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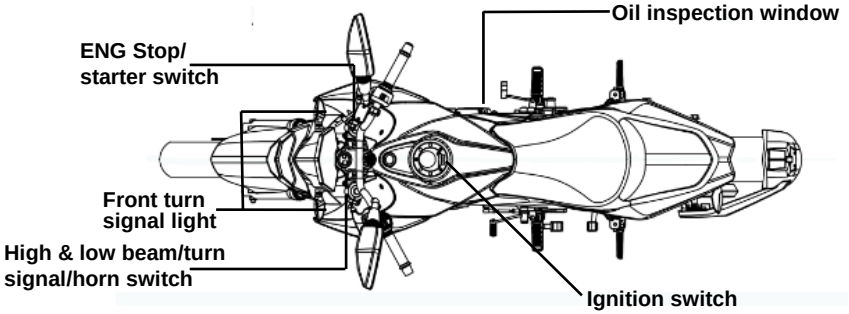
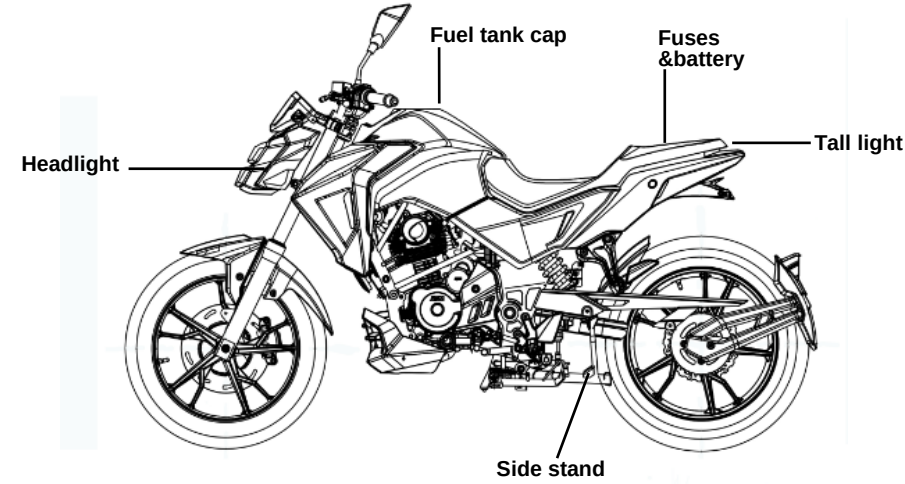
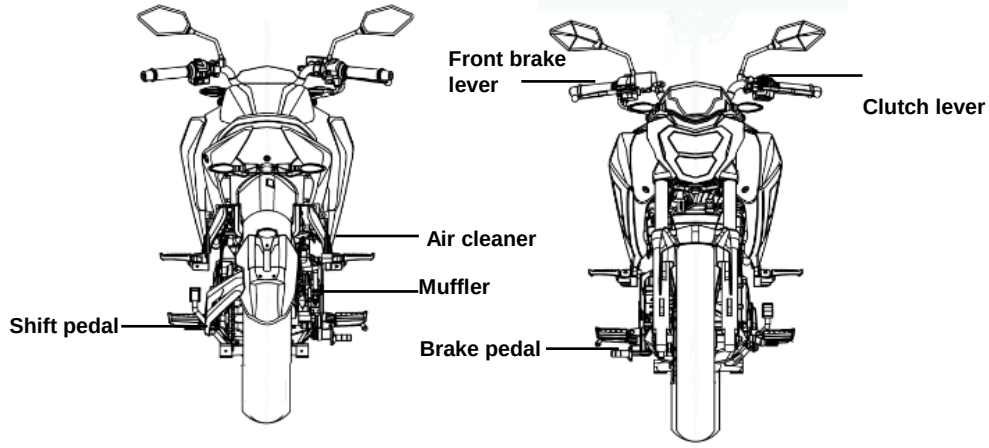
2. CONTROL LOCATION

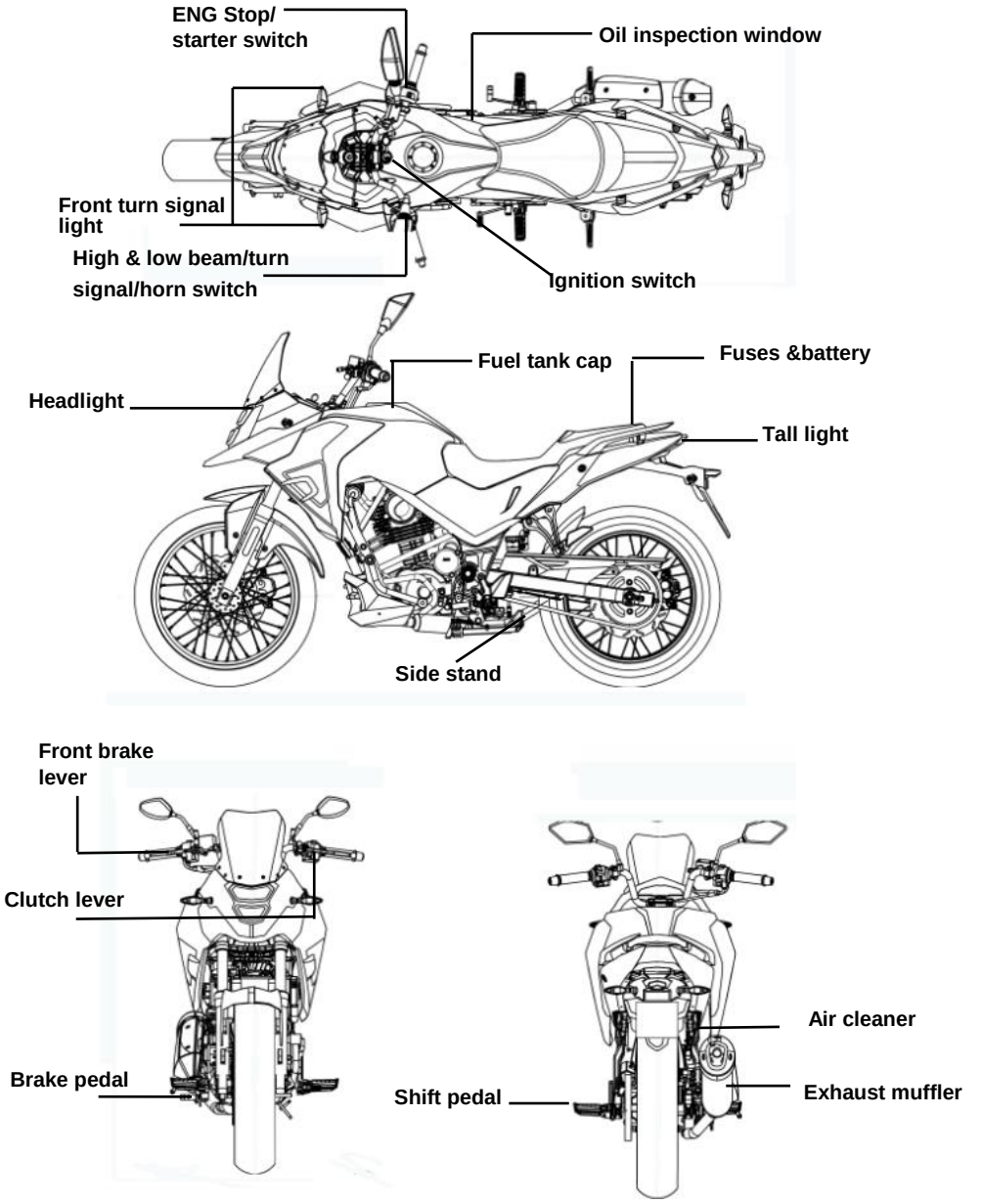
MODEL: ME12B2-EU







MODE: MG12B2/-EUMG20BW-EU/MG30BW-EU



BEFORE RIDING

This manual describes the correct usage of this motorcycle including safety riding, simple inspection methods and so on.
For a more comfortable and safety riding, please read this manual carefully.

For your benefit, please ask your SANYANG dealer the operating manual and carefully read the following:
- Correct use of the motorcycle.
- Pre-delivery inspection and maintenance.

Thank you very much for your patronage
In order to maximize your motorcycle's performance, a periodical inspection and maintenance should be completely carried out.
We recommend that after riding your new motorcycle for the first 300 kilometers, you should take your motorcycle to the original dealer for an initial inspection, and to have your motorcycle inspected periodically every 1000 kilometers thereafter.

- In case the motorcycle's specifications and construction are modified and different from the photos and diagrams on the owner's manual / catalogues, the specifications and construction of the actual motorcycle shall prevail.

3. SAFE RIDING

It is very important to be relax and clothe properly when driving, observe traffic regulations, do not rush, always drive carefully and relaxed.
Usually, most people would ride their newly bought motorcycle very carefully, but after they became familiar with their motorcycles, they tended to become reckless which may result in an accident.

To remind you:
- Please wear a safety helmet, and properly tighten the chin belt when riding a motorcycle.
- Clothes with open or loose cuffs may be blown by wind and cause the cuffs to get caught on the steering handle and thus affects riding safety.
- So, put on clothes with tight sleeves.
- Hold the steering handle by both hands when riding. Never ride with only one hand.
- Observe the speed limit.
- Wear suitable low-heel shoes.
- **Perform periodical maintenance and inspection in accordance with the schedule.**

WARNING!!
- To avoid getting burned by exhaust pipe when taking a passenger. Make sure your passenger has put his/her feet on the pedals.
- After running, the exhaust pipe is very hot, be careful not to get burned when conducting an inspection or maintenance.
- After running, the exhaust pipe is very hot, select a suitable location to park your motorcycle to avoid others getting burned by the exhaust pipe.

CAUTION:
Modified motorcycle will affect its structure or performance, and cause poor engine operation or exhaust noise, which will result in shortening the motorcycle's service life.
Besides, modification is illegal and does not conform to the original design and specifications.
A modified motorcycle will not be covered by warranty, therefore, do not modify your motorcycle at will.

4. DRIVING

- **Keep the related parts of your body such as arms, palms, lumbar, and toes relax and ride with the most comfortable posture in order to be able to react quickly whenever it is necessary.**
- Rider's posture will greatly affect riding safety. Always keep your body's gravity in the center of the saddle, if your body's gravity is on the rear part of saddle, the front wheel load will be reduced, and this will cause the steering handle shaking. It is dangerous to ride a motorcycle with an unstable handle.
- It will be much easier to make a turn if rider inclines his body inward when turning. On the other hand, the rider will feel unstable if his body and the motorcycle do not incline.
- The motorcycle is hard to control on a bumpy, unleveled, unpaved road, try to know the road conditions in advance, slow down and use your shoulder's force to control the handle.
- Suggestion: Do not load objects on the front pedals unnecessarily, to avoid affecting the riding safety and the operation of steering handle.

⚠ CAUTION:

The rider's feeling on the handle is slightly different with a load or without a load.
Overload may cause the handle to swing and affects the riding safety.
Therefore, do not overload your motorcycle.

⚠ CAUTION:

- Do not place flammable materials such as rags between the body side cover and engine to avoid components damaging by fire.
- Do not load objects on areas not specified for loading to avoid damage.

SUGGESTION

To maximize the motorcycle's performance and prolong its service life:
The first month or first 1000km is the wear- in period for the engine and components.
Avoid rapid acceleration, and keep the speed below 60km/hr.

5. USE GENUINE SPARE PARTS

In order to maintain the motorcycle's best performance, each part's quality, material, and machined precision must conform with the design requirements. **"Genuine Spare Parts"** were made from the same high quality materials used for the original motorcycle. No parts would be sold to the market until they could meet the designed specifications through sophisticated engineering and stringent quality control. Therefore, it is necessary to purchase **"Genuine Spare Parts"** from **"Authorized Dealers or Franchised Dealers"** when replacing spare parts. If you buy cheap, or fake substitute parts from the market, no guarantee can be provided either for the quality or durability. Also, it may result in unexpected troubles and lower the motorcycle's performance.

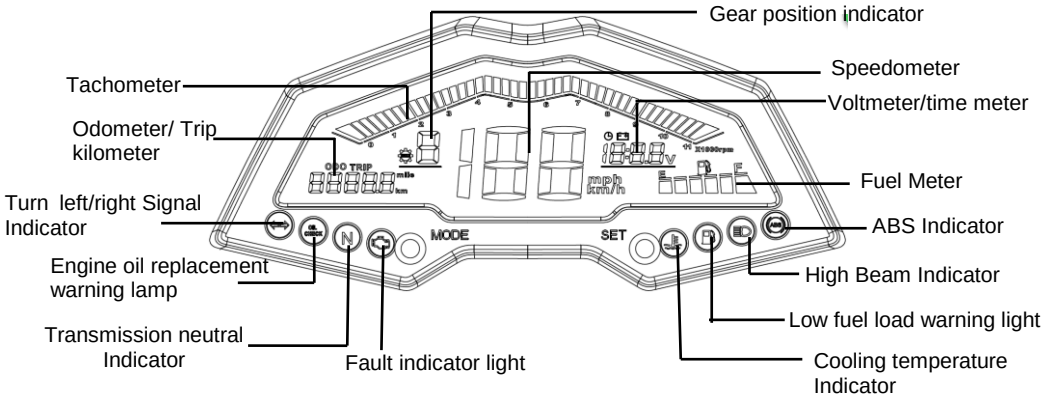
- Always use **Genuine Spare Parts** to keep your motorcycles pure blood and to ensure its long service life.

6. USE OF EACH COMPONENT

(The following is 4 stroke air cooling bike's basic operation, and they could vary from different individual models. Please consult the end of this manual.)

§GAUGES §

The panel figure for speedometer may vary from model to model, but the location usually are the same.



⚠ **CAUTION:**
Do not wipe plastic components, e.g. instrument panel, headlight, with organic solvents such as gasoline…etc to avoid damaging these components.

- **Speedometer：**
  Indicates driving speed（km/h）.
- **Odometer：**
  Indicates total accumulated distance traveled.
- **Trip Kilometer:**
  The rider can measure the trip kilometers.
- **Tachometer:**
  Indicates engine rpm.
- **High Beam Indicator：**
  This indicator comes on with high beam headlight is turned on.
- **Turn (left/right) Signal Indicator：**
  The left or right Indicator will be flashing according to the operated directions of turn signal light switch when it is turned on.
- **Transmission Neutral Indicator：**
  This indicator shows transmission neutral.
- **Gear Position Indicator：**
  This indicator comes on with gear position.
- **Fault indicator light**
  If there is something wrong with the ECU, the warning light will light all the time.
- **Fuel Meter:**
  The pointer in this meter shows how much fuel remains in the tank.
- **ABS Indicator:**
  Normally the ABS indicator light goes on when the ignition switch is turned on and goes off shortly after the scooter starts moving. The ABS (Anti-lock Brake System) indicator light goes on when the ignition switch is turned on and goes off shortly after the scooter starts moving. If the ABS is normal, it stays off. If something is wrong with the ABS, the indicator goes on and stays on. When the indicator light is on, the ABS does not function but if the ABS fails, the conventional brake system will still work normally.

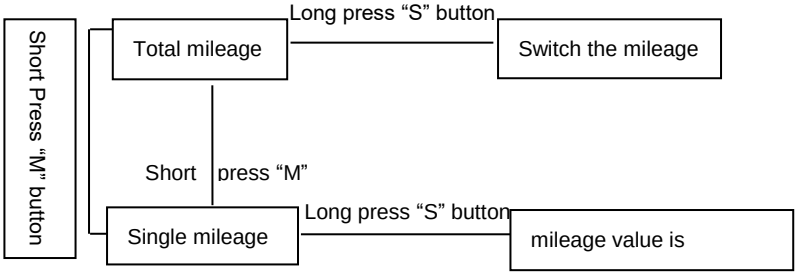
Engine Oil Replacement Indicator

Engine oil replacement indicator light will illuminate when the vehicle is ridden for approx. 1,000 km, which means the engine oil should be checked or replaced. Key on and press the "**M**" button for at least two seconds after replacing the engine oil, engine oil replacement indicator light will extinguish.

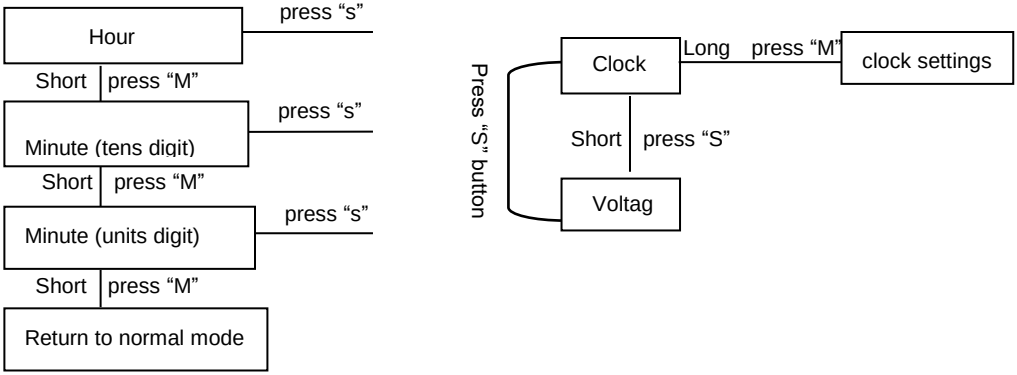
Cooling temperature indicator(For:MG20BW-EU,MG30BW-EU)

Indicates the engine cooling water temperature, engine cooling water temperature indicator if light, should check the cooling water is sufficient and the fan motor is running.

Mileage Setting:



Clock Setting:



Low fuel load warning light:

When there is a little fuel inside the tank, the warning light will be on.

§OPERATION OF IGNITION SWITCH §

IGNITION SWITCH

"ON" position:

- Engine started and lights can be operated this position.
- Ignition switch key can not be removed.

"OFF" position:

- Engine and lights are shut off and can not be started in this position .
- Ignition switch key can be removed.

§OPERATION OF STEERING HANDLE LOCK SWITCH§

"Steering handle lock" position

- Turn the steering handle to left and insert the key into, press ignition switch key clockwise and then lightly turn it to left to the "lock" position.
- The steering handle is locked in this position.
- Ignition switch key can be removed.
- When unlocking, simply turn the key from the "LOCK" position to the "OFF" position.

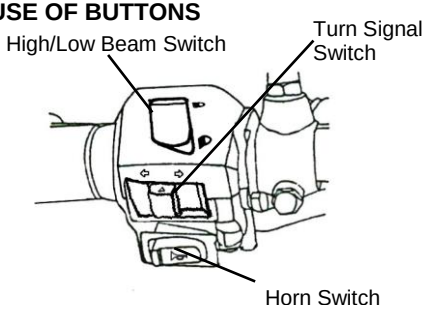
⚠ CAUTION:

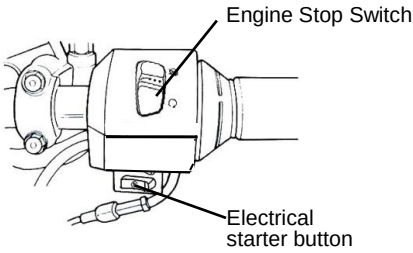
- Make sure to take the key away with you before you lock your seat.

⚠ CAUTION:

- Never operate the ignition switch key when the motorcycle is running. To turn the ignition switch to the "OFF" position, will shut off the electrical system and that may result in a dangerous accident. Therefore, the ignition switch can only be turned off after the motorcycle has been completely stopped.
- To prevent the motorcycle from be stolen, lock the steering when parking.
- Always remove the key and be sure to take the key away with you after locking the steering handle before leaving your motorcycle.
- If ignition switch remains in the "ON" position for a prolonged period after the engine has been stopped, the battery's capacity will be reduced and this may affect the engine's start ability.

§USE OF BUTTONS





- **Engine Stop Switch**

Switch to this position to turn off the engine when a state of emergency.

Switch to this position and the engine can be started.

- **Electrical Starter Button**

This is a starting motor button (switch) for engine starting.

With the main switch "ON",press this button slightly to start the engine.

⚠ CAUTION:

- Release this button immediately after engine has been started, and never press the button again to avoid damaging the engine.
- This mechanism is a safety design. The engine can only be started except squeezing the clutch lever or the gear must be at neutral.

- **High/Low Beam Switch**

  This is the high and low beam of headlight switching switch. Press this switch to switch between high and low beams.


This is for high beam.


This is for low beam. (Please turn to low beam when riding in city)

- **Horn Switch**


Press this button down when ignition switch is in the “ON” position, the horn will sound.

> ⚠ **CAUTION:**
>
> Do not press this button when you are in “No Horn” area.

- **Turn Signal Switch**

  Turn signal lights are used when turning left/right or changing lane.
  Turn ignition switch to the “ON” position, and slide the turn signal switch to left or right. Then, the turn signal lights will flash.
  To release, simply return the turn signal light button to the original position.

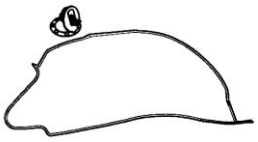

Right-side turn signal light flashing means you intend to make a right turn.


Left-side turn signal light flashing means you intend to make a left turn.

§FUEL TANK CAP §

1. Insert ignition switch key into the lock on the fuel tank cap, and turn the key clockwise, so the cap can be removed.
2. Do not fill above the fuel upper limit when refueling.
3. Align the “△” mark on the cap with the front, turn the key of the fuel tank counter-clockwise to lock the fuel cap. To remove the ignition key after lock the fuel tank cap.

> ⚠ **CAUTION:**
>
> - Main stand should be put down on the ground, engine should be shut off and flames should be strictly prohibited to ensure safety when refueling.
> - Do not fill above fuel upper limit when refueling. Otherwise, fuel will flow out of the fuel tank that may damage the fuel tank’s painting, in serious cases, it may cause a fire to burn down the motorcycle.
> - Make sure the cap has been tighten properly.



§BRAKE §

- Avoid unnecessary sudden braking.
- Use front and rear wheel brakes simultaneously when braking.
- Pull the left brake lever to operate the rear brake (ABS model).
- Avoid brake continuously for a long period of time because that may overheat the brakes and reduce its braking efficiency.
- Slow down and brake early when riding in rainy days on slippery roads. Never apply the brakes suddenly to prevent skidding and falling.
- Using only the front brake or the rear brake increases the risk of falling because the motorcycle is tend to pulled to one side.
- Using the brake pedal to operate the front and rear brake simultaneously (CBS mode).
- Even in motorcycles equipped with ABS, braking during cornering may cause wheel slip. When turning a corner, it is better to limit braking to the light application of both brakes or not to brake at all. Reduce your speed before you get into the corner.

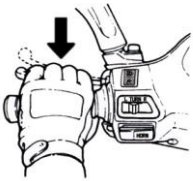
《Engine Brake》

Return the throttle valve handle back to its original position, and apply engine brake.

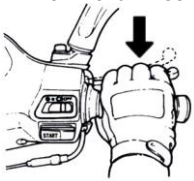
It is necessary to apply brake both for front wheel and for rear wheel intermittently when riding on a long or stiff slope.

ABS model

For Rear Wheel

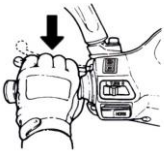


For Front Wheel

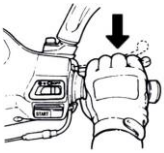


CBS model

For Front Wheel And Rear Wheel



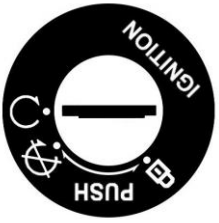
For Front Wheel

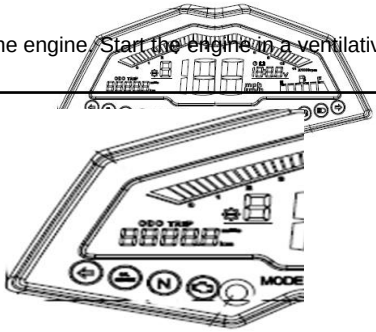


IMPORTANT POINTS AND CAUTIONS FOR STARTING ENGINE

⚠ CAUTION:

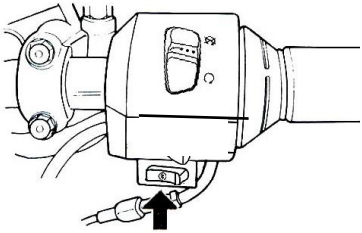
- Please check the oil and fuel volume before starting the engine. Start the engine in a ventilative area.





1. Turn the ignition switch to the “ON” position with ignition key.

2. Shift the transmission into neutral. The neutral indicator (green) lights.



3. Is there enough fuel in the fuel tank?

4. Don’t turn the throttle grip, press the starter button.

⚠ CAUTION:

- Release the starter button immediately after starting the engine.
- Don’t press the starter button when the engine is running.
- If the engine fails to start after 3~4 attempts with the starter button, open the throttle.
- Allow the engine to warm up 2~3 minutes after started, then push the choke lever close (Apposition).

⚠ CAUTION:

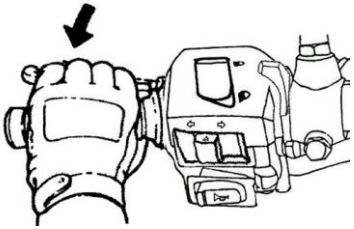
- If engine can not be started after starter motor running for 3~5 seconds, turn the throttle valve handle 1/8~1/4 turns, and then press starter button again for an ease start.
- In order to avoid damaging the starter motor, please do not press the starter button continuously over 15 seconds.
- If engine still can not be started after pressing starter button over 15 seconds, stop and wait for 10 seconds before start it again.
- It is harder to get the engine started after the motorcycle has been left idle for a long time or after refueling only after the fuel has been depleted. Then, it is necessary to press starting lever or starter button several times, and keep the throttle valve handle at the close position to start the engine.
- It may need several minutes to warm up engine if it is a cold start.
- Exhaust contains harmful gases (CO), therefore please start the engine at a well ventilated place.

7. RIDING THE MOTORCYCLE

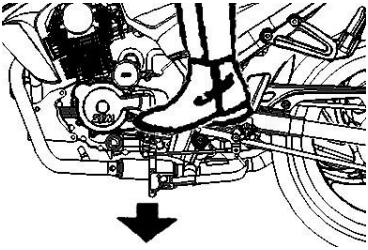
§SET UP RIDING §

- Check the brakes and tire pressure before riding.
- Ride the motorcycle from left side, put the foot on the ground to prevent it from falling over.
- Start and warm up the engine.

1. Squeeze the clutch lever fully, then push shift pedal down to engage the 1st gear.



2. Then release the clutch lever slowly, and at the same time, open the throttle gradually, the motorcycle will move.



⚠ CAUTION:

- After the engine was started and before riding, don't operate the throttle grip rapidly to rise up the engine speed.

- Change the gear position according to the driving speed.
- The relationship between speed and gear position is on the right table.
- Change the gear position according with the table can get the good performance and fuel economy of the motorcycle.

Speed	20 40 60 80 100 120 140
1st gear	
2nd gear	
3rd gear	
4th gear	
5th gear	

⚠ CAUTION:

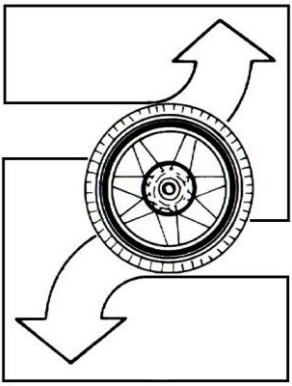
- Do not operate the transmission when the engine is not running.
- Do not push the shift pedal rudely to prevent the transmission from be damaged.
- Control the driving speed for passing other vehicles.

⚠ CAUTION:

During the first 1000km, it is better to drive in low speed for running the engine in good condition and long life.

- Change the engine oil and clean the oil filter screen after first 300km.
- It is better to drive in low speed after have just replaced the engine oil.
- Warm up the engine before start riding.

§DRIVING IN GRADE §



Up Grade

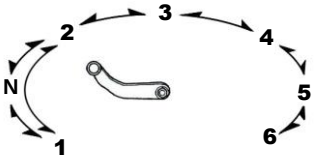
Driving up a slightly grade can drive with high position gear. Under heavy loading or steep grade driving condition, It must drive with low gear.

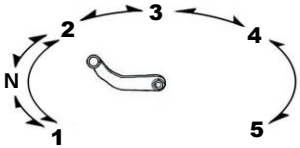
Down Grade

Close the throttle and operate the brakes when driving down a slight grade. Shift the gear to low gear in case of heavy loading or driving down steep grade condition.

> ⚠ **CAUTION:**
> - Braking must apply both the front and rear brakes.

§TRANSMISSION OPERATION §



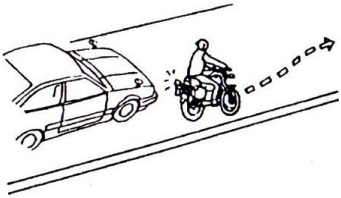


- The change pedal is located on the left side of the engine. Shift transmission to the lower gear when driving hard or down grade.
- Squeeze the clutch lever fully, operate change pedal to the proper position, then release the clutch lever to make a gear change.
- Don't operate the transmission when the engine is not running.
- Don't operate change pedal rudely, or the transmission will be damaged.
- Shift the gear to the next lower position for overtaking other vehicles.

This limit speed for shift to lower gear.

$5^{th} \rightarrow 4^{th}$	Below 80km/h
$4^{th} \rightarrow 3^{rd}$	Below 70km/h
$3^{rd} \rightarrow 2^{nd}$	Below 50km/h
$2^{nd} \rightarrow 1^{st}$	Below 25km/h

§CORRECT RIDING §



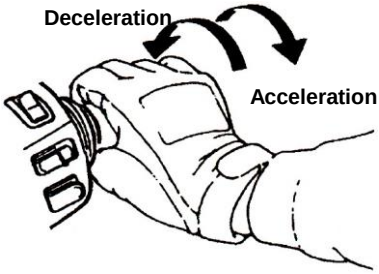
Optimum Start Riding

- Turn on the turn signal and make sure of no vehicle coming behind before start riding.

§THE CONTROL OF THROTTLE VALVE HANDLE §

Acceleration : To increase speed. When riding on an inclined road, turn the throttle valve handle slowly to allow the engine to output its power.

Deceleration : To decrease speed.



Maintenance Performance-During The Initial Period, It Is Better To Drive In Low Speed For Running The Engine In good condition and long life.

During the first month or first 1000 km, never excess 60km/h.
Avoid abrupt acceleration.
Avoid engine running in RPM (over 8000RPM) while under no load.
Do not operate throttle full open from idle running of engine.

Never Making Abrupt Braking Or Making A Full Turn.

Extreme braking or making a full turn may cause wheel slip.
When riding in wet or rainy conditions, making abrupt braking or making a turn may cause wheel slip, may lose control of the motorcycle.

Extreme Caution When Riding In Rainy Condition.

When riding in wet or rainy. Conditions needs longer distance to stopping the motorcycle. Slow the motorcycle down early to brake.
When descending a grade, close the throttle fully and use both brakes to slow the motorcycle.

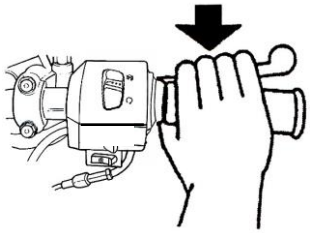
§PARKING METHOD §

Brake-Apply both The Front And Rear Brakes.

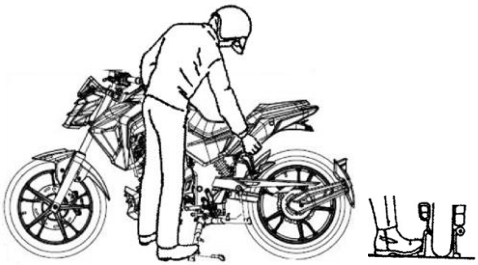
- Close the throttle then squeeze the brake control lever.
- “Brake slightly in beginning, then squeeze tightly”, it is the best way to brake.

> ⚠ **CAUTION:**
> - Use of only the front brake or rear brake may cause wheel slip.

- **When approaching the parking lot:**
  1. Turn on the turn signal light early, and pay attention to the vehicles in front, from rear, left and right, then take the inner lane and approach slowly.
  2. Return the throttle valve handle back to its original position, and apply brakes in advance. (Brake light comes on when braking to warn drivers of vehicles behind.)



- **When stop completely:**
  3. Press the turn signal switch back to its original position, and turn the ignition switch key to the “OFF” position to shut off the engine.
  4. Get off the motorcycle from left side after the engine has been stopped, and select a parking place where the motorcycle will not interfere with traffic and the ground is level, then put down motorcycle’s main parking stand.
  5. Hold the steering handle with your left hand, and hold down the front end of saddle or hold the parking handle on the lower-left side of saddle with your right hand.
  6. Press the main parking stand with your right foot, put down the main parking stand firmly on the ground.



To remind you: Lock the steering handle and remove the key after parking to prevent the motorcycle from being stolen.

> ⚠ **CAUTION:**
> - Park your motorcycle at a safe place where it will not interfere with traffic.

8. INSPECTION AND MAINTENANCE BEFORE RIDING

(Please refer to the components location diagram for the following components.)

§ROUTINE INSPECTION §

Check Items		Check Key Points
Engine Oil		Is there enough engine oil?
Fuel		Is it enough? Is it Octane 90 or above
Brake	Front	Braking condition? (Brake lever free play: 10~20mm)
	Rear	Braking condition? (Brake pedal free play: 20~30mm)
Tires	Front	Is tire pressure normal? (Standard: 1.75kg/cm^2)
	Rear	Is tire pressure normal? (Standard: 2.0 kg/cm^2 for 1 person, 2. 25 kg/cm^2 for 2 persons)
Steering Handle		Does the handle vibrate abnormally or is difficult to turn?
Speedometer, lights, and rearview mirror		Is it operated properly? Do lights come on? Can it be seen clearly from behind?
Tightness of Main Components		Are screws, nuts loosen?
Abnormal Points		Do the previous troubles still exist?

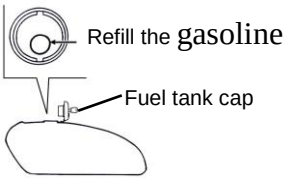
⚠ **CAUTION:**

- If any problem founded during routine inspection, correct the problem before using the motorcycle again, have your motorcycle checked and repaired by the **"Dealer or Authorized service personnel"** if necessary.

§FUEL INSPECTION §

Check fuel quantity, see if it is enough for your destination

- This motorcycle's engine is designed for using the unleaded fuel of Octane 90 or above.
- Firmly secure the main stand on the ground, shut off the engine and keep flames away from the and keep flames away from the motorcycle when refueling.
- Turn and open the fuel tank cap, then refill the gasoline.
- Do not fill above fuel upper limit level when refueling
- Turn the fuel cock to the "ON" position after refilling the gasoline..



⚠ **CAUTION:**

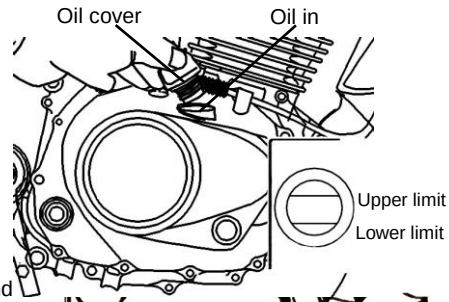
- Stop the engine and keep away from spark and flames when refilling the fuel.
- Make sure that the fuel tank cap has been locked tightly after refilled.

Leakage

Check fuel cup, tank, tube and carburetor for leaks.

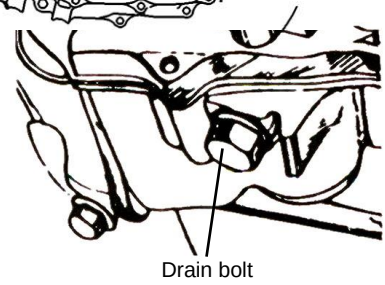
§ENGINE OIL INSPECTION AND CHANGE §

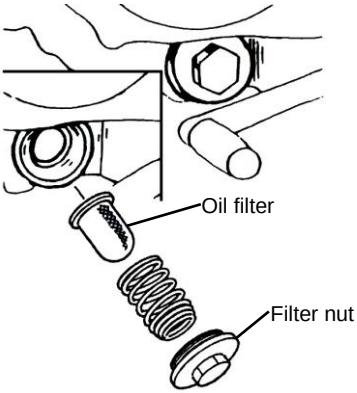
- **INSPECTION:**
  1. Use the main parking stand to support the motorcycle on a level ground, remove the oil cover after engine stopped for 3~5 minutes.
  2. Check whether oil level is in between the upper and lower marks through oil level window.
- Add oil to upper limit if oil is under the lower limit. (Check cylinder, crankcase…etc for leakage.



OIL CHANGE:

- Change period: First 300km for new motorcycle, and the engine oil has been just renewed every 1000km thereafter.
- Service more frequently when riding in dusty or cold area.
- In order to maintain the engine's maximum performance, check whether the engine oil is enough every 500km. Add oil to upper limit if the engine oil has been found to be inadequate.
- Engine Oil : Use (API) SJ MA 10W-30 grade or better engine oil. Otherwise, damage will not be covered by warranty. （especially suggest USE SM 10W-50）.
- Oil Capacity : 1.2 Liter (1 liters for routine change), oil filter change: 1 liters.
- MG30BW-EU:Oil Capacity : 1.7 Liter (1.55 liters for routine change), oil filter change: 1.55 liters.
-
- Use SAE 5W-40 when outside temperature is below 0 ℃





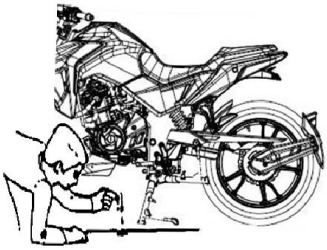
【Oil Filter Cleaning】

The oil filter in engine left side, near change pedal.

Open the filter nut assembly of the filter, and remove the filter. Remove the foreign materials from the filter by using a gasoline or air spraying gun.

⚠ WARNING:

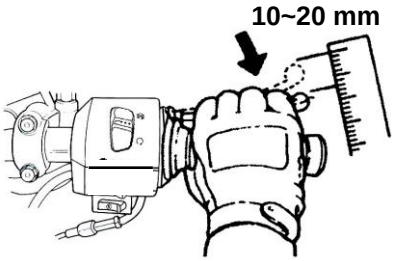
- Oil level will not be correct when checking the oil level with the motorcycle parked on an unleveled ground or immediately after the engine stopped.
- Engine and exhaust pipe are hot right after engine stopped. Pay special attention not to get burned when checking or replacing engine oil.
- If the oil lever approach lower limit again after refilled, check the engine for leaks and refill it again.
- Keep away from spark and flames when refilling the oil.
- Screw in the drain bolt and the oil gauge tightly after refilled.

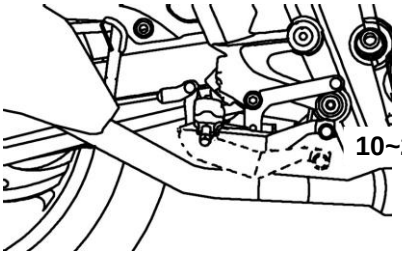


§INSPECTION AND ADJUSTMENT OF BRAKE FREE PLAY §

INSPECTION: (Brake lever and pedal free play must be checked with the engine shut off.)

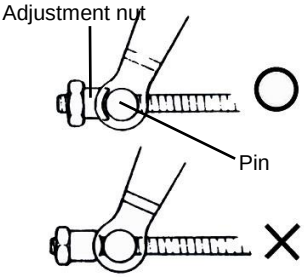
- Brake lever and pedal free play for front and rear wheels.
  When checking the hand-braking lever for front wheels, its free play (the stroke of hand-braking lever from no braking to initial braking) should be 10~20mm. It is abnormal if the feel is spongy when holding the hand-braking lever forcefully.
  When checking the foot-braking pedal for rear wheels, its free play (the stroke of foot-braking pedal from no braking to initial braking) should be 10~20mm. It is abnormal if the feel is spongy when press the foot-braking pedal forcefully.

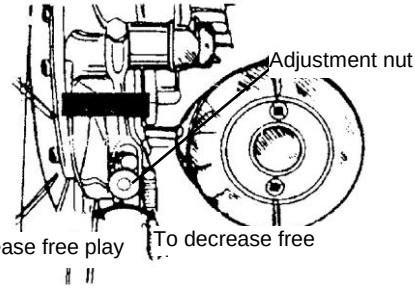




Adjustment:（Drum type）

- The indentation of brake adjustment nut must be aligned with the pin. (see below figure)

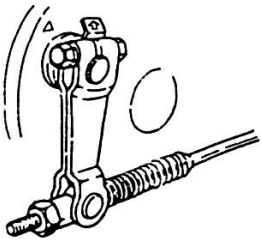




- Turn the adjustment nut on brake arm of front and rear wheels to adjust the free play of hand-brake lever.
- Hold the hand-brake levers after adjusting with both hands until there is effective brake feeling.
- Measure the free play with a ruler.

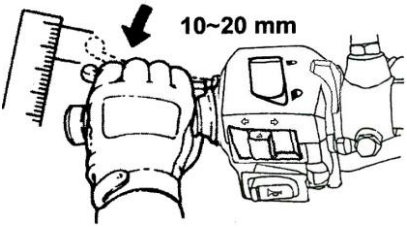
⚠ CAUTION:

When free play is between 10~20 mm, check brake indicators of front and rear wheels. If the arrow on the brake arm aligned with the "△" marked on the brake disk, that means the brake lining has been excessively worn, and must be replaced immediately.



§CLUTCH LEVER §

The clutch lever free play should be 10~20mm. Check the free play and turn the adjusting nut for adjustment if necessary.

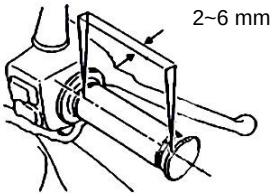


⚠ CAUTION:

- The function of the clutch is translating the engine power to the rear wheel, if the clutch adjustment is incorrect, it will be hard to shift or make the clutch plates slip.
- Make sure the shift is easy to be done after adjustment.
- If the clutch lever free play is too large or too small, It's easy to damage the clutch plates.

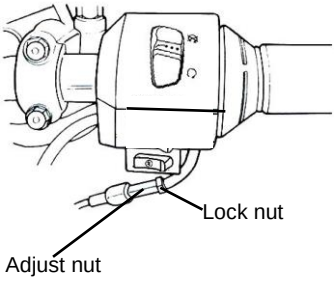
§THROTTLE GRIP FREE PLAY ADJUSTMENT §

- Correct free play allows throttle grip to rotate 2~6mm.
- Loosen the lock nut first, then turn the adjust nut to adjust. Tighten the lock nut securely when finished.



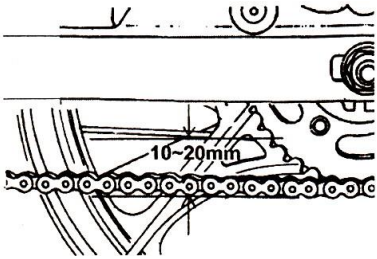
Check Items:

1. Check throttle grip cable to see if it can be moved smoothly from a closed position to a wide open position.
2. Rotate steering handle from side to side to check if the throttle grip cable is interfered.
3. Check to see if the throttle grip cable is obstructed by other cables preventing it from being operated smoothly.



§DRIVE CHAIN §

The drive chain will be elongated and slackened as the using time passed. So it is necessary to be inspected and adjusted periodically.

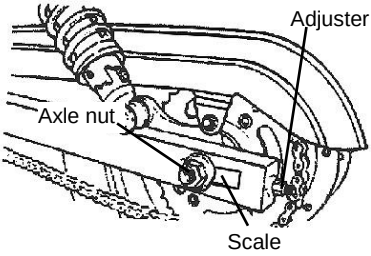


<Drive Chain Inspection>

- The drive chain check lie under drive chain center, the slack of the chain should be 10~20mm.
- Stand the motorcycle with main stand upright. Turning the rear wheel, check the drive chain for free operation and noise.
- Adjust the drive chain if there is any abnormality.

<Drive Chain Adjustment>

1. Loose the rear wheel axle nut.
2. Turn the adjusting nut for adjustment. Tighten the axle nut after adjusted.
3. Check the rear brake pedal free play and adjust if necessary.

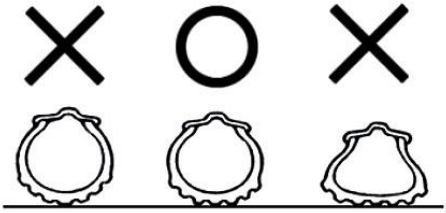


⚠ CAUTION:

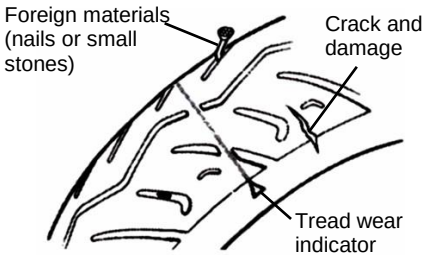
- The right and left adjuster must be adjusted to the same scale.
- Clean and lubricate the drive chain frequently.

§TIRE INSPECTION §

- Tires should be checked and inflated with the engine shut off.
- If a tire's ground contacting curve is abnormal, check it with an air pressure gauge and inflate it to the specified pressure.
- Tires pressure must be checked with an air pressure gauge when cold.



PLEASE REFER TO SPECIFICATIONS FOR STANDARD TIRE PRESSURE



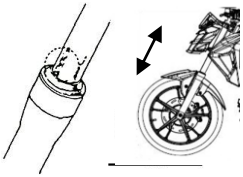
- Visual check tires for frontal and lateral side walls for crack or damage.
- Visual check tires for any nails or small stones wedged in the tread.
- Check the "tread wear indicator" condition to see if tread groove depth is insufficient.
- A tire with a wear bar showing is worn out and should be replaced immediately.

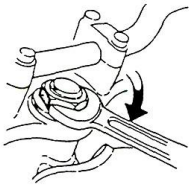
⚠ CAUTION:

- Abnormal tire pressure, wear, or crack is the most important cause that results in the loss control of the steering handle and a punctured tire(s).

§STEERING HANDLE FRONT SHOCK ABSORBERS INSPECTION §

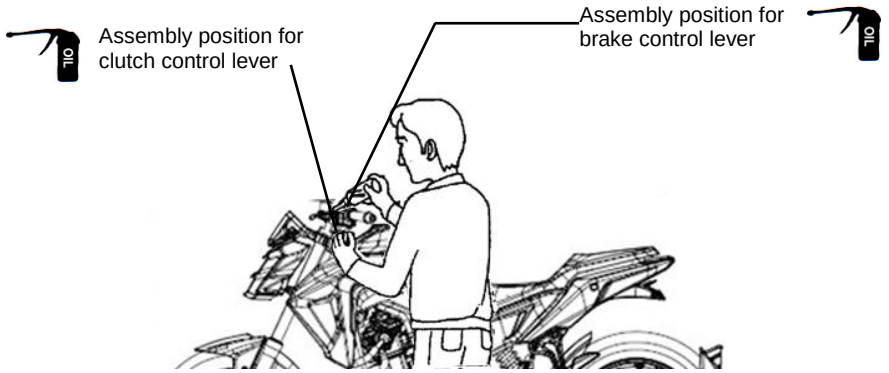
- Perform this check with engine shut off and ignition switch key removed.
- Visual check front shock absorbers for damage.
- Operate steering handle up and down, and check front shock absorbers for noises due to bends.
- Check the bolts and nuts of front shock absorbers with wrenches for tightness.
- Shake steering handle up & down, left & right, and front & rear to check if it is loosen, has too much resistance and pulls to one side.
- Check steering handle if it is being pulled too tight by the brake cables.
- Take your motorcycle to Authorized Dealer or Franchised Dealer for a check or adjustment if any abnormal conditions are found.





§CHECING THE LUBRICATION OF BODY'S VARIOUS MECHANISMS §

- Check the body's pivot points if they have enough lubrication.
  (For example, the pivot points on the main stand, the side stand, and the brake lever…etc.)



§INSPECTION AND MAINTENANCE OF BATTERY §

The electrolyte will vaporize so it is necessary to inspect and refill periodically. Have your motorcycle checked by Authorized Dealer or Franchised Dealer should any abnormality is found.

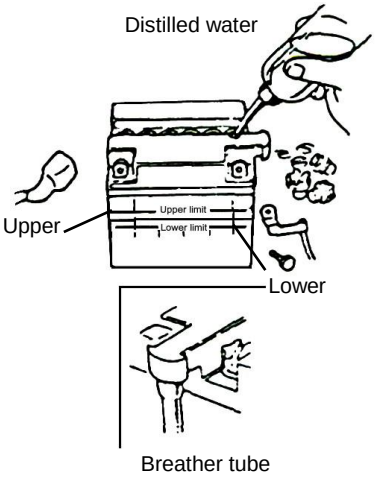
- Remove the rear seat, the electrolyte level should be between the upper and lower limit.
- If the electrolyte level is lower than the lower limit, remove the battery, then remove the cap from each cell and refill the distilled water to the upper limit.

（Cleaning of battery terminals）

Remove the battery terminals and clean if there are dirt and corrosion on them.

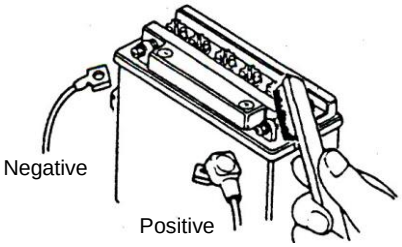
Battery removal procedures are as follows:

Turn ignition switch to the "OFF" position, then remove negative cable screw firstly and disconnect the negative cable. Then, remove positive cable screw and positive cable.



⚠ CAUTION:

- Clean the battery posts with warm water if the posts are eroded and have some white powders on them.
- If there is an obvious erosion on the terminals, disconnect the cables, then clean the erosion off with a steel brush or a piece of sandpaper.
- Install battery cable after cleaning and apply a thin coat of grease on the terminals.
- Install battery in reverse order of removal.



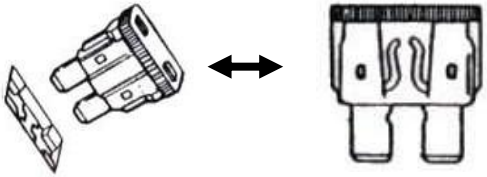
⚠ CAUTION:

- In order to prevent electric leakage and self-discharge when the battery sits idle for long periods. Remove battery from motorcycle, store it in a well- ventilated and dimly lighted place after the battery has been fully charged. Disconnect battery's negative cable if the battery is still kept on the motorcycle.
- If the battery needs to be replaced, replace with a same type battery.
- The electrolyte level is incorrect if the motorcycle is not standee on level ground.
- Don't over fill the distilled water other wise the over flay acid fluid will corrode parts.
- Keep away from sparks and flames when dealing with the battery.
- Don't clog the breather tube.
- The breather tube clogged will break the battery because the inner pressure will be up.
- Keep your eyes and skin away from the electrolyte, if touched by the electrolyte, clean with water immediately or see the doctor.
- Notice the polarity of the cables when removing and assembling.

§CHECKING AND CHANGING FUSES §

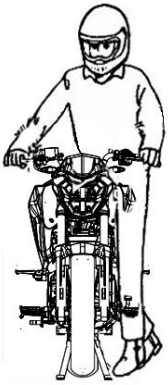
Turn the main switch off and check if the fuse blows. Replace the blown fuse with the specified fuse. Do not use a fuse of a different capacity. Do not use copper wire or any other substitute for the fuse.

- Remove the left side cover, and you'll find the fuse holder near battery.
- Open the fuse holder, and pull out the fuse. Check it for damage or broken.
  Fuses must be firmly secured with wire connectors when replacing. Loose connections will result in overhead and damage.
  Use only parts having the specified specification to replace electrical components such as light bulbs. Using parts not having the specified specifications for replacement may cause the fuse to blow and over-discharge the battery.
- Avoid spraying water directly on or around fuse box when washing the motorcycle.
- If the new fuse burn out quickly again, please check the faulty reason before replace it again. Take your motorcycle to your dealer for an inspection if a fuse is blown by unknown causes.



§CHECKING THE TURN SIGNAL LIGHTS AND HORN §

- Turn the ignition switch key to the “ON” position.
- Turn on the turn signal light switch, and make sure that the front & rear and left & right signal lights flashes and also check if the warning buzzer sounds.
- Check turn signal light covers if they are dirty, crack, or loosen.
- Press horn button to check if it sound.

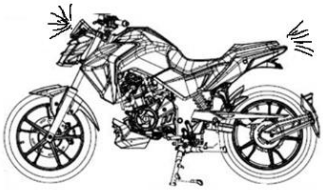


⚠ CAUTION:

- Specified specification bulbs should be used for turn signal lights. Otherwise, the normal operation of turn signal lights will be affected.
- Turn on the turn signal light before turning or switching lane to warn driver of vehicles behind.
- Turn off the turn signal light immediately by pressing its button down after using. Otherwise, the flashing of twin signal lights may confuse the drivers of vehicles behind.

§CHECKING THE HEADLIGHT AND TAIL LIGHT §

- Turn the ignition switch to “on” position. Turn on the headlight and taillight switch. Check if the headlight and taillight come on.
- Check the brightness and light angle of the front light by wall to see if it is correct.
- Check the light cover if it is dirty, crack, or loosen.



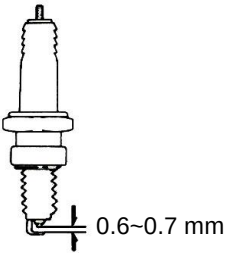
§CHECKING THE BRAKE LIGHT §

- Turn the ignition switch key to the “ON” position, hold the hand-braking levers for front and rear wheels. Check if the brake lights come on.
- Check the brake light cover if it is dirty, crack, or loosen.

⚠ CAUTION:

- Use only specified specification bulbs, do not use bulbs with different specifications to avoid damaging electrical system, burning out bulbs, and discharging the battery.
- Do not modify or add other electrical components to prevent over load or short circuit which may result in a fire and burn down the motorcycle in serious cases.

§CHECKING THE SPARK PLUG §



- The electrodes too dirty or excessive air gap will cause hard or fail starting, so it will be inspect and adjusted periodically.
- Remove the cap of spark plug cable (remove the spark plug using the spark plug wrench in the tool kit.
- Check the electrode if it is dirty or fouled by carbon deposits.
- Remove the carbon deposits on the electrode with steel wire, and clean the spark plug with gasoline, then, wipe dry with a rag.
- Check the electrode, and adjust its gap to 0.6~0.7 mm. (Check it with a feeler gauge)
- ME12B2-EU,MG12B2-EU,MG20BW-EU: 0.6~0.7 mm
- MG30BW-EU: 0.7~0.8 mm
- Hand tight the spark plug as far as it can go and then tighten it another 1/2~3/4 turns with a wrench.

⚠ WARNING:

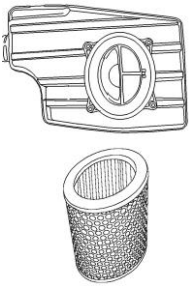
The engine is very hot after running. Pay attention not to get burned.

※Use only spark plugs suitable for the engine specifications of this motorcycle recommended by the manufacturer. (Refer to specifications.)

§CHECKING THE AIR CLEANER §

If air cleaner is clogged by dust, engine performance and fuel economy will be affected, so, it's important to do periodic maintenance.

1. Remove the front seat.
2. Remove the air cleaner cover by removing the four screws.
3. Remove the air cleaner filter element. Use air gun to blow off dirty thoroughly.



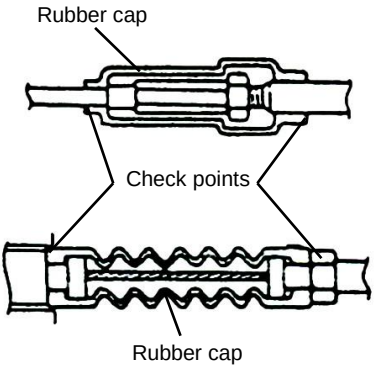
⚠ CAUTION:

- Dust deposit is one of the major causes of reducing output horsepower and increasing fuel consumption.
- Change the air cleaner element or clean it more frequently to prolong the engine's service life if the motorcycle is driven on dusty roads very often.
- If air cleaner is installed improperly, dust will be absorbed into cylinders, which may cause a premature wear and reducing output power and engine life.
- Be careful not to soak the air cleaner when washing the motorcycle. Otherwise, it will cause engine hard to start.
- Water enters the air cleaner will cause the engine fails to start ,so do not allow water to enter the air cleaner when washing the motorcycle.

§WIRING RUBBER CAP §

The rubber caps are used for protecting the wires of the wiring. Check the caps frequently for settling at right position.

Do not direct water under pressure against the wiring or use brush when washing motorcycle. If the wiring is very dirty，use cloth to scrape it.



§BACK MIRROR §

Sit on seat, check and make sure the image of the back mirrors is suitable.

§LICENSE PLATE §

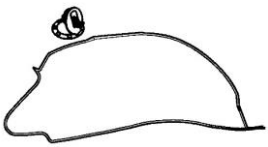
Check the license plate for dirt ,injury and damage. Make sure it is secure.

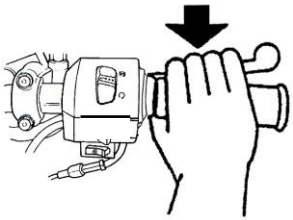
Check The Exhaust for unusual.

Make Sure All The Previous Abnormalities Have Been Solved.

9. WHEN THERE IS AN ABNORMAL CONDITION OR A TROUBLE

§DIAGNOSIS WHEN ENGINE DOES NOT START §

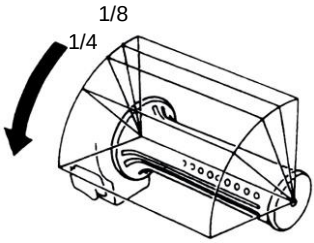


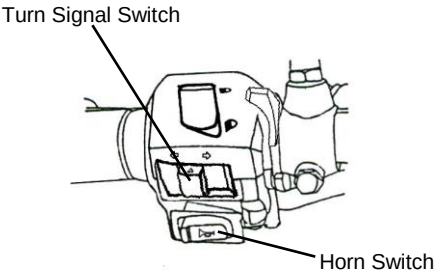


(1). Has the ignition switch key been turned to the “ON” position?

(2). Is there enough fuel in the fuel tank?

(3). Is the rear or front wheel brakes applied when pressing starting button?





(4). Do you rotate the throttle valve handle while pressing starting the button?

(5). Turn the ignition switch key to the “ON” position, and press horn button down, if the horn does not sound, the fuse may have been blown.

【Have your motorcycle checked by authorized dealer or franchised dealer immediately if there are no problems with the above items and engine still can not be started.】

10. SUGGESTIONS ON ENGINE FUEL

- This motorcycle is designed to use UNLEADED gasoline of Octane No. 90 or higher.
- If the motorcycle is operated in high attitude (where the atmosphere pressure is lower), it is suggested that the air/fuel ratio should be readjusted to maximize the engine performance.

CAUTIONS FOR RIDING MOTORCYCLE

1. Raise the motorcycle with the main stand, and to stand on the saddle left side.
   Push the motorcycle forwarding to raise the main stand.

> ⚠ **CAUTION:**
> - Never started engine before raise the main stand.

2. Get on the motorcycle from the left side, and sit on the saddle properly, keep your right foot firmly on the ground to prevent the motorcycle from falling.

> ⚠ **CAUTION:**
> - Apply foot brake on the rear wheel before driving off.

3. Start engine, squeeze the clutch lever fully, push shift pedal down to engage the 1st gear, release the clutch lever slowly, rotate the throttle valve handle slowly, and then the motorcycle will begin to move.

> ⚠ **CAUTION:**
> - Rapidly rotate the throttle valve handle or release the clutch lever may cause the motorcycle moving forward suddenly and it is very dangerous.
> - Make sure the side parking stand is spring back completely before driving off.

【Do not use the brake suddenly and make a sharp turn】

- Rapid braking and sharp turning will cause slip and fall.
- Rapid braking or sharp turning will cause slipping, lateral slipping, or fall especially in rainy days when the road is wet and slippery.

【Drive with extreme caution during rainy days】

- The brake distance in rain day or on wet road will longer than that on a dry road. Therefore, slow down and prepare to apply the brake earlier.
- The throttle valve handle should be released, and the brakes should be properly applied as it is needed while reducing the speed when going down a slope.

VEHICLE ABNORMAL OR BREAKDOWN

Fails to start the engine.
The engine shutting off when riding.
If those conditions happen, first, check the following items by yourself

1. Is there any gasoline in the tank?
2. Have you operated the starting essential points correctly?

NOTE:
If there is any abnormal or breakdown of the motorcycle, go to your dealer for inspection as soon as possible.

§Anti-lock brake system§

ABS is designed to help prevent the wheel from locking up when hard brakes are applied while running straight. The ABS automatically regulates brake force. Intermittently gaining gripping force and braking force helps prevent wheel lock-up and allows stable steering control while stopping. Brake control function is identical to that of a conventional motorcycle. The brake lever is used for the front brake and the brake pedal for the rear brake.

Although the ABS provides stability while stopping by preventing wheel lock-up, remember the following characteristics:

- ABS cannot compensate for adverse road conditions, misjudgement or improper application of brakes. You must take the same care as with motorcycles not equipped with ABS.
- ABS is not designed to shorten the braking distance. On loose, uneven or downhill surfaces, the stopping distance of a scooter's with ABS may be longer than that of an equivalent motorcycle without ABS. Use special caution in such areas.
- ABS will help prevent wheel lock-up during straight-up braking, but it cannot control wheel slip which may be caused by braking during cornering. When turning a corner, it is better to limit braking to the light application of both brakes or not to brake at all.. Reduce your speed before you get into the corner.
- The computers integrated in the ABS compare vehicle speed with wheel speed. Since non-recommended tires can affect wheel speed, they may confuse the computers, which can extend braking distance.

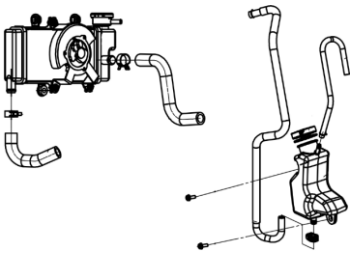
⚠ CAUTION:
ABS cannot protect the rider from all possible hazards and is not a substitute for safe riding practices. Be aware of how the ABS system operates and its limitations. It is the rider's responsibility to ride at appropriate speeds and manner for weather, road surface and traffic conditions.

COOLING SYSTEM INSPECTION(For:MG20BW-EU,MG30BW-EU)

(Check the cooling system for leakage)

1. Support vehicle with main stand on a level ground.
2. Check reserved tank from viewing window to see if coolant level is between the upper limit and lower limit mark.
3. Add coolant up to upper mark if coolant is close to the lower mark.
   (Check the cooling system for leakage)

- Check radiator and piping for leakage.
- Check the ground where the vehicle is parked for water dripped from the vehicle.



REPLENISHMENT OF COOLANT

Always keep radiator cap tightly closed.

1. Support vehicle on a level ground in a straight up position.
2. Open the battery cabinet door.
3. Open surge tank cap, refill coolant until reaches the upper mark.

- If coolant level becomes too low and occurs too often, it may indicate there is something wrong with the coolant system.
- To avoid radiator getting rusty, do not use coolants other than those recommended.

Coolant recommended: SYM Bramax radiator agent Concentration: 50%

⚠CAUTION:

- Use soft water when mixing coolants.
- Please pay attention to using poor quality coolant may shorten the service life of the radiator.
- Coolant should be changed once a year normally.
- Add coolant to reserved tank.
- Cooling system maintenance can work on the vehicle.
- Do not coolant coating body cover surface
- After the maintenance of the system, confirm the cooling system has no leakage.
- When the engine is warm, do not open the radiator tank cover, high temperature of the coolant will cause burns, the maintenance of cooling system can be carried out before the engine cooled out.
- Please refer to table for the concentration and temperature of the coolant when the air temperature is below zero.

11. PERIODICAL MAINTENANCE SCHEDULE

Item	Check Items / Maintenance kilometer / Maintenance Interval	300KM	Every 1000KM	Every 3000KM	Every 6000KM	Every 12000KM	Remarks
		NEW	1 Month	3 Months	6 Months	1 Year	
1	Air cleaner element (Remark)	I	C			R	
2	Oil filter (Screen)	C			C		
3	Fuel l of pump filter		Replacement for every 10000KM				
4	Engine oil(air cooling)	R	Inspection for every 1000KM ,Replacement for every 3000KM				
5	Engine oil(water cooling)	R	Inspection for every 1000KM ,Replacement for every 5000KM				
6	Tire, pressure	I	I				
7	Battery	I	I				
8	Cooling system		Inspection for 10000 km				
9	Coolant level		Inspection for 10000 km				
10	Coolant, water hoses and o-rings		Replacement for every 3 years				
11	Spark plug	I		I		R	
12	Carburetor (idle speed)	I			I		
13	Steering bearing and handles	I		I			
14	Check fuel for leakage	I	I				
15	Check crankcase for leakage	I	I				
16	Drive chain				I	R	
17	Fuel tank switch and lines	I		I			
18	Throttle grip operation and cable	I	I				
19	Engine bolts and nuts	I		I			
20	Cylinder head, cylinder, and piston				I		
21	Exhaust system/cleaning carbon				I		
22	Valve clearance	I			I		
23	Shock absorbers	I			I		
24	Main/side stands	I			I/L		
25	Crankcase Blow-by system	I		I			
26	Clutch disk				I		
27	Clutch free play	I	I				
28	Brake cable/brake lining (pad)	I	I				
29	Bolts/nuts for each components	I	I				

☆The above maintenance schedule is established by taking the monthly 1000 kilometers as a reference which ever comes first.

※Have your motorcycle checked and adjusted periodically by your Authorized Dealer or Franchised Dealer to maintain the motorcycle at the optimum condition.

Code: I ~ Inspection, cleaning, and adjustment R ~ Replacement

C ~ Cleaning (replaced if necessary) L ~ Lubrication

Remark: 1.Clean or replace the air cleaner element more often when the motorcycle is operated on dusty roads or in the Heavily- polluted environment.

2. Maintenance should be performed more often if the motorcycle is frequently operated in high speed and after the motorcycle has accumulated a higher mileage.

【Notes in the remarks are used to indicate the applicable models.】

12. SPECIFICATION

Model / Item / Specification	ME12B2-EU
Length	2040±20 mm
Width	745±10 mm
Height	1080±20mm
Wheel base	1400±20mm
Net Weight	143±6kg
Model	Single cylinder,4-stroke engine
Fuel	Unleaded gasoline
Compression ratio	10.1±0.2:1
Max. HP	8kw/9000 rpm
Max. torque	9.3N.m/7500 rpm
Starting methods	Electrical starter
Clutch type	Wet Muli-plate
Transmission	5-speed gear clutch
Gear ratio	I:2.769 | II：1.882 | III：1.273 | IV:1.13 | V：0.96
Front tire	110/70-17
Rear tire	130/70-17
Tire pressure	Front: STD1.75kg/cm^2, Rear: STD 2.0kg/cm^2 for 1 person, 2.25kg/cm^2 for 2 persons
Front brake	Disk type (Ø 288 mm)
Rear brake	Disk type (Ø 222mm)
Headlight deep/main beam	13.5V 25W/14W
Position Lamps	12V 1.5W
Taillight/Stoplight	13.5V 2.5W/5.5W
Turn signal light	13.5V 1.8W*2/13.5V 1.8W*2
Engine oil capacity	1.2L (1 L for change)
Fuel tank capacity	11±0.5L
Fuse	15A*2&20A*1&25A*1
Spark plug	CPR8EA-9
Battery capacity	12V 6Ah

13. SPECIFICATION

Model / Item / Specification	MG12B2-EU				
Length	2068±20 mm				
Width	860±10 mm				
Height	1195±20mm				
Wheel base	1405±20mm				
Net Weight	150±6kg				
Model	Single cylinder,4-stroke engine				
Fuel	Unleaded gasoline				
Compression ratio	10.1±0.2:1				
Max. HP	8kw/9000 rpm				
Max. torque	9.3N.m/7500 rpm				
Starting methods	Electrical starter				
Front shock absorber	Telescopic fork				
Clutch type	Wet Multi Disc Clutch				
Transmission	5-speed gear clutch				
Gear ratio	I:2.769	II：1.882	III：1.273	Ⅳ：1.13	Ⅴ：0.96
Front tire	100/90-19 57S				
Rear tire	130/80-17 65S				
Tire pressure	Front: STD 1.75kg/cm^2, Rear: STD 2.0kg/cm^2 for 1 person, 2.25kg/cm^2 for 2 persons				
Front brake	Disk type (Ø 288 mm)				
Rear brake	Disk type (Ø 222mm)				
Headlight deep/main beam	13.5V 25W/14W				
Position Lamps	12V 1.5W				
Taillight/Stoplight	13.5V 2.5W/5.5W				
Turn signal light	13.5V 1.8W*2/13.5V 1.8W*2				
Engine oil capacity	1.2L (1 L for change)				
Fuel tank capacity	11±0.5L				
Fuse	15A*2&20A*1&25A*1				
Spark plug	DPR8EA-9				
Battery capacity	12V 6Ah				

14. SPECIFICATION

Item \ Model / Specification	MG20BW-EU					
Length	2068±20 mm					
Width	860±10 mm					
Height	1195±20mm					
Wheel base	1405±20mm					
Net Weight	152±6kg					
Model	Single cylinder,4-stroke engine					
Fuel	Unleaded gasoline					
Compression ratio	11.2±0.2:1					
Max. HP	13.5kw/8500 rpm					
Max. torque	15.7 N.m/7500 rpm					
Starting methods	Electrical starter					
Clutch type	Wet muli-plate					
Transmission	6-speed gear clutch					
Gear ratio	I:2.643	II：1.65	III：1.318	Ⅳ：1.04	Ⅴ：0.889	Ⅵ:0.786
Front tire	100/90-19					
Rear tire	130/90-17					
Tire pressure	Front: STD 1.75kg/cm^2, Rear: STD 2.0kg/cm^2 for 1 person, 2.25kg/cm^2 for 2 persons					
Front brake	Disk type (Ø 288 mm)					
Rear brake	Disk type (Ø 222mm)					
Headlight deep/main beam	13.5V 25W/14W					
Position Lamps	12V 1.5W					
Taillight/Stoplight	13.5V 2.5W/5.5W					
Turn signal light	13.5V 1.8W*2/13.5V 1.8W*2					
Engine oil capacity	1.2L (1 L for change)					
Fuel tank capacity	11±0.5L					
Fuse	15A X 2&20AX1&25*1					
Spark plug	DPR8EA-9					
Battery capacity	12V 6Ah					

15. SPECIFICATION

Item \ Model	MG30BW-EU					
Length	2068±20 mm					
Width	860±10 mm					
Height	1180±20mm					
Wheel base	1405±20mm					
Net Weight	166±6kg					
Max. allowable weight	316+6kg(Front:111+3kg rear:205+3kg)					
Model	Single cylinder,4-stroke engine					
Fuel	Unleaded gasoline					
Compression ratio	11.2±0.2:1					
Max. HP	17.5kw/7500 rpm					
Max. torque	22.5 Nm/7000 rpm					
Starting methods	Electrical starter					
Clutch type	Wet muli-plate					
Transmission	6-speed gear clutch					
Gear ratio	I:2.714	II：1.889	III：1.476	Ⅳ：1.261	Ⅴ：1.08	Ⅵ:0.926
Front tire	100/90-19					
Rear tire	130/80-17					
Tire pressure	Front: STD 1.75kg/cm^2, Rear: STD 2.0kg/cm^2 for 1 person, 2.25kg/cm^2 for 2 persons					
Front brake	Disk type (Ø 288 mm)					
Rear brake	Disk type (Ø 222mm)					
License Light	12V 0.257W					
Headlight deep/main beam	13.5V 25W/14W					
Position Lamps	12V 1.5W					
Taillight/Stoplight	13.5V 2.5W/5.5W					
Turn signal light	Front :13.5V 1.8W*2/ rear:13.5V 1.8W*2					
Engine oil capacity	1.7L (1.55 L for change)					
Fuel tank capacity	11±0.5L					
Fuse	15A X 2&20AX1&25*1					
Spark plug	CR8E					
Battery capacity	12V 8Ah					