

ADVICE

Motorcycles are very dangerous. Check your motorcycle carefully before every ride to ensure everything is working correctly. Do not ride if you are under the influence. If you cannot ride a motorcycles, do not ride a motorcycle. Its your life and wellbeing so be careful with it.

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, knee and elbow protectors 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.

Always go riding with another person so you can help each other.

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 GPX 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.

APPEARANCE GPX 450R FSE COMPONENTS AND POSITIONS



No.	Name	No.	Name
1	Front mudguard	11	Front brake hose
2	Clutch lever	12	Engine sump shield
3	Coolant overflow tank	13	Electric starter motor
4	Petrol cap and tank vent hose	14	Front sprocket
5	Seat	15	Side stand
6	Rear mudguard	16	Air box cover
7	Rear light and no plate mount	17	Drive chain
8	Front brake cover	18	Rear sprocket
9	Front suspension compression adjustment		
10	Front brake caliper		



No.	Name	No.	Name
19	Rear brake disc and caliper	30	Rear suspension rebound adjustment
20	Exhaust silencer	31	Oil level window
21	Rear suspension compression adj	32	Rear brake lever
22	Radiator cap	33	Oil filter access
23	Front suspension rebound adjustment	34	Oil strainer access
24	Throttle	35	Sump shield
25	Front brake lever	36	Front fork protector
26	Front LED light	37	Front suspension compression adjuster
27	Rear wheel spindle	38	Front wheel spindle
28	Chain adjustment	39	Front exhaust
29	Rear suspension height adjustment		

<u>Tips and Tricks and keep your GPX 450R FSE FSE in tip top condition.</u> <u>Following these tips will help to serve you with a reliable and long lasting motorcycle</u>

- 1. Read this handbook !
- 2. So you don't forget and over run ,keep your own dated and mileage recorded list of when you carried out this maintenance. Showing this record and keeping oil and parts receipts to a buyer in the future will help to prove you have looked after your GPX.
- 3. Clean the air filter and lubricate this with air filter oil after each 4 hours of riding or each competition.
- 4. Check and adjust your engine oil level before each ride.
- 5. Use good quality fully synthetic 10W/40 motorcycle oil (full specification beneath)
- 6. Change your engine oil, paper filter and clean the oil strainers every 10 hours of riding or after each competition.
- 7. Check / adjust and lubricate your chain before each and every ride.
- 8. Wash your bike propertly and carefully. Avoid the air box, carburetor ,fuel tank vent hose, bearings and electrical connector and components.
- 9. Dry your motorcycle after you wash. Use an air line , paper or cotton towels or a leaf blower if you have one. Start at the top and down downwards towards the floor, drying the wheels last.
- 10. If you are not confident or don't know how to maintain a motorcycle speak to your dealer, or seasoned motorcycle mechanics, not your neighbour.
- 11. Lightweight dirtbikes are not like cars. They need adjusting, tweaking and maintaining regularly. Its just part of the fun. Speak to your dealer if you want reliable advice.
- 12. Check you brakes , throttle and clutch before each ride. Be safe.
- 13. If your unsure about anything ... STOP and get good advice.



VIN CODE



Vin code of the GPX 450R FSE ,is located on the head stock.

CHASSIS NUMBER



Chassis Number of GPX 450R FSE is located on the headstock/frame/chassis under the handlebars

ENGINE NUMBER



PARAMETER

DIMENSIONS AND SPECIFICATION - GPX 450R FSE				
L*W*H(mm)	2180×820×1254			
Wheelbase(mm)	1480mm			
Net weight (kg)	110			
Tire size	F: 80/100-21; R: 110/100-18. Rear will accept a 140 80/90 18" Enduro or			
	MX tyre			
Seat height(mm)	939mm. This can be reduced by 55mm to 884mm by using the 2 nd lower shock bolt , at no expense.			
Min ground clearance (mm)	330mm			
Tank volume(L)	9.4 litres			
Engine Parameters				
Engine type	Single-cylinder, water-cooled, four-stroke, four-valve overhead cam, balance shaft structure			
Clutch type	Manual wet multi-piece			
Cylinder				
diameter×stroke	94.5×64 mm			
Displacement	449cc			
Compression Ratio	10.7:1			
Oil type /capacity	Fully synthetic 10W/40 Especially suitable for wet clutches High wear resistance API SN Plus (Euro 5 compatible) JASO MA2 Oil capacity 1700ml after filter change 1600ml without filter change			
	ALWAYS check oil level is to the correct dipstick height on a level surface AND that it appears at the correct level in the engine window.			
Shift type	Constant mesh two-stage transmission six-speed transmission International profile 1-N-2-3-4-5-6. Primary reduction ratio: 2.91 Transmission ratio of each gear:first gear: 2.58			

GPX MOTO

ectronic fuel injection	
ectronic fuel injection	
Stock 12v battery for high performance electric starting and reliable electronics . Stock battery code HJTX5L-FPZ	
20. Front is 13 teeth and rear 52.	
stem Parameters	
Central double cradle type high-strength steel tube frame, GPX International patent design	
Front shock SZC Front suspension. 310mm travel. Comprising of quality high performance Telescopic, closed cartridge type units with adjustable compression and rebound. Seals , dust seal and range of springs avail (after market), L=950mm.	
ompression recovery dual adjustable nitrogen airbag rear shock, =480mm, 300mm travel, CRF general configuration.Quality high erformance unit with spring preload, adjustable compression as well as bound damping	
igh 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.				
Motorcyclists	1 person(rider)				
Maximum load weight 120kg					



CONTROL

CLUTCH



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

By adjusting 2 the screws indicated you can change the biting point of the clutch and the distance between the clutch lever and handlebar to your preference.

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 on the lever you can change the biting point of the lever and the distance of the brake lever to your preference.

MOT

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 ouput. The reverse will reduce the engine speed and power output. It will back to normal smoothly once you lease the handle.

STARTING



The start button is a square one and 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.

The TSE engine has a kick start also, as well as the electric start through the start button.

STOPPING



The red stopping button is fitted on the left side of the handlebar near the grip.

FUEL TANK CONNECTION



The fuel tank is disconnected from the fuel supply by disconnecting the two fuel and electrical connectors from the tank mountings. You can also see the cylindrical fuel pump in this photo. This will make a slight noise as it primes, as you turn the igntion on.

SHIFTING





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

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.

The recommended running-in steps are as follows:

- 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 $50\% \sim 75\%$ 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 $5 \sim 10$ seconds;

- 3. 4-5h stage: Using under the throttle level of $75\% \sim 100\%$
- 4. More than 5h: increase the speed to $60 \sim 80$ km/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.

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.

MOT

- 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.
- 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 on the ignition key
- 2. Wait for the fuel pump pump to prime with a short whining noise.
- 3. Pinch the clutch lever with the left hand;
- 4. Pinch the brake lever with the right hand;
- 5. Push the starter button until the engine starts but no longer than 2 seconds;
- 6. Release the starter button after the engine starts.

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.

RECOMMENDED SERVICE / INSPECTION SCHEDULE

	e	very	30 hc	ours
6	every	20 h	ours	
every 10 hours/after e	very 1	race		
1 hour after each	ride			
Check and charge the battery		٠	•	•
Check the front disc brake		٠	•	•
Check the rear disc brake		٠	•	•
Check the front and rear disc brake discs		٠	•	•
Inspect brake tubing for damage or leakage		٠	•	•
Check the rear disc brake fluid level		•	•	•
Check the free-play of the brake pedal		٠	•	•
Check the frame and swingarm		٠	•	•
Check the swingarm bearing for wear			•	
Check the top of the shock absorber		٠	•	•
Check the shock absorber connecting		٠	•	•
Check tire surface condition	0	•	•	•
Check tire pressure	0	٠	•	•
Check hub bearings for loose		•	•	•
Check the wheel hub		•	•	•
Check for rim edge pulsation	0	٠	•	•
Check the spoke tension	0	•	•	•
Check chain, rear sprocket, engine sprocket, guide sleeve and chain		٠	•	•

Check chain tension	0	•	•
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	0	•	•
Check valve clearance cold :	Every 5k		
	5000		
Intake value $0.10-0.15 < 0.05 \text{ or} > 0.25$	miles		
Exhaust valve 0.15-0.20. <0.10 or > 0.30			
Check clutch			٠
Change the gear oil Change the gear oil - Recommended every 2000-3000	1hr		
miles. 2000 miles for aggressive off road riding and 3000 miles for easier trail			
riding.			
Change the paper oil filter with every oil change	1hr		
Remove and clean oil strainer in petrol with every oil change	1hr		_
Check the clutch and throttle cables for damage and sharp bend	•	•	•
Check that the throttle cable is intact, free of sharp bends, and set correctly	0	•	•
Clean air filter and air filter tank	•	•	•
Check whether screws and nuts are tightened	0	•	•
Replace the fuel filter	3500 mls	/65	hrs
Check front and rear light fixtures	0	•	•
Final inspection: check whether the vehicle is running safely and conduct a test	0	•	•

• Periodic interval

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.

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.

GPX450R FSE 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 COMPRESSION DAMPING OF THE REAR SHOCK ABSORBER

You can adjust the compression damping by adjusting the chrome allen screw in the centre of the shock nut.

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

Warning - Do not loosen either of the bolts on the shock that are by the compression allen screw.



ADJUSTING THE REBOUND DAMPING OF THE REAR SHOCK ABSORBER



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

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

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

GPX4

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 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~	100r	nm	
If	"D2" measured	by the	customer	ie	lower	_

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

spring with a solier 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:

- 1. Check the front shock absorber, to determine whether there is a need to adjust the rebound damping
- Turn clockwise to increase rebound damping.
 Turn counter clockwise to rebound damping.
 This is the same for both the left and the right fork.

ADJUSTING THE DAMPING OF FRONT FORKS



Adjusting Steps as follows:
Check the front shock absorber, to determine whether there is a need to adjust the damping

2. Adjust the damping by rotating using your fingers to turn the knob.

Turn clockwise to increase damping,

Turn counter clockwise to decrease damping.

This is the same for both the left and the right fork.

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

VEHICLE MAINTENANCE PLACEMENT



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 carr

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

REMOVING OR INSTALLING THE FRONT FORK PROTECTION GUARDS

GPX MOTO



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.

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
- . 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





REMOVING OR INSTALLING FRONT HEADLIGHT



Removing Steps are as follows:

- 1. Remove or loosen the rubber fixing strap on both the
- 3. Pull out the connector between headlight and main

The instalment should be carried out in the reverse

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 rear silencer.

2. Remove the upper and lower mounting bolts of the rear shock absorber and the sub frame bolts.

3. Remove the bolt as indicated on the lower U-shaped rocker arm.

4. Remove the connecting bolts between the rear shock absorber and the triangular rocker arm;

5. After confirming that there is no interference, take out the rear shock absorber from the side;

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 on the rear seat.
- 2. Take out the seat backwards.



Installing Steps:

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

REMOVING OR INSTALLING THE AIR FILTER HOUSING



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

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 throttle body 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.

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 REAR SILENCER



Removing steps as below:

- 1. Undo the clamp bolt joining the front to the rear exhaust.
- 2. Remove the rear silencer by removing the twp bolts as indicated.
- 3. Remove the rear silencer by pulling backwards firmly.
- 4. Unplug the front exhaust sensor
- 5. Undo and remove the 2 bolts that secure the front exhaust to the cylinder head.
- 6. Remove the one bolt that attaches the front pipe to the chassis.
- 7. Remove the front exhaust from the motorcycle.

REMOVING OR INSTALLING THE FRONT EXHAUST PIPE



Installation Steps:

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

For the cleaning of the exhaust system, please consult with GPX dealers before operating.

If you need to replace the muffler packing or 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.

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REMOVING OR INSTALLING THE FUEL TANK



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:

. Remove the chain split link on the chain.

. Remove the movable section of the chain.

3. Pull out the chain from the sprocket.

Installing Steps: OTO

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.
 - Loosen the rear axle nut (A)
 - 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.

6.

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



CHECK THE THROTTLE CABLE

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.

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 thottle body.



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 2 adjusters change the distance between the clutch lever and the handlebar grip .



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. Loosen the fixing 10mm nut.
- 2. Turn the adjusting allen screw to adjust the angle of the handlebar to the position you are satisfied with.
- 3. Tighten the fixing nut.

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

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.

GPX MOTO 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 GPX Free-Play 25**~30**mm

CHECK THE REAR BRAKE DISK LIQUID LEVEL



REFILLING THE REAR BRAKE DISK BRAKE FLUID LEVEL

GPX MOTO



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



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



Check the tire pressure by using a pressure gauge. 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	30psi	30psi

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

CHECK SPOKE



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

ELECTRICAL SYSTEM

REMOVING OR INSTALLING THE BATTERY



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 code: HJTX5L-FPZ

THE ENGINE ADJUSTMENT

The GPX 450R FSE is fitted with electronic fuel injection



The GPX 450R FSE is fitted with no maintainence electronic fuel injection.

The carburetor is replaced with a fuel injection throttle body.

The system has been designed so that it is reliable and resistant and will not lose its control unit mapping data. Whilst it may be possible, GPX recommends that you do not reprogram the control unit or enter it in anyway. If you enter the control unit or its information you are voiding any warranty immediately and you are also entering an area where you will have no importer and dealer support. GPX, importers and dealers do not have the ability or equipment to digitally enter the control unit. So you are warned. Do not tamper.



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.

CHECK THE SHIFT LEVER POSITION

Gear lever



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 gear lever head
- 3. The shift head should be level with the tread surface of the footrest or slightly lower than the tread surface

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

GPX MOTO ADJUST THE SHIFT LEVER POSITION



Adjusting Steps are as follows:

- 1. Loosen the fixing bolts of the shift lever.
- 2. Remove the shift lever.
- 3. Turn the shift lever to a suitable position and install the spline.
- 4. Tighten the shift lever fixing bolt.

INSPECTION OR REPLACEMENT OF SPARK PLUGS

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The engine spark plug torque is $25 \sim 30$ N·m. The spark plug must be disassembled regularly to check the distance between the electrodes ($0.6 \sim 0.7$ 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 20 hours accumulated and replaced every 40 hours accumulated.

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

LUBRICANT SELECTION

Fully synthetic 10W/40 Especially suitable for wet clutches High wear resistance API SN Plus (Euro 5 compatible) JASO MA2 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 the GPX 450R FSE is fitted with Fully synthetic 10W/40 grade motorcycle oil. This oil must meet the specification listed here. It must be motorcycle oil and not general car or workshop oil.

Fully synthetic 10W/40 Especially suitable for wet clutches High wear resistance API SN Plus (Euro 5 compatible) JASO MA2



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 level ground . View the oil level through the clutch cover window as you can see in the photo opposite. Unscrew the oil cap on the top of the clutch cover and add the correct quality oil until it reaches the upper level "A".

Once you have the level perfect at the upper level, run the engine for 1 minute. Then check the oil level again and add oil if necessary, once again to reach the perfect level.

You should check this level before every time you ride.

If the oil level is higher than the upper graduation line, the excess oil should be discharged.

The GPX 450R FSE engine should be fitted with 10W/40

fully synthetic motorcycle oil only. NOT car oil as car oil will damage the clutch quickly. This is the specification -DO NOT CUT COSTS WITH CHEAP OIL. Fully synthetic 10W/40 Especially suitable for wet clutches High wear resistance API SN Plus (Euro 5 compatible) JASO MA2



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 sump bolt 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. The tightening Refill with (1500ml) torque is: 15 **~** 20N⋅m. litres of new lubricating oil and check the oil position. You may think you have filled the engine to the correct level however start the engine for 1 minutes and then stop the engine. Check the oil level AGAIN to obtain the correct level. The GPX 450R FSE engine should be fitted with fully synthetic 10W/40 motorcycle oil only. NOT car oil as car oil will

When replacing this oil filter the engine requires 1700ml of oil to replenish it.

It is also very important to follow the maintenance schedule and regularly replace the paper oil filter and clean the oil strainer. This should always be completeed in conjunction with chainging you engine oil.

Changing you engine oil and filter regularly and cleaning the oil strainer at the same time will ensure your motorcycle engine lasts a long time and gives you good performance.

There are 4 steps

1- Drain the oil as described.

damage the clutch quickly.

2- Remove the paper oil filter cover "A" by remove the 2 bolts. Remove the paper oil filter and dispose of safely. Ensure everything is spotless.Place a new paper oil filter in same location and replace the spring, oring ,cover and 2 bolts.

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A



B

3-Remove bolt "B" and remove the metal oil strainer. Clean this in petrol to ensure it is spotless and replace. Ensure it is spotless and there are no particles on it and that there are no holes. When applying the bolt to secure the oil strainer, ensure that the o ring is in good condition.

4 - Then replenish the engine with fresh new oil refill to the correct level. You may think you have filled the engine to the correct level , however start the engine for 1 minute and then stop the engine. Check the oil level AGAIN.

The GPX 450R FSE engine should be fitted with fully synthetic 10W/40 motorcycle oil only. NOT car oil as car oil will damage the clutch quickly.

Here is the oil specification that must be adhered to.

Fully synthetic 10W/40 Especially suitable for wet clutches High wear resistance API SN Plus (Euro 5 compatible) JASO MA2

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. Remove the plastic air box cover and air filter + filter frame . Fit a plastic inner air box washing cover over the entrance to the thottle body.Refit the plastic air box cover . This will protect water from entering the thottle body during washing. In the interim between and now and you obtaining the plastic inner air box washing cover , you can fit a polythene over the air filter foam whilst you are washing the machine. Always fit the plastic air box cover before washing the exterior of the machine. NEVER clean the inside of the air box with a hose or flowing water. If you clean the inside of the air box , do this with by fitting the plastic inner air box washing cover.
- 3. Seal the lock and all connectors with tape;
- 4. Use a low-pressure water spray device to remove the mud and dirt on the surface;
- 5. Use a special motorcycle cleaner to clean particularly dirty places;
- 6. Flush with low-pressure water flow;
- 7. Let the motorcycle air dry naturally;
- 8. Drive the motorcycle for a short period of time until the engine reaches the working temperature;
- 9. Lubricate the chain and all other parts that need to be lubricated.
- 10. After washing its is always best to dry the motorcycle with an air line or a garden leaf blower. This will contribute greatly to stopping corrosion and retaining the shine. Pressure washers are extreme and they force water into bearings and seals and past small o rings. With this in mind remember not to use high water force on the thottle body or the bearings or the electric connectors and components AT ALL.

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.