

Appendices / Annexes

FIM HOMOLOGATION REGULATIONS FOR MOTORCYCLES

2024

	Modifications log						
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1.1 FIM HOMOLOGATION PROCEDURE FOR SUPERBIKE, SUPERSTOCK AND SUPERSPORT 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.

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 ASIA. The motorcycles must represent machines of mass production.

- a) The motorcycles must be of current production.
- b) The motorcycles are to be sold for 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) For the inspection, the following part must be removed for the control of the dry weight:
 - Fuel (the fuel tank must be totally empty).
 - Turn signal indicators (when not incorporated in the fairing).
 - Rear-view mirrors
 - Centre and side stand(s) + bracket(s) (if removable).
 - License plate + bracket



- Tool box
- Horn
- Helmet hooks and luggage carrier hooks
- Passenger foot rests + brackets
- Passenger grab rails
- Safety bars
- User manual
- e) Only the original manufacturer may present the motorcycle for homologation.
- d) The manufacturer must be a holder of a valid FIM Manufacturers licence.
- e) 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.
- f) 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

The maximum retail price (in Euros, including all taxes) for the homologated motorcycle model in the following categories/classes:

- i) Superbike 1000: 44.000 Euros
- ii) Superstock 1000 and 1100: 36.300 Euros
- iii) Supersport Next Generation + Twin-Cylinder Next Generation (including the manufacturers compulsory racing kit): 26.400 Euros
- iv) Supersport and Superstock 600: 22.000 Euros
- v) Supersport 300: 9.350 Euros
- a) The minimum production numbers of the model intended to be raced (in the relevant World Championship/**Cup**) are:
 - 1. Superbike and Superstock 1000/1100 Categories:
 - i) 125 units of the motorcycle on the date of the homologation visit.
 - ii) A total of 250 units on the 31st December of the intended first racing year.
 - iii) A total of 500 units on the 31st December of the following year.



- iv) If a new homologation has been made by the manufacturer in this category in the subsequent year of the homologation then point 1.2.1.b.1.iii is voided and the new homologation will be subject to points i-iv again.
- 2. Supersport Category:
 - i) 125 units of the motorcycle model intended to be raced at the time of homologation inspection visit.
 - ii) A total of 500 units on the 31st December of the first racing year.
- 3. Supersport 300 and World Supersport Next Generation Categories:
 - i) 250 units of the motorcycle model intended to be raced at the time of homologation inspection visit.
 - ii) A total of 500 units on the 31st December of the first racing year.
 - iii) A total of 1000 units on the 31st December of the following year.

1.2.2

Manufacturers may compete with their machine in the Superbike Category of 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 race then the SBK Commission reserves the right to refrain the team/manufacturer from participation for a period of time to be determined. This article also applies (on the principle) in the other based-production disciplines (Examples: FIM Endurance World Championship/Cup, **World Supersport Next Generation, World Supersport 300**).

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.



1.2.4

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.

1.2.5

Manufacturers may request a homologation inspection for machines that will not be legal for competition in any of the above categories nor meet the price limits or production volumes. This will be for the purposes of competition in other series' whose regulations are based on FIM technical regulations.

1.2.6

Applications for machines in the Supersport Next Generation category will be made on a case by case basis and reviewed by the FIM SBK Technical Director and the Promoter. The required racing kit and modifications will be by agreement of the FIM SBK Technical Director and the Promoter. No machines that are already homologated for competition in Superbike or Superstock 1000 (or their equivalents) will be considered.



1.3 HOMOLOGATION PROCEDURE, CALENDAR FOR APPLICATIONS, SUBMISSIONS & PUBLICATIONS

1.3.1 Homologation Type:

Phase One Homologation: Requires submission of all drawings, documents, sample parts and production quantities. An inspection must be carried out by the FIM Homologation Coordinators to confirm the validity of the documents. This basic homologation can be used by the National Federations (FMNs) to make conformity checks.

Phase Two Homologation: Has requirements specific to different series. In these regulations you can find the requirements that must be completed to be eligible for the FIM World Championships.

The 2024 FIM Homologations fees are available on the following link:

<u>https://www.fim-</u> moto.com/en/documents?tx_solr%5Bq%5D=homologation

1.3.2 Phase 1: Homologation Timeline and Process

- a) The deadline for receiving requests for homologation to <u>sptech@fim.ch</u> is 90 days before the homologation inspection is to take place.
- b) At the latest 30 calendar days 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 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 and form C as .pdf and .xlsx to ccr@fim.ch and cti@fim.ch). The email address is: sptech@fim.ch (and copy to cti@fim.ch).
- c) At the latest 7 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.



- In case of failing the inspection, the original manufacturer may apply for e) a new homologation, a maximum of 2 more times in the same year, in each racing class.
- The homologation forms will be studied by the FIM CTI Homologation **f**) Coordinators, to confirm that they are complete and correct, prior to granting the homologation.
- The manufacturer shall at all times be responsible for completing the g) 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. The manufacturers are required to include the respective tolerance table on the homologation drawing of each part.
 - Chassis (frame) i)

iii)

- Engine Parts (castings/forgings) ii)
- ISO2768-c (coarse) ISO2768-m (medium) ISO2768-f (fine)
- Engine (between machined surfaces) Specific measurements - See table 1.6.3 iv)
- All currently accepted drawings may be requested to be re-submitted h) with updated tolerances and missing dimensions. Any drawings not re submitted will be assumed to comply with the tolerances in Art. 1.3.g.
- The homologation drawings must fully dimension ALL centres and i) dimensions to surfaces (including machined faces on frame) allowing a fully resolved 3-dimensional model to be created. The drawings must follow the FIM templates for each sheet.
- Manufacturers must supply 3-dimensional models of the noted **j**) homologated parts (frame, swingarm, fairing, seat, fenders, tank, piston, cylinder head and combustion chamber). These do not have to include material details. The files must be supplied as .igs AND .stp. The origin must be aligned centrally on the swingarm pivot axis and aligned with the steering head. The steering head must be presented normal to the z-plane (parallel to the Z-axis). X-axis positive forward, zaxis positive upwards, y-axis positive right to left (left hand rule). These files are required retrospectively.
- The manufacturer is entitled to request a notice in order to know k) whether the documents and drawings submitted by him are formally correct 7 days before the homologation inspection date. The list will detail the World Championship classes for which the machine is eligible.



- l) At the latest within 30 days after having successfully passed the homologation inspection, an updated list of the valid homologations is published.
- m) The following documents will then be published to the FMN's (National Federations) and licensed manufacturers via the current existing FIM
 FTP Homologation Server restricted access site.
 - i) Form C
 - ii) Workshop Manual
 - iii) Parts Book / Catalogue
 - iv) Drawings / Diagrams E, F, X
 - v) Pictures / Photographs E, F, X
- n) The following documents will NOT be published, and only approved persons will have access:
 - i) Form A
 - ii) Form B
 - iii) 3D (CAD) Data
 - iv) Camshaft Profile .xlsx
 - v) F23/4 CAN bus detail

1.3.3 Phase 2: Timeline and Process for Superbike Machines

a) For Superbike and Superstock 1000/1100 homologations: At the time of inspection Dyno tests must be carried out using an <u>ENGINE DYNO</u> <u>ONLY</u>, a different engine (to d) may be used and mounted in advance. All ancillary powertrain parts (including but not limited to; airbox, exhaust system, air valves, breathing system) must be as the parts being homologated. The engine will perform a sweep test to establish the RPM range of maximum power. A step test will then be performed with 100 rpm steps to establish the point of maximum power and torque. The engine must also be run to the hard limiter in each gear. The FIM Homologation Coordinators' interpretation of this data is final.

The use the EU/ECE, USA or ASIA homologation ENGINE dyno test results made on the OEM motorcycles could be used at the sole condition to get ALL the information requested in the article here above. Without the presentation of the EU/ECE, USA or ASIA homologation ENGINE dyno test results, the dyno test will take place during the homologation inspection as specified here above.



- b) 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 ASIA, to be allowed to be used in the remaining Championship events.
 - a. For those manufacturers who commence competition in the Championship during or before March: The end of April of the current year.
 - b. For those manufacturers who commence competition in the Championship during or after April: The end of the month following the first date of competition.
- c. 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.

One complete example of the production machine must be supplied in road specification running as production, to be dyno tested, will not be returned.

- d. The FIM may request, at its discretion, to make a homologation inspection before the 125 machines are built.
- e. A machine that is given permission to race before 125 units are produced will be considered "Subject to homologation".

1.3.4 Phase 2: Timeline and Process for Supersport (All) Machines

- a) All information required in Phase 1 must be complete.
- b) 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, to be allowed to be used in the remaining Championship events.
- c) The deadline for receiving requests for homologation to <u>sptech@fim.ch</u> is 6 months before the homologation inspection is to take place.
- d) For World Supersport 300 and Supersport Homologations the manufacturer must supply rotational inertia information for the following parts:
 - a. ACG Flywheel



- b. Crankshaft + rotational parts connected to it (cam drive system, camshaft, oil pump, water pump) + "rods and pistons calculated equivalent inertia" + counter-rotating shafts
- c. Clutch (complete)
- d. Primary Gear Box shaft (complete)
- e. Secondary Gear Box shaft (complete)
- f. Front Wheel (complete)
- g. Rear Wheel (complete)
- e) 5 months before the homologation date the manufacturer must supply 3 complete wiring harnesses', throttle bodies (complete) and all sensors required for engine management (including wheel speed sensors), to the FIM in Europe in order to manage development of the Supersport and Supersport 300 control electronics system.
- d) A minimum of 17 weeks before the start of the first event a machine must be delivered to the FIM (in Italy to the FIM's balancing agent) in running condition with racing exhaust (and racing kit if required). The machine will be calibrated for starting and made available to the manufacturer fitted with the control electronics system after 1 week for engine calibration purposes. Manufacturers calibration must be finished a minimum of 14 weeks before the start of first event (including scheduled test).
- g) The homologation must take place a minimum of 12 weeks before the first event in which the machine is due to compete.

Note all machines competing in the World Supersport or Supersport Next Generation Championships must perform the following balancing tests:

- h) 12 weeks before the first event the manufacturer must have 2 samples of the engine (and ancillaries) tested on the SBK commission approved dyno to measure the complete torque map, including tests made with ignition offsets. Full details of the required tests are available from <u>sbk.technical.director@fim.ch</u> and the tests will be at the manufacturers expense.
- The specification of the tested engine (powertrain) will form part of the restricted specification of Supersport Next Generation class machines. For WSS300 and Supersport Next Generation the ignition timing map will be fixed at this point.



- j) One of the test engines (and one set of ancillaries) must remain with the FIM or its approved partner in case any balance (re)checks are required during the term of the homologation.
- k) 12 weeks before the first event the manufacturer must have the machine tested an approved wind tunnel testing facility with a minimum velocity of 150 km/h.
- I) The "reference" performance will be agreed by the manufacturers competing in the relevant classes.
- m) The balancing calculation will be performed using the MPE analysis tool.
- n) 11 weeks before the first event any required balancing for the machine will be finalised (and race maps released).
- o) If this schedule is not met the machine will only be allowed to complete when the timeline is completed.
- p) For further information regarding calibration (engine mapping) and balancing contact <u>sbk.technical.director@fim.ch</u>.



1.4 LIST OF REQUIRED DRAWINGS, SAMPLE PARTS, 3D DATA AND PICTURES (REQUIRED FOR ALL PHYSICAL PARTS) :

Drawing #	3D Data Required	Sample Required	Description	Not required for SBK only homologation
E1/1		Х	Throttle bodies and variable intake tract devices if used	
E1/2		Х	Injector(s); sample of all different injectors, if used	
E1/3		Х	Airbox	
E1/4		Х	Air funnels	
E1/5		Х	Air funnel activation mechanism	
E1/6		Х	Airbox complete assembly (incl. air funnel, mechanism, injectors)	
E1/7		Х	Ride by Wire Motor Assembly and full specification	
E2		Х	Fuel pump and fuel pressure regulator	
E3/1			Crankcases – upper (Left)	
E3/2			Crankcases – upper (Left)	
E3/3			Crankcases – lower	
E3/4		Х	Crankcases Assembly	
E4/1	Х	Х	Cylinderhead	
E4/2			Cylinderhead, Cross section, incl. valve guide position	
E4/3	Х		Combustion chamber detail	
E4/4		Х	Cylinder if separate	
E4/5		Х	Cylinder liner if removable	
E4/6		Х	Throttle Body Insulator	
E5/1		Х	Intake camshaft (including gear) (.xlsx lift profile, see 1.3.k)	
E6/1		Х	Exhaust camshaft (including gear) (.xlsx lift profile, see 1.3.k)	
E7/1		Х	Intake valve	
E7/2		Х	Intake valve spring inner	
E7/3		Х	Intake valve spring outer	
E7/4		Х	Intake valve spring collet and retainer	
E7/5		Х	Intake valve spring seat	
E7/6		Х	Intake tappet/bucket/follower	



Drawing #	3D Data Required	Sample Required	Description	Not required for SBK only homologation
E8/1		Х	Exhaust valve	
E8/2		Х	Exhaust valve spring inner	
E8/3		Х	Exhaust valve spring outer	
E8/4		Х	Exhaust valve spring collet and retainer	
E8/5		Х	Exhaust valve spring seat	
E8/6		Х	Exhaust tappet/bucket/follower	
E9/1	Х	Х	Piston (3D of complete piston)	
E9/2		Х	Piston Ring Assembly	
E9/3		Х	Piston Pin	
E10/1		Х	Con-rod	
E10/2		Х	Shell Bearings (crankshaft and big-end)	
E11/1		Х	Crankshaft	
E11/2a			Crankshaft machined area detail	
E11/2b			Crankshaft balancing details	
E11/3		Х	Balance Shaft	
E12/1			Method camdrive	
E12/2		Х	Cam Chain Tensioner	
E13/1		Х	Primary Gear	
E13/2		Х	Gearbox	
E14/1		Х	Clutch Assembly including Basket	
E14/2			Clutch Basket - Views	
E15/1		Х	ACG Assembly including stator and flywheel	
E15/2			ACG flywheel	
E15/3			Flywheel if separate from E15/1	
E16/1		Х	Oil pump and drive system	
E17/1		Х	Water pump and drive	
E18/1		Х	Generator cover including section showing stator to crankcase offset	
E18/2			Left side cover	
E18/3		Х	Head or valve or Cam cover	
K_Ex/x		All parts included in Superport 300Xand Supersport EVO engine Kits (full documents as above)		



Drawing #	3D Data Required	Sample Required	Description	Not required for SBK only homologation
KIT		Х	Manufacturer Race Kit ECU and Harness (used for National series eligibility lists)	
NA		Х	All sensors required for engine management (see Art. 1.3.1.c) inc electrical characteristics inc Speed	
F1/1	Х	Х	Main frame Side	
F1/2	Х	Х	Main frame Top View	
F1/3	Х		Main frame Bottom View	
F1/4	Х		Headstock detail	
F1/5	Х		Main frame assembly, detailing engine, countershaft sprocket, shock mount and all pivot positions	
F1/6	Х	Х	Steering head cup inserts	
F1/7	Х	Х	Swingarm pivot inserts	
F1/8			Extra frame information if required – i.e. construction detail	
F2			Rear Sub frame (if separate)	
F3	Х		Fuel tank	
F4	Х	X	RAM Air Tubes	
F5/1	Х		Fairing Left	
F5/2	Х		Fairing Right	
F5/3	Х		Fairing Front	
F5/X		Х	Screen / Windshield	
F5/4	Х	Х	Wings and other aerodynamic devices	
F6	Х	X	RAM opening (scale and dimensioned drawing)	
F7	Х		Seat	
F8/1	Х	Х	Front fender	
F8/2	Х		Hugger (if applied)	
F9/1		Х	Fork bridge (top)	
F9/2		Х	Fork bridge (bottom) including stem	
F10		Х	Front fork assembly	
F11*	Х	X	Swing Arm	
F12		Х	Rear suspension unit	



Drawing #	3D Data Required	Sample Required	Description	Not required for SBK only homologation
F13/1		Х	Rear suspension linkage assembly	
F13/2		Х	Rear Suspension linkage detail	
F13/3		Х	Rear Suspension linkage detail	
F13/4		Х	Rear suspension unit top mount	
F14/1		Х	Front Axle	
F14/2		Х	Rear Axle	
F14/3			Swingarm Axle/Pivot	
F15/1		Х	Front brake discs	Х
F15/2			Rear brake discs	Х
F16/1		Х	Front brake caliper	Х
F16/2		Х	Rear brake caliper	Х
F17		Х	Rear caliper hanger	Х
F18/1		Х	Front master cylinder	Х
F18/2			Rear master cylinder X	
F19/1		Х	Front wheel (type) X	
F19/2		Х	Rear wheel (type)	Х
F19/3			Cushion drive	Х
F20			Oil cooler	Х
F21		X	Radiator	X
F22		X	Intercooler	X
F23/1		Х	Electronics ECU Diagram	X
F23/2		X	Wiring Harness Diagram + Dashboard X	
F23/3		Х	Quickshift Sensor X	
			CAN bus message detail	
F23/4			and descriptiondbc file	X
			(not for publication)	
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	



Other Required Documents				
			Form A, B, C	
			Form C in excel format (.xls or .xlsx)	
			Workshop Manual (.pdf)	
			Parts List (.pdf)	
			Camshaft Profile (.xlsx)	

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.

For certain parts, extra pictures of the part may be required to show special features e.g. cylinder head ports.



1.5 HOMOLOGATION, INSPECTION, CONTROL & PERIOD

- 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) During the inspection a production motorcycle must be stripped to confirm the required documentation.
- c) 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 a maximum of two (2) units will be borne by the manufacturer.
- d) The manufacturer must consign to the FIM the parts noted in 1.4 The parts are to be received by the FIM at the latest on the Wednesday of the first European event. In the case of any checks or protests before the parts have been received, any protested or inspected parts can be impounded at the discretion of the SBK Technical Director.

1.5.1 Control

a) Sample Parts:

- a) For Superbike and Superstock 1000/1100 category machines 2 sets of sample parts must be provided by the manufacturer as noted in 1.4. (1 set for WSBK and 1 set for EWC).
- b) For Supersport 300, Supersport, Supersport Next Generation, Twin-Cylinder Next Generation and non-categorised machines, 1 set of sample parts must be provided.
- c) For Supersport 300, Supersport, Supersport Next Generation, Twin-Cylinder Next Generation, one sample engine and ancillaries (powertrain) must be provided.
- d) These parts will be stored by the FIM in sealed boxes. The sample parts will be moved by the relevant Promoter to their events at the discretion of their FIM Technical Directors.
- e) The FIM may at its discretion obtain further parts as samples.



- b) The inspector/s must satisfy him/them that the statements made on the production certificate (Form B) 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 documented on the homologation forms.
- d) The drawings and the consigned "homologation sample" parts will be regarded equally in ascertaining the legality of any inspected race machines.
- 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.

1.5.2 Period

- a) Once a motorcycle has obtained the homologation, it may be used for racing in the corresponding class for a maximum period of:
 - i) Superbike and Superstock 1000: 8 years,
 - ii) Supersport, Supersport Next Generation, **Twin-Cylinder Next Generation**: 8 years
 - iii) Supersport 300: 5 years

or until such time that the homologated motorcycle no longer complies with the technical rules.

- b) A homologation will be granted only if the fee has been paid.
- c) The Manufacturer of the homologated model can request an extension of a homologation before the end of the homologation period. The FIM may grant an extension of the homologation period. All Homologation documents must be updated to the latest standard. **An homologation fee** will be charged for **this** homologation extension.

The 2024 FIM Homologations fees for homologation extension are available on the following link:

https://www.fimmoto.com/en/documents?tx_solr%5Bq%5D=homologation



1.6

NEW HOMOLOGATION, PARTS AND PRODUCT UPDATE

Any change or update 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) (*1)
- 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
- h) Crankshaft
- i) Con-rod
- j) Piston
- k) Camshaft
- l) Valve
- m) Suspension manufacturer or design
- n) Fairing shape when considered "facelift"

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:

(*1) 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).

The decision of the FIM Homologation Officers is final.

1.6.1 Differentiation of Homologated Machines

Parts that differ between different homologation dates of the "same" model may not be used on machines from another homologation date including when sharing the model name, but excepting when the part is superseded for production reasons and also accepted by the FIM.

1.6.2 Homologation of Parts and Production Update

a) Product updates on any homologated parts (those included in x-, e-, fdrawings, form C and any sample parts) require a homologation update.



b) It is the manufacturer's responsibility to notify the FIM and the FIM Technical Director (in each based-production series) of any parts updates and or changes to part number of the listed homologated parts.

The FIM will consider if the part requested for update can be homologated. The decision of the FIM Homologation Officers is final.

- c) Application:
 - i) The manufacturer must send a notice to the <u>sptech@fim.ch</u> and <u>sbk.technical.director@fim.ch</u> requesting a homologation update not later than 90 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 at sptech@fim.ch.
- 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.

All updated parts (assemblies) shall be accepted to be fitted on all further units produced of the homologated model, without any dimensional modifications or changes to other standard fitted parts of the homologated model and not linked with other updated parts. Should multiple parts be required to be changed then it shall be considered as a new homologation. The updated part may retro-fitted, as long as it is a "superseded" part and the preceding part is no longer produced and can be used without any dimensional changes or modifications when assembled to other part(s) of the homologated model preceding the model "update".



Should an updated part not be retrofittable to machines from earlier production the Manufacturer MUST provide the FIM with the VIN number at which this update should be applied, if a manufacturer adopts a numbering system out of sequence, they MUST supply the FIM with the list of the motorcycles produced after the product/part update. The FIM will at their discretion decide if this update shall require a new homologation or can be regarded as a homologation update.

- e) Parts from multiple suppliers will only be accepted if the design, specification, materials and production methods are the same from all suppliers. In case of dispute of the conformity of the inspected part(s), in addition of the analysis of the homologation documents, the comparison with the homologation sample part(s) consigned during the homologation inspection will be final (made by the FIM Technical Director in each series).
- f) If parts from multiple suppliers differ in design, then the updated or newer parts will only be accepted if the alternative manufacturer part(s) are originally fitted during production to a minimum of the number of units required for homologation.
 - vi) Should the updated part no longer be available or the production machines revert to the original homologated part, then the FIM reserves the right to withdraw the approval of alternative manufacturer part at any time.

Or,

vii) If parts from multiple suppliers differ in design, then only the original part as fitted during the homologation inspection will be accepted as homologated.

In case of dispute of the conformity of the inspected part(s), in addition of the analysis of the homologation documents, the comparison with the homologation sample part(s) consigned during the homologation inspection will be final (made by the FIM Technical Director in each series).

- g) FIM may at its discretion decide that product updates result in a new homologation. If more than 3 items need to be updated during the machine's life, a new homologation will be necessary.
- 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 motorcycle.

i) The FIM will withdraw the homologation if these rules are not respected. The homologation fee is not refundable.



1.6.3 Tolerances Table

Drawing #	Description	From 2021
E1/1	Throttle bodies and variable intake tract devices if used	At Butterfly: +/- 0.02
E3/1	Crankcases – upper (Left)	Shaft Centres: +/- 0.02, Crankshaft Centre to cylinder base +/- 0.02, Crankshaft Center to Head Surface
E4/1	Cylinderhead	Dist upper and lower surface. +/- 0.05 mm
E4/3	Combustion chamber detail	Volume: +/- 3%
E4/4	Cylinder if separate	Base gasket to Head Gasket Surface: +0.15 mm, -0.0 mm
E5/1	Intake camshaft (including gear) (.xls lift profile, see 1.3.k)	Base circle: +/- 0.013 mm, Ramp: +/- 0.030 mm, Flank: +/- 0.038 mm, Nose: +/- 0.030 mm
E6/1	Exhaust camshaft (including gear) (.xls lift profile, see 1.3.k)	Base circle: +/- 0.013 mm, Ramp: +/- 0.030 mm, Flank: +/- 0.038 mm, Nose: +/- 0.030 mm
E7/1	Intake valve	Head: +/- 0.1 mm, Stem: +0.02/ -0.035 mm, Weight +/- 2%
E8/1	Exhaust valve	Head: +/- 0.1 mm, Stem: -0.02/ -0.035 mm, Weight +/- 2%
E9/1	Piston (3D of complete piston)	Crown diameter, both axes, +0.000 mm -0.020 mm Weight shoud be a 3%
E9/3	Piston Pin	Length: +/- 0.1 mm, OD: +0/ -0.005 mm, ID: +0.1/-0.2 mm
E10/1	Con-rod	Dist. Holes centers +/ - 0.03 mm; weight +/- %
E11/1	Crankshaft	Weight +/- 3%
E11/3	Balance Shaft	Weight +/- 3%
E15/2	ACG flywheel	Weight +/- 2%
K_Ex/x All parts inlcuded in Superport 300 and Supersport EVO engine Kits (as above)		As above



Drawing #	Description	From 2021
F1/1	Main frame Side	SBK/STK1000/WSS600; +/- 0°12' = 0.2° metric, WSS300; +/- 0°30' = 0.5°
F1/2	Main frame Top View	Frame head pipe to swingarm pivot +/- 1 mm (measured normal to head pipe)
		Engine hanger positions +/-2 mm in X and Z
F1/5	Main frame assembly, detailing engine, countershaft sprocket, shock mount and all pivot positions	Holes centers: +/ - 0.5 mm
F9/1	Fork bridge (top)	Holes centers: +/ - 0.05
F9/2	Fork bridge (bottom) including stem	Holes centers: +/ - 0.05
F10	Front fork assembly	Leg total length: +/ - 4 mm
F11*	Swing Arm	Dist. Wheel axis/swing arm pivot +/- 2 mm, Dist Suspension fulcrum axis/swing arm pivot: +/ - 1 mm
F13/1	Rear suspension linkage assembly	+/- 0.1 mm
F14/1	Front Axle	No linear tolerances, Weight tolerance +/- 2%
F14/2	Rear Axle	No linear tolerances, Weight tolerance +/- 2%
F14/3	Swingarm Axle/Pivot	No linear tolerances, Weight tolerance +/- 2%
F17	Rear calliper hanger	No dimensional tolerances, Weight tolerance +/ - 2%

Other Required Documents	From 2021
Camshaft Profile (.xlsx)	Every 0.5 degrees: Base circle: +/- 0.013 mm, Ramp: +/- 0.030 mm, Flank: +/- 0.038 mm, Nose: +/- 0.030 mm



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FIM HOMOLOGATION REGULATIONS FOR MOTORCYCLES