

# MALOSSSI®

## MALOSSSI TMAX CUP 2022

### TECHNICAL REGULATIONS

Unless otherwise specified in these Regulations, all scooters must comply with that established in the *Regolamento Tecnico Generale di Sicurezza* (General Safety Technical Regulations, hereinafter RTGS). For all that not specified in these Regulations and in the RTGS, all parts of the scooter must be originals, i.e., as originally produced by the manufacturer. Unless otherwise specified in these regulations, mandatory or optional Malossi branded parts replacing the originals must remain as produced by the manufacturer, with no modifications allowed.

The term "original" refers to all the components built by the manufacturer of the vehicle itself for the exact vehicle model in use, as first equipment or as spare parts. Components built by other manufacturers other than the one that built the scooter in use or components built for other models (even from the same manufacturer) won't be considered "original".

All the mandatory or optional MALOSSSI parts, replacing original components, must remain as built from MALOSSSI and cannot be modified in any way.

Only when explicitly authorized in the present technical regulations, it's admitted to use parts from other brands not considered as "competitors" with MALOSSSI. With the term "competitors" are indicated all the manufacturers producing components destined to the same market segment and core business of MALOSSSI. In the case of necessity of a clarification about the conformity of a component from a brand different than MALOSSSI the riders are strongly suggested to refer to the steward accountable to the technical verifications designated from the organization of Trofei Malossi. The final judgment of the inquired parts will be held by the organization itself. Not respecting this article will be considered as a technical irregularity.

#### **Art. 1 - General**

##### **1.1 - Admitted scooters**

1.1.1 - All scooters indicated in the Sporting Regulations of the TMax Cup 2022 are allowed.

1.1.2 - All parts not specifically mentioned in these regulations must remain as originally produced by the Manufacturer of the type-approved scooter.

##### **1.2 - Admitted classes**

1.2.1 - The Cup has a single class called "TMax Cup".

##### **1.3 - Prohibited elements**

The following elements must be removed from the scooters:

- Stand (both side and central).
- Luggage rack (base and frame).
- Rear top box.
- Saddlebags.
- Rear-view mirrors.
- Plate holder.
- Backrest.
- Footrest platforms (even if folding).
- Side and rear handles.



- The internal part of the front optical unit, rear optical unit and directional indicators (front and rear) must be removed, maintaining the original outer shell. Alternatively, the aforementioned elements can be replaced with fibreglass closing shells which maintain the shape of the originals.
- The rear optical unit can remain functional only if used as a rear light for qualifying session or races that have been declared wet, in compliance with that set out by the RTGS.
- Plate light.
- Horn.

#### 1.4 - **Application of leaden seals to scooter frame**

- 1.4.1 - For each event, each Rider is entitled to apply a leaden seal to one scooter only (frame).

#### 1.5 - **Engine sealing**

- 1.5.1 - The engines used in the Cup must be sealed. Sealing the engine consists in applying seals (bindings, stickers or paints) between the crankcase, cylinder and cylinder head, and between the two half-crankcases and clutch cover, and on the valves cover so that they cannot be separated. The aim of said sealing is to guarantee the uniformity of engine performance, and is applied at the Malossi S.p.A. headquarters further to a technical analysis in accordance with an identical protocol for all engines.

- 1.5.2 - Engines used during previous seasons can be reused in the 2022 season in exceptional cases provided the rider, during the Preliminary Operations of the first race in which they participate, makes a request to the organiser's Technical Service to use the already sealed engine. In case of acceptance by the Technical Service, an additional seal will be applied to close the valves cover, not envisaged in previous editions of the Cup, after which a technical analysis must necessarily be carried out at the Malossi S.p.A. headquarters in accordance with the envisaged protocol, on the earliest possible date after the race in progress. Until the analysis has been completed, any results obtained by the rider using said engine shall be considered "sub iudice" until the technical analysis has been carried out and passed. Engines with damaged, illegible, removed or tampered seals will not be accepted. The organiser's Technical Service reserves the right to apply new seals in addition to or in replacement of those already present. The final decision on the suitability of the engine seals is at the sole discretion of the Organiser's Technical Service.

- 1.5.3 - The rider is responsible for checking the conformity of the engine seals before each time they enter the track. The on-track use of an engine without seals or with seals that are nonconforming, damaged or tampered with, requires the immediate application of new seals and is equated with a technical irregularity.

- 1.5.4 - Each engine is sealed in the specific name of the rider, it is therefore prohibited to exchange sealed engines between riders, even within the same team.

- 1.5.5 - The presence of seals is not considered proof of conformity of the engine, the rider is responsible for ensuring the engine complies with the specifications in these regulations before requesting its sealing.

#### 1.6 - **Engine quotas**

- 1.6.1 - During the season, each rider has the right to use one engine only, the replacement of which is authorised only once and only in case of serious and proven technical problems, and must be previously authorised by the first TC after hearing the opinion of the Organisation's technical manager.

- 1.6.2 - Replacement of the engine entails the cancellation of the replaced engine's seals.

- 1.6.3 - The use of additional engines (third, fourth, etc.) during the season is sanctioned as set out by the Cup sporting rules, regardless of the reason for the engine's replacement.

- 1.6.4 - Seals removed during inspections are an exception to the previous articles, provided the technical inspections have a positive outcome and the engine is presented for the application of replacement seals before the PO of the next event after the inspection.

- 1.6.5 - In the event a rider changes teams during the season, the engine count is made taking into account the engines already sealed in their name. A rider that replaces (for one or more events) another rider can request to use one or more engines already sealed in the name of the replaced rider, and therefore in addition to the engines already sealed in their own name. In any case, the penalties for using a greater number of engines than the maximum allowed are indicated in the Cup Sporting Rules.

#### 1.7 - **Engine maintenance**



- 1.7.1 - Except as specified in the following article, the only interventions allowed on sealed engines are those of "routine maintenance", i.e., interventions that do not require the seals to be removed.
- 1.7.2 - The removal of the seals is authorised only in the event of serious and proven technical problems and must be previously authorised by the 1st TC after hearing the opinion of the organisation's technical personnel.
- 1.7.3 - "Special" maintenance, i.e., that which can only be performed by removing the seals, must be carried out under the supervision of the organisation's technical personnel, which shall see to the application of new seals upon completion of the works. The application of new seals to an engine that undergoes "special" maintenance is equated with the sealing of a new engine, in accordance with the provisions of the previous articles.
- 1.8 - **Minimum weight**
- 1.8.1 - The minimum allowed weight for scooters in running order (as defined in the RTGS) is 185 Kg, the sum of the weight of the scooter and the Rider in racing gear must not be less than 260 Kg.
- 1.8.2 - The use of counterweights in accordance with the provisions of the RTGS is allowed in order to reach the minimum weights.
- 1.8.3 - The weight is measured at the end of the race, the Rider must present themselves for weighing operations in their racing gear in the parc fermé with his own scooter, at the end of the session immediately after leaving the racetrack. The late or completely missing appearance at the parc fermé of the scooter will be sanctioned as stated in the current Regolamento Velocità.

## **Art. 2 - Chassis set-up**

### **2.1 - Frame**

2.1.1 - The frame must remain as originally produced by the Manufacturer for the type-approved scooter.

2.2 - Bi-dampers and transmission case

**2.1.1 - The bi-dampers or transmission case must remain as originally produced by the Manufacturer for the type-approved scooter.**

**2.2.2 - Changes to the bi-dampers or transmission case are allowed by means of welding, drilling or helicoil for the purpose of fixing:**

- **The protection "fin" of the chain.**
- **The rear stand support pins**

**2.3 - Handlebar and throttle controller**

2.3.1 - The handlebar (including its position) must remain as originally produced by the Manufacturer of the scooter.

2.3.2 - The original throttle controller can be replaced with a quick throttle controller. The throttle controller must automatically close once released and remain inside the handlebar terminal.

## **Art. 3 - Suspensions**

### **3.1 - Front fork**

3.1.1 - The front fork in all its structure must remain as originally produced by the Manufacturer of the type-approved scooter.

3.1.2 - The surface finish of the fork rods (stems and cases) must remain original. Surface finish treatments to any component of the fork are strictly forbidden.

3.1.3 - The use of after-market fork cartridges is admitted.

3.1.4 - Springs (and the relative preload), plugs and pretensioning regulating systems, hydraulic setting, the quantity and type of oil, the oil bearings e dust bearings are of free choice.

3.1.5 - On the 530 model, mounting of the fork (with rods upside-down), steering plates and brackets for the callipers supplied standard on the 2016 530 model, is allowed.

### **3.2 - Rear shock absorber**

3.2.1 - The rear shock absorber and/or relative rear bracket can be replaced with the parts supplied in the MALOSI rear suspension kit (Annex 1).

3.2.2 - On the 530 model only, adaptation of the "Suspension Bracket" specifically for 4B5 models is allowed.



#### **Art. 4 - Braking system**

- 4.1 - Except as specified in the articles below, the braking system must remain as originally produced by the Manufacturer for the type-approved scooter.
- 4.2 - The brake pads, brake lines (front and rear) and brake discs can be replaced with those of the MALOSSI kit (Annex 1).
- 4.3 - The brake pumps (front and rear) and braking lines are of free choice.
- 4.4 - To remove the parking brake:
  - On the 4B5 model, the original rear calliper and brake pump can be replaced with those originally mounted on a carburettor model.
  - On the 530 and 560 models (until 2021), the parking brake pump can be removed.
- 4.5 - The original brake levers can be replaced with other jointed types, provided the manufacturer is not a competitor of MALOSSI.
- 4.6 - The original brake discs can be replaced with MALOSSI ones and/or the front disc can be mounted in replacement of the rear one.
- 4.7 - On the 530 model, the braking system supplied standard on the 2016 530 model can only be mounted in combination with the front fork of the aforementioned model.
- 4.8 - If the vehicle is originally equipped with an ABS system, said system must be removed without however making any types of changes to the original electronics.

#### **Art. 5 - Wheel Rims and Tyres**

##### **5.1 - Wheel rims**

- 5.1.1 - The original rims can be replaced with rims originally mounted on a different Yamaha T-Max model, provided said rims are not modified in any of their parts.
- 5.1.2 - Except for the balancing weights, valves, bearings, dust seals and spacers, the wheel rims must remain as originally produced by the Manufacturer. The colour of the wheel rims is of free choice.

##### **5.2 - Tyres**

- 5.2.1 - The tyres are of free choice, provided they are road type-approved and compliant with the measurements reported on the scooter's registration documents.
- 5.2.2 - Slick type or hand-carved tyres are not allowed.
- 5.2.3 - The use of electric blankets is allowed. Changing the tyres and the use of generators on the starting grid is prohibited.

#### **Art. 6 - Fuel**

- 6.1 - The only fuel allowed is the "green" type compliant with the Italian Motorcycling Federation (IMF) regulations in force ("Fuels" annex to current Speed Regulations).

#### **Art. 7 - Supply**

##### **7.1 - Air box**

- 7.1.1 - The entire air box must be replaced with the Malossi intake kit specifically for the scooter model in use (Annex 1).
- 7.1.2 - Only in the case of wet weather racing is use of the original air box allowed. Changes to said air box are allowed only through the removal of material.

##### **7.2 - Fuel circuit**

- 7.2.1 - The fuel circuit (fuel pump, pressure regulator and fuel pipes) must remain as originally produced by the Manufacturer for the type-approved scooter.

##### **7.3 - Carburetion instruments**

- 7.3.1 - Except as specified in the article below, the carburetion instruments, i.e., the throttle body, injectors and all devices included in the intake pipe, must remain as originally produced.
- 7.3.2 - Only the original intake horns can be replaced with "MHR Intake Horns" specifically for the original bodies (Annex 1).

## Art. 8 - Engine

### 8.1 - General

8.1.1 - Except as indicated in the articles below, the engine must remain as originally produced by the Manufacturer for the type-approved scooter, no works are allowed on the engine (including surface treatments, polishing or lightening).

**8.1.2 - The air filter can be removed from the transmission, as well as the plastic crankcase-covers of the variator and engine.**

**8.1.3 - One or more holes can be made on the balancing piston (third piston) in order to reduce power loss.**

**8.1.4 - It is prohibited to make any changes to the cylinder support surfaces on the crankcase, the measurements of which must be as follows:**

- **Models 4B5: 24.6±0.1 mm.**

- **Models 530: 24.7±0.1 mm.**

### 8.2 - Cylinder kits and cylinder heads

8.2.1 - For all models except the Yamaha model T-Max 560 from 2020 and later, the cylinder and pistons must be replaced with the parts supplied in the MALOSSI kit (Annex 1).

8.2.2 - The pistons, piston rings and piston-pins cannot be modified in any of their parts.

8.2.3 - The intake and exhaust pipes must maintain the weld witness marks.

**8.2.4 - On models 4B5 only, the Malossi valves specifically for the scooter model in use (Annex 1) must be mounted.**

**8.2.5 - The original cam shafts must be replaced with the MALOSSI ones specifically for the scooter model in use (annex 1), said cam shafts must remain original in all their parts, no changes are allowed including the reprofiling of the cams.**

8.2.6 - The use of new MALOSSI parts specifically for the TMax model in use is regularly allowed starting from 30 (thirty) days after the start of their commercialisation in the common market. In certain special cases MALOSSI may authorise the use of said parts starting from a specific date, which will be communicated with sufficient notice through the official MALOSSI Cups website (trofei.MALOSSI.com). The aim of this rule is to give all registered riders the chance to access new parts at the same time.

8.2.7 - No changes to the cylinder block are allowed. The height of the cylinder block produced by MALOSSI for models 4B5 and 530 must be 86.3±0.2 mm.

The height of the cylinder block for the 560 model since MY 2020 must be 85,6 ± 0,2 mm.

8.2.8 - The gaskets of the cylinder head and cylinder must be replaced with those supplied in the Malossi kit (annex 1), their thickness must be as follows:

Models 4B5 and 530

- Cylinder head gasket: 0.6±0.2 mm.

- Base gasket: 1.1±0.3 mm.

Model 560

- Cylinder head gasket: 0.4±0.1 mm.

- Base gasket: 0.8±0.2 mm.

8.2.9 - No changes are allowed on the cylinder head, the total distance between the two surfaces (1) and the height of the combustion chamber between the 2 valves (2) must be as follows:

- Models 4B5: 88±0.2 mm (1) 8.2±0.2 mm (2)

- Models 530: 86.5±0.2 mm (1) 8.3±0.2 mm (2)

8.2.10 - On models 4B5 and 530 the minimum allowed measurement for the squish is 1.15 mm with a tolerance of -0.1 mm.

The Measurement of the squish must be made in compliance with that indicated in the "Squish Height" annex to the current Speed Regulations. The engine temperature at which the test must be carried out is "Ambient".

8.2.11 - The spark plug, with free choice of brand, model and heat range, provided it is available on the common market. The spark plug must remain as produced by the manufacturer, no modifications are allowed. The spark plug, once fixed to the cylinder head, cannot protrude into the internal part of the combustion chamber, except for the electrodes.

## **Art. 9 – Transmission**

### **9.1 - General**

9.1.1 - Except as authorised in the articles below, the transmission must be maintained as original.

### **9.2 - Clutch**

9.2.1 - The clutch must remain as originally produced by the Manufacturer of the type-approved scooter. All clutches indicated by the manufacturer of the vehicle as original spare parts specifically for the scooter model in use and commercialised until the time of the inspection, are allowed.

9.2.2 - The clutch can be calibrated by adjusting the rollers and original springs, or by replacing the latter with those supplied in the MALOSI spring kit (Annex 1).

9.2.3 - The use of Malossi clutch discs is allowed in replacement of the originals.

### **9.3 - Toothed drive belt**

9.3.1 - The original toothed drive belt can be replaced with that supplied in the MALOSI kit (Annex 1).

### **9.4 - Variator**

9.4.1 - The original variator must be replaced with the one supplied in the MALOSI kit (Annex 1).

9.4.2 - Calibration of the variator can be carried out by replacing the rollers with those supplied in the MALOSI kit (Annex 1), and any shims to be interposed between the hub and fixed half-pulley, respecting a maximum total thickness of 1.00 mm. In the event a lighter roller needs to be used, the MALOSI rollers can be lightened by widening the central hole.

9.4.3 - The contrast spring, fixed half-pulley and torque drivers can be replaced with those supplied in the MALOSI kit (Annex 1).

9.4.4 - Material inside the crankcase on the drive side and/or inside the transmission cover can be removed for the sole purpose of preventing the toothed drive belt from rubbing; drilling or cutting these parts is prohibited.

### **9.5 - Final drive models 4B5**

9.5.1 - For models 4B5 only, the final drive parts (chains and gears) can be replaced with specific parts produced by MALOSI, and the original gears can be turned for the sole purpose of installing the MALOSI chains. Said gears must remain recognisable.

### **9.6 - Final drive models 530 and later**

9.6.1 - Only for models 530 and later, the final drive parts (gears) can be replaced, provided parts produced by direct competitors of Malossi are not mounted and provided the original transmission type is maintained.

9.6.2 - For all models for which Malossi produces a specific final drive kit, said kit is the only one allowed as an alternative to the original parts.

9.6.3 - An adjustable pretensioner for the final drive toothed belt can be mounted in replacement of the standard plate with bolt, provided the brand is not a competitor of Malossi S.p.A.

## **Art. 10 - Lubrication and cooling system**

10.1 - The lubrication and cooling system must remain as originally produced by the Manufacturer for the type-approved scooter.

10.2 - Use of the MALOSI electric water pump and relative controller is allowed.

10.3 - The oil filter (if external) and water filling and draining plugs must be tied with a metal safety wire.

10.4 - On the 4B5 model the original radiator can be replaced with the one originally mounted on the 2012 model.

10.5 - The original cooling circuit pipes can be replaced with silicone hoses and heat sinks.

## **Art. 11 - Bodywork**

11.1 - Except as authorised in the articles below, the elements making up the bodywork of the scooter (fairing and plastics) must remain as originally produced; drilling or any other type of intervention that modifies their appearance or shape is prohibited.

- 11.2 - The elements of the original bodywork can be replaced with those in fibreglass marketed by Race Service MALOSSSI for the TMax Cup.
- 11.3 - If the original shells of the front optical unit, rear optical unit and indicators are maintained, they must be taped.
- 11.4 - The original shell of the rear light must be left free of the tape referred to in the previous article only in the event it is used as a rear light when the Race Director declares the qualifying session or race to be wet, or in conditions of reduced visibility at the discretion of the Race Director.
- 11.5 - All scooters must be fitted with a fluid recovery tank with minimum capacity 500cc to which all the crankcase breathers must be conveyed.
- 11.4 - The colours and graphics of the scooter must be the official MALOSSSI ones (annexes 2 or 3), or, with the Organisation's prior approval, those proposed by the Rider, which must include one or more of the following colours: black, red, orange, yellow, white and silver.
- 11.5 - In order to protect the scooter in case of a fall, side bumper protections can be mounted with a maximum height of 25 mm, provided they do not protrude from the side profile of the scooter.
- 11.6 - In derogation of that established in the RTGS, the front windshield must be replaced by the one supplied in the MALOSSSI kit (Annex 1).
- 11.7 - The fairing tip can be reduced in order to increase the ground clearance, also by removing all or part of the plastic covering the radiator and/or under the wings below the foot pegs, provided the fairing remains firmly secured to the frame.
- 11.8 - The seat must be the original one and must be fitted with a locking system to prevent accidental opening.
- 11.9 - The backrest can be removed and the seat covering can be replaced, changing its colour and adding any logos and/or decorative embroidery, provided MALOSSSI competitor brands are not used. Said changes must be approved the Cup Organiser.
- 11.10 - A collection tank must be installed under the engine to collect any fluid leaks from the engine. Said tank must have vertical edges high enough to contain at least half the fluids (water and oil) loaded into the engine; it can be made in plastic or fibreglass and must not protrude past the scooter profile.
- 11.11 - Absorbent (open-cell foam), flameproof (non-flammable) material must be placed on the bottom of the tank to stop the oil from escaping the tank and delay the spread of any flames.
- 11.12 - Plugs can be installed to cover the holes on the fairing after removing the rear-view mirrors. Said plugs must not be produced by Malossi S.p.A. competitor companies.

## **Art. 12 - Electrical system**

### **12.1 - General**

- 12.2.1 - Except as authorised in the articles below, the electrical system must be original in all its parts. The presence of wires, or electrical or electronic parts of an indeterminate nature is equated with a technical irregularity.

### **12.2 - Devices**

- 12.2.1 - The devices must be original.

### **12.3 - Engine control unit**

- 12.3.2 - The engine control unit (ECU) must be original.
- 12.3.3 - Installation of the additional Malossi controller supplied in the kit and indicated in Annex 1 is allowed.
- 12.3.4 - Any changes to the hardware or software of the aforementioned control units is prohibited.

### **12.4 - Additional equipment**

- 12.4.1 - The use of digital tachometers is allowed provided said parts are not by direct MALOSSSI competitor brands.
- 12.4.2 - Except as authorised in the previous articles, the scooter's electrical system must be entirely original, nothing can be added or removed.
- 12.4.3 - The installation of any additional extra equipment produced by Malossi and intended for any part of the electrical system, specifically for the T-Max model in use, is allowed.

### **Art. 13 - Exhaust system**

- 13.1 - The original exhaust system must be replaced with that produced by MALOSSSI specifically for the scooter model in use (Annex 1). Except as authorised in the following articles, the aforementioned exhaust must be original, no changes are allowed.
- 13.2 - The lambda sensor can be removed. If the lambda sensor is removed, the specific plug supplied with the MALOSSSI exhaust system must be used.
- 13.3 - The restrictor applied to the final part of the exhaust (dB Killer) can be removed.
- 13.4 - Installation of a sensor is allowed for the sole purpose of detecting the temperature of the exhaust gas.
- 13.5 - The allowable sound level is 100 dB/A at 5500 revs per minute.

### **Art. 14 – Summary of general safety rules**

**All scooters must comply with that specified in the General Safety Technical Regulations (*Regolamento Tecnico Generale e Sicurezza*, RTGS) included in the current Speed Regulations; riders and teams are therefore invited to read them. Several of the basic safety rules relating to scooters during their use on-track are reiterated by way of example but not exhaustive. In any case, the official and applicable regulations are those specified in the current RTGS:**

- The pre-race technical inspection (Preliminary Operations, PO) of scooters normally consists in a visual inspection by the TCs of the safety requirements and visible technical characteristics of the scooters set out in the Technical Regulations for the Class or Cup. Under no circumstances may non-objection during the PO be used by riders as valid justification for the use of scooters that do not comply with the Technical Regulations.
- During the PO, each rider is entitled to apply a leaden seal to one scooter only. A leaden seal can be applied to the one scooter for a maximum of two different Classes within the same event, provided the technical rules of each Class are respected, as well as the times spent in the parc fermé. A replacement scooter can have a leaden seal applied in the event of proven technical reasons (e.g. accident, breakage, etc.) and must be agreed upon with the TC in charge. The scooter must be of the same brand and model as the one replaced.
- Applying a leaden seal consists in the application of a sticker, a seal in lead or indelible paint, on the frame of the scooter in a clearly visible and accessible area, at the discretion of the Technical Commissioner (TC) in charge. The seal application area must be presented free of previous seals, without any protections, and be perfectly degreased. At any time during the event, the scooter can be inspected to check that the leaden seal is in good condition and/or that the leaden seal is in the name of the rider of the scooter.
- During the preliminary operations (PO), the TC has the right to reject scooters deemed non-compliant with the current RTGS and Class or Cup Regulations. In the event of a dispute, the ultimate decision regarding the conformity of the scooters rests with the 1st TC. Said decision is final.
- The scooters must comply with the RTGS and the Class or Cup regulations at all times during the event; they are perfectly susceptible to inspections by the Race Commissioners, as well as during the PO and technical inspections, and also before entering the track or during qualifying sessions. The rider has an obligation and responsibility to ensure that the scooter complies with the safety regulations before each entry to the track, during the qualifying sessions, warm-up and race.
- The TC has the right to order tests (also destructive) on parts of the scooter deemed unsafe in order to simulate the effects of violent impact, falls, or other possible stresses resulting from use on the race tracks. Under no circumstances can the rider claim against the TC or IMF in order to be reimbursed for any damaged parts during said testing.
- The 1st TC has the right to remove the leaden seal on the frame of a scooter involved in an accident. Said scooter must undergo a new technical verification (with the application of another leaden seal) if the rider believes they can still participate. At any time during the event, the 1st TC has the right to summon a rider to check whether a scooter is deemed compliant, and if necessary, remove the leaden seal on the frame until such time as the scooter complies with the requests of the 1st TC.



- During a technical inspection, the TC in charge has the right to request, inspect, analyse, retain any part or data present on the scooter in order to determine its compliance. Refusal to comply with the requests of the TC is equated with a technical irregularity.
- The object of the technical inspections, instruments and other inspection methods is at the discretion of the TC in charge and cannot be appealed. Except as otherwise specified in the RTGS and in the Class or Cup regulations, no method or measurement tolerance is applied to the measurements taken.
- The angle of rotation of steering on both sides of the centre-line must be at least 15°. End stops or other equivalent devices must be mounted; under no circumstances can the steering shock absorber act as a device to limit the steering angle. In all steering and front suspension positions, the front wheel must never touch any part of the scooter.
- The exposed end of the handlebar, all control levers on the handlebar and of the platforms, must have rounded edges and a spherical end part.
- On the right half-handlebar or on the right side of the handlebar, a red coloured switch or button (kill-switch) must be installed, allowing the engine to be switched off. The kill-switch must be positioned in such a way that it can be easily activated by the rider when holding the grip, and must be kept operative and functional at all times during the event.
- The throttle control (mechanical or electronic) must close automatically when released by the rider. The mechanical throttle controls (also in the presence of a ride by wire system) must have 2 throttle cables, one to open and one to close the throttle. Scooters with carburettor/s on which the throttle cable is directly connected to a guillotine valve are an exception to the above.
- The position of the fork inside the fork plates is free, provided that the coupling must include the complete height of the tightening surface of the upper fork plate. The use of fork plugs is admitted for the coupling with the upper fork plate.
- All scooters must have at least one functional braking system for each wheel axle.
- In all Classes it is mandatory to use a device (lever guard) that protects the front brake lever against any involuntary activation due to contact between two scooters.
- Wheel rims made of composite material such as carbon and/or Kevlar, including those reinforced with carbon fibre or glass fibre, cannot be used.
- The use of lenticular wheels and/or the use of wheel covers is forbidden.
- It is possible and advisable to insert protective pads with rounded edges onto the ends of the wheel pins, with a maximum protrusion from the ends of the wheel pins of 30 mm.
- All tyres must be replaced when their wear exceeds the minimum value set by the manufacturer. Wet weather tyres can only be used if the race or qualifying session has been declared wet by the Race Director.
- The fuel must be contained in a single tank. Except as expressly authorised in the Class or Cup Regulations, tanks made of composite material (e.g. glass fibre, carbon and/or Kevlar) are prohibited. Regardless of the material used to construct the tank, it is recommended but not mandatory to fill the tank with fireproof foam material (such as "Explosafe<sup>®</sup>").
- Supercharging, regardless of the system used, is prohibited in all Classes. The air box can be communicating with the tank.
- In all Classes, all the air entering the supply system must pass through a filter sponge (filter/s) that prevents impurities from entering the engine. The maximum surface area of any air passage holes through the filter sponge must be mm<sup>2</sup> 2.
- Scooters with 4T engines equipped with air box must be equipped with a closed air circuit, in which:
  - \* The purge or breather pipes of the air box must be closed (blocked/sealed).
  - \* The crankcase breathers must end and drain into the air box, either directly or through an intermediate recovery tank.
 The air box and/or crankcase breather tanks must be inspected and eventually completely drained before the start of each qualifying session or race.
- On 4T scooters without air box, all crankcase breather pipes must end in one or more collection tanks located in an easily accessible position and firmly secured to the scooter. The minimum capacity of said tanks must be 500 cc.
- The only authorised coolant in the water circuit is pure water.
- The filling plug of the water radiator must guarantee a perfect seal and must be secured with a binding wire that prevents accidental opening.
- All external parts of the oil circuit, filling and draining plugs, filters, exchangers (water-oil or radiators), any sensors (pressure or temperature) and pipes containing pressurised oil must be tightened at a suitable torque. The use of gaskets

is mandatory, and all parts must be secured with a binding wire in order to guarantee the perfect sealing of the circuit. Flexible hoses external to the engine containing pressurised oil must be the reinforced type with external braiding and crimped on the ends.

- A light with the following characteristics must be mounted on the scooters:
    - \* Have a red light beam, 10-15 Watts for incandescent lamps, and 0.6-1.8 Watts, for LED lamps.
    - \* When the scooter is on the track, the light beam must be continuous (not intermittent).
    - \* Be firmly mounted under or above the tail, in the rear part, near the centre-line of the scooter and be oriented so as to be clearly visible to those behind the scooter at an angle of 15° to the right and left with respect to the longitudinal plane of the scooter.
    - \* Be connected to the scooter's electrical system and activated by means of a switch preferably positioned on the handlebar or half-handlebar so as to allow the rider to turn the rear light on or off while riding the scooter. At the sole discretion of the 1st TC, the use of rear lights powered by an internal battery with switch activated by the rider when riding the scooter, may be allowed.
    - \* Have a watertight casing preventing the infiltration of water that would compromise its operation.
- The light must be turned on only when the Race Director declares the qualifying session or race as wet, and in cases of reduced visibility at the discretion of the Race Director, but must remain mounted and operational (ready for use) for the entire duration of the event.
- Each component of the bodywork must be presented in good condition and fixed to the scooter using systems that prevent detachment when the scooter is on the track, in compliance with the current RTGS.
  - Scooters with 4T engines must mount a bulkhead with raised edges positioned under the engine, on the bottom of which absorbent, non-flammable material must be placed in order to reduce oil leakage in case of engine failure, and to delay the spread of any flames.
  - The fonts used for the race numbers must be clearly legible, homogeneous in colour and possibly have a matt background so as not to reflect sunlight.
  - All riders must wear protective clothing in compliance with that indicated in the RTGS and in the "Protective clothing" annex of the current Speed Regulations. Full responsibility for the characteristics, suitability and correct use of protective clothing rests with the rider, however the Race Commissioners in charge (or their delegated staff in the organisation) reserve the right to carry out checks during the event, even randomly. Refusal on the part of the rider to have their protective clothing checked shall result in their exclusion from the event. Protective clothing must be worn correctly in accordance with the Manufacturer's instructions and be in excellent condition, without any tears, scratches and/or broken parts such as to compromise its protective function.

#### **Art. 15 – Video recording devices**

As a partial exception to that provided for in the RTGS, the use of video recording devices is allowed provided the rules set out in the following points are respected:

- The organiser or promoter of the event may request authorisation from the Race Director for certain riders to mount and use said devices for commercial and/or promotional scopes. The Race Director has the right to refuse the mounting and use of the aforementioned devices.
- Via the Race Secretariat, the Race Director must transmit to the 1st TC the list of any riders authorised to mount these devices, in order that the TCs can carry out the checks specified in the points below.
- Riders who have been authorised by the Race Director to mount and use the video devices have their scooters inspected by the TC in charge, with the devices mounted in their final position, in order to verify their safety. The video devices can be mounted on scooters only in positions that do not represent an obstacle to the rider's view or a danger in the event of contact with other scooters; it is therefore prohibited to mount devices on the rider's equipment (overalls, helmet, etc.). The TC has the right to refuse any mounting deemed unsafe.
- Regardless of the main fixing system, the video devices must be secured in at least one point by a safety wire.
- Any mounting of video recording or transmission devices not authorised by the Race Director and/or not inspected by the TC is punishable with: the application of the fine provided for by the Sporting Rules for non-compliance with riders'

obligations, or as a technical irregularity for cases that are recurring or deemed more serious from the point of view of safe mounting. The final decision regarding the type of sanction to be applied rests with the Delegated Race Commissioner after hearing the opinion of the 1st TC.

- Video recording or transmission devices (including any memory supports) must remain mounted on the scooter for their entire permanence in the parc fermé.
- The Race Director has the right to requisition the memory supports and/or cancel the recorded images.

#### **Art. 16 – Transitory rule**

For all that not expressly contemplated by these Regulations, the current Motorcycling Event Regulations (*Regolamento Manifestazioni Motociclistiche*, RMM) and current Speed Regulations (chapter I “General part”, chapter II “Specialties” and chapter III “Technical regulations” with particular reference to the RTGS), shall apply insofar as applicable.

#### **Art. 17 – Regulatory changes**

Subject to authorisation by the Technical-Sporting Sector of the IMF, the Organiser reserves the right to modify these Technical Regulations, also during the season, promptly notifying its members.



## **Annex 1 – MALOSI parts kit in replacement of originals**

1. Cylinder, pistons, and head and cylinder gaskets
2. Cams
3. Additional MALOSI controller or Master Commander
4. Cylinder head valves
5. Flyscreen glass
6. Variator
7. Fixed half-pulley
8. Torque driver
9. Toothed drive belt
10. Variator rollers
11. Variator spring
12. Clutch springs
13. Exhaust system
14. Air filter
15. Brake pads
16. Brake lines
17. Brake discs
18. Shock absorber and shock absorber bracket (suspension bracket)
19. Intake horns
20. Electric water pump and pump controller



## Annex 2: Contents of Cup Sticker Envelope

Type	Size	Colour	Code	Quantity			
				LEFT side	RIGHT side	Mudguard	Front
<b>Rs24</b>		<b>Standard</b>	99 8189	<b>2</b>	<b>2</b>		
<b>7.1</b>		<b>Standard</b>	99 8190	<b>2</b>	<b>2</b>		
<b>MHR</b>	<b>cm 16</b>	<b>White</b>	33 9774				<b>1</b>
<b>MHR</b>	<b>cm 16</b>	<b>Black</b>	33 9772	<b>2</b>	<b>2</b>		
<b>MALOSSSI</b>	<b>cm 16</b>	<b>Black</b>	33 8776			<b>1</b>	

<b>MALOSSSI</b>	<b>cm 32</b>	<b>Black</b>	33 12649	<b>2</b>			
<b>MALOSSSI</b>	<b>cm 24</b>	<b>Black</b>	33 9760	<b>1</b>	<b>1</b>		
<b>MALOSSSI</b>	<b>cm 32</b>	<b>White</b>	33 12650	<b>1</b>	<b>1</b>		
<b>MALOSSSI</b>	<b>cm 24</b>	<b>White</b>	33 9762	<b>(2)</b>			<b>1</b>

**Annex 3:**

**Layout TMax 530 2012-2016**

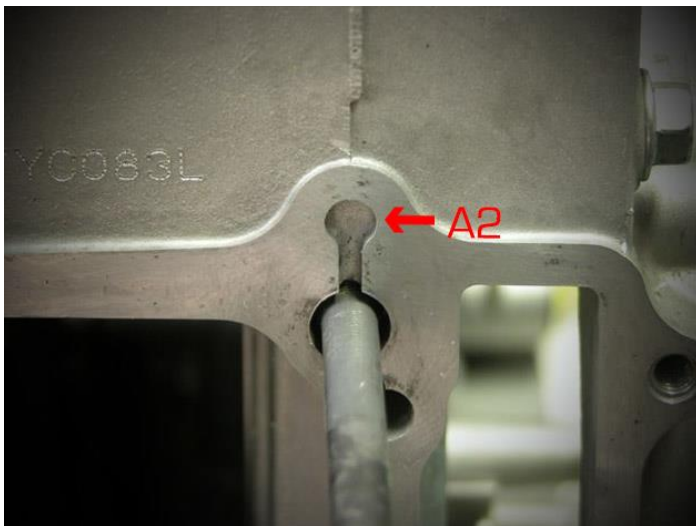
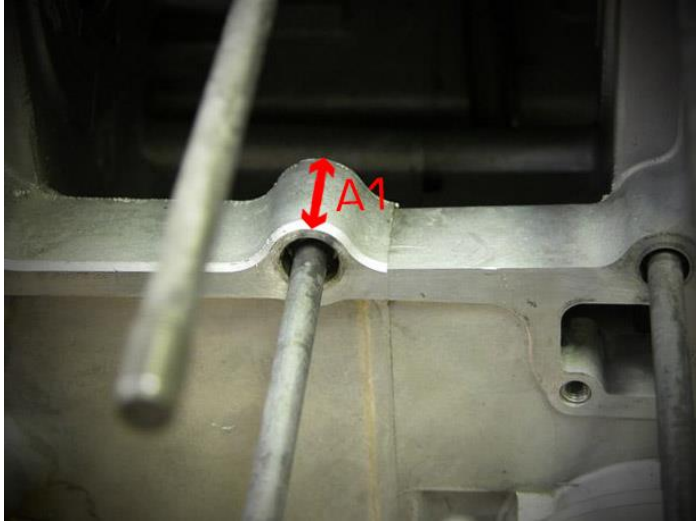


**Layout TMax 4B5 2008 -2011**



#### Annex 4: Reference measurement values for technical inspections

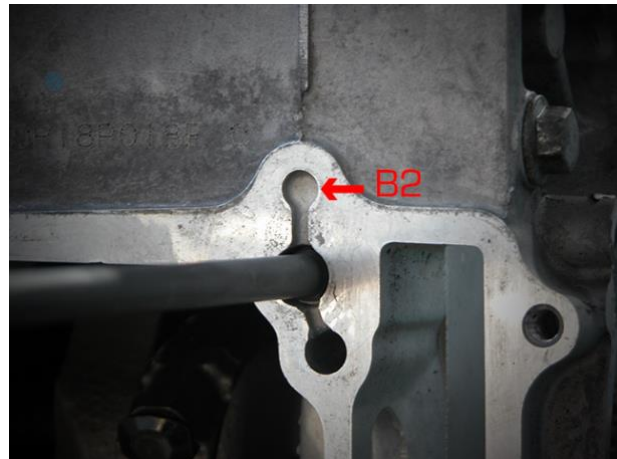
##### YAMAHA T-MAX 500 (4B5)



**A1 (weld height):**      **24.6mm ± 0.1mm**

**A2 (hole depth):**      **2.9mm ± 0.1mm**

**YAMAHA T-MAX 530 (end 2016)**



**B1 (weld height):**      **24.7mm ± 0.1mm**  
**B2 (hole depth):**      **3.0mm ± 0.1mm**