2014 TECHNICAL RULES FOR SUPERBIKE

Below are the changes to the Superbike Technical Rules.

Parts/components not mentioned hereunder will remain the same as the 2013 Superbike Technical rules. Text/words written in red are rule changes.

The final 2014 Superbike Technical rules will also give guidance on the controlling procedures and conditions.

2.4.8 Engine

The total number of engines which may be used by a team during the entire Championship is limited to eight (8) engines for the season per permanent rider. If a permanent rider is replaced or substituted during the Championship, the total engine allocation for the team will not change. The number of engines that may be used during each event is not limited.

Each engine will be officially sealed by the FIM Superbike Technical Director or by his appointed staff before it may be used during an event. The seal will bear a serial number, which will be recorded. Any attempt made to remove the seal will damage it irreparably.

A broken or damaged seal will be considered as if the engine has been used and it will be counted as a part of the rider's allocation for the Championship.
The crankcase, cylinder, cylinder heads and head cover/valve cover will be sealed to control the engine use.

A team who needs to use more than the allocated number of engines during the Championship, will receive a penalty. The penalty for the team's rider using an additional engine will be to start from the last grid position for the race when the additional engine is used and for the following race (two races in the same racing season).

Wild card riders will be allowed to use two sealed engines during the event in which they take part.

2.4.8.1 Fuel injection system

2.4.8.1.1 Fuel injection system

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

- **The original homologated throttle body must be used**

- **Electronically controlled throttle valves, known as 'ride-by-wire', may be added or changed.**
- **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**
- **Fuel Injectors must be stock and unaltered from the original specification and manufacture.**
- **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.**
- **Variable intake tract devices cannot be added if they are not present on the homologated motorcycle.**
- **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.**
- **Variable intake tract devices must function with the same mechanical system as the homologated system**
- **The throttle body intake insulators may be modified.**
- **Bell mouths (including their fixing points) may be altered or replaced.**
- **Secondary throttle valves and shafts may be removed or fixed in the open position and the electronics may be disconnected or removed.**
- **Air and air/fuel mixture can only go to the combustion chamber exclusively through the throttle body butterflies.**

2.4.8.10 Crankshaft

Only the following modifications are allowed to the homologated crankshaft:

- Bearing surfaces may be polished or a surface treatment may be applied.
- **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.)**
- The addition or reduction in weight of the crankshaft in order to reach a racing balance may be no higher than 15% of the homologated weight without the tolerance as shown on the homologation drawing of the crankshaft.
- The weight reduction may be done by drilling or machining of the crankshaft counterweights.
- Polishing of the crankshaft is not allowed.
- Attachment of aftermarket ignition components or sensors is permitted.
- Balance shaft may be altered, removed or modified.

2.4.8.12 Transmission / Gearbox

- **There are two (2) options for the chosing gearbox ratios.**

- **Option one (1) is two (2) different gear ratios for each gearbox speed.**
- **There will be no mixing of these gear ratios (gearbox A and gearbox B).**
- **If option one (1) is chosen that uses 2 different gearbox ratios, it will be possible for 2 different primary gear ratios 1 being the homologated ratio and the other being a free choice for the manufacturer (primary B).**
- **Option two (2) is the alternative of Three (3) different gear ratios for each gearbox speed .**
- **There will be no mixing of these gear ratios, (gearbox C, gearbox D and gearbox E).**
- **With option two (2) only the homologated primary gear ratio is permitted.**
- **Teams will be required to declare the two gearbox ratios and two primary gear ratios, or the other alternative of the 3 gearbox ratios chosen at the beginning of the season.**
- **Only these ratios may be used during the entire season.**
- **Two changes will be permitted during a race weekend per rider. These changes will have to be done under the supervision of a FIM technical member.**
- **The time alloted for gearbox changes is fixed as follows as it must be done under the supervision of a FIM Technical Official.**
- **Thursday from 12:00 until 18:00**
- **Friday from 13:30 until 19:30**
- **Saturday from 11:30 until 19:30**
- **The above hours are the only time that a seal may be removed to allow gearbox changes.**
- **The engines must be resealed when the gearbox change is complete.**
- **The shafts, drums and selector forks are free.**
- The layout of the transmission shafts must be the same as on the homologated motorcycle and only the material may be changed.
- The layout and function of the shift drum must be the same as on the homologated motorcycle.
- 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.
- The number of gears must remain as homologated.
- Additions to gearbox or selector mechanism, such as quick shift systems, are allowed.
- Countershaft sprocket, rear wheel sprocket, chain pitch and size may be changed.
- No power source (i.e. hydraulic or electric) may be used for gear selection, if not installed in the homologated model for road use.
- Human power and so called quick shift systems are excluded from the ban.

2.4.8.16 Air box

The following rule applies to all Homologated Superbikes

- **The air box must remain as originally produced by the manufacturer on the homologated motorcycle.**

- **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.**

- **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.**

- **Variable intake tract devices must function in the same way as the homologated system.**

- **Air filters, internal flap type valve, sensors and vacuum fittings may be removed, modified, or replaced with aftermarket parts.**

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

- **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.**

- **All motorcycles must have a closed breather system. All the oil breather lines must be connected and discharge in the air box**

2.4.10.2 Front Forks

1. **Only the approved and listed Front Forks that the suspension manufacturers have to offer that are within the fixed price cap.**

2. **The material from the suspension manufacturers must be available to all participants from the beginning of year for the Superbike season.**

3. **Teams are allowed to use suspension from any manufacture that has been approved and is listed. A participant has the right to choose any suspension for his motorcycle. Without regard to what a manufacturer delivered on the motorcycle. This does not apply to a leased motorcycle.**

4. **Suspension manufacturers must supply the FIM Superbike Technical Director with documentation that explains what types of suspension that will be offered. Also showing the cost of the products and the setting parts which must be in line with the total cost of the complete product and must agree that any of the participants in Superbike can purchase these suspension products. These suspension products must be available during the entire season. Delivery time for these suspension parts (Front forks or**

rear shock absorber) before or during the season must be within six (6) weeks from the confirmed order. This information must arrive to the FIM Superbike Technical director in order that the approval and list may be made available to the teams no later than the second week of January of the current year

5. **Setting parts and tuning parts must be provided by the suspension manufacturers to all customers/ teams/ participants using the manufacturer's products. These parts may be used by all participants during the season. These parts shall be available for immediate delivery to all teams/customers**

6. **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 obtain a suspension product.**

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

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

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

The steering damper cannot act as a steering lock limiting device.
No aftermarket or prototype electronically-controlled suspensions maybe used.

An electronically-controlled suspension may only be used if already present on the production model of the homologated motorcycle.

The electronically-controlled valves must remain as homologated. The shims, spacers and fork springs not connected with these valves may be changed.

The ECU for the electronic suspension must remain as homologated and cannot have GPS capabilities.

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.

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

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

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).

2.4.10.4 Rear suspension unit

1. Only the approved and listed rear suspension unit that the manufacturers have to offer that are within the fixed price cap.

2. The material from the suspension manufacturers must be available to all participants from the beginning of year for the Superbike season.

3. Teams are allowed to use suspension from any manufacture that has been approved and is listed.

4. Suspension manufacturers must supply the FIM Superbike Technical Director with documentation that explains what types of suspension that will be offered. Also showing the cost of the products and the setting parts which must be inline with the total cost of the complete product and must agree that any of the participants of the Superbike season can purchase these suspension products. These suspension products must be available during the entire season. Delivery time for these suspension parts (Front forks or rear shock absorber) before or during the season must be within six (6) weeks from the confirmed order.

5. Setting parts and tuning parts must be provided by the suspension manufacturers to all customers/ teams/ participants using the manufacturer's products. These parts may be used by all participants during the season. These parts shall be available for immediate delivery to all teams/customers.

6. 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 obtain a suspension product.

7. The suspension manufacturers must supply the FIM Superbike Technical director with documentation that explains what type of suspension products that will be offered. The documenation must include the cost of the products. The manufacturer must agree that any of the participants can purchase these suspension products. This information must arrive to the FIM Superbike Technical Director in order that the approval and list may be made available to the teams no later than the second week of January of the current year.

Rear suspension unit may be changed but a similar system must be used (i.e. dual or mono).
The rear suspension linkage may be modified or replaced. The original fixing points in the frame (if any) must be used to mount the shock absorber, linkage

and rod assembly fulcrum (pivot points). No aftermarket or prototype electronically-controlled suspension unit maybe used.

An electronically-controlled suspension may only be used if already present on the production model of the homologated motorcycle.

The electronically-controlled valves must remain as homologated. The shims, spacers and shock absorber springs not connected with these valves may be changed.

The ECU for the electronic suspension must remain as homologated and cannot have GPS capabilities.

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.

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

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

2.4.10.6 Brakes

1. Only the approved and listed brake parts that the manufacturers have to offer that are within the fixed price cap.

2. The material from the brake manufacturers must be available to all participants from the beginning of the Superbike season.

3. Teams are allowed to use brake parts from any manufacture that has been approved and is listed.

4. Brake manufacturers must supply the FIM Superbike Technical Director with documentation that explains what type of brake parts that will be offered. Also showing the cost of the products and must agree that any of the participants can purchase these brake products. These brake products must be available during the entire season. Delivery time for these brake parts (Front brake callipers, brake disc and front brake pumps) before or during the season must be within four (4) weeks from the confirmed order.

5. The brake manufacturers must supply the FIM Superbike Technical Director with documentation that explains what type of brake parts that will be offered. Also showing the cost of the products and must agree that any of the participants can purchase these brake products. This information must arrive to the FIM Superbike Technical Director in order that the approval and list may be made

available to the teams no later than the second week of January of the current year.

Front brake master cylinder may be altered or replaced from those fitted to the homologated motorcycle.

Front brake calipers may be altered or replaced from those fitted to the homologated motorcycle.

Rear brake master cylinder may be altered or replaced from those fitted to the homologated motorcycle.

Rear brake calipers may be altered or replaced from those fitted to the homologated motorcycle.

Brake pads or shoes may be altered or replaced from those fitted to the homologated motorcycle.

Brake hoses and brake couplings may be altered or replaced from those fitted to the homologated motorcycle. The split of the front brake lines for both front brake calipers must be made above the lower fork bridge (lower triple clamp).

Brake 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. aluminum-beryllium, etc.) is not allowed.

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.

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

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.

End

2014 EVO SUPERBIKE RULES

The following rules will be added to the Superbike rule book, each section that is exclusive for the EVO class will have the EVO 2.4 designation. All other EVO rules will be the same as the 2014 Superbike rules.

The order of the book will place the EVO ruling just prior to the Superbike rule. If there is no EVO rule prior to the Superbike rule, then the Superbike rule will apply for the EVO class. The Superbike rules will also give guidance on the controlling procedures and conditions.

EVO 2.4.8 Engine

- **The total number of engines that may be used by a team during the entire Championship is limited to six (6) per permanent rider. If a permanent rider is replaced or substituted during the Championship, the total engine allocation for the team will not change.**
- **The number of engines that may be used during each event is not limited.**
- **Each engine will be officially sealed by the FIM Superbike Technical Director or by his appointed staff before it may be used.**
- **The seal will bear a serial number, which will be recorded. Any attempt made to remove the seal will damage it irreparably.**
- **A broken or damaged seal will be considered as if the engine has been used and it will be counted as a part of the rider's allocation for the Championship.**
- **The crankcase, cylinder, cylinder heads and head cover / valve cover will be sealed to control the engine use.**
- **A team that uses more than the allocated number of six (6) engines during the Championship will receive a penalty. The penalty for the team's rider using an additional engine will be to start from the last grid position for the race when the additional engine is used and for the following race (two races in the same racing season).**
- **Wild card riders will be allowed to use two sealed engines during the event in which they take part.**

EVO 2.4.8.1.1 Fuel injection systems

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

- **The original homologated fuel injection system must be used without any modification.**
- **The fuel injectors must be stock and unaltered from the original specification and manufacture.**
- **Bell mouths must remain as originally produced by the manufacturer for the homologated motorcycle.**
- **Butterfly valves cannot be changed or modified.**
- **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.**
- **Air and air/fuel mixture must go to the combustion chamber exclusively through the throttle body butterflies.**
- **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.**

EVO 2.6.8.2 Cylinder Head

- **No modifications are allowed.**
- **No material may be added or removed from the cylinder head.**
- **The gaskets may be changed.**
- **The valves, valve seats, guides, springs, tappets, oil seals, shims, cotter valve, spring base and spring retainers must be as originally produced by the manufacturer for the homologated motorcycle.**
- **Valve spring shims are not allowed.**

EVO 2.4.8.3 Camshaft

- **No modifications are allowed.**
- **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.**

EVO 2.4.8.4 Cam sprockets or gears

- **No dimensional modifications are allowed.**

EVO 2.4.8.5 Cylinders

- **No modifications are allowed.**

EVO 2.4.8.6 Pistons

- **No modifications are allowed (including polishing and lightening).**

EVO 2.4.8.7 Piston rings

- **No modifications are allowed.**

EVO 2.4.8.8 Piston pins and clips

- **No modifications are allowed.**

EVO 2.4.8.9 Connecting rods

- **No modifications are allowed (including polishing and lightening).**

EVO 2.4.8.10 Crankshaft

- **No modifications are allowed (including polishing and lightening).**
- **The balance shaft must remain in place and no modifications are allowed**

EVO 2.4.8.11 Crankcase / Gearbox housing

- **Crankcases must remain as homologated. No modifications are allowed (including painting, polishing and lightening).**
- **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.**

EVO 2.4.8.12 Transmission / Gearbox

- **Only one (1) set of gearbox ratios will be allowed. This set may be the homologated ratios or a special racing ratio set.**
- **External Quick-shift systems are allowed (including wire and potentiometer)**
- **The primary dive gear ratio must remain as homologated**

- **Countershaft sprocket, rear wheel sprocket, chain pitch and size may be changed.**
- **The sprocket cover may be modified or eliminated.**
- **Chain guard as long as it is not incorporated in the rear fender may be removed.**

EVO 2.4.8.17 Fuel supply

- **Fuel lines from the fuel tank to the delivery pipe assembly (excluded) may be replaced.**
- **Quick connectors or dry break quick connectors may be used.**
- **Fuel pressure regulator must remain standard.**
- **Fuel vent lines may be replaced.**
- **Fuel filters may be added**

EVO 2.4.9.1 Ignition / Engine Control System (ECU)

The engine control system (ECU) must be either:

- **The original system as homologated and its software may be changed.**
- **Or an ECU kit model (produced and/or approved by the motorcycle manufacturer) may be used. A special connector may be used to connect the ECU and the original wiring loom. The retail price of the ECU kit system (software included) cannot be higher than 1.5 times the price of the original system.**
- **In addition to the options mentioned above, external ignition and/or injection module/s may be added to the standard production ECU, but their total retail price cannot be higher than the complete ECU kit.**
- **Central unit (ECU) may be relocated.**
- **Spark plugs may be replaced.**

EVO 2.4.9.2 Generator

- **No modifications are allowed.**
- **The electric starter must operate normally and always be able to start the engine during the event.**
- **Motorcycles must start on the starting grid in neutral. Push-starting on the starting grid is not allowed, the use of a 'booster' battery is permitted.**

EVO 2.4.9.3 Additional equipment

Additional electronic hardware equipment not on the original homologated motorcycle cannot be added with the exception of FIM/Dorna approved data logging units. The characteristics of approved data logging units must be the following:

- **Maximum retail price of the unit (hardware + software, excluding sensors and wiring loom) cannot exceed 1.000 Euro (VAT excluded).**
- **The unit must be available for sale to the public and listed in the manufacturer's catalogue.**
- **A total of ten (10) sensors will be allowed.**
- **The unit must be single-function. It is not allowed to add additional functions**
- **Type of sensor is free.**
- **Wiring loom is free.**

EVO 2.4.9.4 Wiring harness

The original wiring loom may be modified as indicated hereafter:

- **The wiring loom may be replaced by the kit wire harness loom as supplied for the ECU Kit model, produced or approved by the manufacturer of the motorcycle.**
- **The wiring loom and the key/ignition lock may be relocated, replaced or deleted.**

Note: Parts (i.e. frame, suspension, wheels, etc.) not mentioned in this listing will remain as described in the present Superbike rules.