

USER MANUAL

400^{cc}

EURO4

TT40



SCRAMBLER



FIVE HUNDRED



MASH
DREAM MACHINE



MASH
DREAM MACHINE

Congratulations!

You are the new owner of a MASH which embodies a new spirit, a new trend: a motorcycle with a cool new look and new design philosophy "Vintage", a new concept, synonymous with freedom.

Please read this manual thoroughly before using your MASH

Important Cautions

Running-in of your new motorcycle

The first 1000 km operation is very important in the service life of a motorcycle. The correct running-in can guarantee both the longest service life and the best performance of the vehicle. Running-in ensures machined surfaces are gently smoothed to ensure correct engagement.

Careful and patient running-in will ensure the motorcycle gives full play to its excellent performance. It is important not to do anything that may cause overheating of engine components.

For specific running-in method, please refer to "Running-in of a new vehicle".

Please carefully read the manual and strictly observe all instructions.

Special attention should be paid to the contents emphasized with the terms of "warning" "caution" and "note", etc.

Warning.....Relates to personal safety. Ignoring it may result in an accident.

Precaution.....Refers to operational methods that must be followed or measures that should be taken, so as to prevent damage.

Note.....Refers to special explanations to make maintenance or important descriptions more explicit.

The User manual is an important and permanent document of the motorcycle. Please transfer the manual any new owner if you sell your vehicle to move up to your next MASH motorcycle.



Scrambler
400cc

Five Hundred



TT40
Café Racer

Frame No

Engine No

Distributor :

Foreword

Thank you for your choosing a MASH motorcycle. In design, development and manufacture of the motorcycle, our company applies the latest advanced technology and equipment to provide you with a vehicle that is reliable, novel in design and elegant in appearance. Motorcycle driving is one of the most exciting activities. The motorcycle is an ideal means of transport but It can also give you huge driving pleasure. Before driving your motorcycle for the first time, please become familiar with all stipulations and requirements mentioned in this instruction/User manual.

The instruction manual details the correct use and maintenance of the motorcycle. Observing the details in this manual will ensure your motorcycle will perform faultlessly for a long time. Your MASH dealer has skilled and well trained technical professionals who will provide the best maintenance and service to your motorcycle.

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I Main Technical Data

Mash 400cc Euro 4

Engine type	Single cylinder 4T, Air cooling
Displacement	397,2 cc
Compression ratio	8.8:1
Idle Speed	1500±100RPM
Max power	20.4kw/6500 tr/min
Max torque	30.0N.m/5500 tr/min
Bore * Stroke	85.0x70.0
Ignition	CDI
Spark plug type	DPR8Z
Valve clearance	IN : 0.07-0.10mm
	EX : 0.08-0.12mm
Overcurrent protection	15A/10A
Battery	12V9Ah
Headlight	12V55W
Taillight/Brake signal light	Five hundred et scrambler 12V 5W/21W, TT40 Feu à LED
Position indicator	12v 5W
Turning signal light	12V 10Wx4
Turning instruction light	12V 1.7W
Meter light	12V 3W
Far-reaching light instruction	12V 1.7W
Front wheel	Five hundred 100/90-19, Scrambler 90/90-19, TT 40 3/25-18

Rear wheel	Five hundred et Scrambler 130/70-18 , TT 40 130/80-18
Engine oil	SAE10W-30

Engine oil quantity	2200 mL
Length / Width /Height	Five hundred 2130×740×1130mm, Scrambler 2130x800x1190mm
Wheelbase	1420mm
Ground clearance	160 mm
Weight	Five hundred et Scrambler 160kg, TT40 156 kg
Weight max	155kg
Fuel	SP95 or SP98 (SP95 E10 not recommended)
Capacity fuel tank	Five Hundred 13L , TT 40 16L, Scrambler 13L
Speed I	2.615
Speed II	1.789
Speed III	1.350
Speed IV	1.120
Speed V	0.892
End level transmission ratio	2.533
Initial level transmission ratio	2.667

This list is information only. Changes can be made by the manufacturer without warning to customers.

This manual can display photos showing vehicles equipped with accessories

II Operation Instruction

This instruction book illustrates the notes for the standard and safe operation method, and basic maintenance.

To ensure your comfortable and safe riding experience, please read this instruction book carefully.

·The pictures and illustrations in this book may be different from the actual vehicle, due to the difference of model.

·The vehicle is specifically designed for two people (Including the rider himself)



Caution

Do not use polluted fuel ;

Using polluted fuel may possibly cause stain inside the fuel tank, which in turn block the fuel line, and occurs failure when the engine starts, or even cause severe damage to the engine.

Do not use sub-standard or polluted engine oil

Always use decent engine oil, so the engine's performance and longevity can be ensured.

If any failure occurs under the inappropriate usage of polluted oil or petrol, these failure can be worked out through warranty

Protective Wear

[1]、 Protective wear such as helmet with protective mask, dust proof glasses and gloves should be worn during drive for the sake of personal safety.

[2]、 The passenger should wear high boots or long clothes to protect legs from hurt by the heated exhaust silencer during ride.

[3]、 Loose clothes are not suitable for motorcycle drive or ride as they may get caught on the operating lever, kick lever, footrest or wheel, resulting in danger.

- **always wear helmet**
- **wear goggles**
- **drive safely**
- **Pay attention to the muffler which may be on fire because of heat during riding.**

1. Protective clothing
2. Goggles
3. Gloves
4. High boots
5. Helmet

Preparation before Operation

- Read the operating instruction carefully
· maintaining & checking before operation.
- Keep the engine switched off and away from fire.
- There exist harmful substance such as CO in the waste gas , please start engine at the draughty area .
- Proper Dress
- Always wear helmet , gloves and safety goggles throughout
- Do not suggest wearing the uniform which can easily affect operation, it's very dangerous if uniform was hitched by brake beam or driving chain.
- To avoid affecting brake or gearing , do not suggest to wear the slipper during riding.
- Many automobile and motor accident happened is because the drivers ignore riders.
- Make yourself conspicuous to avoid accident which is not caused by you.
- Dress flashy or reflective clothes.
- Do not ride at the other driver's blindness area .

Operation

- The driver should make himself orientate naturally, keep driving favoring .
- Please check yourself whether are unnatural, anxious or excited
- Rider's gesture is very effective to safe operating. Please always keep sitting in the middle of the saddle, particularly do not sit in backseat , in case lightening the weight in front and trembling of handle.
- Passenger should stay on the vehicle, or hold on the driver , with putting feet on the rear footrest.
- When making a turn, make your body tend to the way you turn , if not , there maybe dangerous .
- When driving on the circuitous & uneven road, it is not safe if you do not follow safety caution.
- To drive safely on this circuitous & uneven road , driver should reduce the speed a half as normal speed , and relax shoulder & waist , clench the handgrip .
- When driving , clench the handgrip without one hand or two hands , even lift up the front wheel , that is easily to rollover , and arouse serious accident .

Modification of the vehicle

Caution

Any unauthorized modification of the vehicle or replacement of the original parts can not ensure driving safety and is illicit. The user must observe the regulations of the traffic control authorities. We are not responsible for any vehicle unauthorized modification.

Loading of goods

Caution

The design of the motorcycle requires distribution of the carried goods in certain extent of equilibrium and improper arrangement of goods will adversely affect the performance and stability of the vehicle. The manufacturer shall not take any responsibility due to the reason mentioned above.

Accessory

·To avoid wearing out battery, do not attach any other lighting equipment except MASH's original accessory.

·Check the accessories carefully, insure they will not block your sight , lower ground clearance and slant angle , limit moving of suspension, diversion, or control function .

·Do not add electric equipment , in case that would exceed capacity of vehicle electric system , lower light luminance and engine power .

·The vehicle is designed without side-car or trailer , because it will affect loading capacity seriously .

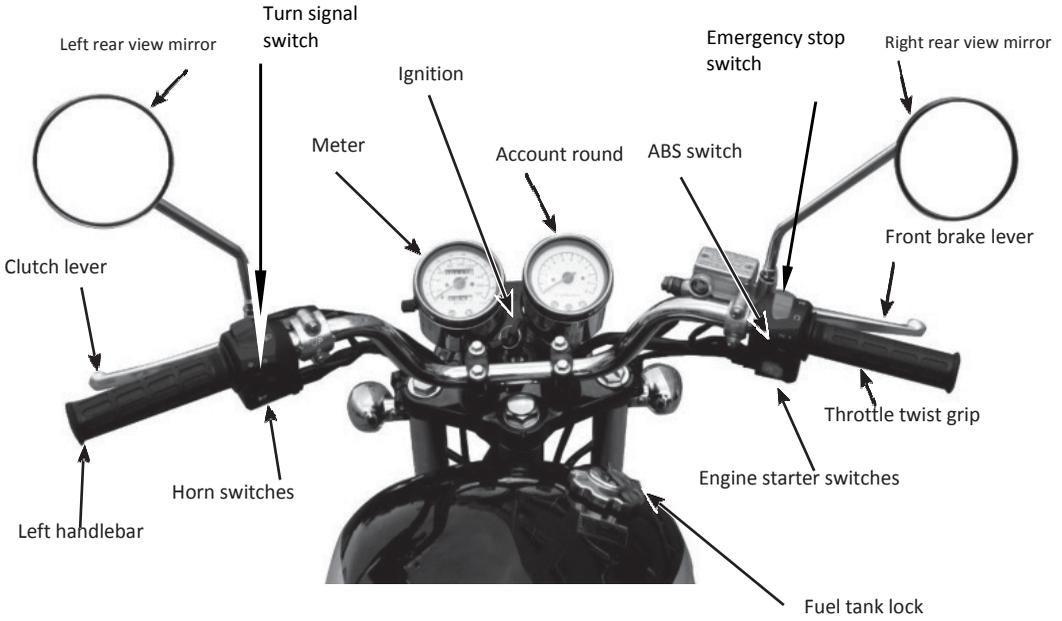
Muffler

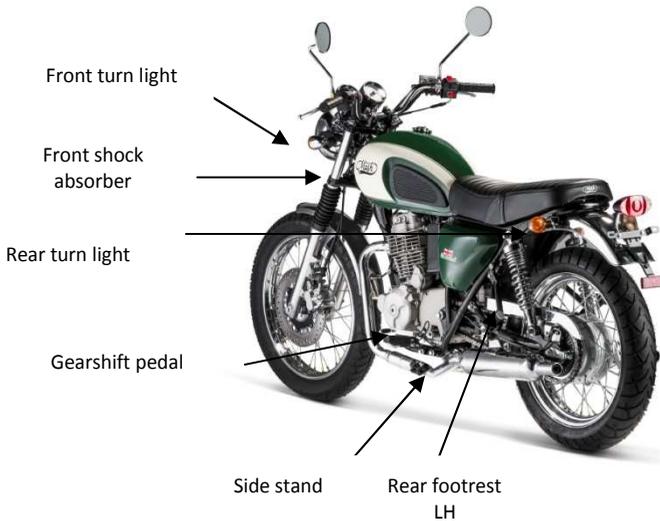
·Passenger should especially pay attention to avoid scalding by the muffler when driving

Caution

- *To avoid scalding by muffler , do not park the vehicle at the walkway .*
- *Passenger should attention that avoid scalded by the muffler*
- *Hay or rattan plant will arouse fire if too closed to the muffler .*

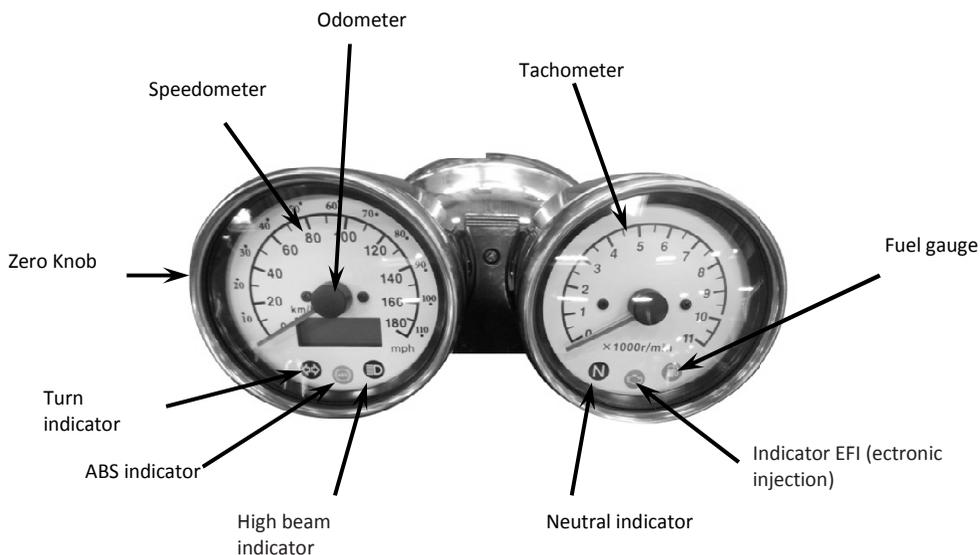
III Parts Position





Meter reading and usage

1. **Speedometer**
Indicate motorcycle speed (Km/h). Do not exceed legal rate-limiting to assure safe riding.
2. **ABS indicator** : When the ABS system is activated, the LED is off. It can be switched off (see procedure on page 28). This indicator will remain on permanently in the event of anomaly.
3. **Turn indicator**
⇒ (R) right turn, blink when turn to right (green).
⇐ (L) left turn, blink when turn to left (green).
4. **High beam indicator**
☰ light on when Far light is switched on.
5. **Neutral indicator**
It is lit up when in the neutral position.
6. **Tachometer**
It shows the speed(rpm) of the engine.
7. **Fuel gauge**
Display tank fuel oil
8. **Trip mileage meter**
It shows the mileage of trip in kilometers.
9. **Zero Knob**
Indicate distance from Zero, by rotating Zero Knob to the Direction of Arrow can return it to Zero.
10. **FAI EFI Indicator** Indicating EFI system situation



! Warning

If the EFI indicator light switches on, contact your local dealer for inspection.
If the ABS indicator light switches on, please contact your local dealer for inspection.

IV Switch instruction

Main Switch used to Start or switch off the Engine .

Position	Function
	For starting or driving the vehicle(making all the main circuits)
	To stop the vehicle (switching off all circuits)
	To lock the steering handle

Caution

·Do not move the Key position when Riding, if the key is on  position during riding, all electric system will out of Action; So during riding do not move the main switch Key in case of accident. If it's necessary, rider should stop the motorcycle before taking out the key.

·Before take out from motorcycle, make sure the handle bar is knocked.

·If the engine is not started when the key is put on  position, the battery will discharge.

·Do not use the key with other sharp Metal keys or key box, in case of scratching the upper board or leads to other kind of lost (suggest to use cloth or leather made key box) .

Headlight Position Indicator

Turn the main switch key to “Q” position, switch on the headlight.



Headlight Switch

Position indicator shows its position to the nearby Vehicles; and reminding other vehicles when wait at crossroad, to avoid Confusion.

Far and Near Light Lamp Instruction

Press the button, the use of far and near light switch can control the distance light

() headlight on full beam

() headlight on lower beam



Direction Indicator

Use indication switch when turning Left and right.

If put main Switch on Q position, the indicator will wrinkle.

Slide Direction indicator can stop the turning signal Operation.

⇒ (R) Turn Right

⇐ (L) Turn Left

Caution

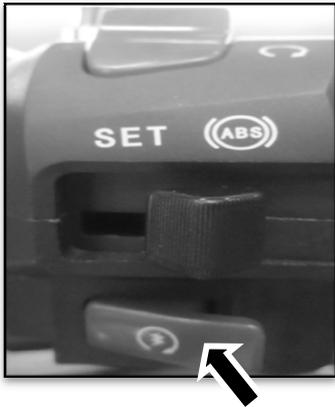
·when finished turning , the direction indicator switch will not be back to original position automatically , please switch it manually .

·Driving with light on will obstruct traffic .



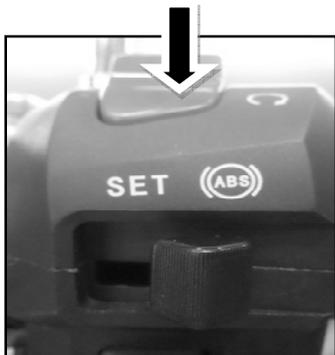
Horn Button

Push the button  to use horn.



Electric Start Button

Press "⏻" button to operate the starter motor. Always pull in the clutch lever, and try if possible to use the starter motor only in Neutral gear.



Emergency Cut-off Switch

Emergency cut-off switch used to Switch off the motorcycle by hand; under normal situation, assure it used when position on , but not .

Caution

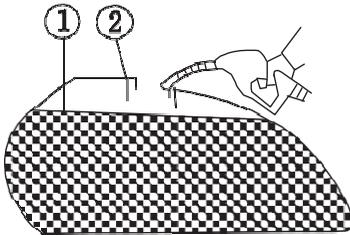
- Emergency cut-off switch only used under urgent situation.
- During riding, turn the switch from  to  will cause dangers, and damage the engine.
- Use Emergency cut-off switch to stop the engine should make sure that the Main Switch on  position; if on  position and engine powered off, the battery discharged.
- If put the Switch on  position, the engine cannot be started.

- **Fuel filling**

The capacity of the fuel tank is 13L. Lead free gasoline SP98 and SP95 are required for the motorcycle. To fuel the vehicle, support it by the main stand, open the lock cover of the fuel tank by the key and fill fuel through the opening, and then close the tank by the cover and take out the key.

Note : Don't use fuel E10

- (1) Fuel level
- (2) Filling tube



WARNING

Do not overfill the tank. Never spray fuel on the hot engine. Fill the tank to the lower level of the filler tube, otherwise the fuel may overflow as it expands due to the increase in temperature.

Turn the engine off and turn the key to the OFF position when filling the tank. It is strictly forbidden to smoke or to light a fire during this operation.

Engine starting

Set the key of the ignition switch to “” position.

Set the emergency stop switch to “” position.

Ascertain the gear is in neutral position by checking the neutral position lamp is lighted.

Ascertain the fuel level in the tank.

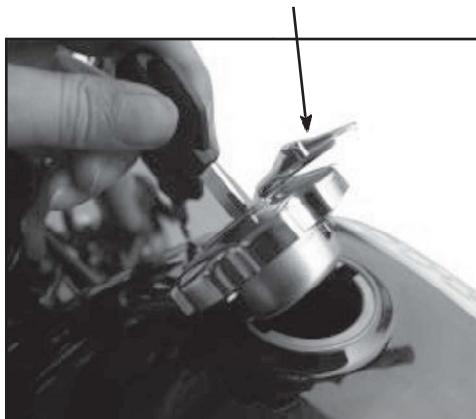
To start engine :

Start the engine by the electric cell motor. Each time you push down the start button, it is recommended that you stop pushing when firing sound of the engine combustion is heard and the engine is fired and running. If the engine is not firing, please stop pushing down the start button in 5 seconds, and wait for more than 5 seconds before next start.

Slightly turn the throttle twist grip by about 1/8 turn but never over 1/4 turn to increase intake air and restart the engine again if the engine started but stalled during idling in cold seasons, and keep the engine running at a higher speed so as to warm up the engine for about 10 seconds or more.

⚠ Caution

Make sure the engine is turned off and away from any heat sources before filling your fuel tank. The Fuel will overflow if it rises above the level mark.



V Correct driving

Caution

The engine can only be started when the gear is in neutral position or clutch is OFF. Otherwise accident may happen.

Unnecessary long time idle running (especially at a high speed) may be harmful to the engine

To stop engine running:

you can also stop the engine running by turn the ignition key to “ ” position to cut off all electric power.

If the start fails

If the engine can't be started, or the motorcycle is not moving, the points below should be checked :

- If there is fuel in the tank
- If the motorcycle is properly operated according to the instruction book shows
- If the fuse is melted
- If the engine start button is working properly
- If the battery is finished with power which cause the engine start button not working, please try the kick start

Run-in of engine

Run-in of the engine is very important. Any operation without run-in (or improper operation) will cause serious damages or failures of function

A. Engine without run-in and the one has been run in have big difference in their power and torque performance.

B. The well run-in engine: the initial wear-out of the parts is well renewed, which eases the damage to the parts in fierce movements, and extend the service life of the engine.

C. Requirements

- 1). Never fully open the throttle when the new motorcycle has not been ridden for more than 350km.
- 2). When riding in each gear, the speed should less than 80% of its allowed speed (the opening of the throttle should be less than 80%), and shift the gear in time.
- 3). Do not let your engine bear too much load in the first 350km.

Maintenance of the engine

- A. When the engine has run in for 800-1000km, a duly check should be taken.
 - 1). Replace the engine oil (the capacity of the engine oil is 2.200L)
 - 2). The adjustment of the valve clearance inside cylinder head is allowed (carried out by MASH service stuffs)
- B. After finishing 800-1000km run-in, please activate ordinary maintenance.
 - 1). Check the spark plug, adjust the clearance and clean up the carbon deposit.
 - 2). Replace the engine oil
 - 3). Tighten each fastener
 - 4). Clean the air cleaner

Checking Before Operations

In order to ensure safety, vehicles must be checked and maintained on time. Please make sure thorough inspection for the vehicle is finished each time before you ride.

- 1、 Engine oil level checking: Insufficient engine oil will cause earlier abrasion, and damages.
- 2、 Fuel level checking, tighten up the fuel tank cap, and check if the fuel pipe is twisted.
- 3、 Transmission chain checking, loosen chain will fall out of the sprocket, severely worn out chain may break, insufficient lubrication may cause the abrasion to the chain and sprocket, and if the chain is getting too tight, then the transmission system will be suffering extra burden, which in turn abase the chain or break the transmission.
- 4、 Check the tire, to see if the tire is under abrasion, tire with scratch or grooves abnormal should be replaced, the tire tread's depth should meets the legal regulation, moreover, tire pressure inspection is also crucial. Both factors mentioned above is key to the motorcycle performance and safety.
- 5、 Brake system checking, to see if the brake system is working normally. Brake fluid amount and the state of the brake shoe should be checked. The brake fluid checking should be done before the engine started, if the level of the fluid is lower than the minimum level line, the cause maybe leaking or the abrasion of the brake shoe. To avoid the utter incompetence of the brake system. Please go to MASH's technician for professional inspection and suggestions, we will also help you to check the condition of the brake pipe, disk and brake shoe, also the distance of the brake lever and pedal.
- 6、 Cable checking, Please check if all the cable for control is correctly installed, and moves smoothly.
- 7、 Throttle checking, check the throttle grip, throttle cable to see if there is

enough gap, and if the acceleration process is smooth, and turning off process is fast and clear.

8、Clutch checking, the cable should have enough gap to move, and can move smoothly.

9、Lights and horn checking, please kindly check if the illumination and the horn are working normally.

10、Rear view mirror checking, sit on the vehicle and keep your body vertical to the ground, see if you get a clear view of the world behind you from the rear view mirror.

11、Steering bar adjusting, sit vertically on the seat, check if the steering bar is at the best position for your safe and comfortable operation, also without the tangle of cables..



Caution

When you check, please make sure your conformity to the safety rules and law.

·The exhaust contains harmful gas, like CO₂, so please make sure when you make the checking with the engine started, keep it in ventilated place.

·The checking should be launched in flat and hard ground, with stable support.

·Watch out for fire when the engine is just switched off, because the engine and muffler are still quite hot then.

·Before you repair or mend, the engine should be switched off and the key should be pulled out.

·If the problems still exist after calibration , please immediately get contact with our authorized workshops , dealers or appointed repair shops .

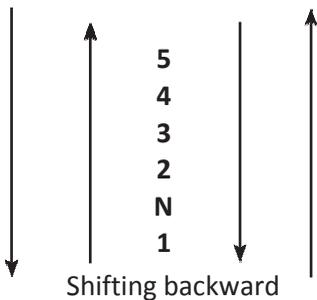
Gear Shift

1. When you ride on the motorcycle and the engine is idling, disengage the clutch and push the gear shifting pedal down by left foot fingers to change the gear from neutral to 1st gear position.
2. Gradually turn the throttle twist grip to increase the speed of the engine to about 3000 rpm, and slowly release the clutch lever until the motorcycle start to move, with a good coordination between the two operations of throttle and clutch to ensure a natural riding start.
3. When the motorcycle reaches a balanced state of running, return back the throttle twist grip and disengage the clutch again, and then push up the shifting pedal to change the gear to the 2nd position.
4. The gear can be shifted up to 3rd-5th gear position in the same way.
5. If you push down the shifting pedal instead of push up, you can change down the gear position.

Gear down operation

If you want to speed up drastically, for example, when passing another motorcycle, gearing down can provide faster acceleration, but if the speed gets too high, damage for the engine may be caused by over-speed.

Shifting forward





Operation

- Before starting the engine, please make sure the side stand is at the right position.
- If the side stand can't be moved smoothly, please check the lubrication of the side stand joint.
- Shift the gear properly according to the motor speed,
- In order to keep the fuel consumption at a lower state, and also to ensure the longevity, please do not accelerate or decelerate too drastically.

Running in

Make 1000km running in at the speed of 6000rpm, this can provide better longevity

⚠ Caution

Always start the vehicle from gear I, and make the starting process as slow and carefully as possible.

- During the riding, if there is any abnormal noise, please contact the authorized distributors for inspection, and take necessary step.
- Keep the speed under the legal limit.

Brake usage

- Use front and rear brake simultaneously.
- Avoid unnecessary sudden brake.

Caution

- If You only use the front or rear brake, the motorcycle may slide down.
- When riding in rainy day or on wet road, when brake suddenly, accidents will occur, so please speed down and use the brake properly.
- Avoid repeat brakes and overheat the brake, which will cause the brake lose effect.

ABS: Your motorcycle is equipped with a system that limits the front wheel locking during periods of intense braking (ABS).

A switch on the right-handed switch allows the ABS system to be disconnected. By default, ABS is always enabled. It is however possible to deactivate it if you wish. The ABS light will flash continuously on the instrument panel.



Disabling ABS:

If the ignition is turned on or the engine is running, switch the switch to "SET" for 3 seconds, as soon as the ABS light comes on, switch back to "ABS": the ABS light will now blink to indicate that the ABS is disconnected.

Engine Brake

The engine can work as a brake if you rotate the throttle grip in as reversed direction, And if you need stronger braking power, lowering the gear to IV or III is suggested, meanwhile, if you need the motorcycle roll march in a lasting decelerating state, or decelerates quickly, you may use the vehicle brake and use the engine brake at the same time.

Caution

When the motorcycle running over speed, do not switch to the lower gear, in case to reduce the speed suddenly and cause damage to the engine and transmission system; and even cause shaking of rear section of the vehicle.

Park

- Shift the gear to neutral, and switch off the motorcycle.
- Turn off the throttle.
- Please use the main stand to keep the motorcycle steady, and keep the motorcycle on the horizontal ground, or else, the vehicle will fall down.

Caution

- Park the motorcycle in safe and traffic free place.*
- The muffler could be severely hot, please pull off the motorcycle away from the place of easy access.*

Park with side stand

Place the motorcycle on horizontal ground, activate the side stand, and move the steering bar to the left side.

If the motorcycle is placed on the terrains below, the motorcycle may possibly fall down.

- If the steering bar is moved to the right side, or the motorcycle is side stand on slopes, sandy, rough or soft ground, the vehicle is prone to fall down.
- In unavoidable situations, necessary steps must be taken to ensure the stability.

Rearview mirror

Before driving, must adjust the rearview mirror angle.



Warning

*Don't put anything on the back seat to avoid interfere with vision mirror .
Don't adjust mirror while you are riding.*



Caution

To use soft paper or similar material to clean mirror, you can use detergent, but please don't spray detergent on the mirror directly.

VI Inspection and adjustment

The following table shows the interval of regular maintenance in travel distance or number of months. At the end of an interval, be sure to carry out the specified inspection, lubrication and maintenance. If your motorcycle is used with heavy loads, such as high power driving in a dusty environment, the maintenance shall be carried out more frequently. Your distributor can give you further guidance. The parts of steering gear, shock absorber, bearings and wheels are critical components, and require professional skills to repair. In the light of safety, it is advisable to have the inspection and maintenance done by your distributor or qualified maintenance staff.

Precaution

In regular maintenance, it may be necessary to replace one or more parts. For part replacement, it is advisable to use genuine parts or equivalent products. No matter if you are experienced in vehicle maintenance or not, the items with * mark shall be handled by your distributor or qualified maintenance staff. For the items without such mark, you can do it by yourself according to the instructions.

Warning

After correct running-in of 1000 km, maintenance is mandatory to ensure the safety of your motorcycle and give it a full play of its performance.

Be sure to make regular maintenance thoroughly according to the instructions in the manual.

TABLE OF MAINTENANCE INTERVAL

Interval: based on odometer reading or number of months	km	1000	4000	7000	10 000
	Number of months	6	12	24	36
Battery		I	I	I	I
* Butterfly throttle, throttle cable		I	I	I	I
* Spark plug		I	R	R	R
* Clutch		I	I	I	I
* Air Filter		C	R	R	R
* Fuel filter		I	I	I	I
* Fuel hoses		<i>Replace every 4 years</i>			
* Engine oil and oil filter		R	R	R	R
* Oil filter strainer		C	C	C	C
* Valve clearance		I	I	I	I
* Timing chain		I	I	I	I
* Chassis bolt and nut		T	T	T	T
* Brake pads front and rear, linings		I	I	I	I
* Brake fluid		<i>Replace every 2 years</i>			
* Front fork		-	I	I	I
* Rear shock absorbers		-	I	I	I
* Wheel and tyres		I	I	I	I
Driving chain		<i>Clean and lubricate every 1 000 kms</i>			
* Steering		I	I	I	I
* Cylinder head nut and exhaust pipe bolt		T	T	T	T

Caption : Inspection : **I** Tightening : **T** Cleaning: : **C** Replace : **R**

Note that the maintenance interval is 3000 km.

Do not forget to certify them in the manual provided by your MASH dealer

Lubrication Table

Item	Interval	Every 6000 km or 6 months	Every 12000 km or 12 months
Accelerator wire		Engine oil or (1)	Engine oil or (1)
Clutch wire		Engine oil or (1)	Engine oil or (1)
Speedometer wire		-	Grease (2)
Driving chain		Lubricate every 1 000 km (3)	
Brake cam shaft		-	Grease (2)
Accelerator grip		-	Grease (2)
Brake wire		Engine oil or (1)	Engine oil or (1)
Speedometer gear case and wheel bearing		-	Grease (2)
Brake pedal		Grease or Engine oil (1) (2)	Grease or Engine oil (1) (2)
Steering gear		Lubricate every two years or every 7 000 km	

Reference IPONE : (1) Spray Cables / (2) Multifonction grease / (3) Spray chain

Remarks:

1. *While driving in a dusty area, it shall be cleaned more often.*
2. *When the odometer reads more than the given maximum value, its maintenance period shall still repeat as per the mile interval as stipulated in the table.*
3. *To ensure safety, the adjustment of timing chain and valve clearance shall only be carried out by persons from MASH Service Station.*

Maintenance Caution

This section introduces the inspection and adjustment of various parts of the MASH 400 EURO 4 motorcycle . It also introduces the technical requirements for the inspection and adjustment.



Explanation:

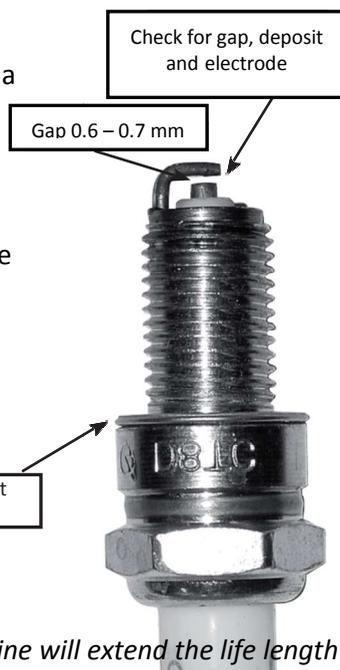
Unless expressly stated or indicated in the maintenance period table, check and adjust all parts of the MASH 400 EURO 4 motorcycle according to the contents hereof before using it.

Spark plug

Remove the spark plug cap. Remove the spark plug with a socket wrench. Visually check whether there is any damage with the spark plug insulator and ablation with the electrodes. If yes, replace them.

Check the spark plug electrode gap with a plug gauge. Spark plug electrode gap 0.6 -0.7mm. Carefully adjust the electrode gap. Then clear away the accumulated carbon and contaminants with a spark plug cleaner or string wire. Check that the spark plug sealing gasket is in good condition.

To mount the spark plug, manually screw up the spark plug first, and then tighten it with a socket wrench. Put on the spark plug cap.



Lubricating oil

Using high quality engine oil designed for four stroke engine will extend the life length of the engine. Please select the SE, SF or SG type high quality engine oil classified in API



Caution

The insufficiency or poor quality of the engine oil will lead to the premature wear-out of the engine.

Substitution of the engine oil

The engine oil plays an important role in the normal operation of the engine and for this reason it is necessary to check the engine oil periodically and to renew it after the first 1000 km and then every 5000 km according to the procedures The following.

Note: When draining, clean the dipstick and replace the oil filter.

Engine oil change

The engine oil must be replaced when the engine is still warm, in order to allow a complete draining of the fluid.

To do this, proceed as follows:

1. Secure the bike by placing it in a vertical position
2. Remove the oil filler cap
3. Unscrew the drain screw and run the used oil
4. Replace the oil filter
5. Tighten the drain screw (Tightening Torque: 20-30 Nm). Fill with 2.2L new engine oil.

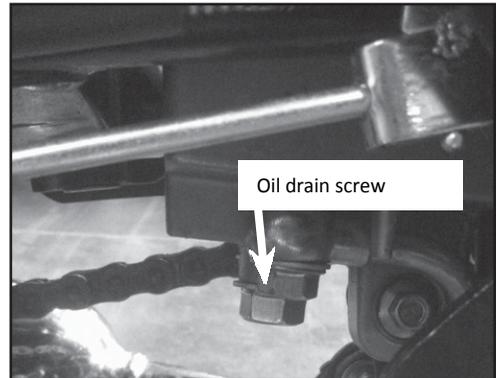
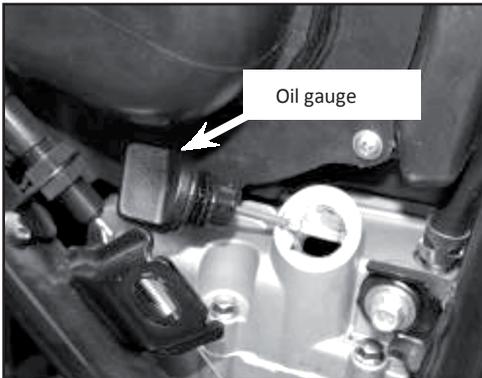
Before each use, check whether or not the engine oil level is among the lowest and highest level of the oil ruler.

- Heat the engine to operating temperature
- Secure the motorcycle by placing it in a vertical position
- Stop the engine
- Check the oil level in the minute

Note: gauge level control (not screwed)

Caution

Carefully check for leaks around the oil filter cover.



⚠ Caution:

When the engine is at a operating temperature, the engine oil might be very hot, so do not make yourself burnt.

Place the motorcycle flatly, take off the plug, then fill the engine oil in the container. Clean the plug thoroughly.

Oil ruler must be mounted properly, or the oil ruler will fail to function and strengthen wear-out of the engine

Cleaning the sump

- Drain off the engine oil thoroughly.
- Disassemble each parts
- Clean each part respectively.
- Fuel with the appointed engine oil
- This work only can be done by professional stuff, please have your sump cleaned at the authorized service station.

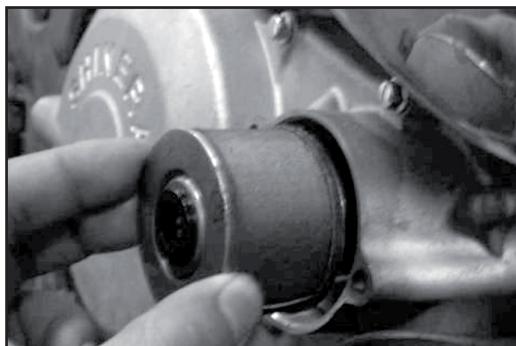
Cleaning oil filter

The oil drain plug (filtering net cover) remove

Out the filter net

The filtering net is dross clean

According to the original machine assembly reduction



Valve clearance

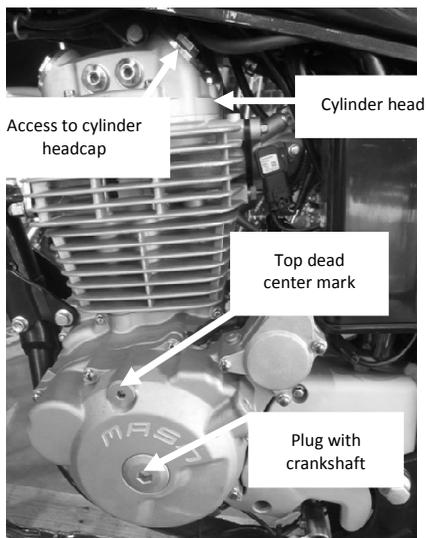
Noise will stem from too big valve clearance. However if there is too small gap or even no gap at all, closing of the valve will be hindered, which will cause many problems such as engine stall, power loss, etc. Therefore, the valve clearance must be checked periodically.

The valve clearance should be inspected and adjusted by a Mash Dealer.

The specified valve clearance is : 0.07-0.10mm for intake valve and 0.08-0.12mm for exhaust valve respectively.

If clearance adjustment is needed, please contact your Mash Dealer.

This adjustment is absolutely necessary on new two-wheeled vehicles at the end of their running-in period (first 1000 km).



Check-up, cleaning of Air Filter

Take out the air filter and check if it is contaminated.

Dismounting:

Open the right side cover. Remove the right side cover screw of the filter, open the right cover and disassemble the air filter.

Cleaning:

Wash the filter in clean washing oil and wipe it dry with dry cloth.

Caution:

The air filter element for use must be intact or the engine will suck in dust and dirt, resulting a shorter service life of the engine.

Water should be prevented from entering into the filter in washing the vehicle.

The filter shall never be cleaned with gasoline or any other agent of a low ignition point.



Warning

Never start the engine without the air filter or a dirty air filter: this may exacerbate engine wear.

The effectiveness of the air filter partly conditioning the longevity of the engine, so it is essential to make sure of its good condition.

Idle speed

Warning

The engine of your Mash is equipped with a gasoline injection system. It is not possible to adjust the idle speed of this engine.



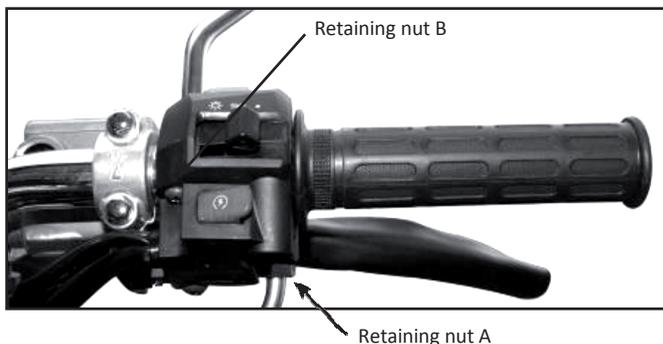
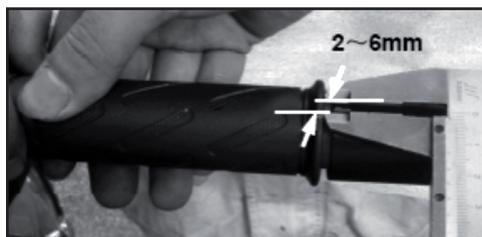
Throttle control

First, check whether the throttle control line is deformed, twisted or damaged

Then, measure the throttle bar free stroke. Turn the bar to lean it against one side of the free stroke, and draw a straight line between the bar and the balance weight with a mark pen, and then turn the bar to lean it against the other side of the free stroke; measure the distance the straight line staggers, i.e. the throttle bar free stroke.

Adjusting methods :

Free stroke 2-6mm.



Fine adjustment:

Pull open the rubber lagging, unscrew the retaining nut A, and turn the adjusting solenoid to adjust to a satisfied free stroke. And then screw up the retaining nut A and mount the protective rubber lagging.

Coarse adjustment: If the fine adjustment is not satisfying, separate the throttle control line with throttle valve body and unscrew the retaining nut B to make adjust the free stroke in a larger range. Screw up the retaining but B after the adjustment.

Check whether the throttle can turn smoothly from full open to full close at any position. If there is clogging, adjust or replace it.

Warning

Use not full throttle to the free stroke motorcycle is a dangerous operation, rotating the handle, not full throttle to the free stroke can make the engine speed increases suddenly.

Brake system

The front brake is disk type, and the rear brake is drum type, due to the abrasion of the brake shoes, the brake fluid will be getting less as time goes by. The performance can't be adjusted, but the brake fluid level and brake shoe abrasion are the two most important factors, that needs to be checked on time. The brake system should be checked frequently, to ensure there is no leaking.

Front brake

Brake handles idling

Pull brake handle lightly till to when you feel the tension, then check the free stroke, if brake handle has no free stroke or too loose, that is the sign of brake system fault.



free stroke of brake handle : 10 – 20mm

Warning

- Brake fluid will arouse inflammation , should avoid being touched with skin & eyes. Once touched, should clean clearly with water, furthermore, if touched with eyes, must go to hospital.
- Storing in the area where child cannot touch.

Brake fluid level

The motorcycle is supported on the flat ground, operate steel wheel and check brake fluid when cylinder cover is at the level position .

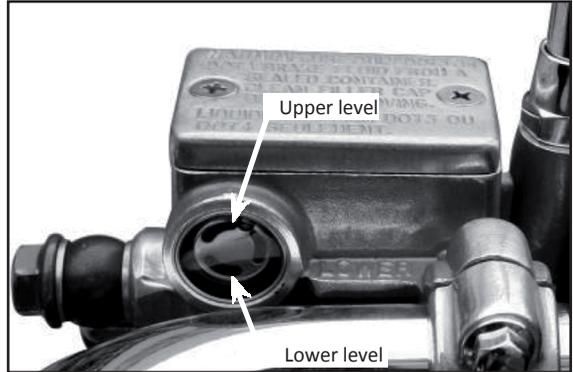
Check fluid level, whether it is below the lower position .

If the brake fluid level tend to low , that means weeping exists in brake system , check the leaking situation or brake system , if this situation happens , the one should check the leaking source , or the damage situation of system , as well as checking the link point and holder's tautness .

Additionally , if the vehicle shakes from left to right as vibrating when driving , the one should check whether the hole or pipe cover touched with other parts .

⚠ Caution

The brake fluid is strongly corrosive, never splash it onto the surfaces of spray painted or plastic pieces; in case it splashes into the eyes or on the skin, immediately flush with large amounts of fresh water and see a doctor.



Make up the brake fluid

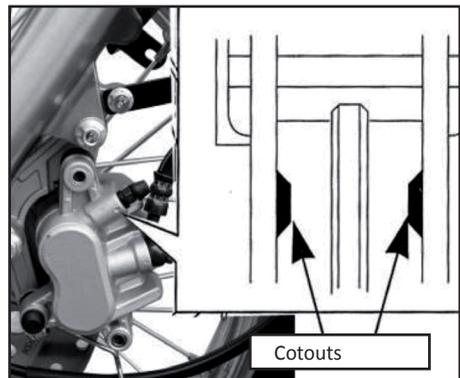
- Turn the handle bar and make the pump cylinder be horizontal with the ground.
 - wipe out the dust and foreign matters from pump cylinder.
 - Loosen the screw of cover, then take out the diaphragm.
- Add the recommended brake fluid into the upper position of cylinder, then tighten the cover with special attention for diaphragm to avoid no foreign matters in.

⚠ Caution

*The brake fluid shall be DOT 4 non-petroleum base brake fluid.
The brake fluid can't be mixed with other impurities; otherwise the braking performance shall be reduced due to chemical change.*

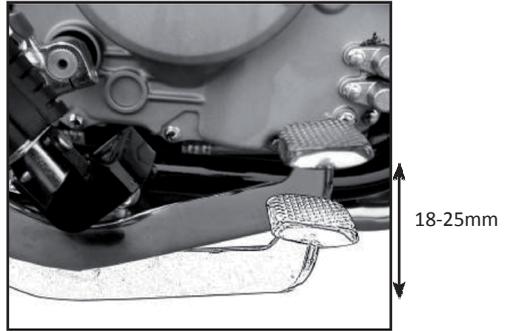
Brake parts checking

Operating brake, if the wears limit line of the brake shoe touch to the side of the brake disc. It shows that the brake shoe has touched the wear limit.



Rear Brake

Pushing the brake pedal by hand, checking the resistance, to confirm the move of the brake pedal whether is good. If not, it could be adjusted by adjusting the rear brake adjustment nut. Twirling the nut to adjust the pedal stroke. Pushing the brake pedal by hand till feeling resistance. Validation the pedal free stroke whether is in the scope of regulations.
Brake pedal free stroke : 18-25mm



Caution

Do not drive immediately after changing linings. Press the brake lever several times so that the packing stretches to the maximum, the lever spring returns to its original position and the brake fluid gradually spreads through the system.

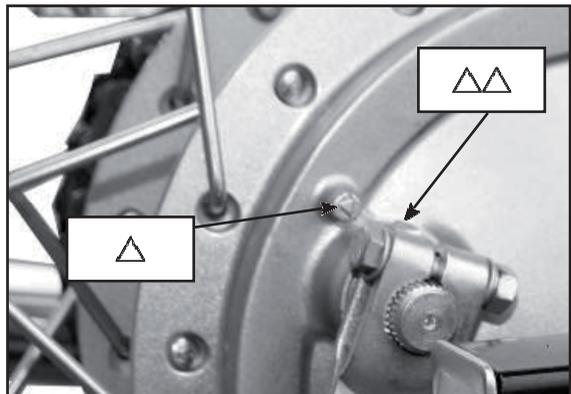
The brake linings wear checking

(1) Pulling the front & rear brake, checking the wear and tear of the brake shoe. If the mark "△" on the drum brake cover and also on the brake cam alignment, shows the brake shoe has been touched the wear limit. Please change it.

(2) If it needs to be changed. Please go to the designated special maintenance station. And it is better to use the parts from our company.

Caution

Please change the brake shoe in time if it has been touched the wear limit. Otherwise it would cause accidents by the lack of strength.



Check the condition of the brake pads (4) regularly. The lining thickness must be greater than 2 mm. If the latter is less than 2 mm, the brake pads are to be replaced.

Degrease the rear brake disc (5) at regular intervals to ensure optimum braking quality at all times.



In the event of a brake fluid leak, contact your MASH dealer.

In the event of a braking problem, contact your MASH dealer.

Type of brake fluid: DOT4



Maxi
Mini

Tire specifications and tire pressure

Check the tire pressure with a tire pressure gauge to see whether the pressure conforms to the recommended value.

Tire specifications and recommended tire pressure :

Tire	Front tire		Rear tire	
Cold tire air	Normally loaded		Fully loaded	
	Front tire	Rear tire	Front tire	Rear tire
	180kPa	200kPa	200kPa	230kPa

If the tire pressure can't reach the specified requirements, check the tire for cuts, embedded iron nail or other sharp articles.



Front wheel tire pressure



Rear wheel tire pressure

⚠ Caution

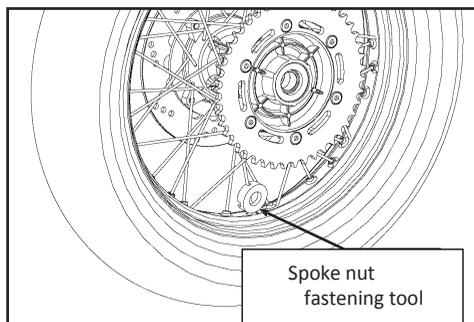
The tire pressure measured when the tire is cooled down shall be the correct tire pressure.

Spoke

Check the wheel for loosened or broken spokes.

Screw the loosened spokes to the specified torque with a spoke nut fastening tool .

The spoke nut torque: 2.45-4.9N.m.



Clutch control line

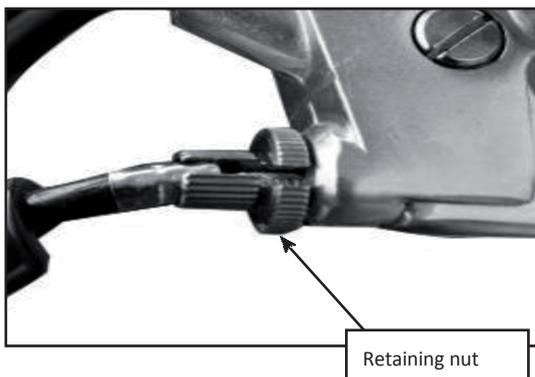
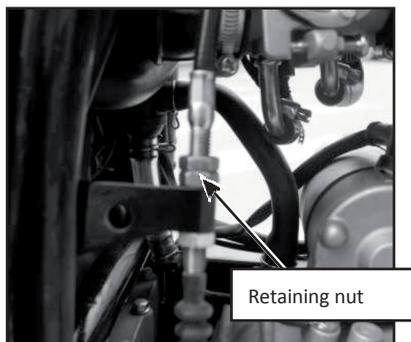
Check the clutch operating handle free stroke. Clutch operating handle free stroke: 10-20mm.



Adjusting methods:

Fine adjustment: Pull open the rubber lagging, unscrew the retaining nut, and turn the adjusting nut to adjust to a satisfied free stroke. And then screw up the retaining nut and mount the protective rubber lagging.

If a satisfactory free stroke can't be achieved by fine adjustment, remove the clutch control line on the handle end to adjust the engine end.



Remove the clutch control line on the handle end, and then remove the clutch operating arm on the engine end; turn the clutch operating arm by a proper angle and remount it, and then mount the clutch control line, finally adjust it to a satisfied free stroke according to the fine adjustment.

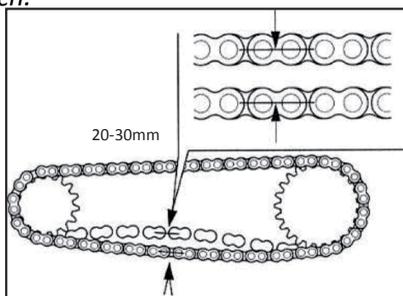
⚠ Warning

Always ensure the clutch operating handle has the proper free stroke! Being too loose will cause a failure of the clutch detachment, while being too tight will cause poor clutch engagement thus damaging the clutch.

Driving chain:

Driving chain tension inspection

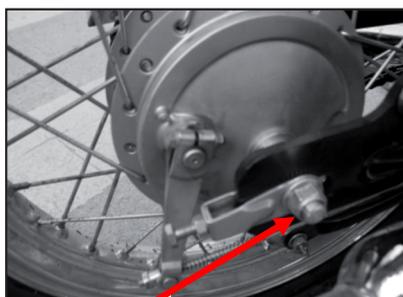
Park the motorcycle on level ground with main stand, and shift the transmission to the neutral position. Check the driving chain tension. Press the chain with a finger up and down to check the amount of movement of the lower chain. Driving chain tension 20-30 mm



If the chain is too loose or too tight, make adjustment.

Adjusting methods:

Unscrew the rear wheel spindle nut and turn the adjusting bolt on the chain adjuster until the specified tension is achieved, and then fasten the rear wheel spindle nut, and check the flexibility for free rotation of the rear wheel and the consistency of the front and rear wheels.



Unscrew the nut from the rear wheel

⚠ Caution

The scale lines of the chain adjuster on both sides must be consistent with each other.

⚠ Warning

The rear wheel spindle nut must be firmly screwed up to the tightening torque of 60-90N.m.

Clean and inspection of chain

First, remove the chain by detaching the spring locking pieces and the removable chain plate.

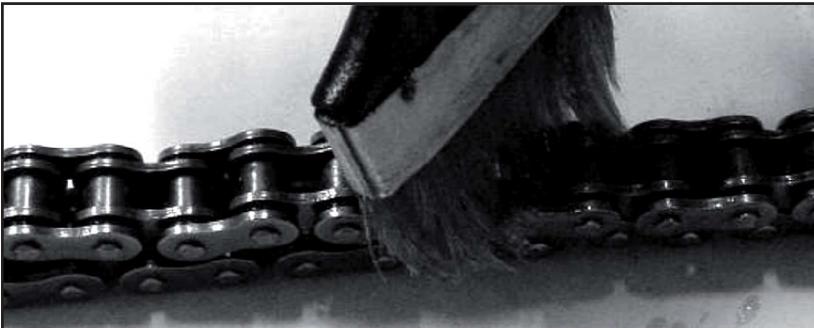
Use cleaning liquid to wash the driving chain and remove dust and mud, and then air dry it; check the chain for abrasion or cracking, and replace it in case of damage.

Remount the chain and coat it with chain-specific lubricant; while mounting the chain, the spring locking pieces shall be in the opposite direction with the chain movement, the left and right scale lines of the chain adjuster shall be consistent and the chain swag (tension) shall be 20-30mm.

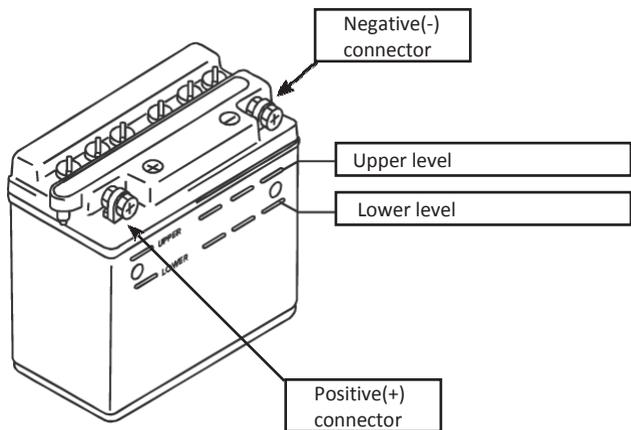
Inspect the abrasion of major / minor sprocket. In case of serious tooth abrasion, teeth missing or broken teeth, replace it.

⚠ Caution

This model uses the oil seal chain, so the selected washing oil shall be in corrosive to the oil seal; while assembling the chain, the locking piece coupling spindle shall be coated with appropriate amount of chain-specific lubricating oil.



Cleaning and coating oil



Battery Checking

Open the left side cover.

Clean away dust and corrosive from the surface of the battery.

Remove the negative, then the positive pole of the accumulator; unscrew and remove the loosen battery strap

Set the vehicle in a vertical position to see whether the level of the battery electrolyte is between the upper and lower mark lines. If it is below the lower one distilled water shall be added to the battery. After filling in distilled water, measure the voltage of the negative pole with a voltmeter; if it is less than 12V, recharge it with a charge power supply.

Seriously corroded conductor connectors of the battery shall be replaced.

Installation of accumulator

Installation is in the reverse order of removal. While connecting the poles, connect the positive pole first.



Caution

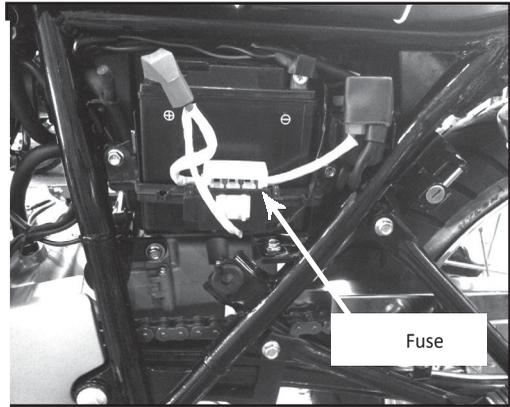
- 1 In this model, both the startup and EMS system are completely powered with accumulator. Therefore, it is quite important to ensure sufficient electric quantity of accumulator, otherwise, startup is impossible.
- 2 Never fill in tap water, because this will shorten the accumulator's life span.
- 3 To dismantle the battery, disconnect the negative (-) electrode before the positive (+) one, and vice versa in installation .Ensure against any contact of the positive (+) electrode with the vehicle body.
- 4 Never have the electrolyte level come over the upper mark line when adding distilled water .Otherwise overflow and corrosion will occur.
- 5 The electrolyte contains sulfuric acid and will cause serious hurt to skin and eyes by contact. In case of contact with it, wash it off for 5 minutes and see a doctor immediately.
- 6 Foreign matter should be prevented from entering into the battery during dismounting and installation.
- 7 The breathing pipe must be kept unblocked.

Replacement of fuse

Set the ignition switch to "OFF" position. The specified fuse tube of 15A should be used for main fuse replacement, and a 10A fuse tube for FAI injection nozzle.

Open the left side cover, remove the fuse holder on the side of the battery and replace the fuse tube.

If the new fuse tube is broken again as soon as it is fitted on, it means that somewhere of the electric parts is shorted unexpectedly.



Caution

Do not use any fuse over 15A

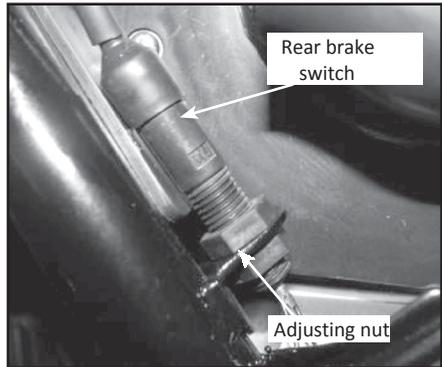
Be sure not to wash the battery when washing the vehicle.

Brake lamp adjustment

If the rear brake lamps abnormally light up and go out, adjust it by turning the adjusting nut. If the rear brake lamp switch is broken, replace it immediately.

The braking light should be lit up on time as soon as the rear wheel is braked. If not, adjustment shall be made by turning the adjusting nut.

With the braking light switch in "ON" position, the braking light should be lit up. If not, check should be carried out to see whether the braking lamp, circuit and switch work normally, Make replacement if needed



Caution

For the adjustment of the braking light switch, the brake needs to be first checked to make sure that the free operating stroke is ensured within the specified range.

If the braking light switch does not work well, the designed safety system BOS (Brake Override System) may not work well, causing problems such as no power when accelerating the throttle, or still powered even braked.

Headlamp dimming

Before driving, check the brightness, direction, etc. of the headlamp.
The adjustment can be made to the headlamp in the left / right and vertical directions.

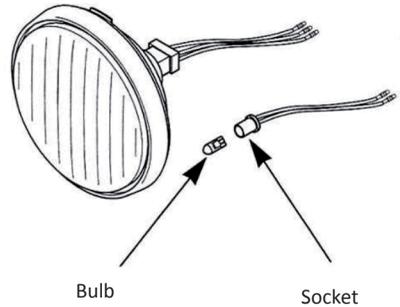
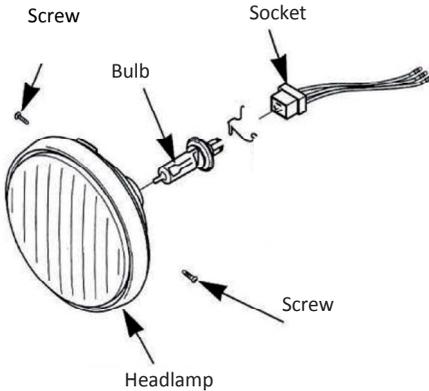
Headlight bulb replacement

- Loose the screw to disassemble the headlight.
- Rotating , directly unplugging
- Rotating and disassemble the bulb.
- Install the new bulb in reverse order



Position lamp bulb

Unplugging the sidelight seat
Unplugging the sidelight bulb



Rear light

The AR light of your TT40 is a led light.
The service life is thus extended compared to a conventional bulb. If necessary, in case of failure it is necessary to replace the complete fire.

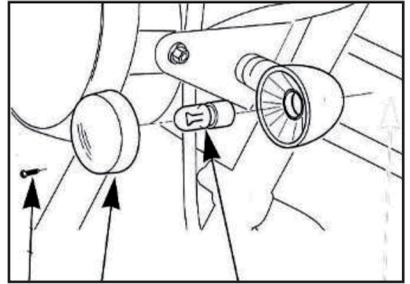


Front and rear flashing bulb :

Remove screws and remove optics.

Lightly press the bulb and turn it counterclockwise.

Install the new bulb by following the steps in reverse order as follows.



Side stand

Shore up the main stand, the motorcycle in proper position. Check the whether the spring have scratch problem or not, the connector is lubricating



Bolts, nuts and fasteners

All the bolts, nuts and fasteners shall be screwed up as per the maintenance period table.

And check all the cotter pins, safety gripping gears, locks, etc.

Clean and wash your bike

Cleaning the motorcycle

To keep a good looking of the covers, please wash your motorcycle often.

The best way to clean your motorcycle is to use warm water combining with detergent to mop up the dirt before using water to clean up.

Warning

If you use high-press water to wash the motorcycle, please do not point the squirt gun at the electrical parts, plug, cables, bearings and ECU, etc. The high press would let the water get into the parts and lead to the failure of function and premature aging.

-Please use ordinary detergent brands to clean your motorcycle, for the dirtiest places, please use brush to clean.

-Plug up the muffler before cleaning with water to prevent water getting into the inside muffler.

-After cleaning with water, please mop up the motorcycle with clothing or just dry off.

Ride for a distance until the engine has reached a working temperature; meanwhile apply brake to evaporate the water left inside the parts.

- Since the motorcycle cools down, please grease all the sliding parts and bearings with lubricating oil and butter, meanwhile grease the oil plug with lubricating oil.

- In order to avoid any sundries getting into the electronic system, please protect your electronic system.

When washing the motorcycle, please remove the air cleaner cover and filter core and using foam or cotton yarn to protect the intake channel.

When washing, please block up the muffler to avoid the water getting into the muffler and engine.

Maintenance in Non-use Time

For the motorcycle to be stored for a long period of time, attention should be paid to the prevention of moisture, sunshine and rain attack in order to protect it from unnecessary damage. Special check-ups should be carried out on those important parts and subassemblies before storage.

1. Change lubricating oil.
2. Grease the chain.
3. Dismantle the battery and put it in a shady, cool and well-ventilated place. It is suggested that the battery be charged once a month to preventing it from over discharged and out of function.
4. Clean the vehicle and apply antirust oil to the part vulnerable to rust.
5. Inflate the tyre as required and support the vehicle up with the main stand.
6. Take out the ignition key and keep it in your well planned place for easy resumption of service.
7. Put the covering over the motorcycle.

Resumption of Service

1. Remove the covering and clean the vehicle. Change the lubricating oil if the vehicle has been off service for over 4 months.
2. Charge the battery and remount it.
3. Filling new fuel to the required level, or replace in-tank deteriorated fuel with new fuel if the motorcycle has not been used for more than 4 months and the engine can not be started.
4. Prior to driving, test the vehicle at low speed in a safe place.

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4. Prior to driving, test the vehicle at low speed in a safe place.

Special notice

Keep safe distance

Don't obstruct the traffic.

Don't drive on footpath.

Overtake from the left side lane.

Make sure brake at anytime

Stop for while should in braking situation

Don't drive too much long distance.

If find abnormal, should stop for checking

Wait 2 to 3 minutes after crash, and then restart the motorcycle.

Turn on headlight when drive at night.

Driving

Before start, look around to avoid accident

- Take back the stander, ride on motorcycle
- Turn on turning light, release brake, make sure the safe situation and then drive.

Warning

Put side stander in original position, if not it will cause accident.

Only drive on vehicle road, if drive on footpath will lead accident.

Drive on uneven road in high speed, will lead rollover and hurt.

Don't drive on grit road, if grit enters in engine or tire, will cause rollover and hurt.

If possible, don't drive near seaside or Calcium chloride road, muffler, some other outside parts, and jointing position are easily rust.

Operation turning

Turning basic principle is combine the centrifugal force and gravitation well to get balance result.

Turning method

① Turning throttle grip to original position, using front and rear brakes.

② Lean towards the inner side, keep constant speed driving.

③ Speed up gradually.

Turning reminder

Don't drive at the inner side of huge vehicle turning area.

Dead angle of sight

Dead angle of sight is the sight area which the rider can't distinguish immediately.

Turning distance of front and rear wheels

Turning distance is the front and rear wheels turning distance

It is related with the length of motorcycle.

Speed effect

Centrifugal force increase, one reason is turning radius increase, another reason is speed. So when turning, keep low speed and close inner side.

Postulate of brake (friction)

Use the friction between tire and road surface.

Brake distance: Because of the friction reduce, at wet road should increase 1.5 times, at ice road should increase 2 times.

Restrict of Brake effort

After brake, motorcycle can't stop as once due to the inertia.

Brake method

Turning throttle grip to original position, use engine brake.

Let motorcycle vertical.

Use front and rear brake.

Impact of crash

Impact force is rising as direct proportion with speed and weight. The force of crash in 50km/h to wall is the same as fall from 10 meters.

Cleaning

Frequent and regular cleaning is an essential part for the maintenance of your bike. The exposure to natural elements (sea breeze, sea water, salt road, sludge, dust ...) and anti-slip additives spread over the roads in winter, can be a source of vulnerability for the components of your motorcycle. Corrosion and rust can occur even on good quality parts. The proper maintenance and regular cleaning of your vehicle will extend the original appearance of the vehicle but also, are essential in order to maintain the guarantee.

Precautions Before Cleaning:

Engine cold, protect the exhaust outlet with a suitable protection (example: plastic bag) to prevent water from getting inside.

The exposed electrical elements must be covered with a plastic bag. Check that the covers and caps are correctly positioned.

With a degreaser and a soft brush, remove any stubborn stains from the crankcase, making sure that they are never applied to the sprockets, drive chain, seals and wheel axles. . Rinsing residues and degreaser have to be done with clean water.

Cleaning :

Cleaners that are too acidic or aggressive are not recommended for washing the motorcycle. Especially for the axes, bearings, levers, pivots, wheels and spokes. If however it is necessary to use for stubborn stains, respect the instructions and time of application of the product. We recommend spraying an anti-corrosion and lubrication product on these items after rinsing thoroughly with water.

Plastic parts and windshields (for equipped vehicles) should be cleaned preferably with water using a soft sponge or soft cloth. Only a mild detergent may be used if some plastic parts cannot be cleaned properly. Rinse thoroughly the product used: badly rinsed it could damage the plastic parts. The use of other products on plastic parts is not recommended (thinner, solvent, gasoline, antifreeze, abrasive cleaner ...).

⚠ Caution, Special precautions: Do not use pressure washer or steam jet: Avoid directing the jet of water close to the following items: instrumentation, cylinders and brake calipers, under the fuel tank, chain of transmission , steering column bearings, gaskets, air box, wheel or swing arm bearings, all electrical elements and also the air vents. Water infiltration could damage these elements.

After use under normal conditions: clean with lukewarm water mixed with mild detergent using a soft sponge and rinse thoroughly. A damp cloth placed a few minutes on the parts having more stubborn stains and insects, will allow the dirt to take off smoothly.

After use in the rain, near the sea or on salt roads: Clean the motorcycle with cold water and mild detergent: do not use hot water, it will increase the corrosive action of salt. Protect the vehicle from corrosion by spraying an anti-corrosion and lubrication product on all metal surfaces, chrome-plated or nickel-plated.

After cleaning:

Dry the body parts with a soft absorbent paper. After being dried with disposable cloth, the drive chain should be lubricated with a specific lubricant to prevent it from rusting.

It is recommended to rub the chrome or stainless steel elements (including the exhaust system) with a chrome care product.

An anticorrosion product will spray on all metal surfaces, chrome or nickel plated.

Lubricate all axes, pivots, bolts and nuts.

Apply wax on all painted parts.

⚠ Caution, Special precautions:

Never use lubricating or greasy products on the braking elements. This will decrease braking efficiency and could cause an accident.

Always use a specific degreaser for braking systems.

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