

MOTORCYCLE 150ZH / 175ZH / 200ZH

OWNER'S MANUAL



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PREFACE

Thank you for choosing a right three-wheeled motorcycle of our company. Pleasant riding all the time.

The manual contains the necessary instructions and guidance with respect to the operation and maintenance of the motorcycle, and **BE SURE TO READ IT CAREFULLY BEFORE YOU RIDE THE MOTORCYCLE**. Proper operation and maintenance can guarantee a safe riding to minimize troubles of the motorcycle and keep it at an optimal performance, which can extend the engine service life. Your dealer will provide you with technical inquiry and after-sales service.

The technical data in the manual are the latest, and we reserve absolute right to amend them. The revision will be made without notice. Please check carefully the product nameplate, VIN record and engine code in the motorcycle, which you have bought, and they are helpful for you to get the motorcycle a registration plate and for future inquiry.

Important Notice

Maximum load

270kg/350kg.

On-road use

This motorcycle is designed to be used only on the road. If riding on rugged roads, please service and adjust the motorcycle according to the rules in the manual.

READ THIS OWNER'S MANUAL CAREFULLY

Pay special attention to statements preceded by the following words:

Warning

Indicates a strong possibility of severe personal injury or death if instructions are not followed.

Caution

Indicates a possibility of personal injury or equipment damage if instructions are not followed.

Note: Gives helpful information.

This manual should be considered as a permanent part of the motorcycle and should remain with the motorcycle when resold.

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MOTORCYCLE SAFE RIDING

WARNING

Motorcycle riding requires special efforts on your part to ensure your safety. Know these requirements below before you ride.

SAFE RIDING RULES

1. Always make a pre-ride inspection before you start the engine. You may prevent accidents or equipment damage.
2. Many accidents involve inexperienced riders. Most countries require a special motorcycle riding test or license. Make sure you are qualified before you ride. NEVER lend your motorcycle to an inexperienced rider.
3. Many automobile/motorcycle accidents happen because the automobile driver does not "see" the motorcyclist.
Make yourself conspicuous to help avoid the accident that wasn't your fault:
 - Wear bright or reflective clothing.
 - Don't ride in another motorist's "blind spot".
4. Obey all national and local laws and regulations.
Excessive speed is a factor in many accidents. Obey the speed limits, and NEVER travel faster than conditions warrant.
Signal before you make a turn or lane change to draw other motorists' attention.
5. Don't let other motorists surprise you.
Use extra caution at intersections, parking lot entrances and exits, and always remember to ride with both hands and keep both feet on the footrests.

PROTECTIVE CLOTHS

1. Most motorcycle accident fatalities are due to head injuries. ALWAYS wear a helmet. You should also wear a face shield and protective clothing.
2. The exhaust system becomes hot during operation, and it remains hot for a while after stopping the engine. Be careful not to touch the exhaust system while it is hot. Wear clothing that fully covers your legs.
3. Do not wear loose clothing that could catch on the control levers, kick-starter, footrests or wheels.

REFITTING

⚠ WARNING

Refitting of the motorcycle, or removal of original parts, may make the vehicle unsafe or illegal. Obey all national and local equipment regulations.

LOADING AND ACCESSORIES

⚠ WARNING

To prevent an accident, take extreme care when adding accessories and cargo and riding with them. Addition of accessories and cargo may reduce a motorcycle's stability, performance and safe operating speed. Remember these performances may be reduced by installation of the accessories not produced by the company, improper loading, worn tyre and overall motorcycle conditions, poor road or weather conditions. These general guidelines may help you decide whether or how to equip your motorcycle, and how to load it safely.

Loading

1. Keep cargo and accessory weight low and close to the center of the motorcycle. Load weight equally on both sides to minimize imbalance. As weight is located further from the motorcycle's center of gravity, handling is proportionally affected.
2. Adjust tyre pressure and rear suspension to suit load weight and riding conditions.
3. Vehicle handling and stability can be adversely affected by loose cargo. Recheck cargo security and accessory mounts frequently.
4. Do not attach large or heavy items (such as a sleeping bag or tent) to the handlebars, fork, or fender. Unstable handling or slow steering response may produce.

Accessories

Genuine accessories of the company have been specifically designed and tested on the motorcycle. Because the factory cannot test all other accessories, you are personally responsible for proper selection, installation, and use of accessories not produced by the company. Always follow the guidelines under Loading, and these below:

1. Carefully inspect the accessory to make sure that it does not obscure any lights, reduce ground clearance and banking angle, or limit suspension travel, steering travel or control operation.
2. Large fork-mounted fairings or windshields, or poorly designed or improperly mounted fairings can produce aerodynamic forces that cause unstable handling. Do not install fairings that decrease cooling air flowing to the engine.
3. Accessories may increase the time that hands or feet operate controls, resulting in increased reaction time in an emergency.
4. Do not add electrical equipment that will exceed the motorcycle's electrical system capacity.
5. This motorcycle was not designed to pull a sidecar or trailer. Handling may be seriously impaired if so equipped.

DESCRIPTION

PARTS LOCATION (FIG.1,2&3)

Fig.1

- ① Choke lever
- ② Fuel cock
- ③ Gearshift pedal
- ④ Footrest
- ⑤ Engine code

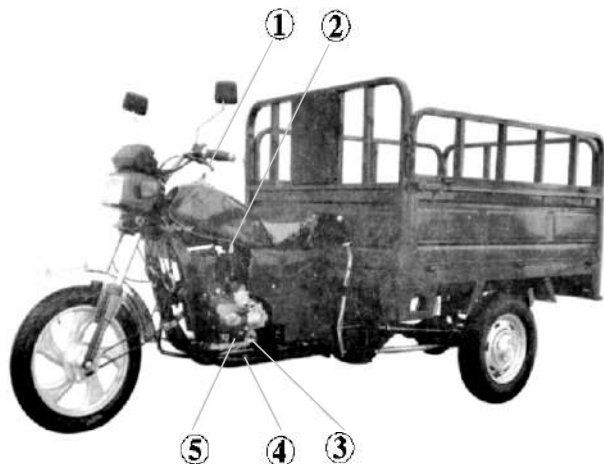


Fig.1

Fig.2

- ① Kick-starter
- ② Dipstick/oil filler cap
- ③ Footrest
- ④ Rear brake pedal
- ⑤ VIN

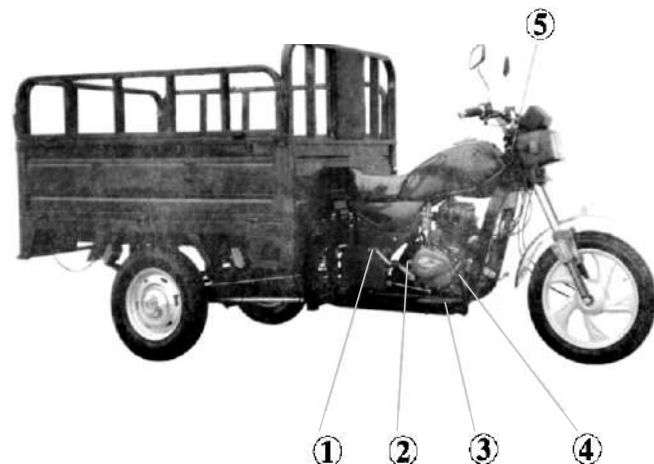


Fig.2

Fig.3

- ① Odometer
- ② Tachometer
- ③ Front brake lever
- ④ Rear-view mirror
- ⑤ Throttle grip
- ⑥ Clutch lever
- ⑦ Left handlebar controls
 - Headlight dimmer switch
 - Turn signal switch
 - Horn button
 - Passing switch
- ⑧ Fuel filler cap
- ⑨ Right handlebar controls
 - Lights switch
 - Engine stop switch
 - Starter button

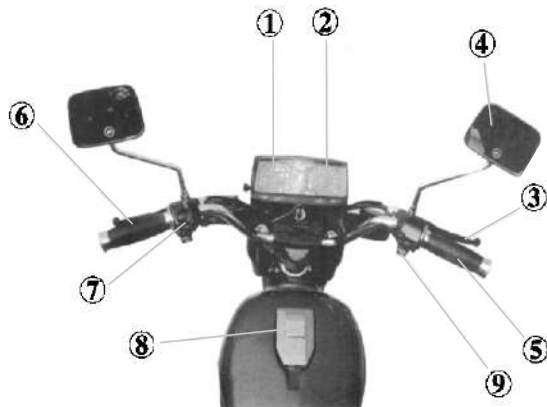


Fig.3

VIN RECORD (FIG.4;5&6)

Please fill the VIN and engine code of your motorcycle in the blank below. They will help order spare parts and find out the vehicle once stolen.

VIN: ☆ ☆

Engine code: ☆ ☆



Fig.4 VIN



Fig.5 Engine code

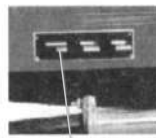


Fig.6 Nameplate

NOTE:

- ① The VIN is stamped on the right of the steering stem pipe (Fig.4).
- ② The engine code is stamped on the bottom-left of the crankcase (Fig.5).
- ③ The vehicle nameplate is fixed on the right steel guard (Fig.6).

IGNITION SWITCH (FIG.7)

The ignition switch has three positions, ON, OFF and LOCK.
ON: engine and lights can be operated and the key cannot be removed.

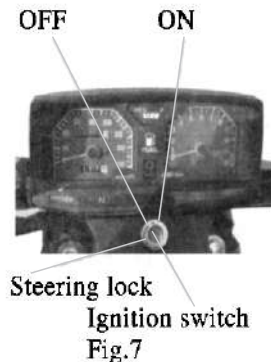
OFF: engine and lights cannot be operated and the key can be removed.

STEERING LOCK (FIG.7)

When the ignition key is at "LOCK" of the ignition switch, the steering stem is locked and the vehicle cannot run. The way is as follows:

- 1.Insert the ignition key into the ignition switch
- 2.Turn the key to OFF.
- 3.Depress and turn the key counterclockwise till to "LOCK".

To open the steering lock, just turn the key clockwise.



RIGHT HANDLEBAR CONTROLS (FIG.8)

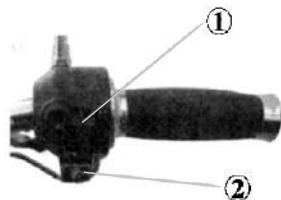


Fig.8

- ① Engine stop switch
- ② Starter button

Engine Stop Switch

In emergency, depressing the button to ☒ (OFF) will stall the engine at once. In normal cases, set the button at ○ (ON).

Starter Button

Depress the button ④ while make braking by pulling in the front brake lever or treading down the rear brake pedal to start up the engine.

LEFT HANDLEBAR CONTROLS (FIG.9)



Fig.9

- ① Lights switch
- ② Headlight dimmer switch
- ③ Turn signal switch
- ④ Horn button

Lights Switch

The headlight switch has three position: "☼" "☾" and OFF marked by a dot "●"

☼ : The headlight, taillight and instrument lights are bright.

☾ : The taillight, position light and instrument lights are bright.

● : The headlight, taillight, position light and instrument lights are off.

Headlight Dimmer Switch



Push the dimmer switch to ☐ (HI) to select high beam or

to  to select low beam.

Horn Button

Press the button  to sound the horn.

Turn Signal Switch

Move the switch to  (L) to signal a left turn and to  (R) to signal a right turn. Press the button to turn signal off.

REAR SHOCK ABSORBER

The rear shock absorber is composed of a spring steel belt, a helix spring and a spring oil-damped shock absorber and it can be adjusted in order to fit different riding conditions.

FUEL AND FUEL TANK (FIG.10)

Fuel Selection

Fuel is a key factor in deciding the exhaust emissions amount from the engine, so selection of fuel must follow the rules below.

Selected fuel must be unleaded or low-leaded gasoline, and the octane number of it is RQ-90# or higher.

Fuel Tank

The fuel tank capacity including 2.2L of the reserve supply is 11L.

To open the fuel filler cap, insert the ignition key and turn it clockwise. The fuel lock will pop up and can be lifted off. After refueling, to close the fuel filler cap, just depress it down.

⚠ WARNING

● Gasoline is extremely flammable and is explosive under certain conditions. Refuel in a well-ventilated area with

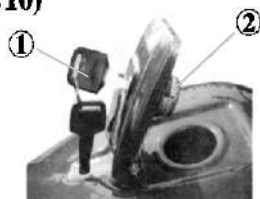


Fig.10

① Ignition key

② Fuel lock


the engine stopped. Do not smoke or allow flames or sparks in the area where gasoline is stored or where the fuel tank is refueled.

- Before refueling, make sure to filter fuel first.
- Do not overfill the tank (there should be no fuel in the filler neck). After refueling, make sure the fuel filler cap is closed securely.
- Be careful not to spill fuel when refueling. Spilled fuel or fuel vapor may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.
- Avoid repeated or prolonged contact with skin or breathing of vapor. **KEEP OUT OF REACH OF CHILDREN.**

FUEL COCK (FIG.11)

The three-way fuel cock is on the left side near the carburetor.



RES()

OFF(●)

ON()

Fig.11

OFF

With the fuel cock in the OFF position, fuel cannot flow from the tank to the carburetor.

Turn the cock OFF whenever the motorcycle is not in use.

ON

With the fuel cock in the ON position, fuel will flow from the main fuel supply to the carburetor.

RES

With the fuel cock in RES position, fuel will flow from the reserve fuel supply to the carburetor. Use the reserve fuel only when the main supply is gone. Refill the tank as soon as possible after switching to RES.

⚠ WARNING

- To avoid running out of fuel that may result in a sudden stop, learn how to operate the fuel cock when riding the motorcycle.
- Be careful not touch any hot engine parts while operating the fuel cock.

NOTE:

Remember to check that the fuel cock is in ON position each time you ride.

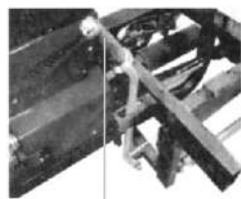
If the cock is left in RES position, you may run out of fuel with no reserve.

BRAKE ASSISTANT (FIG.12)

Beside the front and rear brakes, the motorcycle is equipped with an accessory braking set called brake assistant which is set to the left of the fuel tank and connected with the rear brake pedal. The brake assistant is specially used to help stop the motorcycle on ramps securely from sliding down.

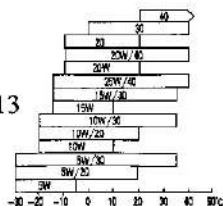
ENGINE OIL(Fig.13)

The quality of the engine oil plays a vital role in deciding the engine per-



Brake assistant Fig.12

Fig.13



formance and service life. Engine oil must be selected in accordance with the rules below and other oils, such as ordinary engine oil, gear oil and vegetable oil, are forbidden to be used. Engine oil recommended: gasoline engine oil of SAE15W/40-SE class or SE, SF, SC class from API Service Classification.

The vehicle has been filled with the engine oil of SAE15W/40-SE class in the company, and the lubricant is only suitable at a temperature range from 40°C to 10°C below zero. If other motor oil is to be used instead, the alternative must be technically equivalent in every respect. Viscosity varies with regions and temperatures, so the lubricant has to be selected according to our recommendation. If the gasoline engine oil of SAE15W/40-SE class can not be obtained when in need, the gasoline engine oil of HQB-10#(HQB-6# in the temperature under 10 ~C below zero).

Before replacing the lubricant, please drain the oil out completely remaining in the crankcase, and clean the inside by cleansing kerosene, then fill new one instead.

Oil filler



Fig.14



Oil filler plug

Rear axle housing

CAUTION: Running the engine with insufficient oil can cause serious engine damage.

TYRES

Proper air pressure will provide maximum stability, riding comfort and tyre life.

Check tyre pressure frequently and adjust if necessary.

Select the right replacement tyres in accordance with the specifications shown in the table 1.

Table 1

	Front	Rear
Tyre size	3.25-16-6PR	4.50-12-6PR
Cold tyre pressure, kPa	250	250

NOTE:

Tyre pressure should be checked before you ride while the tyres are "cold". Check the tyres for cuts, embedded nails, or other sharp objects. Check the rims for dents or deformation. See your dealer for change of damaged tyres or punctured inner tubes.

⚠ WARNING

- Do not attempt to patch a damaged tyre or inner tube. Wheel balance and tyre reliability may be impaired.
- Improper tyre inflation will cause abnormal tread wear and create a safety hazard. Under inflation may result in the tyre slipping on, or coming off from the rim causing tyre deflation that may result in a loss of vehicle control.
- Operation with excessively worn tyres is hazardous and will adversely affect traction and handling.
- The use of tyres other than those listed on the table 1 may adversely affect handling.

When the tread depth in the middle section of tyres reaches the limits in table 2 below, please replace tyres.

Table 2

Tread depth limits			
Front tyre	1.5mm	Rear tyre	2.0mm

OPERATION GUIDE

PRE-RIDE INSPECTION

⚠ WARNING

If the Pre-ride Inspection is not performed, severe personal injury or vehicle damage may result.

Inspect your motorcycle every day before you ride it. The items listed here will only take a few minutes to inspect, and in the long run they can save time, expense, and possibly your life.

- 1.Engine oil level-add engine oil if required. Check for leaks.
- 2.Fuel level-fill fuel tank when necessary. Check for leaks.
- 3.Front and rear brakes-check operation and if necessary, adjust free play.
- 4.Tyres-check condition and pressure.
- 5.Drive chain-check condition and slack. Adjust and lubricate if necessary.
- 6.Throttle-check for smooth opening and full closing in all steering positions.
- 7.Lights and horn-check that headlight, tail/brake light, turn signals, indicators and horn function properly.
- 8.Battery electrolyte-check that the electrolyte level is suitable.
- 9.Fastener-check that all nuts, screws and bolts are mounted securely.
- 10.Steering system-check for its smoothness and reliability.

Correct any discrepancy before you ride. Contact your dealer for assistance if you cannot correct the problem.

STARTING THE ENGINE (FIG.15)

Always follow the proper starting procedure described below.

⚠ WARNING

- Never run the engine in an enclosed area. The exhaust contains poisonous carbon monoxide (CO) gas that can cause loss of consciousness and lead to death.
- Attempting to start the engine with the transmission in gear and the clutch engaged may result in injury or damage.



Choke lever

A: Fully closed



B: Fully open

Fig.15

Procedure in starting cold

1. Insert the ignition key and turn to ON;
2. Depress the engine stop switch situated at the right handlebar to (ON);
3. Push the fuel cock lever to align with ON;
4. Check that the fuel is ON;
5. Pull the choke lever ① up all the way to its fully closed position (A).
6. Make sure that the transmission is in NEUTRAL while the green neutral indicator lights, if not, shift the transmission into neutral.

NOTE:

When the transmission is in neutral, the green neutral indicator doesn't light, it shows something wrong with the neutral indicator or with the vehicle. In this case, repair at once, if cannot right now, test the vehicle instead. Standing to right of the vehicle and gripping the steering bar with hands while the vehicle is in neutral, slightly tread down the kick-starter

pedal by your left foot until feel bigger anti-action, and then tread it down quickly while open the throttle to add fuel by turning counterclockwise the throttle grip, normally, 1 ~ 3 attempts of the operation can start the engine, if quite a few attempts cannot start the engine yet, inspection of the electric circuit, fuel and air supply line are necessary.

7. With the throttle slightly open (less than 1/8 of its entire opening), operate the kick-starter pedal. Kick from the top of the stroke through to the bottom with a rapid, continuous motion so as to start the engine.

CAUTION:

Allowing the kick-starter pedal to snap back freely against the pedal stop can damage the engine case.

You may also start the engine by the starter button. With the throttle closed and the clutch is disengaged, push the starter button. Release the starter button as soon as the engine starts.

NOTE:

Do not use the electric starter for more than 5 seconds at a time. Release the starter button for approximately 10 seconds before pressing it again.

8. Warm up the engine for 1~2 minutes, and then set the choke lever to fully open position (B).

NOTE:

Starting up the engine in regions with especially low air temperature, tread the kick-starter pedal several times first to poke the crankshaft when the ignition key is at OFF and the choke is fully closed.

High Air Temperature

1. Do not use the choke.
2. Start the engine following step 2 under "Normal Air Temperature"

Flooded Engine

If the engine fails to start after several repeated attempts, it may have become flooded with excess fuel. To clear the engine, turn off the ignition switch and move the choke lever to Fully OPEN (B). Open the throttle fully and crank the engine several times with the kick-starter pedal. Turn the ignition switch to ON and open the throttle slightly; start the engine using the kick-starter pedal.

RIDING

⚠ WARNING

Review "Motorcycle Safe Riding" before you ride.

1. After the engine has been warmed up, the motorcycle is ready for riding. In regions with especially low air temperature, warming up time of the engine at idle speed may be five minutes or so.
 2. While the engine is idling, pull in the clutch lever with left hand and tread down forward the gearshift pedal to shift into 1st (low) gear.
 3. Slowly release the clutch lever and at the same time gradually increase engine speed by opening the throttle.
- Coordination of the throttle and clutch lever will assure a smooth and positive start of the vehicle.
4. When the motorcycle attains a speed within 10 ~ 15 km/h, close the throttle, pull in the clutch lever and shift to 2nd gear by treading down backward the gearshift pedal.
- This sequence is repeated to progressively shift to 3rd, 4th and 5th (top) gears.
 5. Coordinate the throttle and brakes for smooth deceleration.
 6. When applying both the front and rear brakes at the same time, be careful not to operate strongly enough to lock the wheel, or braking effectiveness will be reduced and control of the motorcycle be difficult.

CAUTION:

Gear shifting with the clutch engaged and the throttle not decreased a little is forbidden, or damage of the engine, drive chain or other parts may result.

⚠ WARNING

- When riding in wet or rainy conditions, or on loose surfaces, the ability to maneuver and stop will be reduced. All of your actions should be smooth under these conditions. Rapid acceleration, braking or turning may cause loss of control. For your safety, exercise extreme caution when braking, accelerating or turning.
- Riding with your foot resting on the brake pedal or your hands on the brake lever may actuate the brake light, giving a false indication to other drivers. It may also overheat the brake, reducing effectiveness.

GEAR MARK (FIG.16)

1.. Gear mark

1. 5-Speed gear-shifting semi-cycle
2. 5-Speed gear-shifting cycle



Fig.16



TURNING

For the motorcycle is equipped with a drive system composed of a two-grade chain set and a speed-differentiator, so turning is more smooth and flexible. When turning, make sure to speed down the motorcycle to 10 ~ 20km/h, or sliding even turn-over of it may result.

PARKING

1. Downshift the motorcycle by reducing the throttle opening while apply both the front and rear brakes.
2. Once stopped, turn the ignition switch off and lock the motorcycle by turning the ignition key to ON and then to LOCK.
3. Pull up all the way the brake assistant.

MAINTENANCE

The Required Maintenance Schedule specifies how often you should have your motorcycle served, and what things need attention. It is essential that your motorcycle be served as scheduled to retain its high level of safety, dependability, and emission control performance.

These instructions are based on the assumption that the motorcycle will be used exclusively for its designed purpose. Sustained high speed operation, or operation in unusually wet or dusty conditions, will require more frequent service than specified in the MAINTENANCE SCHEDULE. Consult your dealer for recommendations applicable to your individual needs and use.

MAINTENANCE SCHEDULE

The following Maintenance Schedule specifies all maintenance required to keep your motorcycle in peak operating condition. Maintenance work should be performed by properly trained and equipped technicians.

I: INSPECT AND CLEAN, ADJUST, LYBRICATE OR REPLACE 1F FNECESSARY

C: CLEAN R: REPLACE A: ADJUST L: LUBRICATE

MAINTENANCE SCHEDULE

ITEM		FREQUENCY	WHICH EVEVER COMES FIRST NOTE	ODOMETER READING[NOTE(2)]				
				×1,000km MONTH	1	4	8	12
						6	12	18
*	FUEL LINE				I	I	I	
*	FUEL GAUZE FILTER			C	C	C	C	
*	THROTTLEOPERATION			I	I	I	I	
*	CARBURETOR CHOKE				I	I	I	
	AIR CLEANER	(NOTE1)		C	C	C		
	SPARK PLUG			I	I	I	I	
*	VALVE CLEARANCE			I	I	I	I	
	ENGINE OIL	EVERYYEAR		R	EVERY2000km-R			
	ENGINE OIL GAUZE FILTER	EVERYYEAR-R				C	C	
*	CAM CHAIN SLACK			A	A	A	A	
*	ENGINE IDLE SPEED			I	I	I	I	
	DRIVE CHAIN			I,L	I,L	I,L	I,L	
	BATTERY	EVERYMONTH		I	I	I	I	
	BRAKE SHOES/PADS WEAR				I	I	I	
	BRAKE SYSTEM			I	I	I	I	
*	BRAKE LIGHT SWITCH			I	I	I	I	
	CLUTCH SYSTEM			I	I	I	I	
	SIDESTAND				I	I	I	
*	SUSPENSION				I	I	I	
*	NUTS,BOLTS FASTENERS			I	I	I	I	
**	WHEELS/SPOKES			I	I	I	I	
*	STEERING HEAD BEARINGS			I			I	

* SHOULD BE SERVICED BY YOUR DEALER, UNLESS THE OWNER HAS THE PROPER TOOLS AND IS MECHANICALLY QUALIFIED. REFER TO THE MANUAL.

** IN THE INTEREST OF SAFETY, WE RECOMMEND THESE ITEMS BE SERVICED ONLY BY YOUR DEALER.

NOTES:

1. Service more frequently when riding in unusually wet or dusty areas.
2. At higher odometer readings, still follow the frequency interval established here.

TOOL KIT (FIG.18)

Some roadside repairs, minor adjustments and parts replacement can be performed with the tools contained in the kit.

- ① open-ended spanner 8 × 10mm
- ② open-ended spanner 12 × 14mm
- ③ Spark plug wrench 16x18
- ④ Double-end screw driver
- ⑤ Screw driver handle
- ⑥ Tool bag



ENGINE OIL CHECK AND CHANGE

Engine Oil Level Check (Fig.19)

Check the engine oil level each day before riding the motorcycle. The oil level must be maintained between the Upper and lower level marks on the dipstick.

1. Start the engine and let it idle for a few minutes.



Engine Oil Change (Fig.20)

Engine oil quality is the chief factor affecting the engine service life. Change the engine oil as specified in the maintenance schedule.

NOTE:

Change the engine oil with the engine at normal operating temperature and the motorcycle placed on a level ground to assure complete and rapid draining.



1. To drain the oil, place an empty oil tray under the engine, and turn off the drain plug.

⚠ WARNING

A warmed-up engine and the oil in it are hot; be careful not to burn yourself.

2. Tread the kick-starter pedal several times so as to help empty the oil thoroughly.
3. Reinstall the drain plug well.
4. Remove the oil filler cap/dipstick; add specified gasoline engine oil.
5. Install the oil filler cap/dipstick.
6. Restart the engine and let it idle for a few minutes, and then stall it. Recheck the engine oil level. Add more oil if necessary. Check that the oil level is at the upper level mark on the dipstick with the motorcycle uptight on firm, level ground. Make sure there are no oil leaks.

CAUTION:

Running the engine with insufficient oil can cause serious engine damage.

NOTE:

When running in very dusty conditions, oil changes should be performed more frequently than specified in the maintenance schedule.

Please dispose of used engine oil in a manner that is compatible with the environment. We suggest you take it in a sealed container to your local

recycling center or service station for reclamation. Do not throw it in the rubbish or pour it on the ground or down a drain.

SPARK PLUG (FIG.21)

Selection

Recommended plug:D8TC.

Check and Replace

- 1.disconnect the spark plug cap from the spark plug.
- 2.Clean any dirt from around the spark plug base. Remove the spark plug using the plug wrench containing in the tool kit.
- 3.Inspect the electrodes and center porcelain for deposits, erosion or carbon fouling. If the erosion or deposit is heavy, replace the plug. Clean a carbon or wet-fouled plug with a plug cleaner, or use a wire brush.
- 4.Check the spark plug gap using a wire-type feeler gauge, If adjustment is necessary, bend the side electrode carefully.
The spark plug gap should be 0.6-0.8mm.
Make sure the plug washer is in good condition.
- 5.With the plug washer attached, thread the spark plug in by hand first to prevent cross threading, and then by the spark plug wrench.
- 6.Reinstall the spark plug cap.

CAUTION:

- The spark plug must be securely tightened, An improperly tightened plug can become very hot and possibly damage the engine.
- Never use a spark plug with an improper heat range. Severe engine damage could result.

CLEAR AWAY ACCUMULATED CARBON

Clear away accumulated carbon around the spark plug and piston ring, on the piston top, in the piston ring slot and combustion chamber regularly.

AIR CLEANER (FIG.22)

The air cleaner should be serviced at regular intervals as specified in the maintenance schedule. Service more frequently when riding in unusually



Fig.22 ①Set screw ③ Connection screw
② Housing

wet or dusty areas. See your dealer for further information.

- 1.Remove the right frame cover by loose the set screw①.
- 2.Remove the air cleaner housing②,by disconnecting the connection screws ③.
- 3.Wash in clean, nonflammable or high flash point solvent and let it dry.

⚠ WARNING

Never use gasoline or low flash point solvents for cleaning the air cleaner. A fire or explosion could result.

- 4.Soak in gasoline engine oil of 15W/40SE until saturated, and then squeeze out the excess oil.
- 5.Install the removed parts in the reverse order of removal.

CHECK LEAKS ALONG AIR SUPPLY LINE

Check leaks regularly along air supply line, and repair or replace related parts once there are some to assure a normal air supply.

THROTTLE OPERATION (FIG.23)

- 1.Check for smooth rotation of the throttle grip from the fully open to the fully closed position at both full steering positions.
- 2.Measure the throttle grip free play at the throttle grip flange. The standard free play should be approx: 2-6mm.

To adjust the free play, loosen the lock nut and turn the adjuster.



Fig.23

IDLE SPEED (FIG.24)

The engine must be at normal operating temperature for accurate idle speed adjustment.

NOTE

Do not attempt to compensate for faults in other systems by adjusting idle speed. See your dealer for regularly scheduled carburetor adjustments.

If the motorcycle cannot idle at about 1500r/min for over 15 minutes, adjustment of the engine idle speed is necessary.

1. Warm up the engine, shift to neutral.
2. Adjust idle speed by turning the throttle stop screw and mixture screw to set idle speed at about 1500r/min. Turn clockwise the throttle stop screw will increase fuel supply and increase idle speed while will decrease it turning counterclockwise; turn clockwise the mixture screw will reduce air supply and increase idle speed while will increase air supply and decrease idle speed turning it counterclockwise. Coordinate the two operations of turning the two screws to attain idle speed of about 1500r/min.

CLUTCH ADJUSTMENT (FIG.25)



Fig.25

- ① Lock nut
- ② Adjusting nut
- ③ Cable setting block



Fig.24 ① Mixture screw

Measure the clutch lever free play at the clutch lever flange. The free play should be 10-20mm.

1. To make adjustment, turn loose the lock nut at the clutch cable-setting block, which is located on the crankcase, and then make adjustment.
2. Turn in the direction of the arrowhead A will decrease the free play while will increase it in the direction of the arrowhead B. Reveal the dust rubber near the clutch lever, adjustment can be performed as the same steps.

DRIVE CHAIN (FIG.26)



- ① Lock nut
- ② Front adjusting nut
- ③ Rear adjusting nut

between the engine output sprocket and left sprocket on the secondary transmission shaft is first one, and the chain between the right sprocket and sprocket on the rear bridge axle is secondary one.

The service life of the drive chain is dependent upon proper lubrication and adjustment. Poor maintenance can cause premature wear or damage to the drive chain and sprockets.

The drive chain should be checked and lubricated as part of the Pre-ride inspection. Under severe usage, or when the motorcycle is ridden in unusually dusty or muddy areas, more frequent maintenance will be necessary.

First-Grade Chain Adjustment (Fig.26)

1. Loose the lock nuts ① both left and right of the secondary transmission shaft by a spanner of 24 inches.

2. Loosen the front adjusting nut (only one) ② of the secondary transmission shaft by a spanner of 14 inches.
3. Turn tight the four rear adjusting nuts ③ by a spanner of 14 inches to move backward the secondary transmission shaft so as to tighten the first-grade chain; doing in the reverse order of the above to loose the first-grade chain. Chain slack should be 15-20mm.
4. After finishing adjustment, turn tight lock nuts and all the adjusting nuts.

Lubrication

Use engine oil or a commercially prepared drive chain lubricant in preference to motor oil or other lubricants. Saturate each chain link joint so that the lubricant penetrates between the link plates, pins, bushings, and rollers.

Removal and Cleaning

When the drive chain becomes dirty, it should be removed and cleaned prior to lubrication.

1. With the engine off, carefully remove the chain clip.
2. Clean the drive chain in high flash-point solvent and allow it to dry. Inspect the drive chain for possible wear or damage. Replace any chain that has damaged rollers, loose fitting links, or appears unserviceable.
3. Inspect the sprocket teeth for possible wear or damage. Replace if necessary. Never use a new drive chain on badly worn sprockets. Both chain and sprockets must be in good condition, or the new replacement chain or sprocket will wear rapidly.
4. Lubricate the drive chain.
5. Pass the chain over the sprockets and join the ends of the chain with the master link. For ease of assembly, hold the chain ends against adjacent rear sprocket teeth while inserting the master link.

⚠ WARNING

Install the chain clip so that the closed end of the clip will face the direction of forward wheel rotation.

6. Adjust the drive chain and rear brake pedal free play.

FRONT BRAKE CHECK AND ADJUSTMENT (FIG.27)

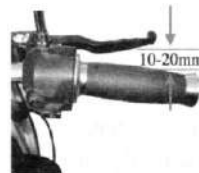


Fig.27

Pin
Adjusting nut



Check:

Check the brake cable for kinks or signs of wear that could cause sticking or failure. Lubricate the brake cable with a commercially available cable lubricant to prevent premature wear and corrosion. Make sure the brake arm, spring and fasteners are in good condition.

Adjustment:

The distance the front brake lever moves before the brake starts to engage is called free play.

Measured at the tip of the front brake lever, free play should be maintained at 10-20mm.

1. Adjustment should be made using the adjusting nut at the front wheel.
2. Turning the adjusting nut clockwise will decrease free play and turning the nut counterclockwise will increase free play.
3. Apply the brake several times and check for free wheel rotation when release the brake lever.

CAUTION

- Make sure the curved slot in the adjusting nut is seated on the

brake arm pin after making final free play adjustment.

● If proper adjustment cannot be obtained by this method, see your dealer for help.

REAR BRAKE ADJUSTMENT (FIG.28)

1. Measure the distance the rear brake pedal moves before the brake starts to engage.

The free play of the rear brake pedal should be 20-30mm.

2. If adjustment is necessary, turn the rear brake adjusting nut.

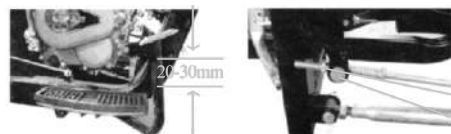


Fig.28

Adjusting nut
Pin

Turning clockwise will decrease free play while turning counterclockwise will increase free play.

3. Apply the brake several times and check for free rear wheel rotation after the brake pedal is released.

CAUTION

● Make sure the curved slot in the adjusting nut is seated on the brake arm pin after making final free play adjustment.

● If proper adjustment cannot be obtained by this method, see your dealer for help.

FRONT SUSPENSION INSPECTION

1. Check the front fork assembly by locking the front brake and pumping the fork up and down vigorously. Suspension action should be smooth.

2. Carefully inspect all front suspension fasteners for tightness.

WHEEL REMOVAL

Stop and place the vehicle on a level ground

Front Wheel Removal

1. Raise the front wheel off the ground by placing a support block under the engine.

2. Remove the speedometer cable by removing the lock screw.

3. Remove the front brake adjusting nut and remove the front brake cable from the brake arm.

4. Remove the axle nut.

5. Take out the axle and the wheel.

Rear Wheel Removal (Fig.29)

1. Raise the frame rear off the ground with a supporting block.

2. Dismantle the set pin ① with a pliers and drive out the big nut ② to remove the rear wheels.

Installation Notes:

● Reverse the removal procedure.

● Tighten the rear axle nut to specified torque: 40 ~ 50N.m.

● Adjust the rear brake and drive chain.

● After installing the rear wheels, apply the rear brake several times and check for free rear wheel rotation when released.

EXHAUST MUFFLER

Clear away regularly accumulated carbon in the exhaust pipe; check the exhaust pipe inside for crack and washer damage, and repair or replace if necessary.

BATTERY (FIG.30)

Battery electrolyte is poisonous, so be sure not to discard it at will. Handle in accordance with national or local environmental protection roles.

Maintain the battery in accordance with the maintenance schedule in the manual. The battery electrolyte level should be between the UPPER level mark and the LOWER level mark. If battery electrolyte level is below the LOWER level mark, add proper distilled water up to the UPPER level mark.

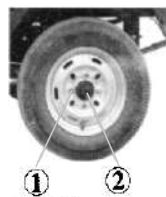


Fig.29

① Set pin
② Big nut

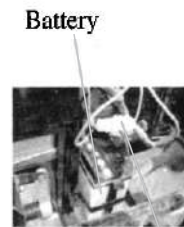


Fig.30

Fuse

CAUTION:

When the motorcycle is to be stored for an extended period of time, remove the battery from the motorcycle and charge it fully, and then store it in a cool, dry place. If the battery is to be left in the motorcycle, disconnect the negative lead from the battery terminal first and then come to the positive lead.

⚠ WARNING

- The battery gives off explosive gases; keep sparks, flames, and cigarettes away. Provide adequate ventilation when charging or using the battery in an enclosed space.
- The battery contains sulfuric acid (electrolyte). Contacting with skin or eyes may cause severe burns. Wear protective clothing and a face shield.

If electrolyte gets in your skin, flush with water.

If electrolyte gets in your eyes, flush with water for at least 15 minutes and call a physician immediately.

- Electrolyte is poisonous. If swallowed, drink large quantities of water or milk and follow with milk
Of magnesia or vegetable oil and call a physician.

- **KEEP OUT OF REACH OF CHILDREN**

FUSE

The fuse holder is located nearby the battery and its rated current is 15A. Before checking, turn the ignition switch off (ON) to prevent short circuit. To replace a blown fuse, dismantle the fuse holder and slide the clip out, and take out the blown fuse.

REAR STOPLIGHT SWITCH ADJUSTMENT (FIG.31)

Check the operation of the rear stoplight switch at the right side behind the engine from time to time.

Adjustment is done by turning the adjusting nut. Turn the nut in the direction of the arrowhead A if the switch operates too late and in the direction of the arrowhead B if the switch operates too soon.



Fig.31

TROUBLESHOOTING

If the vehicle has some troubles, see your dealer for help.

CAUTION:

Not being initiated into professional knowledge with respect to the motorcycle, do not dismantle or maintain the vehicle.

CLEANING

Clean your motorcycle regularly to protect the surface finishes and inspect for damage, wear, and oil or brake fluid leakage.

CAUTION:

High-pressure water (or air) can damage certain parts of the motorcycle.

Avoid spraying high-pressure water at the following areas:

Wheel Hubs; Ignition Switch; Carburetor; Instruments; Handlebar Switches; Muffler Outlets; Under Fuel Tank; Drive Chain; Under Seat

1. Wash the vehicle completely with a great deal of water.

NOTE:

Clean the headlight lens and other plastic parts using a cloth or sponge dampened with a solution of mild detergent and water.

2. Dry up the motorcycle, start the engine, and let it run for several minutes.

⚠WARNING

Braking efficiency may be temporarily impaired immediately after washing the motorcycle. Anticipate longer stopping distance to avoid a possible accident.

3. Test the brakes before riding the motorcycle. Several applications may be necessary to restore normal braking performance.

4. Lubricate the drive chain immediately after washing and drying the motorcycle.

STORAGE GUIDE

Some measures should be taken for storing a long term-unused vehicle so as to reduce the bad influence on its performance. Before the storage, make necessary maintenance to ensure the vehicle high performance after-storage.

Storage

1. Clean and dry up the vehicle and wax its surface.

2. Empty the fuel inside the fuel tank and carburetor, spray some antirust.

⚠WARNING

Gasoline is extremely flammable and is explosive under certain conditions. Perform this operation in a well-ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the area where gasoline is drained or stored and where the fuel tank is refueled.

3. Drive off the spark plug to fill a little of engine oil (about 15~20 millilitre) into the cylinder; turn off the ignition switch and tread the kick-pedal several times to scatter evenly the oil inside the cylinder; and then reinstall the spark plug.

4. Clean and oil the drive chain.

5. Dismantle the battery and store in a dry, cool and well-ventilated place without being shone directly.

CAUTION:

When dismantling the battery, dismantle the cathode conductor first, and then the anode conductor. When installing it, the procedure is just opposite. During the operations above, the ignition switch must be turned off.

6. Seal the muffler outlet with plastic cloth to prevent damp's entering.

7. Cover the motorcycle (don't use plastic or other coated materials) and store in an unheated area, free of dampness. Do not store the motorcycle in direct sunlight.

REMOVAL FROM STORAGE

1. Take off the cover shielding the vehicle and clean it.

2. Charge the battery as required. Install the battery.

3. Clear away the antirust inside the fuel tank, and fill fresh gasoline instead.

4. Perform all Pre-ride Inspection checks. Try the motorcycle at low speeds in a safe riding area away from traffic.

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SPECIFICATIONS

DIMENSIONS AND PERFORMANCE

Overall length	3200mm/3450mm
Overall width	1250mm/1300mm
Overall height	1350mm/1800mm
Ground clearance	195mm/230mm
Track	1100mm
Steering angle	42°
Top speed	50km/h
Grade ability	10°
Economic speed consumption of fuel	3.10L/100km/3.54L/100km
Kerb weight	335kg/345kg/392kg
Maximum weight capacity	270kg/350kg

ENGINE

Model	162FMJ/162FMK/163FML-2
Type	4-stroke, single cylinder with air-cooled
Bore and stroke	62×49.5/62×58/63.5×62.5(mm)
Compression ratio	9.0:1/9.5:1/10.16:1
Displacement	149.4ml/175.1ml/197.01ml
Rated power output	8.5/8500, 9.5/8000, 12.0/8000(km/t/min)
Max. torque	10.0/7500, 12.5/7500, 15.0/6000(N·m/t/min)
Start mode	Electric starter/kick-starter
Carburetor type	PZ27/PZ30
Spark plug	D8TC
Spark plug gap	0.6-0.8mm
Ignition system	C.D.I./DC-C.D.I.
Lubrication	Press/splash

Start mode

Electric / kick start

CHASSIS AND SUSPENSION

Tyre size, front	3.25-16-6PR/ 4.50-12-6PR
Tyre size, rear	4.50-12-6PR
Front brake type	Drum type
Rear brake type	Drum type
Front suspension type	Spring and oil-damping/swing arm
Rear suspension	Left spring

POWER TRANSMISSION

Clutch type	Wet, multi-plate type
Transmission	Five-speed, constant mesh
Drive system	Chain-drive/Shaft-drive
Primary reduction	4.055
Gear ratio: 1 st	2.769
2 nd	1.882
3 rd	1.400
4 th	1.130
5 th	0.960
Final reduction I	2.643
Final reduction II	1.591

ELECTRICAL

Battery	
Electric start mode	12V9AH/12V12AH
Kick-starter start mode	12V2.5AH
Magneto	Permanent magnetic

LIGHTS

Headlight	12V-35W/35W
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