Precautions

Please read this User's Manual carefully before operating this vehicle!

Warning

* Please observe all traffic laws and regulations.
* All users must have a valid driver's license.
* NEVER hang anything from the handle bars while operating your vehicle.
* For your safety, always wear a helmet, eye protection, and gloves while operating your vehicle.
* This vehicle is for on road use only.
* Always be aware that the exhaust and muffler will become hot when operating your vehicle. Do not touch the exhaust assembly during or shortly after riding as not to burn yourself.
* For your safety, always wear the appropriate clothing and footwear while operating your vehicle.

Caution

* Please check the accessories and various documents delivered with the vehicle according to the packing list.
* Strictly follow the listed weight limit of your vehicle.
* Do not mechanically modify any part of your vehicle. Modifying the vehicle can decrease the engine life, the reliability of your vehicle, and compromise the riders safety.
* Only premium fuel should be used in the vehicle. (90+ octane) Otherwise, the engine performance, fuel economy, and safety of the vehicle may be compromised, and the service life of the vehicle will be shortened. Use of lesser rated fuel will void the engine coverage of your warranty.
* All repairs and required service must be completed at a Wolf Brand Scooters authorized service center. All required service must be done to the vehicle following the published service intervals to maintain the vehicle's warranty.
* Not completing required, scheduled service will void your warranty.

Suggestion

* This manual provides important information regarding the vehicle. If the vehicle is transferred to any other person, this manual should be transferred together with the vehicle.

Vehicle Identification Number (VIN) and Engine Number

The Vehicle Identification Number (VIN), Engine Number and Quality Certificate, are used for obtaining the registration and license plate for your new vehicle

Vehicle Identification Number (VIN) is printed on the vertical tube of the frame. Remove this small cover to find the number plate

The product nameplate is riveted on the right lower part of the frame.

The Engine Number is printed on the left lower part of the crankcase.

Please note your vehicles specific numbers for future reference here:

Vin:
Engine Number:

A Brief Introduction to the vehicle

1. Headlight
2. Left front turn signal
3. Front storage box
4. Seat cushion
5. Rear luggage carrier
6. Disc brake
7. Side stand
8. Center stand
9. Kick starting arm
10. Air filter housing

A Brief Introduction to the vehicle

1. Tail light
2. Helmet hook
3. Right front turn light
4. Rear wheel
5. Exhaust muffler
6. Battery
7. Front brake lever
8. Front wheel

A Brief Introduction to the vehicle

1. Rearview mirror
2. Left grip
3. Left switch assembly
   - Headlight Hi/lo beam switch
   - Left/right turn signal switch
   - Horn button
4. Instrument cluster
5. Ignition switch
6. Right switch assembly
   - Cut off or Run Stop Switch
   - Starter button
7. Throttle grip

Technical Specifications

Engine	QMB139 Short Case
Displacement	49cc (Single Cylinder, 4 Stroke)
Cooling System	Air Cooled
Compression Ratio	10.2 : 1
Bore x Stroke	39mm x 41mm
Max Power	2.99 HP @ 7500 RPM
Max Torque	3.10 Nm @ 5500 RPM
Idle Speed	1600 RPM (+/- 100)
Engine Oil	15W/40 or 5W/40 (if fully synthetic)
Gearbox Oil	SAE 80W/90
Transmission Type	CVT (Continuously Variable Transmission)

Technical Specifications

Belt Size	669 - 18 - 30
Ignition Type	CDI (Capacitor Discharge Ignition)
Spark Plug	NGK C7HSA
Battery	12 Volt - 7 Amp (YTX7A-BS)
Starting System	Electric / Kick
Front Tire	3.5 x 10 (Set to 40 psi)
Rear Tire	3.5 x 10 (Set to 40 psi)
Brakes (Front/Rear)	Disc / Drum
Scooter Dimensions LxWxH	67" x 25" x 44"
Seat Height	31"
Fuel Tank Capacity	1.3 Gallons
Fuel Economy	100+ MPG
Scooter Weight	165 lbs

Oil capacity	30.5 oz

Instrument cluster

1 **Turn signal indicator lamp:**

When this turn signal indicator light flashes, it indicates that a left or right "Turn signal light" is on.

2 **High beam indicator lamp:**

When the high beam indicator lamp "≡D" is on, it indicates that the "High beam lamp" is on.

3 **Speedometer:**

It indicates the current driving speed of the vehicle.

4 **Odometer:**

It records the accumulative miles travelled.

5 **Fuel gauge:**

It indicates how much fuel is in the fuel tank of the vehicle.

Left switch assembly

1 High beam headlamp switch:

To use the "High beam lamp", turn the switch to the upper "" position.

2 Low beam headlamp switch:

To use the "Low beam lamp", turn the switch to the upper "" position

3 Horn button:

To use the horn, press the "" button

4 Turn signal switch:

When changing the direction of the vehicle, move this switch to "" or "" to signal to other motorists that you are turning left or right. When you complete your turn, press the center white button to switch the turn signal off.

Right switch assembly

1 Electric start button:

When you want to start the vehicle, press the "" button while holding in brake levers.

2 Throttle grip:

When the engine is on, twist towards you to accelerate and twist away from you to decelerate.

3 The Cut Off or Run/Stop Switch:

Electrical power for the engine is turned on when the switch is set to

The position marked ""

This switch must be set to this position for the engine to start and run

Electrical power to Engine is turned off when the switch is set to the position marked ""

The engine will turn off when this switch is set to this position

Key Switch and Lock Set

When the vehicle is parked, turn the steering all the way to the left. Then turn the Ignition lock switch to "🔒". This locks the steering to help prevent the vehicle from being easily stolen.

1) **Ignition On:**

Insert the key and turn the ignition lock to "🔑" to switch the electrical system of the vehicle on.

2) Ignition Off:

Turn the ignition lock to "⊗" to switch the electrical system of the vehicle off. The vehicle key can now be removed.

3) Steering lock:

When stopped, turn the handle bars all the way to the left, push the key inwards and turn to "🔒" to lock the steering. The key can then be removed.

Seat lock

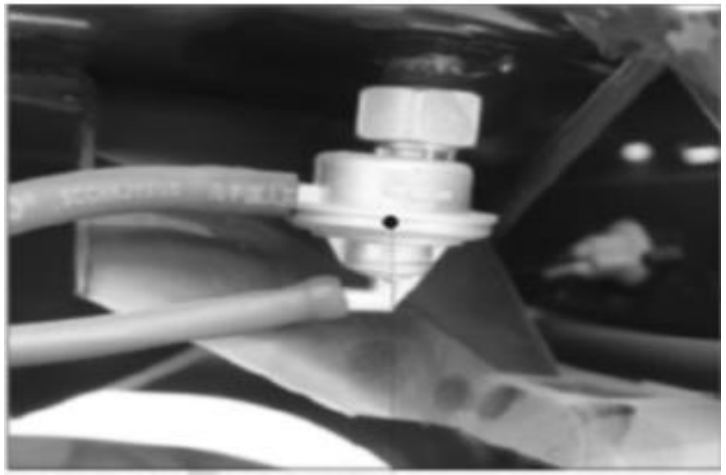
Seat: Insert the ignition lock key into the seat lock and turn it clockwise to open the seat cushion.

Front storage box

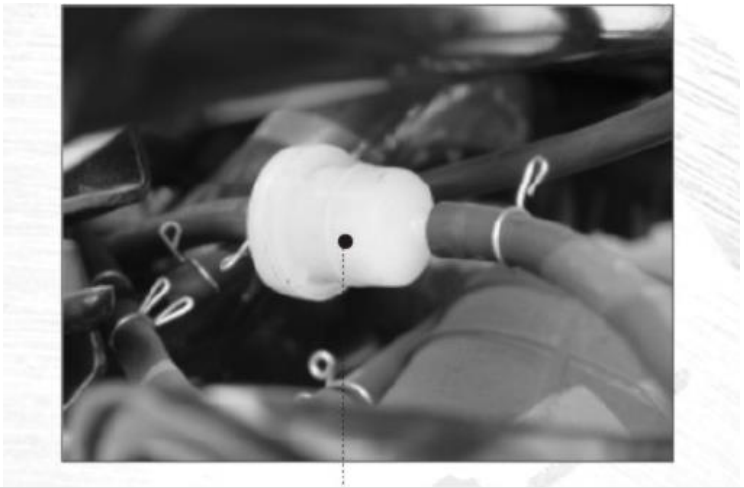
Fuel tank

Opening the fuel cap: Flip tab up, insert the key and turn the cap 90º counterclockwise.

Closing the fuel cap: Insert the fuel cap in the fuel tank opening and turn it clockwise. Once it is closed fully, you can remove the key and flip the tab down.



Bolt on Fuel valve or switch, this valve is opened by the vacuum pressure produced by the engine, it allows fuel to enter the carburetor via gravity. It closes when the engine turns off.



Fuel filter: This is positioned in the main fuel line; the fuel passes through here between the fuel tank and the carburetor to ensure clean fuel is entering the carburetor.

Warning

* Don't fill fuel above the neck, or "top off" the tank.
* Gasoline vapors are flammable. The vehicle should be turned off before opening the fuel tank cap. Fuel should be dispensed in a well-ventilated place.
* While dispensing fuel, smoking is strictly forbidden nor should it be done close to any open flame or spark. Before refueling, ground yourself by touching any metal part of the vehicle. This will dissipate any static electricity present and prevent static sparks that could ignite any fuel vapors that will be present during refueling.

Caution

* Only 90+ Octane fuel or above should be used.

Vehicle Operations

All WOLF Brand Scooters use the dry, centrifugal clutch and belt driven CVT (Continuously Variable Transmission). If there is an issue with the clutch, belt or variator, take your vehicle to an authorized WOLF Brand Scooter dealership.

Front brake: This is the right lever when you're sitting on the vehicle. It operates the front disc brake.

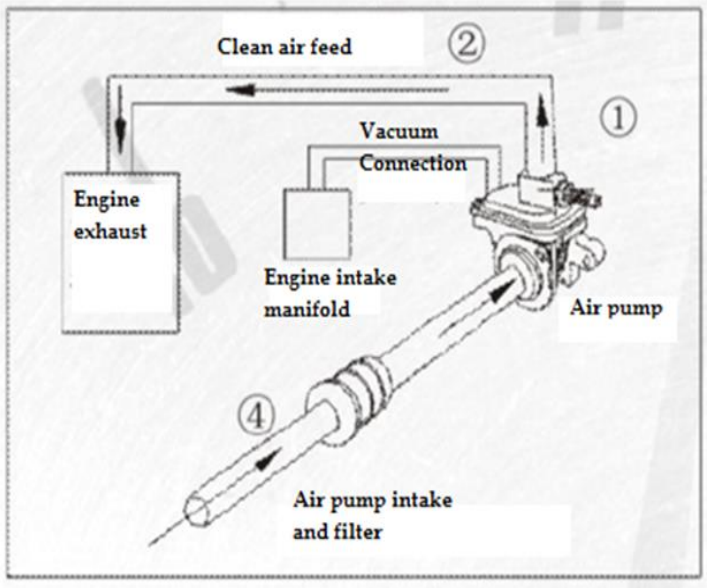
Rear brake: This is the left lever when you're sitting on the vehicle. It operates the rear drum brake.

Automatic clutch: The CVT allows smooth acceleration without the need for gear changes.

Kick Starter: This is used for manually starting the engine. The vehicle must be on the main stand, the ignition must be on and the brake levers need to be held in while you kick start the engine.

Environmental protection device

The environmental protection device is mainly a two-in-one air compensating valve (air pump) combining a one-way leaf valve and a secondary air control valve. . By making use of the engines vacuum pulsation, the air pump controls the amount of air needed to enter the exhaust port through the one-way leaf valve and the secondary air control valve. This fresh air enters the exhaust passage of the engine under the action of the air pump. Unburned fuel vapor discharged from the engine in its exhaust is then consumed. Thusly this device reduces the exhaust pollution of the vehicle, and ensures that the vehicles exhaust meets National Stage III emission standards.



Emission Standards of vehicle (Stage III , under the running mode)

Units:g/km

Emitted pollutants	Two-wheel vehicle
CO	2.0
HC	0.8
NOx	0.15

Emission Standards of Mopeds (Stage III , under the running mode)

Unit's:g/km

Emitted pollutants	Two-wheel moped
CO	1.0
HC + NOx	1.2

Limits of exhaust pollutants of vehicle/mopeds under idle conditions

In case of idle type approval test, the volume concentration of emitted CO is ≤3.8%; and the volume concentration of emitted HC is ≤800×10-6;

In case of Production consistency check test, the volume concentration of emitted CO is ≤4.0%; and the volume concentration of emitted HC is ≤1000×10-6.

Vehicle Load

The vehicles maximum load of 330 lbs. must be strictly observed. Otherwise, the safety and stability of the vehicle may be compromised. This weight limit includes Rider, passenger, their gear, and any luggage.

* Belongings in the seat storage box must be secured to prevent them from moving while the vehicle is in motion.
* NEVER hang anything on the handle bars while operating the vehicle. This will dangerously compromise the handling of the vehicle
* The load on the rear luggage carrier must not exceed 12lbs.

Tool kit (Included)

Common service and maintenance tools are delivered together with the vehicle.

Your tool kit will be found stored in the under-seat bucket area

Checks before and after operating the vehicle

There are checks that you should do on your vehicle on a regular basis to ensure that the vehicle is always safe to use and to keep it in good condition. These checks will also help in optimizing the vehicle's performance.

1. After it's been sitting for more than a few hours and after cleaning the vehicle, start the engine, and let it run at idle for several minutes, making sure it reaches operating temperature.
2. Check for any fluid leaks. If any are found correct as soon as possible.
3. Check for any loose electrical connections.
4. Check to ensure that all lights are working.

Different levels of maintenance and service need to be performed at different odometer readings. When these are performed may vary because of the different conditions the vehicle might be subjected to.

The very first oil change should be done between 300~500 miles to replace the "break-in" oil with fresh lubricant. The valve clearances should be checked and adjusted if necessary.

Level 1: Service and Maintenance: Odometer reading 1000~1500 miles. Oil change, valve checking/adjusting, and lubricate any necessary parts and check any nuts and bolts and tighten as necessary. (See the Service and Maintenance section for more details).

Level 2: Service and Maintenance: Odometer reading 2000~2500 miles. Oil change, valve checking/adjusting, and lubricate any necessary parts and check any nuts and bolts and tighten as necessary. (See the Service and Maintenance section for more details).

Level 3: Service and Maintenance: Odometer reading 3000~3500 miles. Oil change, valve checking/adjusting, and lubricate any necessary parts and check nuts and bolts and tighten as necessary. Disassemble necessary parts and check for any hidden hazards/wear. (See the

**** Oil changes and basic service should be done every 1000 miles. ****

ALL WORK NEEDS BE DONE AT AN AUTHORIZED WOLF BRAND VEHICLE DEALERSHIP TO ENSURE THE WARRANTY DOES NOT GET VOIDED

Vehicle Operation

Before operating the vehicle, please follow the following steps to check it. This will ensure good performance of the vehicle and maximize your driving safety.

Turn the ignition on and ensure all turn signals and other lights are working.

Check the fuel gauge to ensure you have enough gas to get to your destination.

Service and Maintenance section for more details).

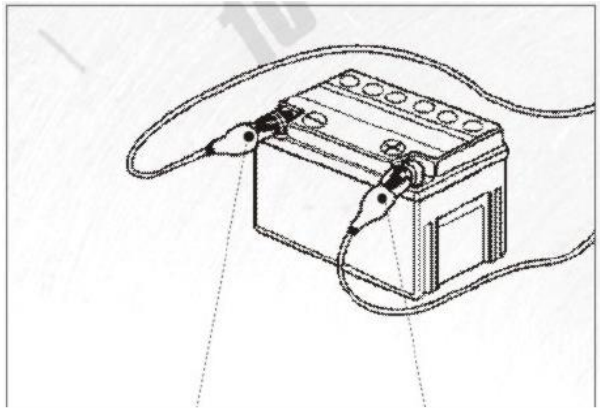
Ensure you have enough gas for your trip and ensure the gas cap is secured properly.

Check handle bars by moving from left to right. They should move easily and smoothly with no play or binding.

Check your vehicles oil levels before any trip. Always make sure your engine has the correct amount of lubrication oil. See the "Service and maintenance section for how to make this check

Check that the throttle grip rotates smoothly and freely. If not, the throttle cable may need replacing.

Check for any leaks under the engine.



Check the terminals on the battery to ensure they both are clean and have a good connection.

Check the pressure of the front tire. Set to between 32 and 40 Psi. Always check air pressure when tires are cold. Check for abnormal wear on the tire tread and side walls.

Check the pressure of the rear tire. Set between 32 and 40 Psi. Always check air pressure when tires are cold. Check for abnormal wear on the tire tread and side walls.

The throttle grip should have a slight amount of free play in it. About 10-20mm.

Check that the rear brake lever has the correct amount of free play in it. About 20-30 mm.

Check that the head light, turning lights and indictor lamps work properly.

Check that the tail light and brake lights work properly.

Using the kick starter

1) Turn the ignition on.

2) The vehicle should be put on the main stand and you need to hold the brake levers to allow the engine to start.

3) Pull out the foot lever, place your foot on it and push firmly and quickly all the way down. Let the arm return to its horizontal position before you try to kick start it again. Repeat this motion.

4) Twist the throttle slightly to allow more gas flow as you kick the engine over. Once started, let the engine warm up before revving the engine at high RPM.

Using the Electric Starter

Make sure that the side stand is up. It is recommended that you support the vehicle on its main stand. The duration of each start up attempt should not exceed 5 seconds, and the interval between any two attempts should be more than 10 seconds. If 3 startup attempts fail consecutively, the vehicle should be checked.

First, insert the key into the ignition switch lock, and turn it to the "" position.

Hold the front brake handles.

Hold the front brake

While holding the brake handles, push the electric start button with your right thumb. Roll the throttle a small amount with your right hand to add an appropriate amount of fuel.

Parking the vehicle

When you come to park the vehicle, you have 2 different ways to park it, the side stand and the main stand.

You should turn your engine off before using either of these stands.

Using the side stand:

Holding the vehicle upright, you use your foot to put the side stand down. Once all the way down, you can then lean the vehicle onto it.

NOTE: With this side stand down, a safety switch is activated and the vehicle will not start

Using the main stand:

Holding the vehicle upright, place your left hand on the left-hand grip and your right hand on the rear rack. Keeping the vehicle vertical, you put your right foot on the main stand and press down while pulling up with your right hand.

To lock the steering column, and secure the vehicle, turn the handlebars all the way to the left, push the key inwards and turn the ignition to the "🔒" position to prevent the vehicle from being stolen easily.

Regular Service and Maintenance

Throughout the life of the vehicle, usage will inevitably cause wear of its mechanical parts. Regular maintenance will prolong the life of the vehicle.

Requirements on Service and Maintenance

1. Keep the engine clean, make sure there are no fluid leaks
2. Confirm that the automatic clutch does not show any indication of slipping on acceleration or that it makes any abnormal noise. Also confirm that your throttle operates smoothly and without binding.
3. Ensure that the brakes work well and meet necessary requirements. Check that the wheels spin freely once brakes are released and that there is no friction noise when brakes are not on.
4. The front forks and rear shock absorbers should compress and rebound smoothly. Check for leaks around the seals.
5. The air pressure of the tires should be set to the required P.S.I. Check your tires regularly
6. Check for loose electrical connections throughout the vehicle.
7. All mechanical parts should be lubricated.
8. The cable connections to the battery terminals should be clean and tight and the battery should be secured properly within the vehicles battery box.
9. Any corrosion on any metal parts should be taken care of as soon as possible to prevent spreading.

Service and Maintenance during the break in period

How a new vehicle is broken in directly affects the service life of the vehicle. Within the first 500 miles of a new vehicles life, the driving speed should not exceed 30 MPH, and the rider should vary their speed regularly.

Precautions for the break-in period of a new vehicle

1. Within the break-in period, every 300-500 miles, replace the oil with the correct weight engine oil. Standard 15w-40 or synthetic 5w-40, and clean the oil filter screen.
2. Regularly check for loose electrical connections, and tighten if found.
3. Regularly check to make sure that the engine, the drive train, and the braking system does not overheat. Make sure that there is enough lubricating oil on each lubricated part. If any overheating occurs, the cause should be found and rectified immediately.
4. Regularly check the tightness of the drive belt, and the free travel of the front and rear brakes, the throttle grip, and the handle bars movement from left to right. Adjust them if necessary.
5. Within the break-in period, only ride the vehicle after the engine is completely warmed up. Run it at low speed for the first mile, and then run it at higher speeds.
6. To reduce vibration and impact loads, the vehicle should run on a level road with good road conditions whenever possible.
7. Within the break-in period, carrying any unnecessary weight should be avoided. The load on the vehicle should not exceed 80% of the maximum payload, otherwise, the drive train will wear faster.
8. Try to avoid heavy braking and braking for long periods of time.
9. Varying the speed regularly while riding.

Contents of Level 1 Service and Maintenance

Level 1 Service and Maintenance should be performed every time the vehicle reaches 500~1000 miles on the odometer.

1. Drain the engine oil and clean the filter screen. Refill to the correct level with the correct weight engine oil. Standard 15w-40 or synthetic 5w-40
2. Adjust the travel of the front brake handle to 10mm~20mm (0.394-0.787 inch), and adjust the rear brake handle to 20mm~30mm (0.787-1.181 inch).
3. Adjust the travel of the throttle cable to 2mm~6mm (0.079-0.236 inch), and lubricate the throttle grip and the throttle cable.
4. Clean the carburetor, fuel tank, oil filter screen and air filter.
5. Adjust the idle speed of the carburetor.
6. Remove the spark plug from the head and clean any carbon deposits off the plug, adjust the electrode gap of the spark plug to 0.025inches.
7. Remove the battery and charge it.
8. Check and tighten all nuts and bolts for all exposed parts.
9. Check the tightness of all electrical connections
10. Adjust the engine valve lash: intake valve to 0.03-0.05mm (0.001-0.002 inch); and exhaust valve to 0.05-0.07mm (0.002-0.003 inch).
11. Always Store the vehicle under the best possible conditions.

Level 2 Service and Maintenance

Level 2 Service and Maintenance should be performed every time after the vehicle runs 2000~4000 miles.

1. Drain oil and refill to correct level with the correct weight engine oil. Standard 15w-40 or synthetic 5w-40
2. Disassemble the top end cylinder assembly of the engine. Inspect for excessive wear and remove any carbon deposits from parts such as, the piston, piston rings, cylinder head and muffler. Lubricate and reassemble.
3. Check for excessive wear on the clutch friction lining, the rear brake shoes and front brake pads. Replace as needed.
4. Clean the carburetor, air filter, and fuel tank. Replace the fuel and air filter if needed. Inspect fuel and vacuum lines for pinches and any cracking or excessive wear. Replace as needed.
5. Clean the upper and lower bearings in the steering column and re-pack with grease.
6. Clean and lubricate all the cables on the vehicle and replace if any fraying or excessive wear is seen.
7. Flush the transmission and check all components and refill with new oil.

Contents of Level 3 Service and Maintenance

Level 3 Service and Maintenance should be performed every 5000~8000 miles.

1. Drain oil and refill to correct level with the correct weight engine oil. Standard 15w-40 or synthetic 5w-40
2. Ensure the emissions system is working correctly.
3. Ensure the electric start system is working.
4. Ensure normal operation, of front and rear automatic clutches and the drive system.
5. Check whether there are any cracks, erosion, or serious wear on each gear tooth of the rear transmission box.
6. Disassemble the top end cylinder assembly. Inspect for excessive wear and remove any carbon deposits from the parts therein. Check the clearance between the piston and the cylinder wall, and the smaller head of the crank connecting rod and the piston pin.
7. Ensure the front and rear shocks are in good condition and their mounts are in good condition.
8. Ensure the fuel system is running cleanly. Inspect all fuel and vacuum lines for wear and replace the fuel filter
9. Ensure normal operation of instruments and the electric system.
10. Disassemble the vehicle and check the steering column, engine mounts and other substantial parts and make sure there is enough lubrication and that they're not worn down.

Service and Maintenance for the Carburetor

For maximum performance and reliability, it is important the carburetor is maintained and adjusted properly. Failure to do so will affect starting; idle, as well as the vehicles overall performance.

The carburetor should be serviced and maintained as follows:

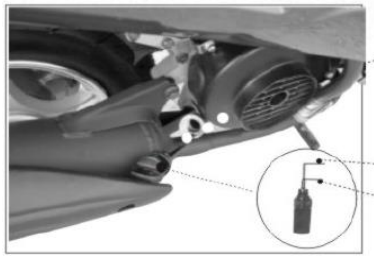
1. Regularly check the all connections and fittings on the intake assembly. Check the Carburetor, intake, T-pipe, cylinder head, cylinder block and intake port of the crankcase, and ensure that they are tight and properly sealed. Any air leaks will negatively affect the engines performance, and may cause top end engine damage by allowing an excessively lean condition to exist.
2. Inspect the fuel and vacuum lines for any cracking, weathering or other deterioration, replace if any is found
3. Start and drive your vehicle often. Add a carb cleaner to your fuel every 500 miles or so to keep the carburetor clean and free of any build up from the fuel.
4. Gasoline left sitting for a long period of time will start to become "stale", breaking down into its base components as the more volatile compounds evaporate. The longer a vehicle sits the more likely the vehicle will develop carburetor issues because of this stale fuel. If the vehicle is to be stored for any length of time longer than 2 weeks, the fuel in the carburetor bowl and fuel tank must be drained from the vehicle into an approved container for use elsewhere. Failure to do so will result in a contaminated, "clogged" carburetor. This will cause hard starting and poor performance. The carburetor will then have to removed and thoroughly cleaned or, as in many cases, replaced.

   Draining the fuel is quite simple. You will find a length of fuel line running from the bottom of the carburetor to a bracket on the frame. In that bracket, there will be a brass screw plug that when removed will allow fuel to drain out of the carburetor bowl. Fuel can then be easily syphoned from the fuel tank.

Check and Replacement of Lubricating Oil

With the vehicle on the center kick stand, unscrew the oil dipstick and wipe clean with a rag. Insert the dipstick, pull out, and check the level and color of the oil. The oil level should always be between the upper and lower oil level markings on the dipstick.

Following the service intervals in this manual, drain and replace the oil as necessary. The 17mm bolt on the bottom of the engine needs to be removed to drain the oil. Be sure to clean the mesh filter screen before reinstallation.



After the engine has drained completely, reinstall the mesh screen into the spring. Place the spring into the drain plug and reattach to the engine. Refill the engine with oil.

Lower oil level

Upper oil level marking

Caution

Checking and Replacing Engine Oil

To ensure an accurate reading when checking the engine oil, place the vehicle on the center main stand. Only check the oil level after the engine has been shut off for at least 5 minutes. Be aware the engine, exhaust and engine oil will be extremely hot if the engine has been running. It is recommended you allow the engine to cool for at least 30 minutes after a long drive before checking.

-Remove oil cap. Note if there is oil on the dipstick. A lack of oil on the dipstick indicates a low oil level.

-Wipe the dipstick clean and insert into engine. Quickly withdraw the dipstick and note the oil level. If there is no oil on the dipstick, oil will need to be added.

-Note the color of the oil. Very black oil indicates the oil must be drained and replaced.

-To drain the engine oil, loosen the 17mm oil drain plug on the bottom right hand side of the engine, directly underneath the black engine shroud.

-Allow oil to drain completely. Not allowing all the oil to drain will result in residual oil left in the crankcase which will alter the amount needed to fill the engine.

-Inspect oil filter and clean if necessary.

-Reattach oil drain plug with spring and filter installed.

-Fill with ~750mL (25 oz) of 15W-40 engine oil (5w-40 if synthetic) through the oil dipstick opening.

-Insert dipstick and withdraw to verify correct oil level.

-Tighten dipstick and inspect for leaks.

Service and Maintenance of the Spark Plug

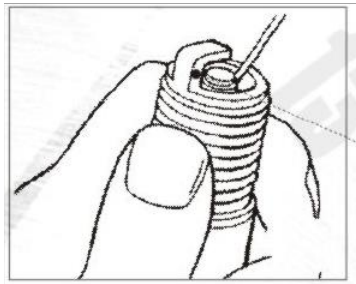
It is normal for the spark plug to be light brown. This indicates a proper air fuel mixture.

Check the electrode gap of the spark plug with a gauge and adjust the gap to 0.025 inches.

Remove the spark plug from the engine. If the color of the insulator skirt of the spark plug is brown it indicates that the carburetor is adjusted properly. Any signs of buildup on the plug should be noted as this could be a sign of an incorrect carburetor adjustment.

Cleaning the Spark Plug

Inspect the spark plug for carbon buildup. If there are noticeable deposits or wear on the spark plug, replace.



Correct spark plug gap helps fuel economy and performance. Incorrectly gapped spark plugs can lead to hard starting and poor performance. Always replace the spark plug with the original NGK replacement.

When removing and tightening the spark plug, be sure to use the correctly sized socket. Improper removal can result in spark plug damage that can result in costly repairs.

Service and Maintenance of the Air Filter

When dust builds up in the filter element of the air filter assembly, it results in an increased resistance to air flow through the air intake system. This leads to an overly rich fuel/air mixture that can reduce power and increase fuel consumption. It is important the air filter be cleaned or replaced on a regular basis. Riding in dusty conditions will require more frequent filter maintenance.

Remove the screws securing the air filter cover, and then remove the cover. Check whether there is dust and dirt on the sponge foam of the filter element. Remove the air filter and wipe up the dust from inside the air filter housing with clean, dry cloth.

Paper based filters are a disposable item and just need to be replaced. You can find them at your Wolf Brand dealership Foam or cloth filter elements can be cleaned and reused numerous times. You can wash them in warm water and a simple detergent. Once dry you must treat them with a light oil before reinstallation for them to filter correctly.

⚠ Caution

* NEVER use the following cleaning agents to clean reusable foam or cloth air filter elements: Gasoline, low ignition-point solvent, acid, alkaline or organic volatile oil.

Adjusting the throttle:

Check whether the free travel of the throttle is within the correct range and adjust it if necessary. Please follow the following steps to adjust the free travel.

1. First, loosen the locking nut.
2. Spinning the regulator will extend or shorten the free travel of the throttle.
3. When the desired setting is reached, tighten the locking nut and slide the protective covering back over the regulator.

The throttle grip should work smoothly. Any signs of sticking or binding should be addressed prior to riding the vehicle.

Service and Maintenance for the Front Brake

Most models use a front disc brake, which features high heat dissipation and increased performance.

Adjusting the front disc brake

1. Place the vehicle on the main stand.
2. Adjust the regulating nut of the front brake to adjust the free travel of the front braking handgrip to 1/4 –1/2 of an Inch.

Adjust the free travel of the front braking handgrip to between ¼ to ½ an inch.

Service and Maintenance for the Front Brake

Disc brake

* Check the travel of the brake lever when applied. Excessive travel could indicate worn pads or air in the brake fluid. Either of which need to be addressed at an authorized service center prior to riding.

* Check for the wear on the front brake rotor. Any signs of warping or irregularities in the surface of the brake rotor can cause vibration and lower any braking force. This can dangerously increase the stopping distance of the vehicle. Replace when needed.

Service and Maintenance of the Rear Brake

Adjustment of the rear drum brake:

* First, use the main stand to prop up the rear wheel of the vehicle and then adjust the free travel of the rear brake by screwing in or out the nut on the end of the rear brake cable.
* Apply the rear brake several times. Each time the brake should release freely without binding or sticking. Rotate the rear wheel assembly to check whether the wheel rotates freely.
* Always keep the cables and fittings clean and free of debris. Keeping the cables lubricated will improve service life.

Use the main stand to stand the vehicle up. You can then adjust the free travel of the rear brake between ¼- ½ inch.

Spin the rear when and apply the rear brake. Make sure the wheel stops spinning within the levers recommend length of free travel. On rear brake cable equipped models, turn the brake adjustment fitting at the bottom of the cable clockwise to tighten the cable and reduce free travel. If you run out of adjustment, please take your vehicle in to an authorized service center for servicing.

Checking the rear brake light

* It is important to always check the vehicle lights and make sure they are functioning properly prior to using the vehicle. The brake light can be inspected with the ignition turned to the on position, and the left and then right brake handle pressed. If the brake light fails to light with one brake handle and not the other, that is indication that the brake micro switch for that handle has failed. If the light fails to work for both brake handles check the vehicles taillight bulb. It has more than likely burned out

To gain access to the brake switches the left and right side controls must be removed as well as the brake handles. This can be performed at your local authorized service center.

Adjustment of the idle speed

If the vehicle stalls out during normal operation due to the engine idle speed being low, this idle speed can be adjusted:

* Place the vehicle on its main stand and open the under-seat storage area to gain access to the carburetor cover at the bottom of this storage compartment. Open the carburetor cover to expose the carburetor
* Start the engine
* Allow the engine to reach normal operating temperature.
* While the vehicle is running adjust the idle until the specified value.

Adjust the idle speed screw here. Turning clockwise will raise the idle; counter clockwise will lower the idle.

Service and Maintenance for Front and Rear Tires

Prior to riding always inspect the tires. Make sure the front and rear tire are filled to their recommended pressure. Always check air pressure when tires are cold. Proper tire inflation increases riding comfort and the stability of the vehicle while maximizing the service life of the tires.

Tire specification/air pressure	Front wheel	3.50-10 32-40PSI
	Rear wheel	3.50-10 32-40PSI

Check the air pressure of the tire and visually inspect the rubber tire and rim for excessive wear, cracking or other defects. If there are any issues, the tire should be replaced at a local authorized service center.

Removal and Installation of Front Wheel

* With the engine off, place the vehicle on the center kickstand.
* Remove the nut off the front wheel axle. Slide the bolt out while making sure to retain all hardware including wheel spacers, and speedometer hub.
* Do not use the front brake with the wheel removed.
* Check fluid level in the master cylinder and top off if needed. Verify that the wheel spins freely with no brake drag.

Warning:

* Always re-torque the front wheel nut to 40-50 ft. lbs.

Failure to properly torque the front wheel nut can lead to serious injury!

Removal and Replacement of the Rear Wheel

* Turn the engine off.
* Place vehicle on center stand and remove muffler.
* Loosen the rear wheel nut, and remove the rear wheel from the drive shaft.

Installation precautions:

* Torque the rear wheel nut to 40-50 ft lbs. and reinstall muffler.
* Verify the rear brake is adjusted properly.

If the tread depth in the middle of the tire reaches the following limits the tire must be replaced immediately.

Minimum limit of tread depth	Front wheel	2.0mm (0.079")
	Rear wheel	2.0mm 0.079")

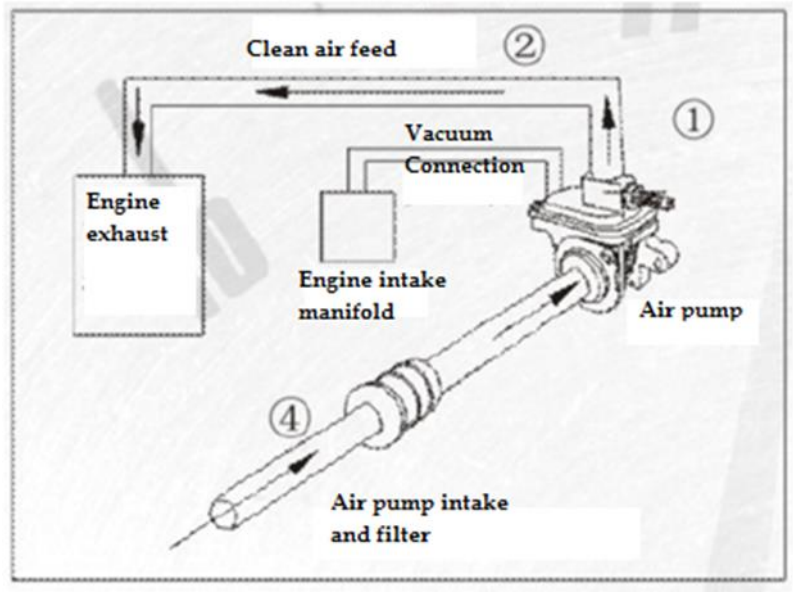
Check the tread wear depth of the tires and inspect the sidewalls for any damage. If any abnormalities are found, the tire in question must be replaced immediately.

Warning: Correct tire pressure is a necessity for the safe operation of your vehicle. Check your tire pressure every time you use your scooter

* Low tire pressure will increase the rolling resistance of the vehicle, increase fuel consumption, and wear the tire prematurely. In more severe cases is can lead to flat tires. Always check tire pressure prior to riding.
* Excessive tire pressure will cause uneven tire wear, increase the risk for blow outs, and decrease vehicle stability.

Service and Maintenance of the Environmental Protection Device

Vehicle operators must conduct regular service and maintenance of the environmental protection system to ensure the best performance of the assembly. With proper and regular service and maintenance, we can promptly eliminate faults, prolong the service life of the environmental protection system, reduce the maintenance costs, and realize the goal of being environmental-friendly by reducing your vehicles fuel consumption.



⚠ **Caution**

The air pump of the environmental protection device must be serviced and maintained by a professional motorcycle repair shop or the dealer's after-sales service personnel (make sure not to adjust the air pump without authorization)

① Regularly check the clamp for the intake vacuum hose, the clamp for the clean air feed, and the mounting bolt for the metal air pump intake pipe. If they are loose, tighten them.

② Regularly check whether there is any aging, air leakage or damage on the intake vacuum hose and the plastic clean air feed hose. If any, replace damaged hose

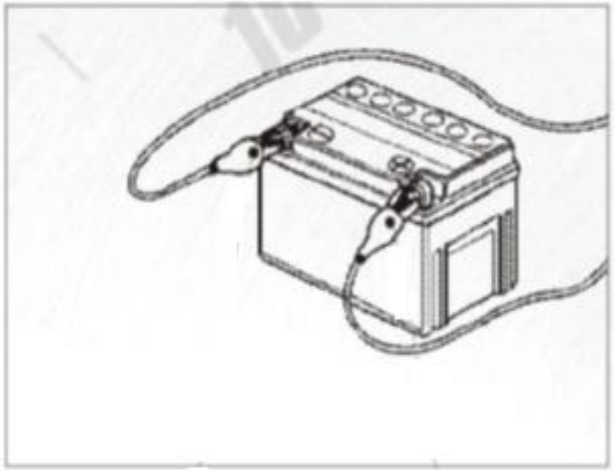
③ Regularly check the working conditions of the air pump of the environmental protection device. If it is blocked or is not working properly, replace the air pump.

④ Regularly check the air filter. If dirty, change it immediately. Otherwise, the air flow through the assembly will be reduced, changing the fuel/air ratio in the exhaust passage, increasing emissions.

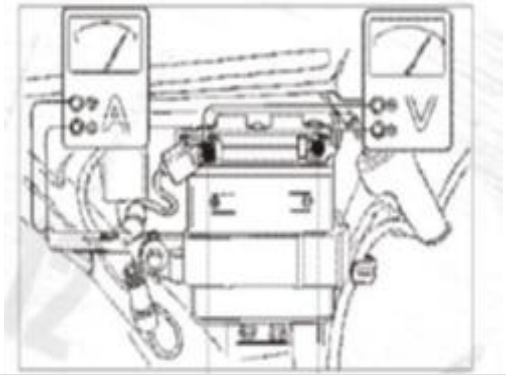
Service and Maintenance of the battery

In this model, the battery is mounted under the floor mat. For the first 500 to 1000 miles of the vehicle, the battery should be serviced and maintained as follows:

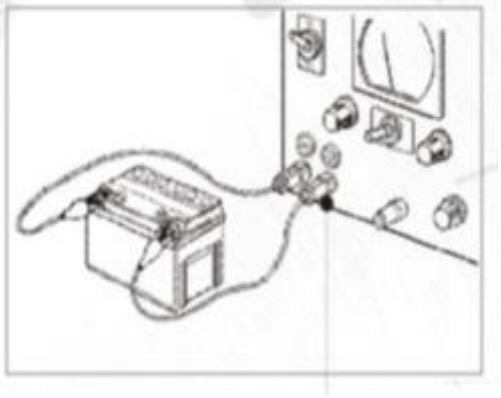
1. Keep the battery poles clean of corrosion.
2. Make sure the positive and negative cable connections are clean and tight.
3. If the vehicle is not going to be used for more than 2 weeks, the battery should be disconnected from the vehicle and maintained on a trickle charger



Make sure the positive and negative cable connections are clean and tight.



When checking the voltage of the battery, a reading of less than 12 volts is not normal. You should also "load test" the battery to determine if the battery needs to be replaced. or just charged. This can be done at most auto parts stores



If your battery is showing a voltage level less than 12v, but passes a "load test" charge it on a battery charger.

Service and Maintenance of the Main Fuse

The main fuse is connected in series to the battery. If there is a sudden power surge or issue within the electrical system, the fuse will automatically break to protect the battery and other electrical components. The size of this fuse is 15A

If the entire electrical system of the vehicle is not functioning, check the fuse first. A blown main fuse will cause all electrical components including the electrical start to stop functioning.

Caution

* In the event of a blown fuse, the cause should be found right away as it is indicative that there may be a more serious electrical problem present. In this situation, please bring the vehicle to your authorized WOLF Brand Scooters dealer for service.

Service and Maintenance for the Horn

Over time the horn may need to be adjusted. By removing the front panel, you can access the horn and adjustment screw.

If the horn sound becomes weak or isn't working at all, remove the front cover, and use a multi-meter to measure the voltage of the horn circuit. You must do this with the ignition turned on, and it should measure 12 Volts. If that is the case, you should use the adjustment screw in the middle of the horn to get the correct horn sound. If you do not get a correct reading from the multi-meter on the horn circuit, you should have the vehicle checked out by your local WOLF Brand Scooter Dealer.

Long term storage of your vehicle

If you need to store your vehicle for more than one month, the following steps should be taken:

* Drain all the fuel from the fuel tank and the carburetor. The Fuel system can be completely drained by running the engine until it stalls after draining the fuel tank. This will not only empty the carburetor of any fuel that might become "stale" but the fuel lines as well.
* Remove the spark plug. Pour 5mL clean lubricating oil into the cylinder. Use the kick-start arm to turn the motor over several times to enable the lubricating oil to be evenly distributed in the combustion chamber. Re-install the spark plug.
* Remove the battery, and store it in a dry, dark, and climate controlled environment. Place the battery on a trickle charger to maintain a good charge.
* Wash the vehicle clean and dry with soft cloth or chamois. Wax the painted surfaces, and apply a film of anti-rust oil to the chrome surface.
* Fill the tires with air to the specified P.S.I
* Cover the vehicle, and park it in a dry, clean, dark well-ventilated, place, away from any hazardous materials such as flammables or chemical corrosives.

Re-use after Storage

* Clean the vehicle.
* Replace the engine oil if vehicle has been stored for more than 4 months, regardless of mileage.
* Test the battery.
* Refill the fuel tank with fresh gas.
* Perform an inspection on the vehicles brakes, lights, tires, and check for any fluid leaks.

Service and Maintenance Interval Table

Vehicle service and maintenance is based on its odometer reading. If the vehicle is being used in harsh conditions or under load for long periods of time, the service and maintenance interval should be shortened accordingly.

Service Type		Item	Odometer				
		Interval	500 Miles	1000 miles	2000 Miles	3000 Miles	Remarks
	Fuel system		C	C	C	C	Items marked ※※ can only be serviced and maintained by authorized Wolf Brand Scooter service center. When operating in an extremely humid or dusty environment, the service and maintenance interval should be shortened accordingly.
	Fuel filter		C	C	C	C	
	Throttle cable		A	A/C	A/C	A/C	
※※	Carburetor		C	C	C	C	
	Air filter		C	C	C	C	
	Spark plug gap		A/C	A/C	A/C	A/C	
※※	Valve lash		A	A	A	A	
	Engine oil		R	R	R	R	
	Oil filter screen		C	C	C	C	
※※	Timing chain		I	A	A	A	
	Carburetor idling		A	A	A	A	
※※	Drive belt		-	A	R	R	
	Battery		B	B	B	B	
	Brake shoe		I	A	A	R	
※※	Braking system		A	A	A	R	
	Brake light switch		A	A	A	A	
	Lighting system		I	I	I	I	
※※	Clutch		I	I	I	I	
※※	Shock absorber		I	I	A	A	
	Nuts and bolts		G	G	G	G	
	Front and rear tire hardware		I	I	I	I	
	Throttle grip		I	A	A	R	
A-Adjustment C-Cleaning I-Inspection R-Replacement G-Tightening B-Battery Charging							

Service and Maintenance Interval Table for Lubricated Parts

Name	Model	Odometer reading							
		300-500	1000	2000	3000	4000	5000	6000	7000
Engine oil	SAE 15W-40 (5w-40 if synthetic)	R	R	R	R	R	R	R	R
Brake Cables	Multipurpose lithium-based lubricating grease	-	-	R	R	R	R	R	R
Brake fluid	DOT3 or DOT4	-				R	-		
Lubricating oil for front shock absorber	20w Motorcycle fork oil	-	I	I	I	T	I	I	I
Tachometer gear	Multipurpose lithium-based lubricating grease	-			I	R	I	R	I
Steering gear	Multipurpose lithium-based lubricating grease	-				I	-	R	-
Bearings for front and rear wheels	Multipurpose lithium-based lubricating grease	-			I	R	I	R	R
Rear braking swing arm	Multipurpose lithium-based lubricating grease	-				I	-	I	-
I-Inspection R-Replacement T-Addition									

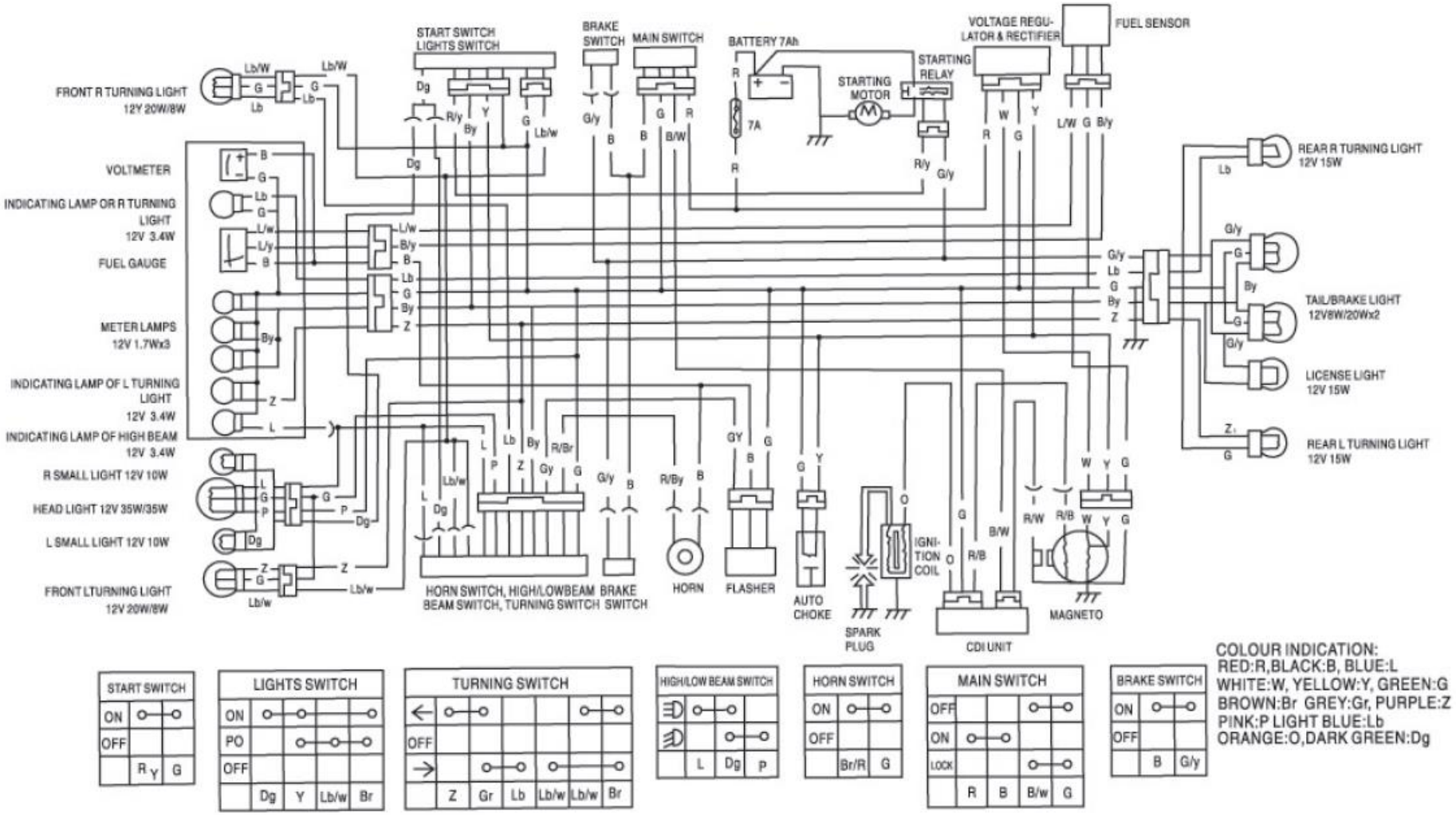
Table

Fault system	Fault	Causes	Troubleshooting
Fuel system	The engine won't start	Fuel not entering the carburetor.	Check the fuel lines.
		The fuel is not flowing from the tank.	Clean the tank and replace fuel shut of valve.
		The vacuum lines are pinched or leak.	Check vacuum lines and replace if needed.
		The fuel line is clogged.	Replace fuel lines.
		The vacuum line is blocked.	Unblock the vacuum lines.
	The vehicle is difficult to start or you notice a sudden loss of fuel economy.	The carburetor is blocked.	Clean or replace the carburetor.
		The air/fuel mixture is not correct.	Rejet the carburetor
		The carburetor leaks.	Replace the carburetor.
		The fuel filter is blocked.	Replace/Clean the fuel filter.
		The throttle of the carburetor is worn.	Replace the carburetor.
		The fuel is bad.	Replace the fuel and then clean the carburetor.
		The air vent of the fuel tank is blocked.	Remove blockage in air vent of the fuel tank.
		Low fuel.	Add fuel to the fuel tank.
Air intake/exhaust system	The vehicle is difficult to start.	The Air filter element is blocked.	Clean the air filter.
		The air filter leaks.	Replace the air filter.
		The air filter is dirty.	Clean the air filter.
		The air filter housing leaks.	Repair or change the air filter housing.
		Too much carbon build up at the exhaust port.	Clean the carbon build up at the exhaust port.
		The exhaust port leaks.	Replace the cylinder head.
		The muffler is blocked.	Replace the muffler.

Fault system	Fault	Causes	Troubleshooting
EPA Device	Emitted pollutants exceed applicable standards	Carbon has built up at the secondary air intake port. The air pump is blocked or damaged. The air pump filter is blocked or damaged. The intake rubber hose is leaking. The clamp is loose or damaged.	Clean the carbon from the port. Replace the air pump. Replace the air pump filter. Replace the intake rubber hose. Replace the clamp.
Ignition system	Weak spark or no spark	There is carbon buildup on the spark plug. The spark plug gap is not gapped to specs. The insulation part of the spark plug is damaged.	Clean the carbon buildup on the spark plug. Adjust the gap to 0.025" (0.6mm~0.7mm) Replace the spark plug.
		Short-circuit of the ignition coil C.D.I is faulty.	Replace the ignition coil. Replace C.D.I.
		The stator is faulty. The connection of the ignition system is loose.	Replace the stator. Check each connection.
Engine	The engine is difficult to be start and will not idle.	The cylinder head is leaking. The valves are not adjusted properly. The valves are bent.	Replace the cylinder head. Adjust the valves to .003 inches. Replace the valves.

Fault system	Fault	Causes	Troubleshooting
Engine	Compression ratio is too high.	There is excessive carbon buildup in the combustion chamber and at the top of the piston.	Clean the carbon buildup in the combustion chamber and on the top of the piston.
	Excessive noise coming from engine.	The valves are not adjusted properly. The air valve is broken. The cylinder and piston are worn out.	Readjust the valve clearance. Replace the air valve. Replace the damaged internal engine parts.
	The cylinder pressure is too low.	The cylinder, rings, valves, piston could be damaged.	Replace the damaged parts .
	Excessive smoke from muffler.	The piston rings are damaged. Oil is leaking past the valves. There is excessive wear on the piston or cylinder wall.	Replace the piston rings. Replace the valve seals. Replace the piston or cylinder.
	The cylinder head leaks.	The valves need to be reseated.	Reseat the valves.
Front Wheel	The front wheel vibrates or wobbles.	The front shock absorbers are damaged. The front wheel is damaged. The triple tree is bent. The front wheel is improperly mounted. The front wheel bearings are worn out or damaged.	Replace the front shock absorbers Replace the front wheel. Replace the triple tree. Replace the front tire. Replace the front wheel bearings.
	The front wheel has play in it.	The front wheel is damaged. The front wheel nut is loose. The tire pressure is too low. The front wheel bearings are worn out or damaged	Replace the front wheel. Tighten the front wheel nut to specs. Increase the tire pressure. Replace the front wheel bearings.

Fault system	Fault	Causes	Troubleshooting
Rear Wheel	The rear wheel vibrates or wobbles	The rear wheel is damaged. The tire pressure is too low. The rear wheel nut is loose. The tire was improperly mounted.	Replace the rear wheel. Inflate the tire to the correct P.S.I. Tighten the rear wheel nut to specs. Have the tire remounted and re balanced
Suspension system	The shock absorber no longer rebounds	The spring of the shock absorber is worn out.	Replace the spring of the shock absorber.
		The shock absorber is improperly adjusted.	Re-adjust the shock absorber.
Braking system	Poor braking performance	The master cylinder has air in it. The front brake pads are worn out. The rear brake shoes are worn out. Contaminated or old brake fluid.	Bleed the brake lines. Replace the brake pads or brake shoes. Adjust brake cable. Flush and bleed brake lines.
Lighting system	The head light will not turn on	The head light bulb is burnt out. The headlight switch is faulty. The connecting plug is loose. The fuse is burnt out. The battery is faulty.	Replace the headlight bulb. Inspect headlight switch wires or replace. Check the plug connector. Replace the fuse. Charge or replace battery.
		Stator issues	Check stator connections or replace.


START SWITCH
LIGHTS SWITCH
BRAKE SWITCH
MAIN SWITCH
BATTERY 7Ah
STARTING MOTOR
STARTING RELAY
VOLTAGE REGULATOR & RECTIFIER
FUEL SENSOR
FRONT R TURNING LIGHT 12V 20W/8W
VOLTMETER
INDICATING LAMP OR R TURNING LIGHT 12V 3.4W
FUEL GAUGE
METER LAMPS 12V 1.7Wx3
INDICATING LAMP OF L TURNING LIGHT 12V 3.4W
INDICATING LAMP OF HIGH BEAM 12V 3.4W
R SMALL LIGHT 12V 10W
HEAD LIGHT 12V 35W/35W
L SMALL LIGHT 12V 10W
FRONT LTURNING LIGHT 12V 20W/8W
REAR R TURNING LIGHT 12V 15W
TAIL/BRAKE LIGHT 12V8W/20Wx2
LICENSE LIGHT 12V 15W
REAR L TURNING LIGHT 12V 15W
HORN SWITCH, HIGH/LOWBEAM SWITCH, TURNING SWITCH
BRAKE SWITCH
HORN
FLASHER
AUTO CHOKE
SPARK PLUG
IGNITION COIL
CDI UNIT
MAGNETO
START SWITCH
LIGHTS SWITCH
TURNING SWITCH
HIGH/LOW BEAM SWITCH
HORN SWITCH
MAIN SWITCH
BRAKE SWITCH
COLOUR INDICATION:
RED:R,BLACK:B, BLUE:L
WHITE:W, YELLOW:Y, GREEN:G
BROWN:Br GREY:Gr, PURPLE:Z
PINK:P LIGHT BLUE:Lb
ORANGE:O,DARK GREEN:Dg