taken by the FIM Stewards.

The CDI adjudicates upon request of the Race Direction or the FIM Steward Panel.

After a meeting, the President of the FIM, the Executive Board or the Management Council may, within 5 days, refer to the CDI all matters of violation or infringement to the FIM regulations.

### **3.3.5 The FIM as a Party in the Legal Proceedings**

#### **3.3.5.1 Function**

For all the appeals to the CDI, the FIM is entitled to assert its interests or to explain its position by means of a prosecution address.

#### **3.3.5.2 Appointment**

The Executive Board shall appoint in each case, the person who will represent the FIM.

#### **3.3.5.3 Procedure**

The intervention of the FIM is optional and is left to the appreciation of the Executive Board.

As a party, the FIM enjoys the same rights and obligations as the other parties.

The FIM may be present in person at a hearing or may present its claims in writing.



## **3.4 Protests and Appeals**

### **3.4.1 Right of protest**

Any legal entity or any individual, rider, team, manufacturer, official etc. affected by a decision taken under the authority of the FIM, has the right to protest against that decision.

No protest may be lodged against a decision of the Race Direction 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.

No protest may be lodged against a decision of the Race Direction based on a photo finish.

### **3.4.2 Right of appeal**

The rules concerning appeals against FIM disciplinary decisions are:

#### **1. To the FIM Stewards against a decision of the Race Direction**

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

No appeal may be lodged against a decision based on a photo finish.

When no appeal may be lodged the decision of the Race Direction decision is final.

#### **2. To the CDI against a decision of the FIM Stewards. The decision of the CDI is final.**

No appeal may be lodged if the FIM Stewards confirm the previous decision of the Race Direction. In this case, the decision of the FIM Stewards is final.

### **3. To the CAS**

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

No appeal may be lodged against a decision based on a photo finish.

#### **3.4.3 Procedure and time limit for protests**

All protests must be submitted and signed only by the person directly concerned. Each protest must refer to a single subject only and the intention to protest must be notified to Race Direction or to DWO within 30 minutes following the signature of the results by the Clerk of the Course. The protest must then be confirmed in writing or withdrawn within 1 hour at the latest after the signature of the results by the Clerk of the Course.

Following Superbike Race 1 the intention to protest other riders for technical breaches only must be submitted within 15 minutes of the end of the race. For sporting protests the time limits remains as above.

The end of the race is defined as the sooner of; the last active rider crossing the finish line after the chequered flag or 5 minutes after the leader crosses the finish line following the display of the chequered (or red) flag.

Protests must be handed to a responsible official (Clerk of the Course, Race Director or Secretary of the Meeting) together with the security deposit of 660 € or equivalent.

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

#### **3.4.4 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.



### **3.4.5 Effect of the decision upon a protest**

The decision of the Race Direction of determination of penalty is immediate.

### **3.4.6 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 Stewards - 5 days
- statement of appeal before  
the Court of Arbitration for Sports (CAS) - 5 days

The time limits shall be taken from the date and time of receipt of the decision by the appellant.

### **3.4.7 Lodging of an appeal**

To be admissible, the statement of appeal must be submitted by letter (appeal before the FIM Stewards) or sent by registered letter or special courier to the FIM Executive Secretariat and postmarked (appeal before the CDI).

The correct security deposit for appeal must be handed to the FIM Chief Steward (appeal before the FIM Stewards) or paid in to the FIM Executive Secretariat (appeal before the CDI), as the case may be.

Within 10 days following the statement of appeal before the CDI, the appellant assigns to the FIM Executive Secretariat a brief of appeal stating the facts.

If the appeal was not lodged and/or the security deposit for appeal not paid within the dead line specified in article 3.4.6, the appeal will be declared inadmissible without hearing.

#### **3.4.7.1 Security deposit for appeals**

The amount of the security deposit is 1'320 Euros.

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

### **3.4.7.2 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.

### **3.4.7.3 Time limits to be observed for appeal hearings**

The FIM Stewards must be convened to examine an appeal immediately after the brief of appeal is received.

The CDI must be convened to examine an appeal not later than 6 weeks after the brief of appeal is received.

The FIM Stewards and the CDI must in all cases pronounce a decision.

### **3.4.8 Effect of an appeal**

On request of the appellant, the FIM 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 International Disciplinary Court (CDI) may decide a stay of the provisional execution adjudicated by the FIM Stewards Panel by injunction or in its decision.

## **3.5 Procedure before all the Disciplinary and Arbitration Bodies**

### **3.5.1 Right to a hearing**

It shall be the unquestionable right of any person or body charged with any offence 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 defence 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 one of the official languages of the FIM. Should one of the parties wish to use another language, it shall provide the necessary interpreters at its own costs.

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 President has opened the proceedings, he will invite the parties involved to 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 and with the President's approval, 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 Courtroom and shall not be allowed to speak to any other witness who has still to give evidence.

The Court may summon experts.

#### **3.5.4 Judgement**

Decisions of all disciplinary or arbitration bodies will be reached in camera 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 judgements**

The decisions of the Race Direction or of the FIM Stewards must be notified directly at the event venue, or failing that, addressed by registered letter with acknowledgement of receipt.

All judgements of the International Disciplinary Court (CDI) must be notified, in writing, by registered letter with acknowledgement of receipt in order to inform all the parties concerned.

#### **3.5.6 Publication of judgements**

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 the FIM nor against any person having published the statement.

Furthermore, final decisions will be published in the Media Centre and in the FIM Magazine unless the Court itself decides otherwise.

#### **3.6 Costs of procedure**

The costs of a disciplinary or arbitration decision will be assessed by the FIM Executive Secretariat and will be awarded against the losing party, unless the Court decides otherwise.



### **3.6.1 Payment of fines and costs**

If the penalty is definitive, all fines and costs must be paid to the FIM Executive Secretariat within 30 days of notification of the judgement decision according to Article 3.5.5.

The person or body affected by the decision shall be automatically suspended from participation in all FIM activities, until such time as full payment has been received.

### **3.7 Reciprocity of penalties**

As a consequence of the agreement of reciprocity concluded on April 30th, 1949 between the 4 organisations controlling motorised sports internationally, i.e. in addition to the FIM, namely:

- the Fédération Internationale de l'Automobile (FIA)
- the Fédération Aéronautique Internationale (FAI)
- the Union Internationale Motonautique (UIM)

penalties of suspension or exclusion may also be applied to one or another of the sports represented by the above organisations, upon request of the FIM.

### **3.8 Law of Mercy**

The Management Council, after consultation with the CJI President or upon his proposal, may mitigate or completely forgive the penalty of a person or group of persons after having exhausted all the appeal procedures

### **3.9. Arbitration Clause**

Final decisions made by the disciplinary bodies (exception art. 3.4.2.3) or the General Assembly of the FIM may be submitted exclusively to the Court of Arbitration for Sport by way of appeal within the time limit as laid down in article 3.4.6, which shall have exclusive authority to impose a definitive settlement in accordance with the Code of Arbitration applicable to sport.



## **4. CIRCUIT STANDARDS**

Circuit standards will be defined by the “FIM Standards for Road Racing Circuits” (SRRC).

## **5. MEDICAL CODE**

### **5.1 INTRODUCTION**

The new FIM Anti-Doping Code (included in these rule book) came into force on July 2004.

### **5.2 SPECIAL MEDICAL EXAMINATION**

At any time during an event a special medical examination may be carried out by an official doctor or by another doctor nominated by the Chief Medical Officer (CMO) at the request of the Race Director or Medical Director.

#### **5.2.1 Refusal to undergo Special Medical Examination**

Any rider who refuses to submit himself to such special medical examination must be excluded from the event, and his case notified to the FIM.

#### **5.2.2 List of medically Unfit Riders**

The CMO shall examine all riders listed as medically unfit who wish to compete in order to assess their medical fitness to do so the day before they use a motorcycle on the track. The list shall be supplied by the Medical Director who may attend this examination.

#### **5.2.3 Riders with Special Medical Requirements**

Riders with certain medical conditions and who may require special treatment in the event of injury, or who have been in hospital during the previous 12 months or who are being treated for any medical conditions are responsible for informing the Medical Director/CMO before the event that they may require such special treatment.

## **5.3 MEDICAL SERVICES AT EVENTS**

Any treatment at the circuit during an event is free of charge to the riders. The costs for transferring an injured rider to a hospital designated by the CMO are the responsibility of the organiser or promoter of the event.

Medical services must guarantee assistance to all riders as well as any other authorised persons injured or taken ill at the circuit during event.

A medical service for the public, separate from the above services must be provided by the event organisers. This service is not described in this code but must conform to any regulation enforced by the relevant country and reflect the size of crowd expected.

Both medical services must be controlled by a single CMO.

Adequate medical services should be available continuously, from at least 08.00 hrs. on the day the paddock opens for the teams, until at least 20.00 hrs. on the race day.

### 5.3.1 Terms of reference of the CMO:

#### The CMO:

- Is holder of the corresponding FIM official's licence.
- Is appointed by the FMNR/Organiser.
- Should be the same throughout the event.
- Must be able to communicate in at least one of the FIM official languages, either English or French.
- Should be familiar with the FIM Medical Code and FIM Anti- Doping Code.
- Must be named in the event information.
- Must be a fully registered medical practitioner authorised to practice in the relevant country or state.
- Must have malpractice insurance appropriate to the relevant country or state, where the event is being held.
- Is responsible for the positioning of medical and paramedical staff and vehicles under his control.
- Is responsible for the positioning of medical and paramedical staff and vehicles under his control.
- Must brief the medical staff prior to the start of the first practice session of the event, as well as debrief the staff after the event.
- Must provide the Medical Director with a circuit map showing the position of the medical personnel and vehicles.
- Must with the Medical Director and FIM Medical Observer (if present) inspect all medical services not less than 30 minutes before the start of practice and racing each day of the event to ensure that all services and staff are in their correct place and ready to function, including the Medical Centre.
- Must inform and update the Medical Director and the Race Director regarding the condition of injured riders who are in the hospital.



- Will prepare a list of injured riders (MEDICALLY UNFIT LIST) to be given to the Medical Director and FIM Medical Observer (if present).
- Shall ascertain that fallen riders during practice are medically fit to continue in competition. All riders injured during an event who avoid a Medical examination must be placed on the medically unfit list.
- Can recommend to the Race Director/Clerk of the Course that a race be stopped if:
  - There is danger to life or of further injury to a rider or officials attending that rider if other riders continue to circulate.
  - There is a risk of physiological damage to riders or of inability by riders to control their machines, due to extreme weather conditions.
  - The Medical staff is unable to reach or treat a rider for any reason.
- Must be stationed in race control, whenever bikes are on the track.
- Must complete the FIM CIRCUIT CMO QUESTIONNAIRE (Appendix F) and return it to the FIM at least 60 days prior to the event.
- Must contact, in writing, at least 60 days before the event, hospitals in the vicinity of the event that are able to provide the following specialist services:
  - Trauma resuscitation
  - Neurosurgery
  - General surgery
  - Vascular surgery
  - Trauma and Orthopaedic surgery
  - Cardio-Thoracic surgery
  - Intensive Care
  - Burns and plastic surgery
- Must send copies to the Medical Director and to the FIM at least 30 days before the event by FAX or E-MAIL of the letters they have written to the hospitals and copies of the letters of confirmation that every hospital to be used for treatment of injured persons is aware that the event is taking place and, is prepared to accept and treat injured riders with minimum delay. The letter of confirmation of every hospital must mention its equipment (x-ray, scanner etc..) the name (and telephone numbers) of the doctor in charge for each day and a map showing the shortest way from the circuit to the hospital. Any change to the above mentioned information must be immediately forwarded to the Medical Director and to the FIM.



An interpreter in English must be available in the hospital permanently when an injured rider is there.

- Must make every effort to ensure that a rider may be released from the hospital when he wishes by signing an official self discharge form.
- May attend the meetings of the Event Management Committee.

### **5.3.2 Medical Director**

The Medical Director will be appointed by the Contractual Partner.

His duties shall be:

- To receive from the CMO a signed copy of the FIM Circuit Medical Report Form and to ensure that the facilities comply with it.
- To inspect the circuit with the CMO the day before the first practice session. A further check will be made no later than 30 minutes before each day's practice session to ensure that medical facilities are in accordance with this code, and to report any shortcomings to the Race Director and FIM Safety Officer.
- To obtain from the CMO at the end of each practice session or race a list of fallen riders and to ensure that the list of medically unfit riders held by the Medical Director is up to date to ensure medically unfit riders are not allowed on the circuit.
- To attend serious incidents with the CMO or his nominated deputy and render such assistance as may be necessary. A car should be available in the pit lane near the Race Control to allow this.
- To examine with the CMO all riders listed as injured (Unfit Riders List) who wish to compete to assess their medical fitness to do so.
- To attend International Jury Meetings.

### **5.3.3 FIM Medical Observer**

The FIM Medical Observer at an event will be a member of the FIM Medical Panel.

The duties of the FIM Medical Observer at an event will be:

- To observe and advise the application of the Medical Code
- To inform the Medical Director and if necessary the Race Direction of any medical arrangement that contravenes the Medical Code.

### **5.3.4 Other Doctors**

Any injured rider must first be seen and assessed by the official event medical staff for emergency treatment and be declared medically fit or unfit to compete as appropriate. He may then attend any other doctor of his choice. If the CMO advises against this, the rider must sign a declaration that he is seeking other advice and treatment.

Any rider, who, after treatment by a doctor not part of the event team, wishes to compete, must first obtain authorisation for this from the CMO of the event or his deputy, who should consider any recommendation by the doctor treating him.

### **5.3.5 CLINICA MOBILE**

For many years the CLINICA MOBILE, or its personnel, under the direction of Dr Claudio Costa, has attended Superbike and Supersport events and has gained a considerable reputation among riders and support staff.

The CLINICA MOBILE has X-Ray and treatment facilities and its staff have considerable experience in treating riders' injuries and illness. Many riders prefer treatment by the CLINICA MOBILE staff to treatment by others. The parties involved in the Championship fully support the CLINICA MOBILE staff and the CLINICA MOBILE will be in attendance at events with the full co-operation of event organisers and CMOs.

The CLINICA MOBILE staff will treat those riders who wish to be treated by them only after they have been seen by the CMO. The CMO should declare riders medically fit or unfit as normal, after which they may go to the CLINICA MOBILE if they wish. The CLINICA MOBILE staff will give a medical report to the CMO after assessment and treatment. A rider who has been declared unfit to race, who after treatment by the CLINICA MOBILE staff then wishes to race, must present himself back to the CMO for re-examination.

A rider who prefers treatment by the CLINICA MOBILE staff when advised by the CMO otherwise is entitled to take their own course of action, but should sign a form indicating it was against local medical advice. If the rider decides he wishes to be treated in a hospital of his own choice, the CMO, using the means at his disposal at the circuit (ambulance, helicopter, etc.) must allow the rider to reach such hospital: i.e. the rider must be allowed to be transported by ambulance or helicopter from the circuit to the nearest airport.

## 5.3.6 Qualification of Medical Personnel

### 5.3.6.1 Qualification of Doctors

Any doctor participating at an event:

- must be a fully registered medical practitioner.
- authorised to practice in the relevant country or state.
- qualified in and able to carry out emergency treatment and resuscitation.

### 5.3.6.2 Qualification of paramedics or equivalent

Any paramedic or equivalent participating at an event:

- must be fully qualified and registered as required by the relevant country or state.
- must be **experienced in emergency care.**

### 5.3.6.3 Identification of medical personnel

All medical personnel must be clearly identified.

All doctors and paramedics must wear a garment clearly marked with “DOCTOR” or “DOCTEUR” and “MEDICAL” respectively, preferably in red on a white background on the back and on the front.

## 5.3.7 Medical Equipment

### 5.3.7.1 Minimum medical requirements for events

The medical service comprising of equipment, vehicles and personnel must be organised in such a way and in sufficient number to ensure that an injured rider can be provided with appropriate and all necessary emergency treatment with the minimum of delay and to facilitate their rapid transfer to further medical treatment in an appropriately equipped medical centre or definitive medical care in a hospital with the necessary facilities to deal with their injuries or illness should this be required.

The CMO will therefore determine the number, location and type of vehicles, helicopter, equipment and personnel that are required to achieve this for a specific event taking into consideration the circuit, event location.

The minimum medical requirements will be subject to confirmation and agreement following inspection and review by the FIM Medical Observer and Medical Director.

A doctor or doctors must be available to provide initial medical intervention directly or following initial assessment and treatment by the paramedic teams.

In all cases, the transfer of an injured rider to a medical centre or hospital either by ambulance or by helicopter must not interfere with the event and the CMO must plan to have sufficient replacement equipment available to allow the event to continue.

- Vehicles type A are to be placed in such a way and in such numbers that a fallen rider can be reached within 2 minutes after coming to rest.
- Vehicle(s) type B (number as per the FIM Medical Homologation) are to be placed in such a way that a fallen rider can be reached with minimum delay after coming to rest.
- Vehicle(s) type C (number as per the FIM Medical Homologation) are to be placed in such a way that a fallen rider can be reached with minimum delay after coming to rest.
- Track Ground posts
- Pit lane ground post
- A Medical Centre
- A helicopter

N.B. the only replacement allowed to these requirements is a vehicle Type B may replace a vehicle Type C

### 5.3.7.2 Vehicles

#### 5.3.7.2.1 Definition of Vehicles

Vehicles are defined as follow:

**Type A:** A vehicle for rapid intervention at accident areas to give the injured immediate assistance for respiratory and cardio-circulatory resuscitation.

This vehicle should have “MEDICAL” clearly marked on it in large letters.

**Type B:** A highly specialised vehicle that can serve as a mobile resuscitation centre.

**Type C:** A vehicle capable of carrying a stretcher with an injured person in reasonable conditions.

### 5.3.7.2.2 Equipment for Vehicle Type A (Medical Rapid Intervention Vehicle)

#### Type A1:

- a driver, experienced in driving the Type A vehicle and familiar with the course
- a doctor experienced in emergency care
- a second doctor or paramedic, experienced in emergency care

#### Type A2:

- a driver, experienced in driving the Type A vehicle and familiar with the course
- paramedics (or equivalent) experienced in emergency care

#### Medical Equipment:

- Portable oxygen supply
- Manual ventilator
- Intubation equipment
- Suction equipment
- Intravenous infusion equipment
- Equipment to immobilise limbs and spine (including cervical spine)
- Sterile dressings
- ECG monitor and Defibrillator
- Drugs for resuscitation and analgesia /IV fluids
- Sphygmomanometer and stethoscope

Equipment should be easily identified and stored in such a way that it can be used at ground level at the trackside.

#### Technical:

- Radio communication with Race Control and the CMO
- Visible and audible signals
- Equipment to remove suits and helmets

The minimum number of medical rapid intervention vehicle is 2.

### 5.3.7.2.3 Equipment for Vehicle Type B (Ambulance)

#### Personnel:

#### Type B1:

- A doctor experienced in emergency care

#### Type B2:

- Two paramedics or equivalent experienced in emergency care

#### Medical Equipment:

- Portable oxygen supply
- Manual and an automatic ventilator
- Intubation equipment
- Suction equipment
- Intravenous infusion equipment
- Equipment to immobilise limbs and spine (including cervical spine)
- Sterile dressings
- Thoracic drainage equipment
- Tracheotomy equipment
- Sphygmomanometer and stethoscope
- Stretcher
- Scoop stretcher
- ECG monitor and defibrillator
- Pulse oximeter
- Drugs for resuscitation and analgesia/ IV fluids

#### Technical:

- Radio communication with Race Control and the CMO
- Visible and audible signals
- Equipment to remove suits and helmets
- Air conditioning and refrigerator are recommended

One (1) such ambulance must be on stand by at the Medical Centre.

### 5.3.7.2.4 Equipment for Vehicle Type C

#### Personnel:

- Two ambulance personnel or paramedics of whom one would be the driver and the other would be a person capable of giving first aid

**Medical:**

- Stretcher
- Oxygen supply
- Equipment to immobilise limbs and spine (including cervical spine)
- First aid medicaments and materials

**Technical:**

- Radio communication with Race Control and the CMO
- Visible and audible signals

**5.3.7.3 Helicopter**

A helicopter must be fully equipped with adequate personnel and equipment and be appropriately licensed for the relevant country and flown by an experienced pilot familiar with medical air evacuation and the potential landing sites. The medical personnel - doctor and paramedic(s) - should be qualified in and able to carry out emergency treatment and resuscitation. The helicopter should be of a design and size that will allow continuing resuscitation of an injured rider during the journey. It should be positioned close to the medical centre such that an ambulance journey between medical centre and helicopter is not necessary or depending on the legislation of the relevant country and the location of the event be available “on call.”

**5.3.7.4 Track Ground Posts**

These are placed at suitable locations and in sufficient numbers around the circuit to provide rapid intervention and evacuation of the rider from danger with the minimum of delay. The personnel must have sufficient training and experience to take action autonomously and immediately in case of an accident.

**Personnel:**

- Doctor or paramedic (or equivalent) experienced in emergency care
- Sufficient number of stretcher bearers

**Medical Equipment:**

- Equipment for initiating resuscitation and emergency treatment
- Cervical collar
- Scoop stretcher

**Technical Equipment:**

- Radio communication with race control and the CMO
- Adequate shelter for staff and equipment should be available.

**5.3.7.4.1 Pit Lane Ground Post****Personnel:**

A doctor and paramedic (or equivalent) experienced in emergency care must be positioned in the pit lane.

One or more Pit Lane Ground posts, depending on the length of the pit lane are required.

**Medical Equipment:**

- Airway management and Intubation equipment
- Drugs for resuscitation and analgesia/ IV fluids
- Cervical collars
- Manual respiration system
- Intravenous Infusion Equipment
- First Aid Equipment
- Stretcher

**Technical Equipment:**

- Radio communication with race control and the CMO

**5.3.7.5 Medical Centres**

Refer to Art. 029.9.1 of the FIM Standards for Road Racing Circuits (SRRC).

**5.3.7.5.1 Equipment for Resuscitation Areas:**

- Equipment for endotracheal intubation, tracheostomy and ventilatory support, including suction, oxygen and anaesthetic agents
- Equipment for intravenous access including cut-down and central venous cannulation and fluids including colloid plasma expanders and crystalloid solutions
- Intercostal drainage equipment and sufficient surgical instruments to perform an emergency thoracotomy to control haemorrhage
- Equipment for cardiac monitoring and resuscitation, including blood pressure and ECG monitors and a defibrillator
- Equipment for immobilising the spine at all levels
- Equipment for the splinting of limb fractures

- Drugs/IV fluids including analgesic, sedating agents, anticonvulsants, paralyzing and anaesthetic agents, cardiac resuscitation drugs/IV fluids
- tetanus toxoid and broad spectrum antibiotics are recommended
- Equipment for diagnostic ultrasound is recommended
- A Permanent or portable X-ray machine, appropriate to detect usual bone fractures in motorcycle sport, must be available

#### **5.3.7.5.2 Equipment for minor injuries area:**

The area must have beds, dressings, suture equipment and fluids sufficient to treat up to three riders with minor injuries simultaneously. Sufficient stocks to replenish the area during the meeting must be available and sufficient Doctors and Paramedics experienced in treating trauma must be available.

#### **5.3.7.5.3 Staff of Medical Centre**

The following specialists should be immediately available in the Medical Centre:

- Trauma resuscitation specialist (e.g. Anaesthetist, Accident and emergency specialist, Intensive care specialist)
- Surgeon experienced in trauma

Nurses and paramedics in a sufficient number, should be experienced in resuscitation, diagnosis and treatment of seriously injured patients.

#### **5.3.7.5.4 Medical Homologation of Circuits/Medical inspection of events**

All circuits require medical homologation.

All circuits which have undergone significant changes in the layout or at the Medical Centre within the homologated period are required to renew homologation. The objective is to maintain the highest standard of services for the safety of the riders. This code will be used as the reference for the homologation inspections. Any request for renewal of homologation should be made by the FMN concerned.

The specific requirement for each circuit will be decided by the FIM Medical Inspector in collaboration with the Circuit CMO who has to be present according to the requirements of the Championships promoters and with reference to the Medical Code.

Following homologation, a certificate of homologation will be issued for a period of 3 years and will include details of medical services.

Sample drawings of Medical Centre models are available from the FIM Executive Secretariat for reference.

The FMN and the Organiser will be informed by the FIM if the circuit requires renewal of homologation.

The FIM also reserves the right to review such a homologation at any time.

#### **5.3.7.6 Minimum medical requirements for events**

- Vehicles type A are to be placed in such a way, in such numbers that a fallen rider can be reached within 2 minutes of coming to rest
- Vehicle(s) type B (number as per the FIM Medical Homologation) are to be placed in such a way that a fallen rider can be reached with minimum delay after coming to rest.
- Vehicle(s) type C (number as per the FIM Medical Homologation) are to be placed in such a way that a fallen rider can be reached with minimum delay of coming to rest.
- Track ground posts.
- Pit lane ground post.
- A medical centre.
- A Helicopter.

N.B. the only replacement allowed to these requirements is a vehicle Type B may replace a vehicle Type C

#### **5.3.8 Procedure in the event of an injured rider**

The management of an injured rider is under the control of the CMO and should be the following:

A fallen rider must be reached by a Doctor or Paramedic who can begin treatment **with the minimum of delay** of the rider coming to rest. If the rider is injured, the CMO must be informed by radio so that further procedures can be initiated. It is recommended that the CMO be stationed in Race Control with access to Closed Circuit Television to monitor the situation. Upon request by the CMO any Medical Vehicle can be dispatched to the scene of the incident, only the Race Director can authorize entry onto, or response via track. Similarly, interruption or cessation of racing or practice session can only be authorized by the Race Director. It is the responsibility of the CMO and Medical Director to advise the Race Director of incidences where access to a fallen rider(s) necessitates this.



Response Codes are:

Code 0 No medical intervention required  
Rider gets up unassisted

Code 1 Short Rescue  
Rider able to walk with assistance  
Rider will be cleared from track in less than 1 minute

Code 2 Long Rescue  
Rider requires stretcher  
Rider will be cleared from track in less than 2 minutes

Code 3 Prolonged Rescue  
Rider(s) seriously injured  
Rider (s) requires stretcher

Rescue will take longer than 3 minutes

Medical intervention required on track

### **Transfer to the Medical Centre**

The injured rider will be transferred to the Medical Centre when his condition permits. The CMO shall decide the time and method of transfer. Rarely, at the discretion of the CMO only, a rider may be transferred to hospital directly from the trackside.

The vehicle used to transfer the rider must be on scene of the accident with minimum delay following the order to intervene.

### **Medical Centre**

At the Medical Centre, medical staff will be available to treat the rider. The CMO remains responsible for the treatment of the rider.

If the rider is unconscious, he will be treated by the Medical Centre staff under the responsibility of the CMO. The rider's personal doctor may observe this treatment and may accompany the rider to hospital.

A rider who is conscious may choose the medical staff by whom he wishes to be treated. A rider who does not wish to be treated by the Medical Centre staff against their advice must sign a "Competitor Self Discharge" Form.



## **Transfer to hospital**

The CMO shall decide the time of transfer, the mode of transfer and the destination of an injured rider. Having made the decision, it is his/her responsibility to ensure that the receiving hospital and appropriate specialists are informed of the estimated time of arrival and the nature of injuries. It is also the responsibility of the CMO to ensure appropriately skilled and equipped staff accompany the rider.

A doctor of the Clinica Mobile will accompany the rider.

## **5.4 MEDICAL MALPRACTICE INSURANCE**

All doctors and other medical staff at an event must have adequate medical malpractice insurance cover.



**RIDER SELF DISCHARGE FORM**

**ROAD RACING SUPERBIKE & SUPERSPORT  
WORLD CHAMPIONSHIPS AND  
SUPERSTOCK CUP**

**PART 1: To be completed by the rider**

I, \_\_\_\_\_ rider no \_\_\_\_\_  
in the \_\_\_\_\_ class, discharge myself against local medical advise  
and understand the possible consequences.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**PART 2: To be completed by the Chief Medical Officer (CMO)**

I, Dr \_\_\_\_\_, CMO at the  
\_\_\_\_\_ circuit, confirm that I have  
explained the possible consequences of the rider discharging himself/herself.

In view of the language difficulties, this explanation was given through an  
interpreter (Delete if inappropriate).

Signed : \_\_\_\_\_ Date : \_\_\_\_\_ Time : \_\_\_\_\_

**5 Copies: CMO, Rider, Clerk of the Course, Medical Director, Clinica Mobile**



# SCAT3™



## Sport Concussion Assessment Tool – 3rd Edition

For use by medical professionals only

Name \_\_\_\_\_

Date/Time of Injury: \_\_\_\_\_  
Date of Assessment: \_\_\_\_\_

Examiner: \_\_\_\_\_

### What is the SCAT3?<sup>1</sup>

The SCAT3 is a standardized tool for evaluating injured athletes for concussion and can be used in athletes aged from 13 years and older. It supersedes the original SCAT and the SCAT2 published in 2005 and 2009, respectively<sup>2</sup>. For younger persons, ages 12 and under, please use the Child SCAT3. The SCAT3 is designed for use by medical professionals. If you are not qualified, please use the Sport Concussion Recognition Tool<sup>1</sup>. Preseason baseline testing with the SCAT3 can be helpful for interpreting post-injury test scores.

Specific instructions for use of the SCAT3 are provided on page 3. If you are not familiar with the SCAT3, please read through these instructions carefully. This tool may be freely copied in its current form for distribution to individuals, teams, groups and organizations. Any revision or any reproduction in a digital form requires approval by the Concussion in Sport Group.

**NOTE:** The diagnosis of a concussion is a clinical judgment, ideally made by a medical professional. The SCAT3 should not be used solely to make, or exclude, the diagnosis of concussion in the absence of clinical judgement. An athlete may have a concussion even if their SCAT3 is “normal”.

### What is a concussion?

A concussion is a disturbance in brain function caused by a direct or indirect force to the head. It results in a variety of non-specific signs and/or symptoms (some examples listed below) and most often does not involve loss of consciousness. Concussion should be suspected in the presence of **any one or more** of the following:

- Symptoms (e.g., headache), or
- Physical signs (e.g., unsteadiness), or
- Impaired brain function (e.g. confusion) or
- Abnormal behaviour (e.g., change in personality).

## SIDELINE ASSESSMENT

### Indications for Emergency Management

**NOTE:** A hit to the head can sometimes be associated with a more serious brain injury. Any of the following warrants consideration of activating emergency procedures and urgent transportation to the nearest hospital:

- Glasgow Coma score less than 15
- Deteriorating mental status
- Potential spinal injury
- Progressive, worsening symptoms or new neurologic signs

### Potential signs of concussion?

If any of the following signs are observed after a direct or indirect blow to the head, the athlete should stop participation, be evaluated by a medical professional and **should not be permitted to return to sport the same day** if a concussion is suspected.

- Any loss of consciousness?  Y  N  
 “If so, how long?” \_\_\_\_\_
- Balance or motor incoordination (stumbles, slow/laboured movements, etc.)?  Y  N  
 Disorientation or confusion (inability to respond appropriately to questions)?  Y  N  
 Loss of memory:  Y  N  
 “If so, how long?” \_\_\_\_\_  
 “Before or after the injury?” \_\_\_\_\_
- Blank or vacant look:  Y  N  
 Visible facial injury in combination with any of the above:  Y  N

### 1 Glasgow coma scale (GCS)

#### Best eye response (E)

No eye opening	1
Eye opening in response to pain	2
Eye opening to speech	3
Eyes opening spontaneously	4

#### Best verbal response (V)

No verbal response	1
Incomprehensible sounds	2
Inappropriate words	3
Confused	4
Oriented	5

#### Best motor response (M)

No motor response	1
Extension to pain	2
Abnormal flexion to pain	3
Flexion/Withdrawal to pain	4
Localizes to pain	5
Obeys commands	6

**Glasgow Coma score (E + V + M)** \_\_\_\_\_ of 15

GCS should be recorded for all athletes in case of subsequent deterioration.

### 2 Maddocks Score<sup>3</sup>

“I am going to ask you a few questions, please listen carefully and give your best effort.”

Modified Maddocks questions (1 point for each correct answer)

What venue are we at today?	0	1
Which half is it now?	0	1
Who scored last in this match?	0	1
What team did you play last week/game?	0	1
Did your team win the last game?	0	1
<b>Maddocks score</b>		<b>of 5</b>

Maddocks score is validated for sideline diagnosis of concussion only and is not used for serial testing.

**Notes:** Mechanism of Injury (“tell me what happened?”):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Any athlete with a suspected concussion should be REMOVED FROM PLAY, medically assessed, monitored for deterioration (i.e., should not be left alone) and should not drive a motor vehicle until cleared to do so by a medical professional. No athlete diagnosed with concussion should be returned to sports participation on the day of injury.**



## BACKGROUND

Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Examiner: \_\_\_\_\_  
 Sport/team/school: \_\_\_\_\_ Date/time of injury: \_\_\_\_\_  
 Age: \_\_\_\_\_ Gender:  M  F  
 Years of education completed: \_\_\_\_\_  
 Dominant hand:  right  left  neither  
 How many concussions do you think you have had in the past? \_\_\_\_\_  
 When was the most recent concussion? \_\_\_\_\_  
 How long was your recovery from the most recent concussion? \_\_\_\_\_  
 Have you ever been hospitalized or had medical imaging done for a head injury?  Y  N  
 Have you ever been diagnosed with headaches or migraines?  Y  N  
 Do you have a learning disability, dyslexia, ADD/ADHD?  Y  N  
 Have you ever been diagnosed with depression, anxiety or other psychiatric disorder?  Y  N  
 Has anyone in your family ever been diagnosed with any of these problems?  Y  N  
 Are you on any medications? If yes, please list:  Y  N

SCAT3 to be done in resting state. Best done 10 or more minutes post exercise.

## SYMPTOM EVALUATION

### 3 How do you feel?

"You should score yourself on the following symptoms, based on how you feel now".

	none	mild		moderate		severe	
Headache	0	1	2	3	4	5	6
"Pressure in head"	0	1	2	3	4	5	6
Neck Pain	0	1	2	3	4	5	6
Nausea or vomiting	0	1	2	3	4	5	6
Dizziness	0	1	2	3	4	5	6
Blurred vision	0	1	2	3	4	5	6
Balance problems	0	1	2	3	4	5	6
Sensitivity to light	0	1	2	3	4	5	6
Sensitivity to noise	0	1	2	3	4	5	6
Feeling slowed down	0	1	2	3	4	5	6
Feeling like "in a fog"	0	1	2	3	4	5	6
"Don't feel right"	0	1	2	3	4	5	6
Difficulty concentrating	0	1	2	3	4	5	6
Difficulty remembering	0	1	2	3	4	5	6
Fatigue or low energy	0	1	2	3	4	5	6
Confusion	0	1	2	3	4	5	6
Drowsiness	0	1	2	3	4	5	6
Trouble falling asleep	0	1	2	3	4	5	6
More emotional	0	1	2	3	4	5	6
Irritability	0	1	2	3	4	5	6
Sadness	0	1	2	3	4	5	6
Nervous or Anxious	0	1	2	3	4	5	6

Total number of symptoms (Maximum possible 22)

Symptom severity score (Maximum possible 132)

Do the symptoms get worse with physical activity?  Y  N  
 Do the symptoms get worse with mental activity?  Y  N

self rated  self rated and clinician monitored  
 clinician interview  self rated with parent input

Overall rating: If you know the athlete well prior to the injury, how different is the athlete acting compared to his/her usual self?

Please circle one response:  
 no different  very different  unsure  N/A

Scoring on the SCAT3 should not be used as a stand-alone method to diagnose concussion, measure recovery or make decisions about an athlete's readiness to return to competition after concussion. Since signs and symptoms may evolve over time, it is important to consider repeat evaluation in the acute assessment of concussion.

## COGNITIVE & PHYSICAL EVALUATION

### 4 Cognitive assessment

#### Standardized Assessment of Concussion (SAC)<sup>4</sup>

Orientation (1 point for each correct answer)

What month is it?	0	1
What is the date today?	0	1
What is the day of the week?	0	1
What year is it?	0	1
What time is it right now? (within 1 hour)	0	1
<b>Orientation score</b>	<b>of 5</b>	

#### Immediate memory

List	Trial 1	Trial 2	Trial 3	Alternative word list					
elbow	0	1	0	1	0	1	candle	baby	finger
apple	0	1	0	1	0	1	paper	monkey	penny
carpet	0	1	0	1	0	1	sugar	perfume	blanket
saddle	0	1	0	1	0	1	sandwich	sunset	lemon
bubble	0	1	0	1	0	1	wagon	iron	insect
<b>Total</b>									

Immediate memory score total **of 15**

#### Concentration: Digits Backward

List	Trial 1	Alternative digit list			
4-9-3	0	1	6-2-9	5-2-6	4-1-5
3-8-1-4	0	1	3-2-7-9	1-7-9-5	4-9-6-8
6-2-9-7-1	0	1	1-5-2-8-6	3-8-5-2-7	6-1-8-4-3
7-1-8-4-6-2	0	1	5-3-9-1-4-8	8-3-1-9-6-4	7-2-4-8-5-6
<b>Total of 4</b>					

#### Concentration: Month in Reverse Order (1 pt. for entire sequence correct)

Dec-Nov-Oct-Sept-Aug-Jul-Jun-May-Apr-Mar-Feb-Jan	0	1
<b>Concentration score</b>	<b>of 5</b>	

### 5 Neck Examination:

Range of motion    Tenderness    Upper and lower limb sensation & strength

Findings: \_\_\_\_\_

### 6 Balance examination

Do one or both of the following tests.

Footwear (shoes, barefoot, braces, tape, etc.) \_\_\_\_\_

#### Modified Balance Error Scoring System (BESS) testing<sup>5</sup>

Which foot was tested (i.e. which is the non-dominant foot)  Left  Right

Testing surface (hard floor, field, etc.) \_\_\_\_\_

#### Condition

Double leg stance: \_\_\_\_\_ Errors

Single leg stance (non-dominant foot): \_\_\_\_\_ Errors

Tandem stance (non-dominant foot at back): \_\_\_\_\_ Errors

#### And/Or

#### Tandem gait<sup>6,7</sup>

Time (best of 4 trials): \_\_\_\_\_ seconds

### 7 Coordination examination

#### Upper limb coordination

Which arm was tested:  Left  Right

Coordination score **of 1**

### 8 SAC Delayed Recall<sup>4</sup>

Delayed recall score **of 5**



## INSTRUCTIONS

Words in *Italics* throughout the SCAT3 are the instructions given to the athlete by the tester.

### Symptom Scale

*"You should score yourself on the following symptoms, based on how you feel now".*

To be completed by the athlete. In situations where the symptom scale is being completed after exercise, it should still be done in a resting state, at least 10 minutes post exercise.

For total number of symptoms, maximum possible is 22.

For Symptom severity score, add all scores in table, maximum possible is  $22 \times 6 = 132$ .

### SAC<sup>4</sup>

#### Immediate Memory

*"I am going to test your memory. I will read you a list of words and when I am done, repeat back as many words as you can remember, in any order."*

#### Trials 2 & 3:

*"I am going to repeat the same list again. Repeat back as many words as you can remember in any order, even if you said the word before."*

Complete all 3 trials regardless of score on trial 1 & 2. Read the words at a rate of one per second. **Score 1 pt. for each correct response.** Total score equals sum across all 3 trials. Do not inform the athlete that delayed recall will be tested.

#### Concentration

##### Digits backward

*"I am going to read you a string of numbers and when I am done, you repeat them back to me backwards, in reverse order of how I read them to you. For example, if I say 7-1-9, you would say 9-1-7."*

If correct, go to next string length. If incorrect, read trial 2. **One point possible for each string length.** Stop after incorrect on both trials. The digits should be read at the rate of one per second.

##### Months in reverse order

*"Now tell me the months of the year in reverse order. Start with the last month and go backward. So you'll say December, November ... Go ahead"*

**1 pt. for entire sequence correct**

#### Delayed Recall

The delayed recall should be performed after completion of the Balance and Coordination Examination.

*"Do you remember that list of words I read a few times earlier? Tell me as many words from the list as you can remember in any order."*

**Score 1 pt. for each correct response**

## Balance Examination

### Modified Balance Error Scoring System (BESS) testing<sup>5</sup>

This balance testing is based on a modified version of the Balance Error Scoring System (BESS)<sup>5</sup>. A stopwatch or watch with a second hand is required for this testing.

*"I am now going to test your balance. Please take your shoes off, roll up your pant legs above ankle (if applicable), and remove any ankle taping (if applicable). This test will consist of three twenty second tests with different stances."*

#### (a) Double leg stance:

*"The first stance is standing with your feet together with your hands on your hips and with your eyes closed. You should try to maintain stability in that position for 20 seconds. I will be counting the number of times you move out of this position. I will start timing when you are set and have closed your eyes."*

#### (b) Single leg stance:

*"If you were to kick a ball, which foot would you use? [This will be the dominant foot] Now stand on your non-dominant foot. The dominant leg should be held in approximately 30 degrees of hip flexion and 45 degrees of knee flexion. Again, you should try to maintain stability for 20 seconds with your hands on your hips and your eyes closed. I will be counting the number of times you move out of this position. If you stumble out of this position, open your eyes and return to the start position and continue balancing. I will start timing when you are set and have closed your eyes."*

#### (c) Tandem stance:

*"Now stand heel-to-toe with your non-dominant foot in back. Your weight should be evenly distributed across both feet. Again, you should try to maintain stability for 20 seconds with your hands on your hips and your eyes closed. I will be counting the number of times you move out of this position. If you stumble out of this position, open your eyes and return to the start position and continue balancing. I will start timing when you are set and have closed your eyes."*

### Balance testing – types of errors

1. Hands lifted off iliac crest
2. Opening eyes
3. Step, stumble, or fall
4. Moving hip into > 30 degrees abduction
5. Lifting forefoot or heel
6. Remaining out of test position > 5 sec

Each of the 20-second trials is scored by counting the errors, or deviations from the proper stance, accumulated by the athlete. The examiner will begin counting errors only after the individual has assumed the proper start position. **The modified BESS is calculated by adding one error point for each error during the three 20-second tests. The maximum total number of errors for any single condition is 10.** If a athlete commits multiple errors simultaneously, only one error is recorded but the athlete should quickly return to the testing position, and counting should resume once subject is set. Subjects that are unable to maintain the testing procedure for a minimum of **five seconds** at the start are assigned the highest possible score, ten, for that testing condition.

**OPTION:** For further assessment, the same 3 stances can be performed on a surface of medium density foam (e.g., approximately 50 cm x 40 cm x 6 cm).

### Tandem Gait<sup>6,7</sup>

*Participants are instructed to stand with their feet together behind a starting line (the test is best done with footwear removed). Then, they walk in a forward direction as quickly and as accurately as possible along a 38mm wide (sports tape), 3 meter line with an alternate foot heel-to-toe gait ensuring that they approximate their heel and toe on each step. Once they cross the end of the 3m line, they turn 180 degrees and return to the starting point using the same gait. A total of 4 trials are done and the best time is retained. Athletes should complete the test in 14 seconds. Athletes fail the test if they step off the line, have a separation between their heel and toe, or if they touch or grab the examiner or an object. In this case, the time is not recorded and the trial repeated, if appropriate.*

## Coordination Examination

### Upper limb coordination

Finger-to-nose (FTN) task:

*"I am going to test your coordination now. Please sit comfortably on the chair with your eyes open and your arm (either right or left) outstretched (shoulder flexed to 90 degrees and elbow and fingers extended), pointing in front of you. When I give a start signal, I would like you to perform five successive finger to nose repetitions using your index finger to touch the tip of the nose, and then return to the starting position, as quickly and as accurately as possible."*

**Scoring: 5 correct repetitions in < 4 seconds = 1**

**Note for testers:** Athletes fail the test if they do not touch their nose, do not fully extend their elbow or do not perform five repetitions. **Failure should be scored as 0.**

## References & Footnotes

1. This tool has been developed by a group of international experts at the 4th International Consensus meeting on Concussion in Sport held in Zurich, Switzerland in November 2012. The full details of the conference outcomes and the authors of the tool are published in The BJSM Injury Prevention and Health Protection, 2013, Volume 47, Issue 5. The outcome paper will also be simultaneously co-published in other leading biomedical journals with the copyright held by the Concussion in Sport Group, to allow unrestricted distribution, providing no alterations are made.
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7. Schneiders, A.G., Sullivan, S.J., Kvarnstrom, J.K., Olsson, M., Yden, T. & Marshall, S.W. The effect of footwear and sports-surface on dynamic neurological screening in sport-related concussion. Journal of Science and Medicine in Sport. 2010; 13(4): 382–386





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**6. ANTI-DOPING CODE**

The regulations will be defined by the “FIM ANTI-DOPING CODE”.

**7. ENVIRONMENTAL CODE**

The regulations will be defined by the “FIM ENVIRONMENTAL CODE”.



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