

IDM Supersport Technical Regulations

Supplements/ modifications may be published by the DMSB at any time to ensure a fair competition.

1. IDM Supersport Regulations

Supersport motorcycles must be in possession of an FIM Homologation (see Article 2.5) or of a DMSB homologation for the category Superstock / Stocksport. All the motorcycles must in each and every respect comply with the Technical Regulations for Road Racing Meetings unless it is equipped as such by the manufacturer on the homologated motorcycle.

The appearance of Supersport motorcycles from the front, from the rear and in profile must comply with the homologated shape (as originally produced by the manufacturer), unless otherwise stated. Everything that is not explicitly authorised is forbidden!

2. Division into classes

Over 400 cc up to 600 cc / 4 stroke / 4 cylinders

Over 600 cc up to 675 cc / 4 stroke / 3 cylinders

Over 600 cc up to 750 cc / 4 stroke / 2 cylinders

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

Each rider may use only one motorcycle. In the case of proved total wreckage (frame, fork, swinging fork) the use of a reserve motorcycle is permitted. A decision will be taken by the DMSB nominated scrutineer or, if no DMSB scrutineer is nominated, by the chief scrutineer.

This provision is not applicable for set-up sessions scheduled by the organiser before the meeting.

The Scrutineers must be informed about any change or engine between the 1st and the 2nd race (if applicable).

Any offence during a practice session will result in exclusion from the practice session, and an offence during a race will result in exclusion from the race.

3. Minimum weights

600 cc / 4 cylinders: 160 kg

675 cc / 3 cylinders: 166 kg

750 cc / 2 cylinders: 167 kg.

The addition of ballast is permitted but they must be solidly fixed by screws.

At any time during the event, the weight of the machine must not be less than the minimum weight. Nothing may be added to the machine before the weighing procedure, including water, oil, fuel or tyres.

During the practice sessions, each motorcycle may be weighed in the pit lane. (This will be done in such a way so as to disturb the riders and teams as little as possible. In all cases the rider and the team must however comply with this request for a control).

4. Start numbers

See Sporting Regulations, point 7, diagram 0.

5. Fuel

All IDM Supersport engines must run on normal unleaded fuel with a maximum lead content of 0.005 g/l (unleaded) and a maximum MON of 90.

(See also specifications in Article 01.63).

The FIM fuel prescriptions must be respected.

6. Component specifications

All items not mentioned in the following articles must remain as originally produced by the manufacturer for the homologated machine.

7. Frame body and rear sub-frame

Frame must remain as originally produced by the manufacturer for the homologated machine.

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.

No other components may be added or removed from the frame body by any kind of machining.

All motorcycles must display a vehicle identification number on the frame body (chassis number). Engine mounting brackets or plates must remain as originally produced by the manufacturer for the homologated machine. Rear sub-frame may be modified or replaced. Additional seat brackets may be added but none may be removed. Bolt-on accessories to the rear sub-frame may be removed.

8. Front forks

Forks must remain as originally produced by the manufacturer for the homologated machine. Standard original internal parts of the forks may be modified or replaced. After market damper kits or valves may be installed. Fork springs may be replaced. Fork caps may be modified or replaced but only to allow external adjustment. The original surface finish of the fork tubes (stanchions, fork pipes) may be changed. Additional surface treatments are allowed. The upper and lower fork clamps must remain as originally produced by the manufacturer on the homologated machine. Steering damper may be added or replaced with an aftermarket damper. The steering damper must not act as a steering lock limiting device.

9. Rear fork (swingarm)

The rear fork must remain as originally produced by the manufacturer for the homologated machine (including the rear axle chain adjuster). The swinging-fork pivot must remain as originally produced by the manufacturer for the homologated machine. A chain guard must be fitted in such a way to reduce the possibility that any part of the riders' body become trapped between the lower chain run and the rear wheel sprocket. In the case of a swing arm with lower tube this lower tube may assume the function of a chain guard. Rear wheel stand brackets must have rounded edges (with a large radius). Suspension points for these brackets must be securely fixed to the swing arm. It is permitted to securely lock the brake calliper permanently in one position on the fork, but the brake calliper itself may not be altered.

10. Rear suspension unit

The rear suspension system is free, including the spring/s. The original attachments of the frame and rear fork must be as homologated. Lever ratio and lever must remain as originally produced by the manufacturer for the homologated machine.

11. Wheels / rims

Rims must remain as originally produced by the manufacturer at the time of sale into the dealer/distributor network for the homologated machine. The speedometer drive may be removed and replaced with a spacer. It is permitted to replace and modify the spacers. Front and rear wheel axles must remain as originally produced by the manufacturer for the homologated machine. It is permitted to use polished / varnished rims.

12. Brakes

Front and rear brake discs including their suspension may be changed but must fit the original calliper and mounting. However, the outside diameter of the brake discs and the ventilation system must remain as originally produced by the manufacturer for the homologated machine. A tolerance of +/- 1.5 mm for the outside diameter is accepted. A tolerance of up to +1.5 mm is accepted for the width of the brake discs, the minimum dimension which is eventually indicated by the corresponding manufacturer as wear limit according to the homologation for the corresponding model. Internally ventilated discs are not allowed as after market part. Replacement brake discs must be of ferrous material. The brake discs may have a floating suspension, floaters are free. Front and rear brake callipers as well as all the mounting points must remain as originally produced by the manufacturer for the homologated machine. Cover plates may be removed.

The front and rear master cylinder must remain as originally produced by the manufacturer for the homologated machine. The brake fluid reservoir may be modified or replaced.

The arrangement of the rear master cylinder and of its reservoir is free.

Front and rear hydraulic brake lines are free. Quick connectors may be used. The split of the front brake lines for both front brake callipers must be made above the lower fork bridge (lower triple clamp).

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

Additional air ducts are not allowed.

An additional manual system for the foot brakes attached to the handlebar is permitted.

Both systems must operate independent from each other.

The scrutineer will check the conformity of the systems.

13. Tyres

Tyres must be a fully moulded type carrying all size and sidewall marking of the tyres for commercial sale to the public. Tyres must have the tyre index V and Z or (W).

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.

One size for the front and two sizes for the rear are allowed. Each size, front and rear, must be available with the same tread pattern as the commercial tyres for the road use. 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.

The FIM/CCR will grant the approval. The manufacturers must submit the tyre for approval 30 days prior to its first use. Templates proving the land and sea ratio must be included.

Tyres must have a DOT and/or E mark on the tyres side wall.

Attention: At each IDM weekend (starting with the 1st timed practice), a maximum of 8 tyres may be used by each driver, regardless if these are front or rear tyres, except wet-weather tyres.

Any offence will result in exclusion of the participant concerned from the meeting and in an additional fine of EUR 250.-.

It is at the discretion of the rider to use intermediate or a special tyres which is normally identified as pure wet-weather tyres. Wet-weather tyres must be a fully moulded tyre, hand cutting on fully moulded tyres is not allowed. The use of hand-cut tyres is prohibited. For wet-weather tyres it is not required to be marked DOT or E but these tyres must be marked "Not for Highway Use" or "NHS".

14. Foot rest/foot controls

Foot rest systems may be replaced but brackets must be mounted to the frame at the original mounting points.

Foot control devices may be modified to invert the gear selection, shifting interior components (inside gearbox/engine) may only be modified for the purpose of the gear inversion.

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

The end of the foot rest must have at least an 8 mm solid spherical radius. (see diagram C).

Non folding footrests must have an end (plug) which is permanently fixed, made of plastic, Teflon or an equivalent type material (radius 8mm).

15. Handle bars and hand controls

Handle bars, hand controls and levers may be replaced (does not include brake master cylinder) and may be relocated.

Clutch and brake levers may be replaced by an after market part, if applicable with manual adjusting device.

An engine stop switch must be located on the handle bar (see also Article 01.33 and Article 40).

Annotation: The master cylinder for the brakes and the clutch must remain as homologated.

16. Fairing/body work

a) Fairing and front body work must appear to be as originally produced by the manufacturer for the homologated machine.

b) Fairing may be replaced with cosmetic duplicates of the original parts. The material may be changed. The use of carbon fibre or Kevlar materials is allowed.

The fairing may be cut at the front towards the bottom, in the area of the radiator, to achieve a better air supply to the radiator. The fairing in the area of generator, gearbox and crankshaft may be closed.

- c) Size and dimensions must be the same as the original parts without any addition or removal of design elements (except weight).
- d) Wind screen may be replaced with transparent material only.
The shape may be changed (so-called bubble form) but the attachment must remain as originally homologated. No surface/ profiles may be added.
- e) No fairing (except a device as described under h)) may be added to motorcycles which were originally not equipped with a fairing. This device may not exceed a horizontal line drawn from one axis to the other one.
- f) The original combination instrument/ fairing brackets may be replaced. All other fairing brackets may be altered or replaced. No part may protrude beyond the fairing (except foot pads). Modifications of the fairing for the purpose of achieving this part are permitted.
- g) The original air ducts running to the air box may be altered or replaced. The air inlets in the fairing must remain as original, additional air inlets are permitted, but the original shape from all perspectives must remain as original.
- h) 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 (minimum 5 litres).
The lower edge of openings in the fairing must be positioned at least 50 mm above the bottom of the fairing.
- i) The lower fairing must incorporate the maximum of two holes of 25 mm at the lowest point. These holes must remain closed in dry conditions and may only be opened in wet race conditions as declared by the Race Director.
- j) Minimal changes of the fairing are allowed to permit the use of an elevator (stand) for wheel changes and a small plastic protective cone made of plastics/carbon may be added to the frame or engine.
- k) The front mudguard may be replaced by cosmetic duplicate of the original parts. The rear mudguard may be modified, replaced or removed. Rear mudguards fixed on the swingarm that incorporate the chain guard can be modified to accommodate larger diameter rear sprockets.
- l) Front mudguard may be spaced upward for increased tyre clearance.
- m) All exposed edges must be rounded.

17. Fuel tank

No modifications may be made to the fuel tank.

The fuel cock must remain as originally produced by the manufacturer for use on the homologated motorcycle.

A drain hole/device may be added.

The fuel tank filler cap may be modified to a quick filling system.

The filler cap must be mounted in a way that it does not protrude beyond the fuel surface and that it may not break away in the case of an accident.

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

All fuel tanks must be completely filled with fuel cell foam (preferably with "Explosafe®").

18. Seat

Seat, seat base and associated bodywork may be replaced with parts of similar appearance but the appearance from the front, from the rear and in profile must conform in principle to the originally production by the manufacturer for the homologated machine. The use of carbon fibre or carbon composite materials is allowed.

The top portion of the rear bodywork around the seat may be modified to a solo seat and may be closed on the lower part towards the wheel.

All exposed edges must be rounded.

19. Wiring harness

The wiring harness may be altered or replaced.

20. Battery

The size, type and seat of battery may be changed and relocated. Additional batteries may be added.

21. Radiator and oil coolers

Additional radiators and oil coolers are permitted, including the necessary connections.

The only accepted form is a square, rectangle, triangle or trapezium with flat side faces. The calculated total volume (not the capacity) of the component results from length x width x height exterior dimensions and may not exceed 3.500 cm³. The component must be fixed inside the fairing.

The existing heat exchanger may be modified, replaced or removed.

It is permitted to add cooler fans.

The cooler expansion tank may be modified or removed.

The cooler pipes from and to the engine may be replaced.

The only permitted cooling liquid is water without any addition.

The thermostat inlet may be removed or modified.

22. Air box

The air box must remain as originally homologated.

The air filter element may be modified or removed.

The air box must be completely closed around the induction bell mouth of the carburettor/ injection system. The carburettor/ injection system may be entirely within the air box.

The air box drains must be sealed.

All motorcycles must have a closed breather system. The oil breather line must be connected and discharge in the air box or in another oil collector box.

The breather system (air box plus any breather oil collector box) must be capable of retaining a minimum of 1000 cc of discharged fuel in the event of drain pipe blockage (Annotation: See drawing C).

Sensors for data acquisition (data recording) may be added.

23. Carburettors

Carburettors must be the standard units as on the homologated model.

Carburettor jets and needles may be replaced.

Resizing of the air metering holes in CV carburettors slide control is permitted.

Intake trumpets and bell mouths may be modified or replaced.

Throttle controls/throttle valves must be self-closing when not held by the hand.

24. Fuel injection system

No modifications are permitted.

The injectors must be standard parts as on the homologated motorcycle.

Intake trumpets and connections between injection body/throttle body and cylinder head are free.

Modifications on the original fuel pump or on the original pressure regulator are permitted within the prescriptions of Article 01.38.

Electronic or mechanical enriching devices may be removed.

Additional flaps with connected and associated components which have no direct connection to the speed control but serve exclusively for mixture enrichment and/or mixture optimisation may be removed, cut or fixed.

Variable length fuel injection intake tract devices that function while the engine is operating are not allowed, unless homologated.

The throttle bodies may not be replaced or modified.

The fuel injection management computer chip (EPROM) may be changed.

The use of flash memory ("flash RAM") for fuel injection mapping is permitted. An additional control unit to modify the fuel mixture may be mounted and must be attached to the original connections.

25. Fuel supply

Fuel lines may be replaced. Quick connectors may be used. Fuel vent lines may be replaced.

Fuel filters may be added.

26. Cylinder head

Cylinder heads must be as homologated.

No material may be added or removed.

The cylinder head gasket may be replaced.

The valves, valve seats, valve guides, valve springs and support devices must remain as originally produced by the manufacturer for use on the homologated motorcycle.

27. Camshaft

No modifications are permitted.

Chains/cam chains or cam belt tensioning devices may be replaced or modified. Tensioning devices for tooth belts are free.

28. Cam sprockets

Cam sprockets can be modified or replaced to allow the degreeing of camshafts.

29. Crankshaft

Crankshaft must remain as homologated.

Polishing and lightening is not allowed.

The crankshaft may be balanced but exclusively through the necessary drilling. Modifications of the flywheel masses are not allowed.

30. Oil pump and oil lines

Oil pump must remain as homologated.

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.

31. Connecting rods

Connecting rods must remain as homologated. Polishing and lightening are not allowed.

32. Pistons

Pistons must remain as homologated.

33. Piston rings

Piston rings must remain as homologated. No modifications are allowed.

34. Piston pins and clips

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

35. Cylinders

Cylinders must remain as homologated.

36. Crankcase and all other engine cases

(ignition case, clutch case)

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

Oil leading components which risk to be damaged in case of an accident (e.g. ignition, clutch and generator covers) must be protected by additional means made of steel, light-alloy, carbon, Kevlar or composite material components.

Engine case guards in the form of strengthened engine side covers may be installed. These covers must be made of the same material and be no lighter in weight than the standard part.

The countershaft cover may be removed or modified.

The addition of a crankcase protector at the countershaft is allowed.

Covers of a dry clutch may be modified to achieve a better cooling.

37. Transmission/gearbox

No modifications are allowed. (Exception: shifting interior components, see Article 14).

Electronic quick shift systems (ignition breaker) and shift indicators are permitted.

Pinions, chain sprockets, chain pitch and size may be modified.

38. Clutch

No modifications are allowed.

Friction and drive discs as well as clutch springs may be replaced but their numbers and operating systems must remain original.

The fluid container may be modified or replaced.

39. Ignition/engine control system

Ignition/engine control system/CDI may be modified or replaced.

It is permitted to use an ignition breaker device to optimize the gear shifting.

Spark plugs, plug wires and spark-plug sockets may be replaced.

The ignition rotor and the corresponding sensor (pick-up) may be modified or replaced.

40. Generator, alternator, electric starter

No modifications are permitted. The electric starter (including all relating starting system parts and connections) may however be removed.

It must at all times (practice/ race) be possible to start the engine of the motorcycle, if necessary with the assistance of an auxiliary starting device (or electric starter).

Annotation: The alternator must supply the battery with charging tension whilst the engine is running.

41. Exhaust system

Exhaust pipes and silencers may be replaced or modified.

Position and arrangement of the silencer/s must remain as originally homologated.

The number and shape of the exhaust final exit of the exhaust pipes are free, but there must be no sharp edges.

The noise limit is 107 dB/A with a tolerance of 3 dB/A after the race.

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.

42. Fasteners/connections

Standard fasteners (annotation: e.g. screws, bolts) may be replaced. Aluminium fasteners may only be used in non high-stressed or non-structural locations.

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

Titanium fasteners may not be used.

Fairing fasteners may be changed to the quick disconnect type.

43. The following items may be altered or replaced from those fitted to the homologated motorcycle

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

Any inner tube (if fitted) or inflation valves may be used.

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

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

Gaskets and gasket materials.

Painted external surface finishes and decals.

It is permitted to fit or to remove heat protection mats, except for the exhaust system (see Article 41).

44. The following items may be removed

- Lights and reflectors
- Instruments and instrument bracket and associated cables.
- Horn
- License plate bracket.
- Tool box.
- Tachometer
- Speedometer and related wheel spacers.
- Radiator fan and wiring.
- Passenger foot rests.
- Passenger grab rails.
- Chain guard as long as it is not incorporated in the rear fender.
- Bolt on accessories on a rear sub frame.
- Emission control items (anti-pollution) in or around the air box
- Lambda probe
- Secondary air system
- Ignition lock and wiring
- Control motors and their control cables from the area of the exhaust system.
- Air ducts in the area fairing/cooler

45. The following items must be altered

Rear view mirrors must be removed.

Electric fuel pumps must be connected to the circuit breaker (see FIM Art. 01.38).

Safety bars, centre and side stands must be removed, but fixed brackets must remain.

All drain plugs must be wired. External screws and bolts in the area of an oil flow as well as external oil filters must be safety secured.

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.

Where an oil breather pipe is fitted, the outlet must discharge into a catch tank located in an easily accessible position and which must be emptied before the start of a race.

The minimum size of this catch tank must be 250 cc for gear-box breather pipes and 500 cc for engine breather pipes.

All motorcycles must have a closed breather system. The oil breather line must be connected with and discharge in the airbox.

Head lamps, rear lamps and turn indicators must be removed, but profile and front appearance of the motorcycle must be retained. The resulting openings must be covered by a suitable material.

It is compulsory to fit a camber gauge.

If, after the qualifying practice or the race, it is not working within 15 seconds a fine of 100 € will be imposed.

46. Additional equipment

Additional equipment not on the original homologated motorcycle may be added (data acquisition, computers, recording equipment, etc.). Necessary attachment holes up to 6 mm may be drilled for this purpose. Electronic driving assistance is permitted.