GPX MOTO

GPX 300R and L TSE

Owners Handbook

WWW.GPXMOTO.COM WWW.GPXMOTOUK.COM

This service manual is edited by GPXMOTO
No part of this publication may be reproduced without authorization.
GPXMOTO reserves the right to make changes at any time without notice and without incurring any obligation.
The vehicle pictured in this owner's manual may not match your actual vehicle.

PREFACE

Congratulations on your purchase of a GPX motorcycle. We believe that you have made an excellent choice ,which will give you great and reliable performance.

This Handbook and Manual will give you an understanding of our product. It has detailed the complete range of specialized maintenance and adjustment schedules as well as the procedures required.
This document also explains extensive troubleshooting methods as well as a comprehensive technical specification. To assist you there are many photographs and guides to assist you.

Please read this manual carefully and carry out maintenance according to a professional standard. carrying out the correct maintenance at the required schedule will effectively prolong the service life of each component, improve the motorcycle and engine performance as well as the reliability of the vehicle.

Riding motorcycles is dangerous and the GPX should not be operated with out the rider wearing a helmet , goggles ,boots and gloves at the bare minimum.

It is expected that the operator has a good knowledge of riding and maintaining motorcycles. If you do not , you should seeking specialised riding coaching and take your motorcycle to a GPX dealer when adjustments or work is required. This is a basic handbook and manual only. It expected that the operator should have a much more comprehensive knowledge that this basic manual displays. If you do not , then take your motorcycle to a GPX dealer.

For the sake of technical development, GPXMOTO will reserve the right of modifying motorcycle structure, equipment, and spare parts without notice. Due to that different markets have different law's requirement, we've adjusted model accordingly, the model image in this manual maybe not match your actual vehicle. In addition, if there is any question concerning this manual, please visit our website www.GPXMOTO.COM or WWW.GPXMOTOUK.COM and consult our customer service.
Alternatively you can call your GPX dealer for advice and assistance.

The contents of this manual are subject to change without prior notice due to vehicle

improvement. The actual state of the motorcycle in questions should determine the overall level of maintenance required.

MEANINGS OF REPRESENTATION

SYMBOLS USED

The meaning of specific symbols is described below

* All work marked with this symbol requires specialist knowledge and technical understanding. If you do not have the confidence to perform that, you can go to an authorized GPX workshop or GPX after-sale service point. There, your motorcycle will be optimally cared for by specially trained experts using the specialist tools required.

→ Indicates a page reference (more information is provided on the specified page).

DEGREES OF RISK AND SYMBOLS

Your safety, and the safety of others, is very important. Operating this motorcycle safety is an important responsibility. Please read this manual carefully.

Safety Messages preceded by a safety alert symbol and one of three signal words:

DANGER: Indicates a danger that will immediately and invariably lead to fatal or permanent injury if the appropriate measures are not taken.

WARNING: Indicates a danger that is likely to lead to fatal or serious injury if the appropriate measures are not taken.

CAUTION: Indicates a danger that may lead to minor injuries if the appropriate measures are not taken.

Other important information:

Please note that it is not practical or possible to warn you about all hazards associated with operating or maintaining a motorcycle.

Therefore, you must have basic mechanical safety knowledge and use your own good judgement.
If you cannot complete the process of operating or maintaining, please consult a more experienced senior technician before operation.

ADVICE

Most of off-road motorcycle fatalities are caused by head injuries. Without helmets, the chances of serious injury or death caused by head injuries are much higher. Always wear an approved motorcycle helmet and protective apparel such as goggles, gloves and boots while riding, which will save your life at the critical moment.

This motorcycle was designed for off road racing , therefore there is no capacity to carry a passenger .Please therefore do not use this motorcycle to carry any passengers. Ignoring this or order rules could lead to serious injury or a fatality.

Do not use non-original parts to modify this motorcycle. If you need to replace any parts, please use spare parts and accessory products that are approved and / or recommended by GPX and have them installed by an authorized GPX workshop. GPX accepts no liability for any personal modification, other products and any resulting damage or loss.

Our TSE series products are specially designed for off-road racing and riding.

Please take care of your vehicle and avoid any problem caused by improper use.

Please check your motorcycle carefully before riding and do the maintenance accordingly after use. If you crash the motorcycle, check the condition of the motorcycle before you resume your journey. Ignoring this advice could easily lead to an accident and endanger your own safety as well as others , as you may be riding a broken or faulting motorcycle .

When using this motorcycle, the temperature of the engine and exhaust pipe is very high, so it needs to a period to cool down after parking. During this period, do not touch the engine or exhaust pipe as you will scold yourself.
Do not wear shorts while riding, otherwise leg injuries may happen.

GPX MOTO

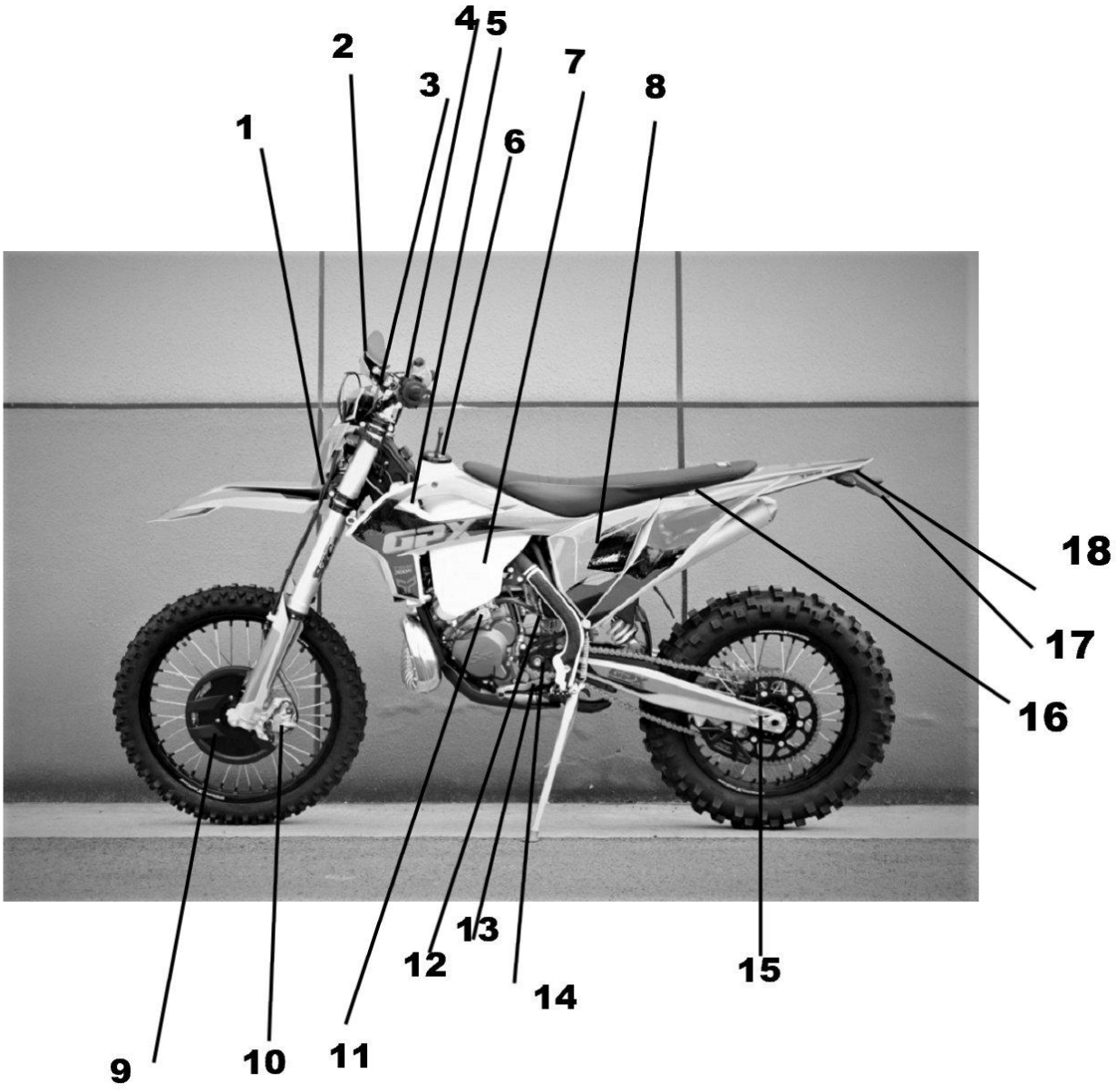
Lessons learnt from a little time with the TSE 300

As is normal on dirt bikes , water can enter the air box when washing. It is imperative that the air filter is cleaned and oiled after every wash and every ride. This is the most important maintenance action you can complete to ensure the long life of your motorcycle
Prior to washing ,if your air filter is clean then open the airbox and cover the filter with a plastic bag so the water doesn't go onto the air filter. Remember to remove the bag !.
Loctite the gear lever bolt
Loctite all the stand bolt and nuts
Do not over tighten the chain as you will cause it to wear. See the section in this handbook
Do not start adjusting the carburettor settings unless you are HIGHLY competent in tuning as you will invalidate the warranty and may seize your engine.
Ensure the rubber boot behind the headlight houses all of the electrical connections. Seal the top of the rubber boot by piercing it at the top and on both sides of the boot and closing with a zip tie
Spend time ensuring that the speedometer cable is correctly routed to avoid it bunching up.
When removing the carburettor it is very very important to do this by removing the air filter and pulling back the rubber boot of the rear of the carb.Wrenching out the carburettor sideways will eventually damage and split the rubber so you must not do this , as it is not designed for this.
Keep a close eye on your spoke tension to ensure they do not come loose
Pull down the fork dust seals and clean your fork seals from time to time with a seal buddy. Often it's a little dirt under the seal causing a weep and the seal does not need replacing.
Many of the issues that customers report stem from their own actions - fitting parts / accessories and makng adjustments. Be very aware that the factory send out great bikes and on many occassions it is the Englishman that messes them up.

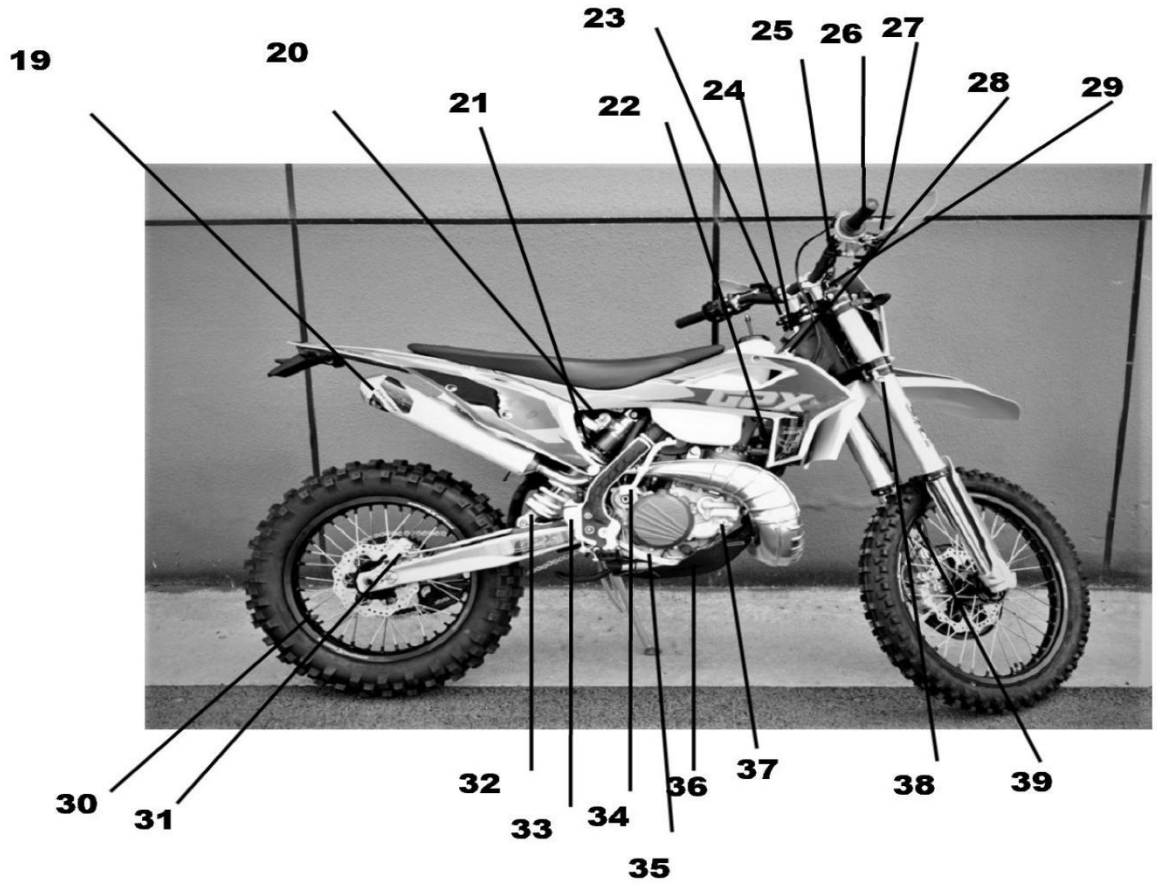
APPEARANCE

TSE 300 COMPONENTS AND POSITIONS

GPX MOTO

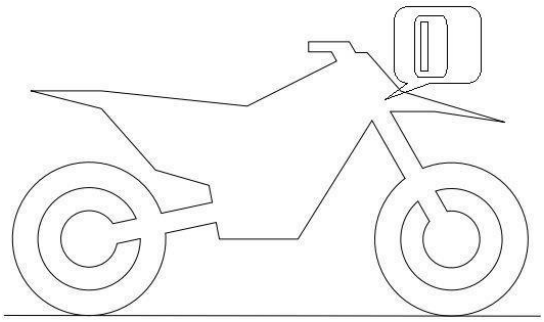


No.	Name	No.	Name
1	Front LED light	10	Front brake caliper
2	Handguard	11	Petrol on off and reserve tap
3	Hydraulic clutch lever	12	Carburettor
4	Switch gear	13	Gear lever
5	Coolant overflow tank	14	Front sprocket
6	Petrol filler cap wth vent	15	Chain adjuster
7	Petrol tank	16	Seat
8	Air filter access	17	Number plate mount
9	Front disc guard	18	Rear light and brake light



No.	Name	No.	Name
19	Rear silencer	30	Security rim lock
20	Fast and slow speed compression	31	Rear brake caliper
21	Spring preload adjuster	32	Rear shock rebound adjuster
22	Radiator fan	33	Rear brake master cylinder
23	Hour meter	34	na
24	Fork compression and spring preload adjuster + bleed valve	35	Rear brake lever
25	Electric start button	36	Sump guard
26	Throttle	37	Power valve adjuster
27	Front brake lever	38	Motorcycle tie down loop
28	Radiator cap	39	Security rim lock
29	Fork rebound , spring preload and bleed valve		

VIN CODE



Vin code of the TSE 300 ,is located on the head stock.

CHASSIS NUMBER

Chassis Number of TSE 300 is located on the headstock/frame/chassis under the handlebars

ENGINE NUMBER

The engine number of TSE 300 is located on the engine case behind the cylinder block.

PARAMETER

DIMENSIONS AND SPECIFICATION - TSE 300	
L*W*H（mm）	2170×830×1285
Wheelbase（mm）	1480mm
Net weight（kg）	109kg
Tire size	F: 90/100-21；R: 130/80-18. Rear will accept a 140 80/90 18” Enduro or MX tyre. Comes fitted with road legal tyres
Seat height（mm）	940 mm.
Min ground clearance（mm）	370mm
Tank volume（L）	9.4 litres
Engine Parameters	
Engine type	Single cylinder, water cooled two stroke with adjustable power valve and counter balancer.
Clutch type	Wet type, Multiple disk
Cylinder diameter×stroke	72x72 mm
Oil / ratio	During run in period 40/1. After run in period 50/1. On both occasions always with quality branded fully synthetic 2 stroke oil
Displacement	293 cc
Shift type	Usually engaged two - stage transmission six - speed transmission, International profile 1-N-2-3-4-5-6
Starting	12v Electric start with starter placement under engine and with direct attachment to flywheel (No maintenance with no gears to wear) . Kick start back up.
Fuel control system	Flat side carburettor
Battery	Stock lithium 12v battery for high performance electric starting and reliable electronics
Chain	#520, 13T/52T O ring
Frame/Shock/Brake/Wheel system Parameters	
Frame type	Central double cradle type high-strength steel tube frame, GPX International patent design
Front shock	SZC Front suspension. Comprising of quality high performance Telescopic forks with adjustable compression and rebound damping.Adjustable spring preload on forks.
Rear shock	Compression recovery dual adjustable nitrogen airbag rear shock, Quality high performance unit with spring preload, adjustable compression as well as rebound damping

Swingarm	High strength forged aluminium alloy structure

Handlebar	Competitive high-strength aluminium alloy fat bar (imported),, material 7075 Φ28.6mm, with GPX special ultra-soft off-road grip
F/R rims	F 1.60×21, R 2.15×18, 7050 high strength aluminium rim , forged CNC wheel hub
F brake system	Powerful Hydraulic alloy twin piston caliper with 260mm disc
R brake system	Powerful Hydraulic alloy twin piston caliper with 240mm disc
Others	
Air filter type	Sponge filter core filter type
Fuel type	92# and above grade gasoline. 50/1 ratio premix with fully synthetic quality oil after fully run in. 40/1 whilst running in.
Motorcyclists	1 person（rider）

CONTROL

CLUTCH

The clutch is controlled by the clutch lever, which is fitted on the left side of the handlebar.

By adjusting black plastic ribbed nut on the clutch lever it is possible to adjust the feel and operation of the clutch.

FRONT DISC BRAKE

The front disc brake is controlled by the hand brake lever, which is fitted on the right side of the handlebar.

By adjusting the small bolt and lock nut on the lever you can change the biting point of the lever and the distance of the brake lever to your preference.

The front wheel adopts the floating - caliper disc brake, which is installed under the left front fork and fixed by two bolts.

THROTTLE LEVER

er

The throttle lever is located on the right side of the handlebar. The throttle is very sensitive.
Turn the throttle counter clockwise to increasing the engine speed and power output. The reverse will reduce the engine speed and power output. It will back to normal smoothly once you lease the handle.

STARTING / STOPPING

The grey start and red stopping button is fitted on the right side of the handlebars, near the throttle grip.
It is expected that you will only need to press this button for a maximum of 2 seconds to start the motorcycle . Release the button as soon as the engine starts . If the engine does not start , then visit the troubleshooting pages for help.

Attention : When starting the motorcycle in any gear , you should operate the clutch with your left hand to avoid possible sudden forward motion when starting the GPX .

FUEL TANK SWITCH

fuel tank switch

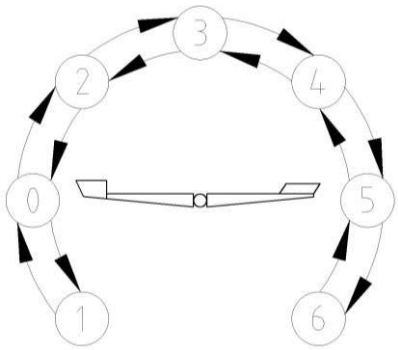
The fuel tank switch is located on the bottom left side of the fuel tank. By turning the switch, you can control the entrance of the fuel into into the carburettor.

The meaning of symbols on the petrol tank switch is shown as the left picture.

- With the lever pointing to the front of the bike the fuel is ON
- With the lever pointing out to the left of the bike the fuel is OFF

SHIFTING

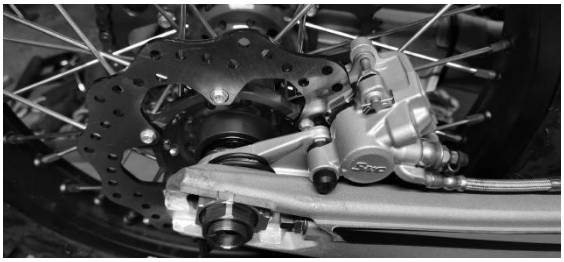
The gear shift is located on the left side of the engine. This is operated by the left foot by pushing down or by pulling up with your foot.



The GPX engine has six gear as International Standard, and you can find the illustration on the left.

REAR DISC BRAKE

The rear brake pedal is located on the right side of the engine and is operate by pushing down on it gently using the right foot.



The rear brake adopts a floating caliper disc brake. This is located on the right side of the rear wheel and fixed by a disc brake bracket.

SIDE STAND SUPPORT

The GPX has a retractable side stand for parking. When parking, make the stand is fully down. When operating the motorcycle make sure the stand is retained in the up position by use of the rubber band.

PREPARING FOR USE

ADVICE ON FIRST USE

1. Before your first trip, read the entire operating instructions carefully, especially the section of "Controls" and "Riding Instructions".
2. When driving, please carry out a standardized run-in period first.
3. If any parts problems are found during using, you can repair that according to this manual or contact GPX Dealers for professional aid.
4. After each use, clean the vehicle with running water.
5. GPX is not responsible for any vehicle problems caused by malicious acts

RUN-IN PROCESS - VERY IMPORTANT

Motorcycle engines have a lot of relative moving parts, such as pistons, piston rings, cylinder blocks, meshing transmission gears, etc.

Therefore, in the initial stage of use, the engine must be operated more gently than when riding afterwards . The running-in can make the moving parts adapt to each other, correct the working gap, and form a good smooth friction surface that can withstand larger loads. Only after standard running-in can the engine have excellent performance and reliability.

DO NOT EXCEED 45MPH FOR 200 MILES

1. **USE A RED COLOURED QUALITY 2 STROKE OIL 50/1(100ML PER 5 LITRES OF UNLEADED) - NOT TRANSPARENT OIL !!- SEMI OR FULLY SYNTHETIC OIL**

2. **WHEN REFUELING AT PETROL STATION , PLACE OIL IN TANK FIRST AND THEN ADD PETROL ON TOP TO CIRCULATE THE OIL IN THE PETROL. THE OPPOSITE RISKS SEIZING YOUR ENGINE.**

3. **LUG ENGINE USING LOW AND MEDIUM REVS. USE THE TORQUE OF THE ENGINE NOT THE HIGH REVS**

4. **THIS IS A DIRT BIKE AND NOT TO BE USED FOR ROAD TOURS. HOLDING THE THROTTLE ON MEDIUM / HIGH OPENINGS IS NOT WHAT 2 STROKE ENGINES ARE DESIGNED FOR . OPEN AND CLOSE YOUR THROTTLE WHEN YOU ARE ROAD RIDING , OTHERWISE YOU WILL CAUSING THE PISTON AND BARREL TO RUN DRY AND SEIZE.**

MORE recommended running-in steps are as follows:

GPX MOTO

1. **0-2.5h stage: Using under the throttle level of 50% ~ 75%, the speed should be changed frequently to avoid the motorcycle working at the same condition for a long time,**
   Let the engine rest and cool down for 5 ~ 10 minutes after each 1-hour work. Do not accelerate suddenly to protect your throttle.
2. **2.5-4h stage: Using under the throttle level of 50% ~ 75% throttle and work for a long time at the same condition.**
   In actual working, the throttle can be up to full level, but not more than 5 ~ 10 seconds;
3. **4-5h stage: Using under the throttle level of 75% ~ 100%**
4. **More than 5h: increase the speed to 60 ~ 80km/h, until the full engine performance can be used.**

DANGER: When riding a motorcycle, do not speed up regardless of the consequences. This behaviour can easily cause engine damage and also cause safety accidents.
So, please ride the vehicle properly.

COLD START PROCEDURE -

USE THE FOLLOWING PROCEDURE TO START THIS MODEL WHEN COLD

TURN ON PETROL AND CHOKE - ENRICHER
LEAN THE BIKE OVER TO THE LEFT HAND SIDE SEVERELY SO THAT FUEL COMES OUT OF THE CARB OVERFLOW
STAND THE BIKE UPRIGHT
TURN IGNITION ON AND PUSH BUTTON

RIDING INSTRUCTIONS

PREPARATION BEFORE RIDING

1. Check fuel level in fuel tank and replenish if necessary.
2. Check fluid level in front brake fluid reservoir and replenish if necessary.
3. Check fluid level in rear foot brake fluid reservoir and replenish if necessary.
4. Check brake pad wear condition of the front brake.
5. Check brake pad wear condition of the rear brake.
6. Check that both brakes operate correctly.
7. Check the antifreeze level.
8. Check the chain for the condition and correct tension
9. Inspect rear sprocket, engine sprocket and chain guide structure to ensure the condition is good.
10. Check the chain adjuster to ensure the lock bolts are tight.
11. Check the outer surface of the tire.
12. Check tire pressure.
13. Check battery level.It is advised to keep your battery plugged into a lithium trickle charger when the motorcycle is not in use.
14. Check the thickness of the front disc brake.
15. Check the thickness of the rear disc brake.
16. Check the torque of each fastener.
17. Check the rear sprocket to ensure the condition is good.
18. Check engine casings and plastic cover parts to ensure a good condition.
19. Check the fuel tank switch.

PRECAUTIONS FOR STARTING

The required to start the GPX are as follows:

1. Turn the petrol tank switch to the "ON" position;
2. Pull up the choke knob on the carburettor to activate it ;
3. Turn on the ignition key;
4. Pinch the clutch lever with the left hand;
5. Pinch the brake lever with the right hand;
6. Push the starter button until the engine starts but no longer than 2 seconds;
7. Release the starter button after the engine starts.
8. Push the choke knob down to deactivate it.

PRECAUTIONS FOR STOPPING

1. Check the condition of the vehicle and the rider’s Equipment before starting off.
2. Speed up slowly when just starting off.
3. Start in gear “1” to ensure safety.

PRECAUTIONS FOR TURNING

1. Take care to slow down in advance conditions when turning
2. Lower your centre of gravity to reduce the risk of side rolling when turning
3. Do not shift gears when turning

PRECAUTIONS FOR ACCELERATION

1. Do not accelerate in the corner
2. Remember to shift gears after acceleration

PRECAUTIONS FOR SHIFTING

1. Pinch the clutch lever before shifting gears
2. Do not rev the engine when shifting gears
3. Do not shift gears in the corner

PRECAUTIONS FOR BRAKING

1. Use the rear brake as your first brake operation, if necessary, use hand brake as a supplement.
2. Check fluid lever in the brake fluid reservoir frequently
3. Replenish the brake fluid reservoir if necessary according with the procedure in the manual

PRECAUTIONS FOR STOPPING & PARKING

1. Slow down gradually to 0 and then stop, do not emergency brake without emergency.
2. Slowly lean the motorcycle to the left until its weight rests on the side stand.
3. Shift the gear to “Neutral” before stopping.

SUGGESTED INSPECTION TIME FOR ALL PARTS OF THE VEHICLE

	1 hour after each ride	every 10 hours/after every race	every 20 hours	every 30 hours
Check and charge the battery		●	●	●
Check the front disc brake		●	●	●
Check the rear disc brake		●	●	●
Check the front and rear disc brake discs		●	●	●
Inspect brake tubing for damage or leakage		●	●	●
Check the rear disc brake fluid level		●	●	●
Check the free-play of the brake pedal		●	●	●
Check the frame and swingarm		●	●	●
Check the swingarm bearing for wear			●	
Check the top of the shock absorber		●	●	●
Check the shock absorber connecting		●	●	●
Check tire surface condition	○	●	●	●
Check tire pressure	○	●	●	●
Check hub bearings for loose		●	●	●
Check the wheel hub		●	●	●
Check for rim edge pulsation	○	●	●	●
Check the spoke tension	○	●	●	●
Check chain, rear sprocket, engine sprocket, guide sleeve and chain		●	●	●
Check chain tension	○	●	●	●
Lubricate all moving parts (chain, handlebars, etc.) and check for smooth		●	●	●
Check the front disc brake fluid level		●	●	●
Check the free play of brake handlebar		●	●	●
Check whether the steering head bearing for loose	○	●	●	●
Check clutch			●	
Check for the correct clutch hydraulic fluid level in the master cylinder		●		
Replace the cap seal and shaft seal ring of the pump				●
Change the gear oil 700ml . Light gear motorcycle oil 10/40	○	●	●	●
Inspect all hoses (e.g. fuel, cooling, exhaust, drainage, etc.) and casing for	○	●	●	●
Check antifreeze fluid and level	○	●	●	●
Check the cable for damage and sharp bend		●	●	●
Check that the throttle cable is intact, free of sharp bends, and set correctly	○	●	●	●
Clean air filter and air filter box. VERY IMPORTANT TO CLEAN AIR FILTER AND REOIL AFTER EVERY JET WASH AND EVERY RIDE. NO EXCUSES. IGNORE AT YOUR PERIL.		●	●	●
Check whether screws and nuts are tightened	○	●	●	●
Replace the fuel filter	○	●	●	●
Check carburettor idle	○	●	●	●
Check front and rear light fixtures				
Final inspection: check whether the vehicle is running safely and conduct a test	○	●	●	●
Clean carburettor		●		
Check rubber chain guards and runners and replace where necessary		●		
Change piston and rings - Recommended every 80 hours				
Check cylinder when piston is changed and replace / recoat if required				

○ One-off interval

● Periodic interval

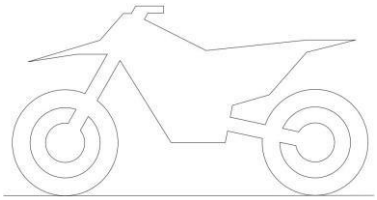
GPX MOTO

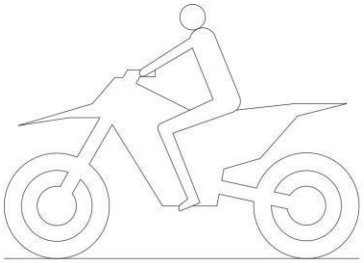
ATTENTION: This table is for reference only. Please adjust the maintenance cycle of the motorcycle according to the specific model and use situation.
WARNING: For the inspection, adjustment and replacement of the engine, please consult GPX Service Centre to avoid damage.

Torque settings. The GPX factory does not provide torque settings.

SUSPENSION SYSTEM

CHECK THE COMPRESSION AND REBOUND OF THE VEHICLE WITH THE RIDER ON BOARD





To ensure the best driving characteristics of the vehicle and avoid damage to swingarm, shock absorbers, linkage and frame, the basic setting of the suspension components must match the driver's weight.
The total standard rider mass of the GPX off-road motorcycle is shown in the table below.

TSE 300	75～85KGS

If the rider's weight is above or below the standard range, the basic setting must be adjusted accordingly. A small weight difference can be compensated by adjusting the rear shock absorber spring preload, but if the weight difference is large, the spring must be replaced.

ADJUSTING THE HIGH AND LOW SPEED COMPRESSION DAMPING OF THE REAR SHOCK ABSORBER

You can adjust the high speed compression damping by adjusting the red dial.

You can adjust the low speed compression damping by adjusting the black dial.

Turn counter clockwise to decrease damping(soft), or turn clockwise to increase damping(hard).

Warning - Do not force the DIALS. Do not loosen either of the bolts on the shock that are by the compression dials.

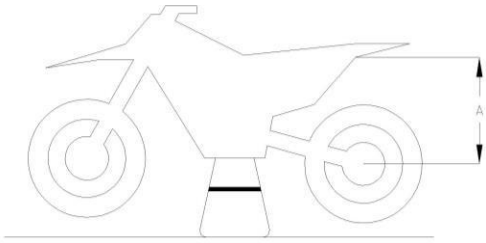
ADJUSTING THE REBOUND DAMPING OF THE REAR SHOCK ABSORBER
ADJUSTING THE SEAT HEIGHT

You can adjust the rebound damping by adjusting the screw in the red ciorcle with a flat bladed screwdriver.

Turn counter clockwise to decrease rebound damping(fast), or turn clockwise to increase rebound damping(slow)

You can adjust the seat height between the low and the high setting by moving the lower bolt between the 2 holes visible

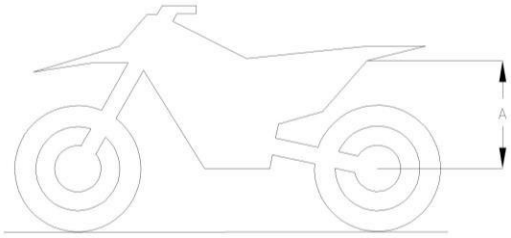
MEASURE THE DISTANCE BETWEEN THE CENTER OF THE REAR WHEEL AND THE REAR FENDER IN SUSPENSION



The measurement procedure is as below:

1. Place your motorcycle on its centre stand so that it is stable.
2. Select a fixed point on the side of the rear fender and mark it as "point 1".
3. Measure the distance from "Point 1" to the centre of the rear axle and record it as "A1".
4. Remove the motorcycle from the rack

MEASURE DISTANCE BETWEEN CENTER OF REAR WHEEL AND REAR FENDER UNDER NO LOAD



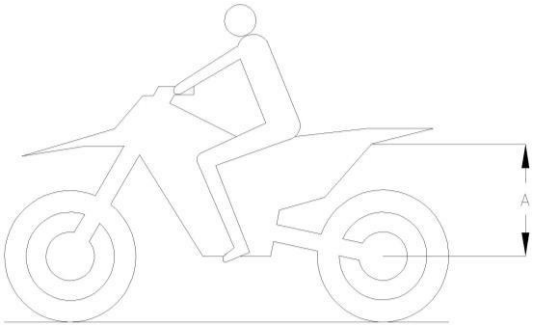
The measurement procedure is as follows:

1. The motorcycle is up right so that the centre surface of the tire is perpendicular to the ground
2. Measure the distance from the centre of the rear wheel axle of the motorcycle to "point 1" and record it as "A2".
3. Use a single stand to support the vehicle
4. Calculate the difference between "A1" and "A2" and denote it as "D1".

The value of "D1" when GPX motorcycle leaves factory is shown below

	D1
TSE 300R	10～34mm

MEASURE DISTANCE BETWEEN REAR WHEEL CENTER AND REAR FENDER IN DRIVING CONDITION



The measurement procedure is as follows:

1. The driver rides the motorcycle (the engine does not start)
2. Up right the motorcycle so that the centre surface of the tire is perpendicular to the ground
3. Measure the distance from the centre of the rear wheel axle of the motorcycle to "point 1" and record it as "A3".
4. The driver uses a single stand to support the vehicle and leave the seat

Calculate the difference between "A1" and "A2" and denote it as "D2".

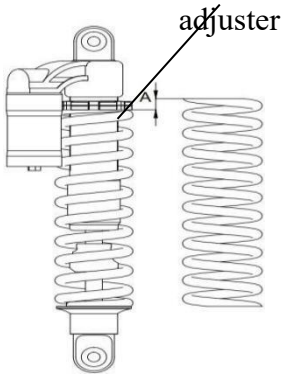
The factory default value of "D2":

	D2
GPX	50～100mm

If "D2" measured by the customer is lower than the factory value, you should decrease the spring preload appropriately; Conversely, increase the spring preload.

If "D2" is far less than the factory value, replace the spring with a softer one; Conversely, replace the spring preload with a harder one.

ADJUSTING THE SPRING PRELOAD OF REAR SHOCK ABSORBER



You can adjust the spring preload by adjuster.
Turn clockwise to increase spring preload,
Turn counter clockwise to decrease spring preload.

CHECK FOR THE SETTING OF FRONT SHOCK ABSORBER

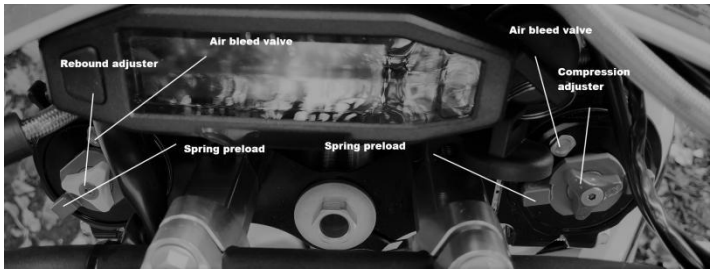
The inspection procedure is as follows:

1. Place the whole motorcycle on the ground
2. Up right the vehicle
3. Hold the handlebars with both hands and press down on the front shock absorber
4. Observe the effect of pressure and rebound of front shock absorber

If it is difficult to press the front shock absorber, decrease the compression damping appropriately.

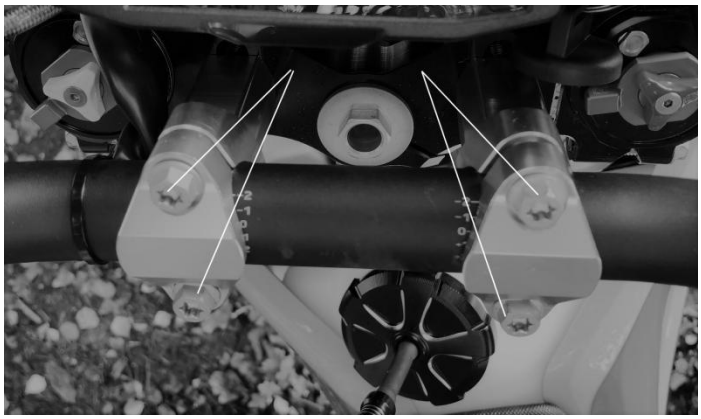
If it is difficult to rebound the front shock absorber, decrease the rebound damping appropriately. When the ambient temperature is high, the front shock absorber should also be properly bled of air using the bleed button on the top of the fork cap. Push the bleed button for 5 seconds to release all of the air. This air bleed button is located in front of the rebound knob that you can see in the photo beneath.

ADJUSTING THE REBOUND DAMPING OF THE FRONT FORKS



Adjusting Steps as follows:
Adjust the rebound , compression and spring preload with the opposite equipment.For the best performance, with the forks fully extended push each the bleed valve for 3 seconds to expel any air from the fork suspension system.

ADJUSTING THE HANDLEBAR

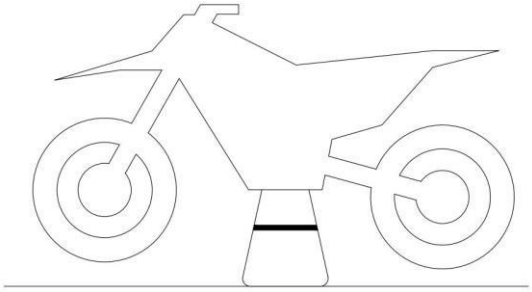


The handlebars of the vehicle can be adjusted according to the customer's driving habits. The specific steps are as follows:

1. Loosen the bolts securing the upper handlebar clamp so that the handlebar can be turned.
2. Sit on the whole vehicle and hold the handlebar to the position where both hands are placed naturally.
3. Tighten the bolts of the upper handlebar clamp to the correct torque setting.
4. Observe the position of the handlebar, if not satisfied, repeat the above process.

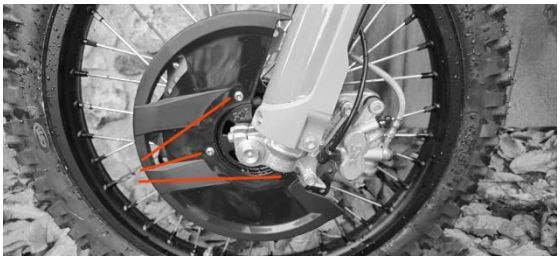
VEHICLE MAINTENANCE

PLACEMENT



Raise you motorcycle on its centre stand always when carrying out the related maintenance.
It is helpful to remove or install various parts.

REMOVING OR INSTALLING THE DISC BRAKE COVER

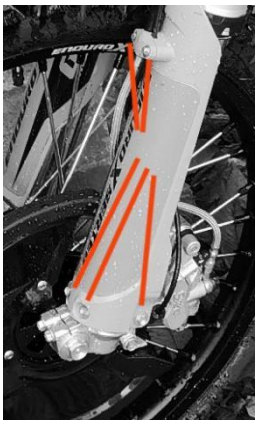


Removing steps are as follows:

1. Turn the front wheel to the straight ahead position.
2. Use an allen key to remove the 3 mounting screws.
3. Remove the disc brake cover.

Installing steps:
The instalment should be carried out in the reverse order of removal.

REMOVING OR INSTALLING THE FRONT FORK PROTECTION GUARDS



Removing Steps are as follows:
Left and right are as if sitting on the motorcycle.

Left guard.
1. Remove the 2 small screws retaining the brake hose clip.
2. Remove the 3 lower screws .
3. Remove the plastic fork protection guard.

Right guard.
1. Remove the 3 lower screws .
2. Remove the plastic fork protection guard.

Installing steps:
The instalment should be carried out in the reverse order of removal.

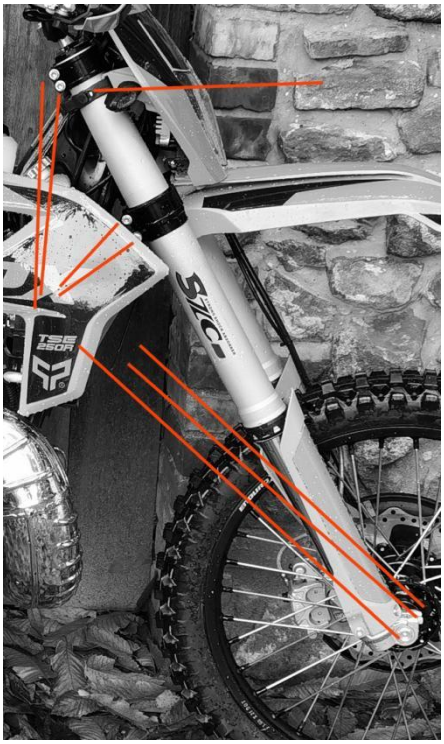
REMOVING OR INSTALLING THE FRONT BRAKE DISC CALIPER

Removing Steps are as follow:

1. Remove the front brake fluid hose clamp from the left fork protection guard.
2. Remove the front brake master cylinder from the handlebars.
3. Remove the front disc brake caliper.

Installing Steps:
The instalment should be carried out in the reverse order of removal.

REMOVING OR INSTALLING THE FRONT SHOCK ABSORBER

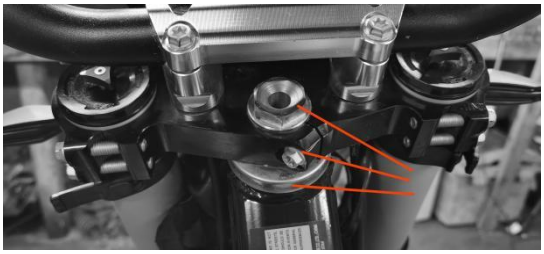


Removing Steps as follows:

1. Remove the front disc brake caliper.
2. Remove the fork protection guards
3. Remove the front wheel.
4. Loosen the 4 upper clamp bolts of each fork leg.
5. Remove the front fork leg on each side.

Installing Steps:
The instalment should be carried out in the reverse order of removal.

REMOVING OR INSTALLING THE STEERING TRIPLE CLAMPS



Removing Steps are as follows:

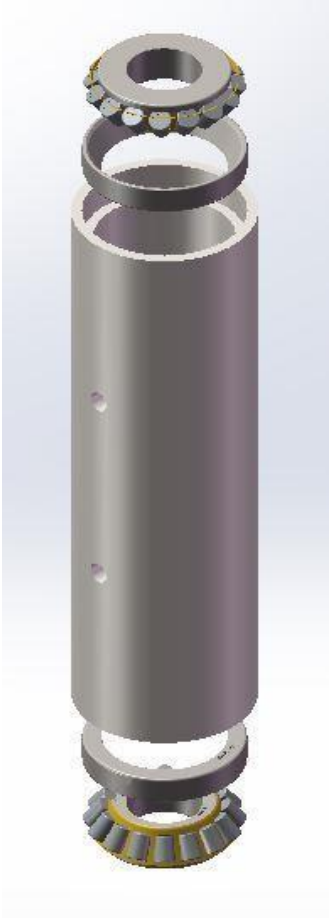
1. Remove the headlight
2. Remove the front wheel
3. Remove the front brake caliper
4. Remove both front forks
5. Remove the handlebars
6. Remove the lock nut and the punch bolt of the steering column as indicated
7. Remove the upper steering clamp
8. Remove the headstock bearings adjusting nut of the steering column
9. Remove the lower steering clamp
10. Remove the steering column
11. The installation is carried out in the reverse order of removal

CHECK THE FRONT STEERING

Check the front steering steps are as follows:

1. Put the GPX on a stand lifting both wheels off the ground.
2. Turning the handlebars left to right to control . It should move smoothly and there should be no obstruction.
3. If you find that the steering of the GPX is feeling graunchy , stiff or is loose with excessive movement please remove the top and bottom steering clamps to check that the bearing is both clean and greased and also that it is adjusted to the correct tension. If you are in any way unsure about this , seek help from a GPX dealer.

LUBRICATION AND INSTALLATION OF STEERING HEAD BEARING



When installing the steering bearing on the head, apply a layer of lithium-based grease on the surface of the roller.

Refer to the figure on the left for specific installation.

ELECTRONIC CLOCKS

The electric clocks display many many functions. There is a separate download on the GPX moto Uk website with instructions on how to operate these and switch between the many functions.

REMOVING OR INSTALLING THE FRONT FENDER

Removing Steps are as follows:

1. Remove the 2 fixing screws.
2. Pull out the Front Fender.

Installing Steps:
The instalment should be carried out in the reverse order of removal.

REMOVING OR INSTALLING THE REAR SHOCK ABSORBER

Check the rear shock absorber to determine the performance of the unit.

Please follow the steps below to removing the rear shock absorber:

1. Remove the seat
2. Remove the 2 small bolts that attach the radiator shrouds to the petrol tank
3. Remove the 8mm headed bolt centrally holding the petrol tank and lift the tank slightly off its mount.
4. Loosen the rear carburettor jubilee clip.
5. Remove the 2 lower side subframe torx headed bolts.
6. Lift the rear of the rear fender upwards.
7. Remove the the top and lower rear suspension unit bolts and remove the unit.

Perform the Installation in the reverse order of removal.

REMOVING OR INSTALLING THE SEAT CUSHION

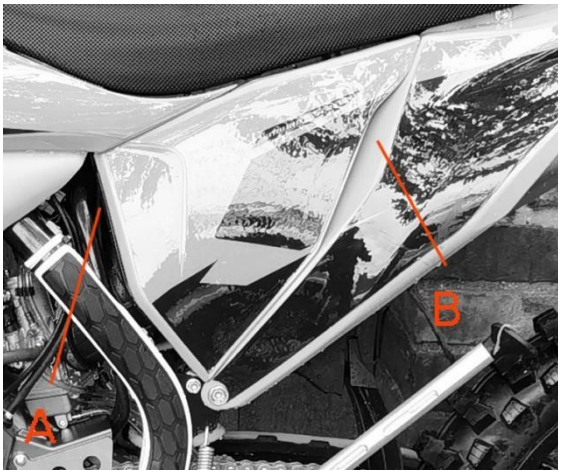
Removing Steps are as follows:

1. Remove the one fixing bolt at the front of the seat
2. Take out the seat forward.

Installing Steps:

The instalment should be carried out in the reverse order of removal being sure to locate the seat on the mounting lugs by pushing downwards.

REMOVING OR INSTALLING THE AIR FILTER HOUSING



Removing Steps are as follows:

1. Place the left hand fingers behind the cover at position A.
2. Place the right hand fingers behind the cover at position B.
3. Pull smoothly but with good pressure.

Installing Steps:

The instalment should be carried out in the reverse order of removal , but reapply grease on the locating pins to ease installation and removal.

NOTE: GPX adopts a unique tool-free maintenance design. The side cover of the air filter can be removed or installed from the main body of the cover only by hands.

REMOVING OR INSTALLING THE AIR FILTER

Removing Steps are as follows:

1. Remove the air filter on its cage.
2. Gently stretch the air filter to remove it from the cage it is located on .

Installing Steps:

The instalment should be carried out in the reverse order of removal.

CLEANING AND MAINTENANCE OF AIR FILTER - THIS IS THE MOST IMPORTANT CARE THAT YOU CAN PROVIDE YOUR MOTORCYCLE

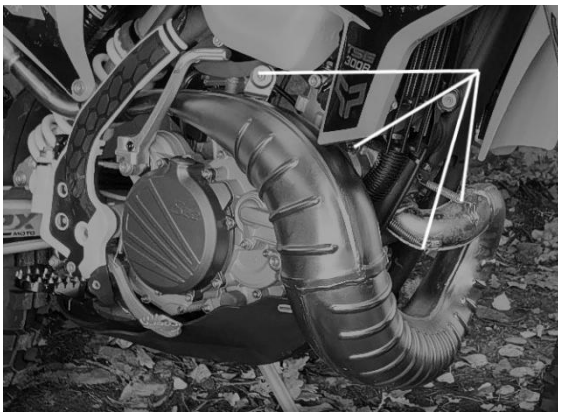
Before performing maintenance on the air filter parts, it is necessary to check the filter first. Follow this direction:

1. Check whether there are cracks on the surface of the air filter rubber hose that connect the carburettor to the air box.
2. Check whether the air filter sponge is damaged.
3. Check whether the lugs that connect it to the air box are damaged.
4. Check whether there is any damage to the air filter housing.

If the air filter or any components are damaged, replace the corresponding parts .If no parts are damaged, perform maintenance as follows:

1. Clean the inside of the air box so that no dirt remains on nay surfaces.
2. Remove the sponge air filter and remove the frame from within it.
3. Clean the sponge with air filter cleaner .Afterwards soak the surface of the air filter element with air filter oil. If there is any damage to the sponge replace it.
4. Clean the surface of the air filter sponge cage, let it dry naturally, and then apply a layer of oil on the surface.
5. Installation is the reverse of removal.

REMOVING OR INSTALLING THE EXHAUST PIPE



Removing steps as below:

1. Remove the rear silencer
2. Remove the 2 fixings and springs
3. Remove the exhaust pipe

Installing Steps:

The instalment should be carried out in the reverse order of removal.

REMOVING OR INSTALLING THE REAR SILENCER

The exhaust pipe and the silencer can guide the gas emission and reduce the noise.
If the exhaust pipe is rusty or ruptured or damaged by impact, please replace it with a new one immediately. If the noise is too high or the engine performance is degraded, replace the muffler tube or repack the silencer tube with wadding.
For the cleaning of the exhaust system, please consult with GPX dealers before operating.
If you need to replace the muffler tube, please follow the steps below:

- Unscrew the 2 mounting bolts of the silencer.
- Unscrew the fixing bolts of the silencer.
- Loosen the buckle at the connection between the silencer and the exhaust pipe
- Pull out the silencer backwards
- Drill to remove the rivets securing the steel front and rear caps to the silencer.
- Pull the caps away and remove the inner tube. Remove the old wadding/packing
- Firmly wrap the inner tube in new wadding.
- Insert the inner tube into the silencer and replace the end caps
- Rivet the end caps onto the central alloy pipe.
- Replace the silencer and install the fasteners

Installing Steps:
The instalment should be carried out in the reverse order of removal.

REMOVING OR INSTALLING THE FUEL TANK

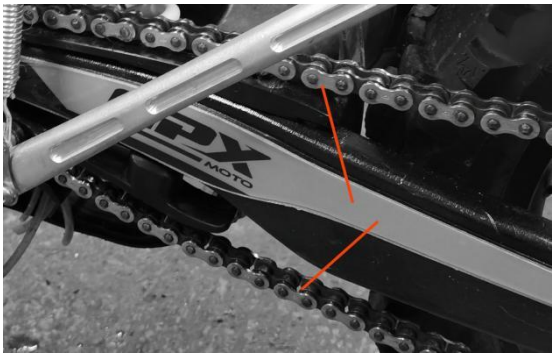
Removing steps as below:

1. Remove the seat .
2. Remove the left and right radiator shroud screws.
3. Unscrew the single central fuel tank installation 8mm headed bolt .
4. Remove the larger 10mm headed bolt at the back of the petrol tank
5. Remove the air filter access flap and remove the 2 smaller 7mm headed bolts
6. Remove the fuel tank from the frame.

Installing Steps:

The instalment should be carried out in the reverse order of removal.

CHECK AND CLEAN THE CHAIN



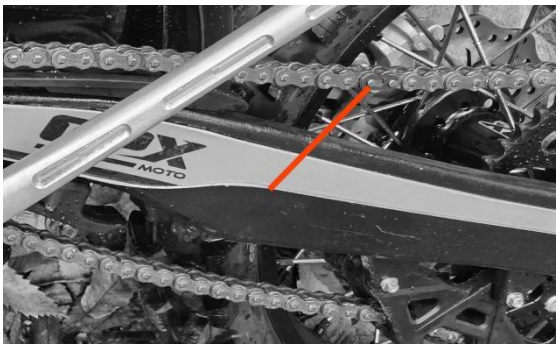
Checking the condition of the chain:

1. Observe the chain from the rear of the vehicle to check whether the chain is skewed as a whole
2. Rotate the rear wheel by hand and observe whether the rotation of the rear wheel is easy and the chain movement is smooth
3. Carefully check the gap between the chain links to ensure there is no dirt and that it is well lubricated.

Clean the Chain:

Use a special cleaning detergent to wash the chain links. Wait until the chain is naturally air-dried, and then apply a layer of chain oil to the surface of the chain using a spray can, a brush or a pump can.

REMOVING OR INSTALLING THE CHAIN



Removing the Chain:

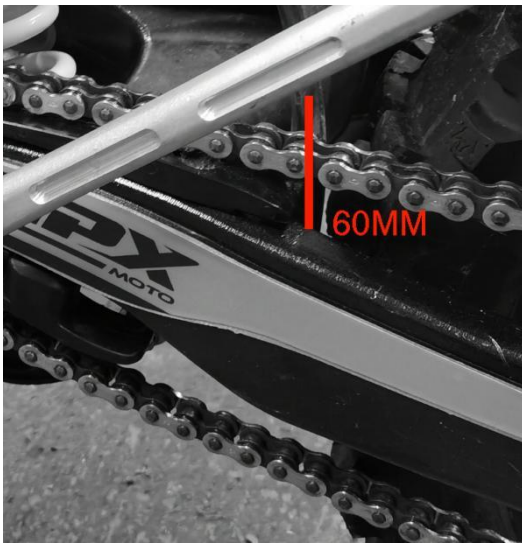
1. Remove the chain split link on the chain.
2. Remove the movable section of the chain.
3. Pull out the chain from the sprocket.

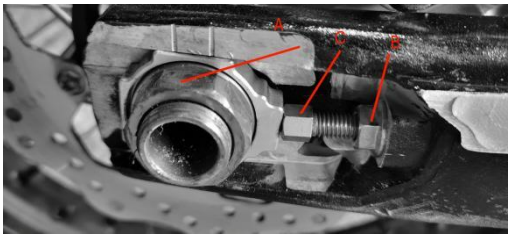
Installing Steps:

The instalment should be carried out in the reverse order of removal.

The chain adjustment should be checked afterwards.

CHECK AND ADJUST THE CHAIN TENSION





The chain transfers the power output from the engine to the wheels. It is therefore important that the chain is in good condition , is well lubricated and works correctly. It is an important part of the motorcycle. The chain needs frequent inspection and maintenance to ensure its normal use.

The chain tension can be adjusted according to requirements, the steps are as follows:

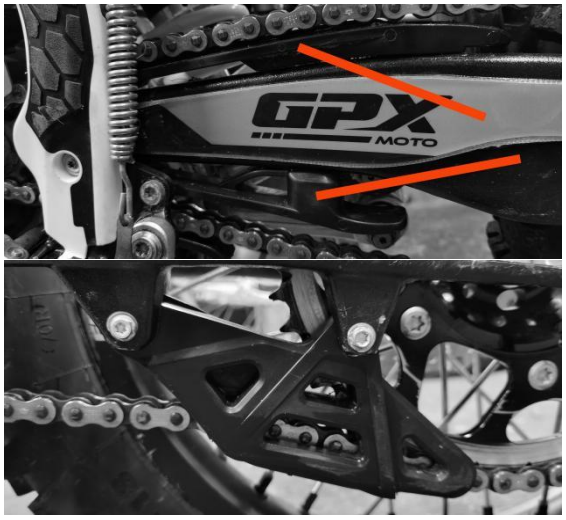
1. Stand the motorcycle with rear wheel suspended.
2. In accordance with the guide photo and at the rear of the chain guide , pull the chain upwards so that it is taut. The distance between the chain and the swinging arm should be 50 - 60mm.
3. Be aware that sometimes the chain may become slightly more loose and slightly more tight as you spin the wheel. You must find a compromise, so that the average measurement is 50-60mm.
4. If the chain does not match this measurement please adjust the chain.
5. Loosen the rear axle nut (A)
6. Loosen the locking nut (B) on both sides of the swinging arm.
7. By using the notches on the swinging arm as a guide , adjust bolt (C) to symmetrical and equal settings on both sides of the swinging arm.
8. Tighten the chain to the correct chain tension.
9. Tighten the rear axle nut.
10. Check the chain tension again and re-adjust if necessary.

When checking the chain tension, you should also check the plastic chain guides, the chain split link and both front and rear sprocket for wear or damage .

When the chain is over-used, or the stretch exceeds 2%, the chain should be replaced. Replace and change the relevant guide rail and both sprockets at the same time. If you only replace the chain without replacing both sprockets the new chain will very quickly be worn and the service life will be much shorter. In any circumstances it is normal for these items to wear at a reasonable rate , due to the harsh condition they operate in.
We repeat , from an economic point of view, it is worthwhile to replace the entire chain drive system at the same time.
At any time, you should use the original parts from GPX factory or the ones authorized by GPX .
The chain needs to be lubricated regularly, see the lubrication section for details.

NOTE: The alternating wet and dry working environment will greatly shorten the service life of the chain and its surrounding accessories. Therefore, please follow the correct lubrication method and select a suitable lubricant for lubrication.
NOTE: If the chain needs to be tightened frequently, or if you find any signs of wear on the front sprocket, rear sprocket and the chain, please contact GPX dealer for a thorough inspection to avoid safety problems.

CHECK THE STRUCTURE OF THE REAR SPROCKET, ENGINE SPROCKET AND GUIDE CHAIN



Check the condition of the swinging arm rubber and the chain guide as per the guide photos.

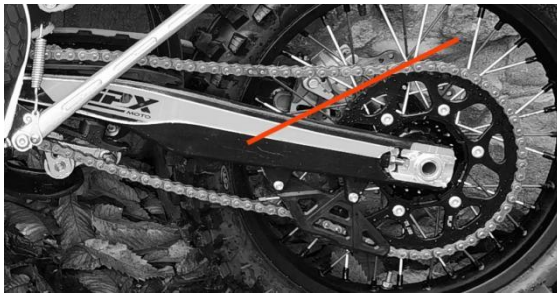
Under normal circumstances, these two parts play a role in guiding the movement of the chain. If they are over worn this will affect the transmission function and thereby be harmful to normal movement of the chain and other components of the motorcycle.
Therefore, you must change the over-worn chain guide and chain protector in order to ensure that the motorcycle works normally.

CHECK THE FRAME

Checking Steps are as follows:

1. Check whether the paint on the surface of the frame is damaged or not.
2. Check whether the fixed points of the frame are deformed or not, especially the installation points of the engine, swinging arm and rear shock absorber.
3. Check whether there are cracks on the surface of the frame, especially on the welded areas.

CHECK THE SWINGING ARM



Checking Steps are as follows

1 Check whether there are cracks on the surface of the swinging arm
2 Check whether there is any deformation at the mounting point where the swinging arm joins the frame.
3 Check whether the paint of the swinging arm is damaged or not.

CHECK THE THROTTLE CABLE

Checking Steps are as follows:

1 Turn the throttle and release, to observe whether the throttle is smooth and returns properly.
2 If there is excess play in the cable as you turn the throttle , this can be adjusted to the correct setting on the top of the carburettor .

CHECK THE HANDLEBAR POSITION

This setting is very personal to the operator. You should sit on the motorcycle and rest your hands on the handlebars naturally, and feel whether the position of the clutch grip and brake grip are comfortable or not.
If it does not feel comfortable adjust the components accordingly .

ADJUST THE POSITION OF THE CLUTCH LEVER

The clutch position can be adjusted according to the riders wishes:
The adjuster indicated here change the distance of operation between the clutch lever and the handlebar grip .
It is important to regularly check the hydraulic fluid level in the master cylinder

MAINTENANCE OF THE BRAKE SYSTEM

CHECK THE FREE-PLAY OF FRONT BRAKE LEVER

Checking steps as below:

1. Rest your right hand on the right hand grip naturally
2. Use the index finger and middle finger of your right hand to check the free play. At this time, two fingers are normally required to be able to hook and pull the handle.
3. Pinch and release the handle and feel the resistance. If the lever feels soft and pulls into the handlebar with little braking power , it is possible that air has entered the hydraulic brake system. You should check the entire brake system and take measures accordingly.

CHECK THE CABLE OF FRONT BRAKE LEVER

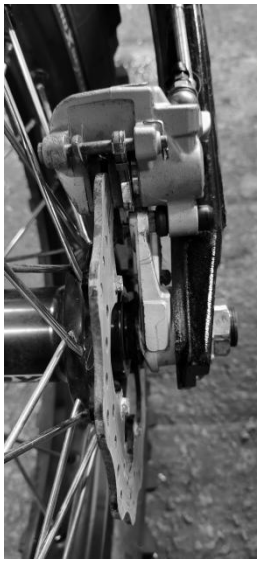
The front brake lever can be adjusted to suit the different groups.

The adjustment steps are as follows:

1. Turn the adjusting screw to adjust the angle of the lever to the position you are satisfied with.

DANGER: You should test the brake system (including front brake and rear brake) every time you go to ride the motorcycle.

CHECK THE DISC BRAKE



Checking Steps are as follows:

1. Check whether there are cracks, dents and other damages on the surface
2. Measure the thickness of the rear disc and compare it with the limit thickness required.
3. If the thickness of disc brake is less than or equal to the limit thickness of the disc brake, it must be replaced immediately.

The limit thickness table of disc brake is as follows:

	Limit thickness of Front Brake Disc	Limit thickness of Rear Brake Disc
GPX	2.5mm	3.5mm

CHECK THE FRONT BRAKE LIQUID LEVEL

GPX uses hydraulic disc brakes that contain DOT 4 brake fluid You can check the liquid level through the observation glass hole.

If the liquid level is lower than the bottom edge of the observation hole, you should immediately replenish the fluid to the upper edge.

REFILL THE BRAKE FLUID LEVEL

You should check/refuel the liquid level regularly.
If the brake fluid is mixed with water, soil or other particles, the brake fluid should also be replaced.
It is recommended to use DOT4 brake fluid.
Danger: Do not mix different types of brake fluid and pour it into the brake system for use. The use of brake fluid must meet the braking requirements. Please do not use the brake fluid in an unsealed container. The brake fluid may deteriorate when exposed to the air, which will affect the braking effect. Do not use used brake fluid.

NOTE: You should change the brake fluid once a year, even it has not used for a long time.
IMPORTANT _ The brake fluid is extremely corrosive and you should protect yourself from this . The fluid will also damage paint and aluminium , so ensure that you do not let the fluid come into contact with anything other than a disposable or old container.

CHECK THE FRONT BRAKE PADS

Check the thickness of the pads of brake caliper.
You must change the pads if the thickness is less than the minimum thickness of the brake pads.
The minimum thickness of the brake pad is 2 mm.

NOTE: The brake pads should be replaced as a complete set. If you are not sure to complete the replacement work, please go to the GPX dealer and have a professional to complete the replacement.

CHECK THE FREE-PLAY OF FOOT BRAKE

In normal use,the free-play of the brake pedal is shown in the table below.
Check the brake lever and pay attention to whether the stroke is correct.

Model	Free-Play
GPX	25～30mm

CHECK THE REAR BRAKE DISK LIQUID LEVEL

Check the Liquid level through the Observing Hole. The liquid level should higher than minimum level as required.

You should refuel it if it is insufficient with DOT 4 brake fluid.

NOTE: Do not splash the brake fluid on the paint surface, which may cause corrosion.

DANGER: Please pay attention to check whether the brake fluid is leaking and whether the brake fluid pipe is damaged.

If so, please contact GPX dealer.

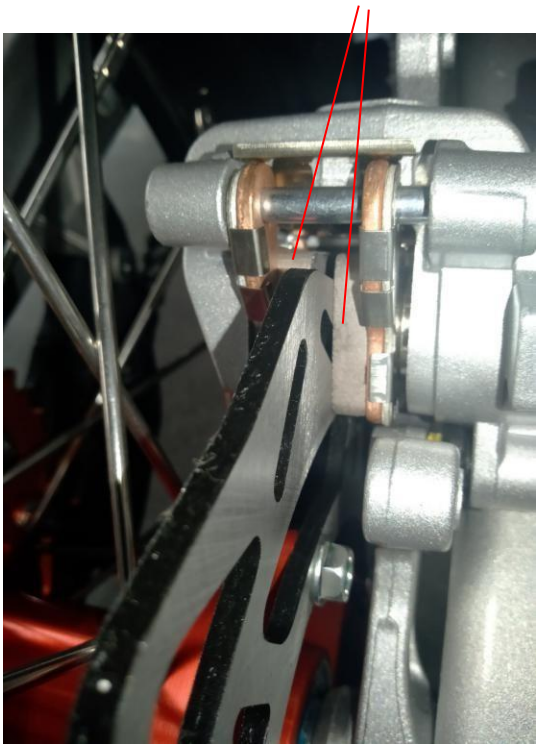
REFILLING THE REAR BRAKE DISK BRAKE FLUID LEVEL

Refilling steps are as follows:

1. Remove the screw.
2. Remove the cap.
3. Refill the brake fluid to a proper level.
4. Re-load the cap.

It is recommended to use DOT4 brake fluid.

CHECK THE REAR BRAKE PADS



After checking the thickness of the brake pads of the brake caliper, the thickness should not be less than 2 mm. If the thickness of the brake pads is lower than the minimum thickness, the entire set of brake pads should be replaced immediately.

WARNING

DANGER: If it is found that the brake system is too worn, the corresponding parts should be replaced immediately to avoid safety accidents.

The specific work should be carried out after consulting the GPX dealer.

TIRE INSPECTION AND MAINTENANCE

REMOVING OR INSTALLING THE FRONT WHEEL

Removing Steps are as follows:

- Lift the motorcycle off the ground and Stabilize it by using a motorcycle stand.
- Remove front disc brake cover.
- Loosen the 2 front wheel axle pinch bolts on each side.
- Holding the front wheel with one hand, withdraw the front wheel axle gradually with another hand
- Remove the front wheel

Installing Steps:
The instalment should be carried out in the reverse order of removal.

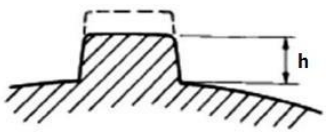
REMOVING OR INSTALLING THE REAR WHEEL

Removing Steps are as follows:

- Remove the chain.
- Loosen the rear wheel axle bolts
- Holding the rear wheel with one hand, withdraw the rear wheel axle gradually with another hand
- Remove the rear wheel

Installing Steps:
The instalment should be carried out in the reverse order of removal.

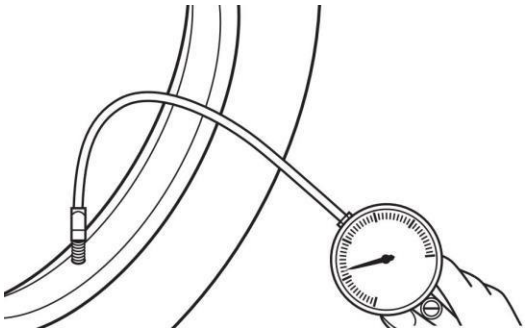
TIRE INSPECTION



Checking Steps are as follows:

1. Check the tires if there are crosswise lines, if the tire has a nail or glass fragments in it, or if the sidewall is cracked.
2. Check the tire thread worn, if the height of tire plies lower than minimum require, replace the tire right away.
   The minimum height requires: 3mm

CHECK TIRE PRESSURE



The tyres fitted to GPX motorcycles as standard are off road tyres only.

Check the tire pressure by using a pressure gage.
If it happens frequently with lower pressure problem, find out if there is a deflation or not and contact the GPX Dealer for help.

Pressure advice		
	Front Tire	Rear Tire
GPX	225kPa	280kPa

NOTE: Do the checking work only on cold tires (i.e., when the temperature of the tires equals the ambient temperature).

CHECK SPOKE

Use your fingers to move the adjacent spokes to check whether the tire spokes lack tension. If you find that the spokes are loose and weak, you must check all the spokes and both wheels.

If there is any further problem, please contact the GPX dealer.

ELECTRICAL SYSTEM

REMOVING OR INSTALLING THE BATTERY

Removing Steps are as follows:

1. Removing the passenger seat
2. Disconnect cable from the battery
3. Remove the screw on battery holder
4. Pull the battery up and out.

Installing Steps:
The instalment should be carried out in the reverse order of removal.

CHANGING THE BATTERY

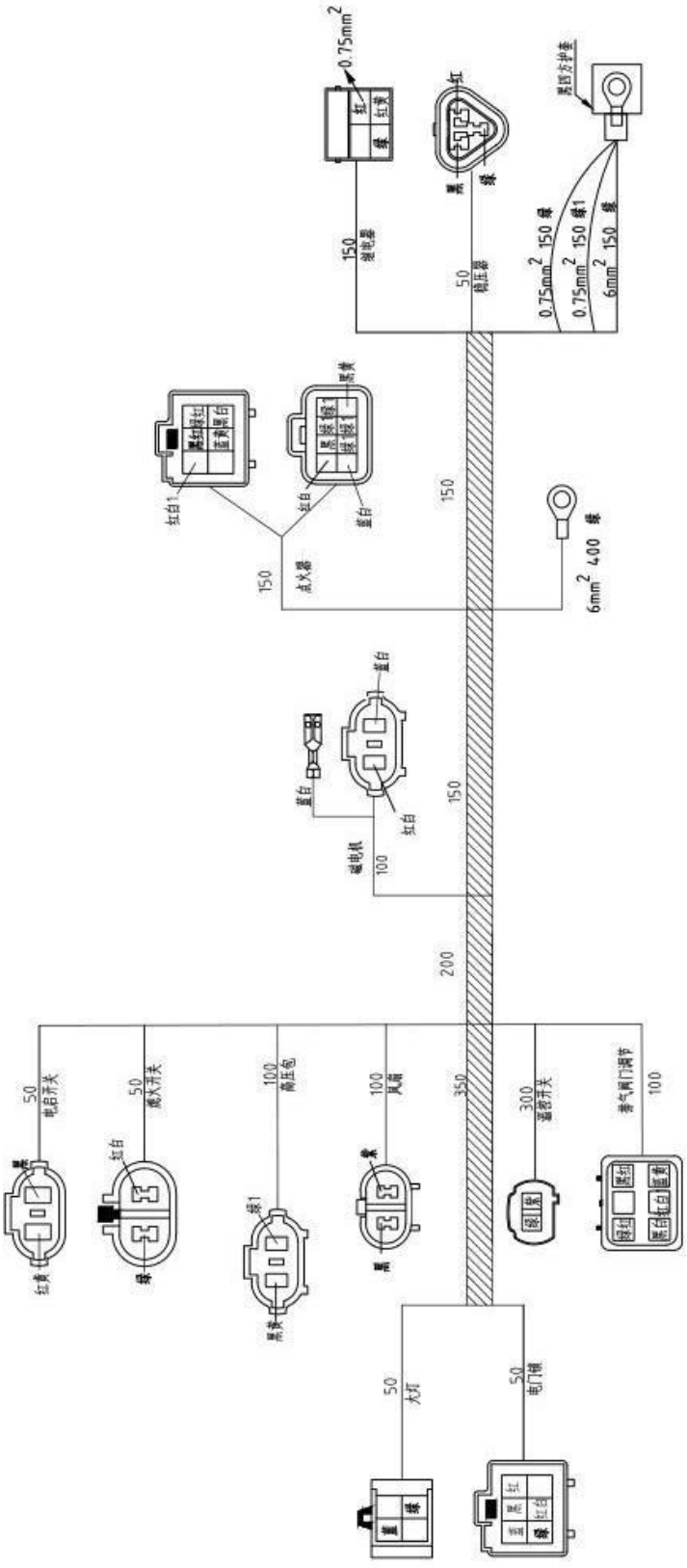
If you found bubble appears in the surface of the battery or it needs frequent charging, you should change the battery.

The new battery should use GPX original Battery or authorized one by GPX.

The battery size: 110mm×70mm×100mm
HJTX5L-FPZ Li-lon

MAIN CABLE

GPX VEHICLE WIRING DIAGRAM



COOLING SYSTEM

COOLING SYSTEM PROFILE

The excess heat from the engine is captured by the water and antifreeze (coolant)within the cooling system. This coolant is circulated around the engine and through 2 radiators by a coolant pump that is mounted within the engine . As the coolant passes through the radiators the air passing through the radiators reduces the temperature of the coolant.

If the antifreeze in the tank does not match the specified value, it can't work properly and thereby the motor may be damaged.
The antifreeze level should be checked before each ride to ensure it has the correct level.
To prevent the metal parts in the cooling system from rust, erosion or freezing , the coolant must have the required level of antifreeze within it.

。**WARNING**: Antifreeze is a kind of chemical reagent and may cause problem to human body, pls read the instruction carefully before using.
WARNING: Using wrong antifreeze may cause damage to motor and cooling system. Pls choose the antifreeze with chemical inhibitor.

REMOVING OR INSTALLING THE RADIATOR AND PROTECTION GRILL

Check the radiators to see if there are any leaks of coolant or any damage.
If there is dirt on the radiator this may stop the cooling process , so it is important that the radiator is kept clean by rinsing it with water.

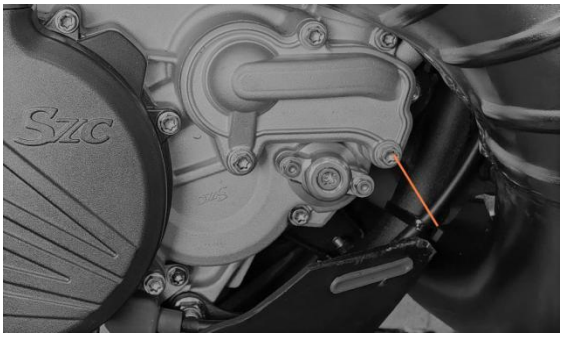
NOTE: Do not use high-press water to do the wash, this may cause damage and effect the heat transfer.

What's more, do not install the unauthorized spare parts, which may disturb heat transfer and thereby damage the motor due to overheat.

CHECK COOLANT/ANTI FREEZE LEVEL

- Stop and stand the motorcycle upright on a horizontal surface.
- Release the radiator cap when the engine is cool only .
- Sway the motorcycle from side to side and then check the antifreeze level, which should be between Min and Max and should be less that 1 inch from the very top of the neck .
- If the level does not match the specified value, correct the antifreeze level.

DRAIN OUT THE COOLANT



You can drain the coolant out of the engine and cooling system through drain bolt.

Main work:

- Stand the motorcycle upright and allow the engine and coolant system to cool down.
- Place a suitable container under the screw, which is on the bottom of the water pump and is used to drain the coolant.
- Remove the bolt. The coolant still can't be drain out at this time due to pressure problem.
- Remove the tank cap, make the air into the cooling system to drain the antifreeze.

NOTE: If the antifreeze drains out without remove the cap, it means that there must one or more air leakage and need to do an overall check.

FILLING THE COOLING SYSTEM

You should change the coolant regularly to increase service lift.

Main work:

- Drain out the coolant. → p.50
- Replace the bolt after draining the coolant completely.
- Fill in a little of coolant through radiator tank. Always check if there is leakage or not.
- Fill in the coolant to specific value.
- Start the engine for 5 minutes to heat that, then stop.
- Check the coolant level again after the engine cooled down. And correct the coolant level if necessary.
- Tighten the radiator cap.

WARNING

DANGER OF SCALDING Do not remove the radiator cap, screw or other cooling system components when the engine is hot. Wait for the engine and cooling system to cool down.

If the coolant drops on the tire, it will cause the tire easy to slip and thereby cause the accident.

So, you should rinse the coolant which dropped onto the frame and tire.

You should check the drained-out coolant, if the liquid is white, it means the aluminium parts was corroded; if the liquid is brown, it means the steel or iron parts was corroded. Otherwise, it means the cooling system works well.

Check the seal ring, if there is any damage, change a new one.

INTRODUCING ABOUT THE ENGINE STRUCTURE

1. COOLING SYSTEM

The GPX uses coolant to cool the engine. The coolant enters the engine from the water tank through the radiators, takes away the heat of the engine, flows back to the water tank, and then exchanges heat with the air. After the coolant cools down, it enters the engine again to play the cooling role again.

INSTALLING THE ENGINE

The installation steps are as follows:

1. The engine is suspended on the frame (pay attention to protect the appearance of the engine).
2. Install the carburettor on the intake elbow and fasten it with nuts and bolts.
3. Install the throttle cable and air filter, the interface should be sealed, and the clutch control cable should be installed.
4. Install the transmission chain.
5. Install the left rear cover or sprocket guard and fasten it with bolts. Pay attention to the outgoing wire of the magneto.
6. Install exhaust muffler. The M8 nut and the exhaust pipe sealing ring should be installed firmly with a tightening torque of 10 ～ 15N•m, and the exhaust port should not leak air during installation.

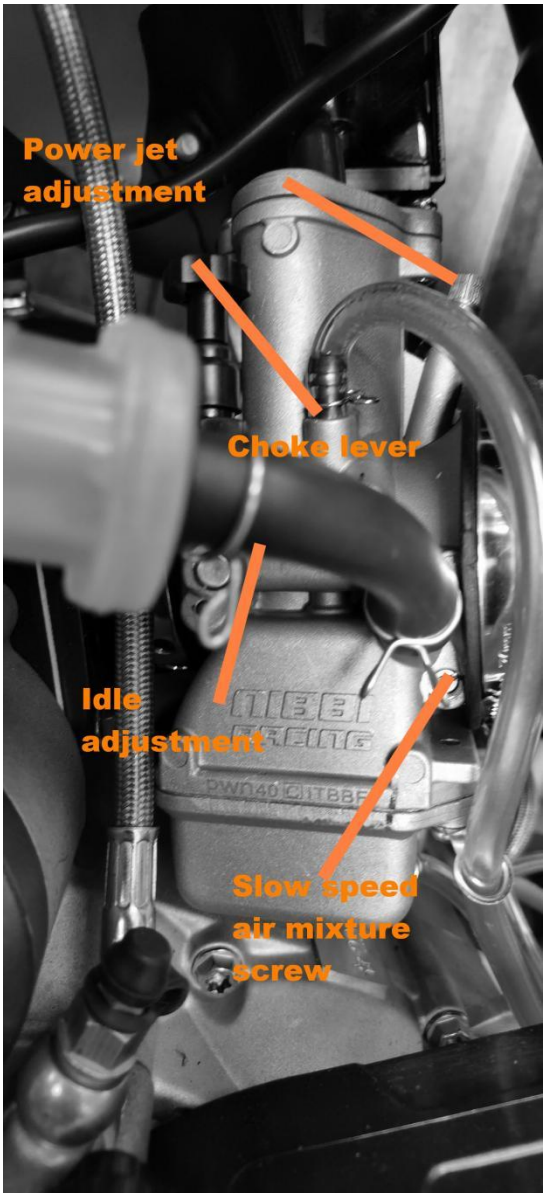
ENGINE MAINTENANCE AND ADJUSTMENT

Inspection of installation bolts and nuts of cylinder head and cylinder block

The inspection is carried out at the first 1000km and every 5000km.

THE ENGINE ADJUSTMENT

IDLE SPEED ADJUSTMENT OF CARBURETOR



It is important that only people who are qualified in tuning make adjustments to the carburettor.

The idle speed of the carburettor can be adjusted through the idle screw and air mixture screw.
Proceed as follows:

1. Operate the engine so that it is at normal temperature.
2. Turn the idle adjustment screw to obtain a slow idle
3. Turn the slow speed air mixture screw whilst listening to the engine speed. Adjust this screw to the position where the engine is more steady and settled
4. The choke lever is for use only when first starting a cold engine.
5. The Power jet adjustment greatly affects the amount of fuel inserted into the engine at high RPM. If this is adjusted to much anti clockwise then to much fuel will enter the engine and it will splutter. If this is adjusted to much clockwise then the engine will the ability to rev at high speed.

DANGER: Driving a motorcycle with a damaged throttle cable is undoubtedly a very dangerous behaviour. The normal throttle cable should have a free stroke of at least 5mm. Start the engine and turn the handlebar left and right. If the engine stalls or accelerates due to the movement of the handlebar, the throttle cable may be improperly adjusted or damaged. Make sure that the throttle cable is normal before driving the motorcycle.

CLEAN THE CARBURETOR

The carburettor will leave a portion of fuel within it after every ride. It is possible after a very muddy or dirty ride , or after washing that water or dirt may enter the carburettor. Therefore, the carburettor should be cleaned regularly to remove the dirt. If you ignore this it is very possible the motorcycle engine will not operate smoothly or correctly.

If you do not have the knowledge to competently complete this task then please consult a GPX dealer.

CHECK THE SHIFT LEVER POSITION

The inspection steps are as follows:

1. Raise the whole vehicle so that the centre plane of the tire is perpendicular to the ground
2. The line of sight is level with the tread surface, and observe the position of the shift head
3. The shift head should be level with the tread surface of the footrest or slightly lower than the tread surface

If the shift head is higher than the tread surface, the shift head should be adjusted downwards; if the shift head is excessively lower than the tread surface, the shift head should be adjusted upwards.

ADJUST THE SHIFT LEVER POSITION

Adjusting Steps are as follows:

1. Loosen the 8mm head fixing bolt of the shift lever.
2. Remove the shift lever.
3. Turn the shift lever to a suitable position and install the spline.
4. Apply red loctite and tighten the shift lever

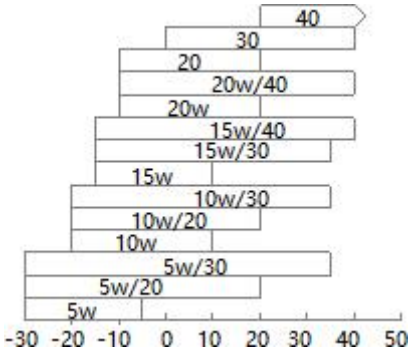
INSPECTION OR REPLACEMENT OF SPARK PLUGS

The engine spark plug torque is 25～30N•m.
The spark plug must be disassembled regularly to check the distance between the electrodes (0.6 ~ 0.7 mm). If the spark plug contains oil or cinder, wipe it off with a wire brush or similar. Use a measuring instrument to measure the distance between the electrodes and adjust them to prevent abnormal bending of the external electrodes. If the spark plug electrode is rusty, damaged, or the insulator is broken, the spark plug must be replaced.

NOTE: The spark plug should be checked every 10 hours accumulated and replaced every 20 hours accumulated.

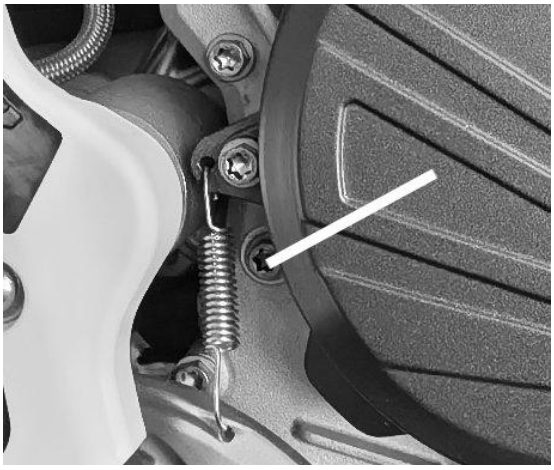
NOTE: If the engine performance drops, replace the spark plug to restore normal performance.

LUBRICANT SELECTION



Lubricating oil is an important factor affecting the performance and life of the engine. It must be selected according to regulations. It is forbidden to replace it with ordinary engine oil, gear oil, vegetable oil, etc.
When the GPX leaves the factory, 10W/40 motorcycle grade oil is filled in the transmission box. If you change to other lubricating oil, its quality level should reach SG level or above, and the viscosity should be selected according to the attached drawings according to different regions and temperature changes. When replacing the lubricating oil, please drain the original lubricating oil in the crankcase and clean it with washing kerosene before adding new lubricating oil according to the regulations.
The thermal engine system of this engine must be lubricated with two-stroke special engine oil. The engine oil is mixed with gasoline and enters the carburettor. It is atomized with the fuel mixture to form oil mist and enter the crankcase, thereby lubricating the crankshaft, cylinder block and piston parts.

LUBRICANT INSPECTION



If the engine is running, turn off the engine and wait a few minutes for the oil to reach the bottom of the crankcase. Place the engine vertically on the ground. Remove the torx 8mm headed bolt. Oil should gently run from this hole. This will indicate that the level is correct. If no oil runs from the oil , add the correct grade and amount of oil.

LUBRICANT REPLACEMENT

When replacing the lubricating oil, it should be done before the engine is warm and has not yet cooled, so as to ensure that the lubricating oil in the crankcase can be discharged quickly and completely. When replacing, place an oil pan under the engine and unscrew the oil bolt A to release the lubricating oil. Check the plug gasket for damage, and replace it with a new one if it is damaged. When the lubricating oil is completely discharged, install and tighten the oil drain bolt and gasket.

ADJUSTING THE POWER VALVE

To adjust the mechanical power valve please follow these instructions.

Always use a correctly sized tool to turn the power valve adjustment so that no damage is caused.

This screw adjusts the engine speed at which point the power valve opens.

For example - If you screw the adjuster fully out the power valve will open at a lower engine speed.If you screw the adjuster fully in the power valve will open at a higher engine speed.

Adjust to your personal requirements

TROUBLESHOOTING

Troubleshooting for 2 and 4 stroke motorcycles.

If the engine wants to be operated normally, it should meet the following four requirements:

1. Good fuel: There is a certain ratio of combustible mixture in the cylinder.
2. Good spark: The spark plug can emit a strong spark at the specified time.
3. Enough compression: There is enough compression pressure in the cylinder.
4. Valve timing: correct valve opening time.

After the engine malfunctions, you can focus on the above four aspects to start, check, analyse the cause of the malfunction, and eliminate it

FAULTS	Inspection Method	Results	Possible Cause
The engine cannot be started or difficult to start	Check whether the fuel flows into the carburettor	Fuel does not flow into the carburettor	No gasoline in the fuel tank
			Blocked tubing from the fuel tank to the Carburettor
		Fuel flows into the carburettor	The float in the Carburettor is stuck
			The vent on the fuel tank cap is blocked
	Remove the spark plug to test the spark	Weak sparks or no sparks at all	Spark plug failure
			The spark plug is not clean
			Electronic ignition is malfunctioning
			The magneto is faulty
		Good sparks	Bad wiring, broken
			High-voltage cable is open or short-circuited
			Ignition coil is open

			or short-circuited
			The ignition switch is faulty
	Test cylinder pressure	Low Pressure	The starting mechanism is slipping, and the engine cannot be turned
		Normal pressure	Valve clearance is too small
			Valve opening blocked
			Cylinder or piston ring wear
			Cylinder head gasket is broken
			Improper valve timing
	Re-start the engine	The engine ignites but does not start	The choke door is opened too much
			Improper adjustment of the carburettor fine-tuning screw
		Engine does not ignite	Air intake pipe leaks
			Incorrect ignition timing
	Remove the spark plug	Wet spark plug	The carburettor oil level is too high
			The carburettor choke is closed too tightly
		Spark plug dry	Excessive throttle
The engine performs poorly at low or idling speeds	Check valve timing and valve clearance	Incorrect	Improper valve clearance adjustment or poor quality of rocker arm adjustment screws
		Correct	Improper adjustment of gas timing
	Check the adjustment	Incorrect	Improper adjustment

	of the fine adjustment screw of the carburettor plunger	Correct	/
	Check whether the carburettor gasket is leaking	Air leak	Deterioration of Carburettor seal ring
		Airtight	Loose carburettor
			Damaged carburettor gasket
	Remove the spark plug and perform a spark test	Weak sparks or intermittent sparks	The spark plug is faulty or carbon deposits
			The electronic igniter is malfunctioning
			The magneto is faulty
		Good spark plug	The spark plug cap is faulty
			The power circuit is faulty
The engine performs poorly at high speeds	Check the ignition timing and valve clearance	Incorrect	The ignition controller is faulty
			Improper valve clearance adjustment
			The magneto is faulty
		Valve clearance and ignition timing are correct	/
	Disassemble the connection of the fuel pipe of the carburettor and check if the fuel pipe is blocked	Insufficient fuel flow	The fuel tank has run out
			Blocked fuel pipe
		The fuel pipe has sufficient flow	Blocked fuel tank cap vent
	Check if the filter and carburettor nozzle are blocked	Blockage	Blocked carburettor measuring hole
		Unblocked	Float stuck
			Filter blocked
	Check gas timing	Incorrect	Adjust gas timing
		Correct	/
	Check valve spring pressure	Insufficient Pressure	Worn or broken valve spring

The engine has abnormal noise	Check whether there is abnormal noise in the valve	Abnormal noise in the valve	Valve clearance is too large
			Valve wear
	Check whether there is abnormal noise in the cylinder	Cylinder has abnormal noise	Piston and cylinder wear
			The small end holes of the piston pin and connecting rod are worn
			Crank pin and connecting rod large end wear
	Check whether the timing chain produces abnormal noise	Abnormal noise in the chain	Camshaft wear
			Timing driven sprocket wear
			Timing chain stretched
			The timing chain automatic tensioner fails, or the guide wheel is worn
	Check whether the driving gear and the driven gear produce abnormal noise	Abnormal noise in the driving and driven gears	Gear machining accuracy is not enough
			The gear teeth are worn
			The matching clearance between the driving and driven gears is too small or too large

SELECTION AND RATIO OF ENGINE OIL

In the process of engine work, the oil has the functions of lubrication, cooling, cleaning, rust prevention, sealing and noise reduction. Compared with the four-stroke engine oil that only lubricates and does not participate in the combustion, the two-stroke engine oil needs to be mixed with gasoline and then be used as fuel. So, the fuel of two-stroke engine is also required to play a lubricating role while participating in combustion.

The difference between two-stroke engine oil and four-stroke engine oil is as follows:

Item	Two-stroke engine oil	Four-stroke engine oil
Flash point [1]	low, flammable	high, flash point >200℃
Thinner	Yes	No

Viscosity	Low	high, the viscosity is 40, 50 or 60
Compounding agent	without ZDDP [2]	with ZDDP
Viscosity index improver	Low molecular weight PIB [3]	High molecular weight PIB
Ash [4]	Low	High

[1] Flash point: Flash is kind of fleeting flashing phenomenon. It is occurred when flammable gas, which is mixed gas of vapour produced on the surface and air, encounters a fire. The flash point is the lowest temperature of flash.

[2] ZDDP: Abbreviation for Zinc Dialkyl Dithiophosphates, which is an antioxidant and anti corrosive agent in lubricating oil additives, that is, a multifunctional agent. Adding this series of additives to oil can control the oxidation of oil, and has anti-oxidation, anti-wear and anti-corrosion effects.

[3] PIB: Abbreviation for Polyisobutylene, used as a thickener, and used with other materials to improve adhesion, flexibility, aging resistance, air tightness and electrical insulation.

[4] Ash content: Ash content refers to the inorganic matter obtained by calcining the remaining residue after the sample is sintered under specified conditions, expressed in mass percentage.

When choosing a two-stroke engine oil, the following conditions should be met:

①Has good lubricity;

②Excellent cleanliness;

③It can prevent premature ignition;

④It can prevent the spark plug from scaling and forming deposits;

⑤It can prevent the exhaust pipe from being blocked;

⑥Meet low smoke emission requirements;

⑦It has miscibility with fuel.

Regarding the choice of engine oil, GPX recommends you choose a fully synthetic quality and branded 2 stroke oil that is well known for its racing heritage and reliability .

The recommended fuel mixture ratio (gasoline: engine oil) for each model is

	GPX
Run-in period	40 : 1
After the run-in period	50 : 1

MOTORCYCLE CLEANING

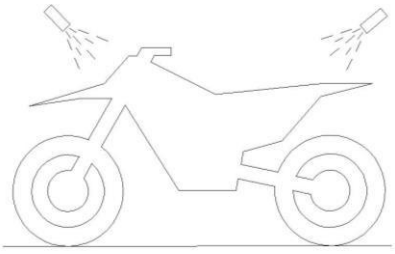
The cleaning of the vehicle is also an important part of the daily use and maintenance of the motorcycle. Frequent cleaning of your motorcycle can keep your car in a good state of motion and prolong its service life. You can clean your motorcycle through the following steps:

1. Cover the exhaust system to prevent water from entering;
2. Seal the electric door lock and all connectors with tape;
3. Use a low-pressure water spray device to remove the mud and dirt on the surface;
4. Use a special motorcycle cleaner to clean particularly dirty places;
5. Flush with low-pressure water flow;
6. Let the motorcycle air dry naturally;
7. Drive the motorcycle for a short period of time until the engine reaches the working temperature;
8. Lubricate the chain and all other parts that need to be lubricated.

WARINING: Never use high-pressure water to clean the vehicle. Avoid direct contact with coils, pipe plugs, carburettor or any electrical components.

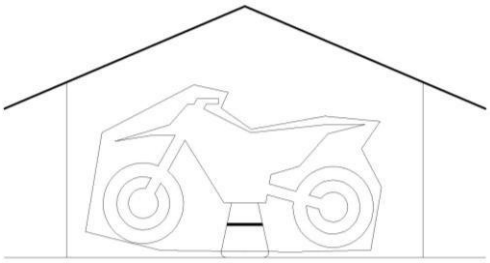
STORAGE

PREPARING FOR LONG STORAGE



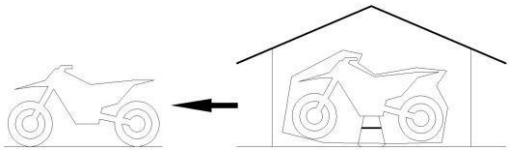
If you want to garage the motorcycle for a longer period, take the following steps.

1. Block the exhaust port of the muffler tube;
2. Remove the battery
3. Clean the motorcycle
4. Wait for the motorcycle to dry naturally;
5. Empty the fuel tank (if not used for a long time, the gasoline will deteriorate);
6. Lubricate the chain;
7. Apply oil to all unpainted metal surfaces to avoid rust;
8. When storing the motorcycle, keep the motorcycle wheels suspended. If this condition cannot be achieved, you can use cardboard to pad under the motorcycle tires;
9. Cover the motorcycle to prevent dust and dirt.
10. Move the motorcycle into a dry room and place it.



NOTE: When applying anti-rust oil, please do not splash the oil on the brake and rubber parts, otherwise the rubber may be aged.

PREPARING FOR USE AFTER LONG STORAGE



After the motorcycle has been stored for a long time, please follow the steps below when it is put into use:

1. Take out the blockage in the exhaust port of the muffler tube;
2. Tighten the spark plug;
3. Fill the fuel tank with fuel;
4. Install the battery;
5. Check the items that need to be checked before daily driving;
6. Routine lubrication for motorcycles.

MAINTENANCE POINTS

In the following content, we will enumerate the problems that occurred during your use, find out the possible causes and give general solutions.

Problems	Reason	Solution
The crank of the engine cannot be turned	Crank stuck	Contact GPX Service Centre
	Cylinder/piston/ connecting rod stuck	Contact GPX Service Centre
	Gearbox stuck	Contact GPX Service Centre
The engine does not start when the electric starter is pressed	The starting relay fuse is blown	Remove the seat cushion and check the fuse, if the fuse is blown, replace the fuse
	Low battery Volume	Remove the seat cushion and

		check the battery
Engine cannot be started	The motorcycle has been stored for a long time and the fuel has deteriorated	Drain the old fuel and add new fuel
	Dirt or wet spark plug	Clean or dry the spark plug, if necessary, replace the spark plug
	Engine water intake	First, drain the mixed fuel out the engine and remove the crankcase of the engine, clean it with a strong cleaning agent, then remove the spark plug, blow it dry with a fan (the machine that inflates the tires), and then wipe the air filter element. Finally, remove the exhaust pipe of the engine and blow it dry with a fan. After everything is done, the GPX owner should add new mixed fuel to the engine before the GPX can drive. Because the moisture in the crankcase is difficult to completely evaporate, the new fuel still contains a small amount of moisture. Therefore, after the engine has flooded and the GPX has run for 100 kilometres, the fuel should be changed again, and then again within 500 kilometres. After three times, the water in the carburettor is almost gone. If water enters the cylinder, depress the start lever several times after the flame is turned off. Step on it for a few times, the water in the cylinder will be drained from the exhaust pipe, and then use a fan to blow on the mouth of the oil dipstick for a few minutes. Warning: In safety sake, the spark plug should be wrapped with dry cloth to avoid spark jumping.
	Incorrect mixing of air and fuel	Clean the fuel tank vent pipe, adjust the air filter duct

	Open exhaust valve	Check and correct the exhaust valve
The engine can be started, but it will stop immediately	Incorrect air supply	Close the choke valve, clean the fuel tank vent pipe, and adjust the air filter duct
	Lack of fuel	Add fuel
Engine overheated	Lack of antifreeze	Replenish antifreeze and check for leaks in the cooling system
	Clogged water tank fins	Use low-pressure water to clean the fins of the water tank and replace them if necessary
Unbalanced engine operation	The spark plug is dirty, damaged or adjusted incorrectly	Remove the spark plug for cleaning, adjustment, and replacement if necessary
	There is a problem with the spark plug cap	Check the condition of the spark plug cap, check whether the spark plug cap is in good contact with the cable itself, check the cable, and replace the damaged parts
	Ignition rotor is damaged	Replace the rotor
	Water mixed in the fuel	Empty the fuel, then inject new fuel
Insufficient engine power or poor acceleration	Problems with fuel supply	Clean fuel system and check
	Dirt in the air filter	Clean the air filter and replace if necessary
	Damaged or leaking exhaust system	Check whether the exhaust system is damaged, and replace related accessories if necessary
	Dirt in the carburettor nozzle	Remove the carburettor and clean the nozzle
	Damaged or worn crankshaft bearings	Contact GPX Service Centre
Engine sound is abnormal	Problem with ignition	Contact GPX Service Centre
	overheat	See "Engine Overheating" section
Exhaust pipe backfire phenomenon	Carbon deposits in the combustion chamber	Contact GPX Service Centre
	Poor gasoline	Change fuel
	The spark plug is in poor condition or the specification is wrong	Replace with a new spark plug with the correct specification
	Exhaust system gasket ageing	Check whether the exhaust system is damaged, check whether the gasket is in good condition, if the

		gasket is ageing, replace the gasket
White smoke from exhaust pipe	The fuel contains water	Change fuel
Black smoke from exhaust pipe	Air filter is clogged	Remove and clean the air filter
	The combustible mixture is too rich	Adjust the carburettor valve
Gearbox gear does not mesh	Clutch abnormality	Contact GPX Service Centre
	The fork is bent or stuck	Check and adjust the fork
	Damaged gear lever	Replace the gear lever
	Damaged gear shift drum	Replace the shift drum
	Damaged ratchet device	Replace the ratchet device
	Loose or broken spring at the selector position	Replace the selector position spring
Gear bounce	Fork wear	Replace the fork
	Tooth wear	Check gears and replace if necessary
	Gear damage	Change gear
	Damaged displacement drum groove	Replace the shift drum
	Worn fork shaft	Check the fork shaft and replace if necessary
	The selector position spring is damaged	Replace the selector position spring
Clutch slip	Clutch disc wear	Replace the clutch disc
	The clutch pressure plate spring is too soft or damaged	Replace the clutch spring
	Clutch handle free stroke is too small	Adjust the free stroke of the clutch
The motorcycle is difficult to steer	The cable makes it difficult to turn the handlebars	Move the cable to reduce its interference
	The steering shaft nut is too tight	Adjust the steering shaft nut
	Worn or damaged steering bearings	Check the steering bearing and replace if necessary
	Bent steering shaft	Contact GPX Service Centre
Damping is too hard	Fork oil level is too high	Lower the front fork oil level to a suitable position
	Fork oil viscosity is too high	Replace the fork oil with the right viscosity
	Fork bent	Contact GPX Service Centre
	Tire pressure is too high	Check tire pressure and adjust to proper pressure
	Damping adjustment error	Re-adjust damping
Damping is too soft	Insufficient front fork oil level	Add the right amount of fork oil

		Note: It is required to add the same kind of oil
	Fork oil viscosity is too low	Change to fork oil with suitable viscosity
	Tire pressure is too low	Check whether the tires are leaking, if the tires are complete, pump them to the proper pressure
	Damping adjustment error	Re-adjust damping
There is abnormal noise when the motorcycle is driving	Improper chain adjustment	Re-adjust the chain tension
	Chain wear	Replace the chain and front and rear sprockets
	Wear of rear sprocket teeth	Replace the sprocket
	Insufficient chain lubrication	Follow the manual to lubricate the chain
	Rear wheel off centre	Check the spokes and adjust the spoke tension centrally if necessary
	The fork spring is soft or broken	Replace the front fork spring
	Disc brake disc wear	Check the disc brake disc, if its thickness is less than the limit thickness, replace it
	Damaged cylinder head	Contact GPX Service Centre
	Brackets, nuts, and bolts are not tightly fastened	Check and adjust the torque of the corresponding fasteners
	The gasket is installed incorrectly, is worn, or is too smooth	Readjust the gasket and replace if necessary
Motorcycle front wheel shimmy	Tire wear	Change tires
	Rim offset	Contact GPX Service Centre
	Whether the front wheel bearing is worn	Check the bearing and replace if necessary
	The vehicle is not aligned	Check the spokes and adjust the spoke tension if necessary
	Steering shaft tolerance is too large	Check the steering shaft pressure bearing clearance
	The steering shaft nut is loose, and the handlebar is not fixed	Check and re-tighten
The motorcycle skews to one side	Bent chassis	Contact GPX Service Centre
	Improper steering adjustment	Check and readjust
	Bent steering shaft	Contact GPX Service Centre
	There is a problem with the fork	Contact GPX Service Centre
	Vehicle is not aligned	Re-adjust the spoke tension and contact GPX Service Centre if necessary.

Brake failure	Disc brake disc wear	Replace the disc brake
	Insufficient brake fluid	Replenish brake fluid
	Deteriorating brake fluid	Replace brake fluid
	Piston damaged	Contact GPX Service Centre
	Brake pad wear	Check the brake pads, if the thickness is less than the minimum friction thickness, replace the brake pads