



**CFMOTO**

# LEADER Motorcycle

CF150-A  
CF150-C OWNER'S MANUAL



## FORWARD

Thank you very much for choosing excellent product made by CFMOTO.

This owner's manual introduces basic and necessary driving and maintenance information of motorcycle model CF150-A/CF150-C. Please read it very carefully before driving. Proper use, repair and maintenance can guarantee driving safety, reduce driving problems, keep vehicle at best condition and longer life time to use.

When periodic maintenance or repair is necessary, please consult with our local authorized dealer who knows best how to do that optimum performance can be achieved.

Wish you a pleasant drive.

CFMOTO reserves right to make improvements of product at any time without prior notice and without any obligation whatever.

The model is subject to standard of Q/CFD004、Q/CFD013

## **ATTENTION**

Local traffic rules and operation guide must be followed for your safety.

The owner's manual is necessary part of vehicle. If your vehicle is transferred to other potential users, please hand the owner's manual over to them for their safety operation.

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## **BRIEF INTRODUCTION OF MODEL CF150-A/CF150-C**

The model is designed for multifunctional purpose, combined with sporty style and utility. It's compact and new-looking with different style. The model can make our customers drive comfortably and with stability. Equipped with CFMOTO newly-developed liquid-cooled engine, it's more environment-friendly and achieve Euro-III emission standard and lower fuel consumption, by using fuel-evaporated recycling system and optimized catalyzer. There're main features as follows.

### **1. Multifunctional-purpose**

It's not only for commuters, travellers, but also for carrying cargoes. It can also be driven on both city roads and rural roads.

### **2. Powerful engine**

Equipped with engine 157MJ-2A/157MJ-3A, it's Max. power reaches 10.00KW/9000RPM, 10.5KW/9000RPM.

### **3. Big torque**

Max. torque is 11.9N.m/6500RPM, 12.2N.m/6500RPM.

### **4. More environment-friendly**

Equipped with fuel-evaporated recycling system, optimized catalyzer and secondary gulp valve, it has lower emission and lower fuel consumption.

### **5. State-of-the-art technology**

The engine is developed by state-of-the-art technology, has better engine cooling effect, engine temperature adjusted more easily, more powerful, lower fuel consumption, longer working life.

### **6. Complete DC (Direct current) charging system**

Quicker charging for battery and brighter light effect during night driving.

## **GUIDES FOR DRIVING**

### **1. Loading limit**

It can only for 2 persons use (Maximum) , one is driver and the other is passenger. It's not allowed to carry more than 2 persons.

Max. Loading is 150Kg.

### **2. Fuel standard selection**

Over 90# standard gasoline is needed. Gasoline is flammable, take care during driving and if there's any leakage of fuel tank, fuel pipes, fuel filter, carburetor and so on., please go to local dealer workshop to remove leakage and repair.

### **3. Electrical components**

It's not allowed to modify electric components and wiring layout, also not allowed to add other electric equipment. Because it can easily overload electric components and burn it when overheating. Any consequence caused by modifying or adding components, CFMOTO will not take responsibility.

Users must keep maintenance following “Periodic maintenance table” .

## **Motorcycle transportation, storage and assembly**

1. During transportation, it should be fixed on transportation vehicle to avoid damage.
2. It should be stored in a well-ventilated, dry and clean warehouse, keep distance away from toxic material.
3. Only after assembled and checked by local dealer, then hand it to our customer.

Assembly procedures is as follows:

1. Unpack carton and remove all accessories.
2. Install handle bar, and tighten screw cap, remove seat and install rear rack.
3. Remove fixing bolts of front shock absorber (Left & Right). Support up vehicle with main stand. Install front brake system, front wheel, front fender, battery and other parts (such as footrest and rear view mirror). Finally tighten all bolts and screws. Check electric system and start engine.
4. Adjust headlight, front & rear brake, clutch and throttle etc. Test driving and if it's ok, then hand it over to customers.

**Above information is only for local dealer reference.**

## **Important information for safety driving**

Motorcycle can bring our customer many conveniences. In order to keep motorcycle at best condition, you need to learn how to use properly and do maintenance regularly. When driving motorcycle, it should be safe and drivers should also be at good health condition.

**Attention: Before driving, please check vehicle very carefully and follow traffic rules strictly during driving.**

### **(1). Rules for safety driving**

1. Before switch on ignition, please carefully check vehicle to guarantee it's ok and safe. It's very important to avoid traffic accident and vehicle damage.

2. Drivers should have “motorcycle driving licence” before driving. It’s not allowed for people without driving licence to drive motorcycle.
3. To avoid accidents from using motorcycle, the following items should be reminded.
  - Make all effort to be seen clearly by automobile drivers
  - Don’t be too close to other running vehicle.
  - Properly use turn light, brake light and horn.
4. Avoid drive carelessly or under dark of traffic.
  - Strictly follow local traffic rules
  - Over speed is one of main causes for many motorcycle accidents. Please drive within speed limit.
5. When turn or change lanes of road, please use turn light or other signal light to remind other drivers.

Many accidents occur at the crossroad, entrance or exit of parking lot and driveway, therefore pay attention in the above places.
6. When driving, hold tightly steering handlebar and put feet on the main footrest. Passenger should hold driver’s waist or handrest tightly, put feet on the assistant footrest.
7. Look ahead and pay attention to left or right side conditions when driving. At the same time look back by rear view mirror.

## **(2). Protective accessories**

1. Many injuries of motorcycle or scooter accidents are on head. Therefore please wear helmet and other protections, For example, goggles, boots and thick coats.
2. When driving, temperature of muffler is very high, good quality of boots must be wear to protect feet.
3. Don't wear loose clothes to avoid potential accidents.

Attention: Please always drive very carefully and follow road rules for safety.

## **(3). Modification of vehicle**

### **Caution:**

**(1) It's prohibited to modify vehicle or add components on vehicle, because it will bring safety problems. Local vehicle management regulations must be obeyed.**

**(2) In order to keep very low emission level, don't modify or remove the following components.**

- ① **Don't adjust mixture adjustment screw of carburetor and change main jet of carburetor.**
- ② **Don't use muffler from other supplier since muffler catalyzer provided by CFMOTO is optimized.**
- ③ **Canister is key component of fuel–evaporated recycling system, don't remove it without permission of our local dealer workshop.**

**(3) If any good suggestions for modification or improvements, please kindly contact CFMOTO directly. Without our permission, CFMOTO will not take responsible for any consequences caused by your modification.**

**⚠ WARNING:**

**It's not allowed to modify electric components and wiring layout, also not allowed to add other electric equipment. Because it can easily overload electric components and burn it when overheating. Any consequence caused by modifying or adding components, CFMOTO will not take responsibility.**

**(4). Cargo Load**

**Caution: Trunk or storage equipment etc. is only for light-weight load.**

1. Max. cargo load for trunk is 10Kg. Max. total load (including driver and passenger) is not more than 150Kg.
2. Overload will affect the stability and controllability.
3. All the loads should be hold firmly.
4. Child or pets should not be carried in trunk. e. g dog or cat.
5. All the loads should not be stretched out of the trunk.

**(5). Accessories**

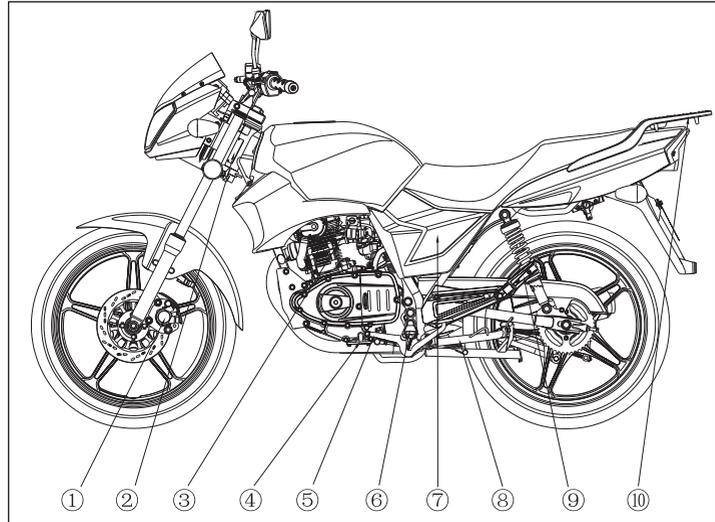
All accessories in the carton are specially designed, produced and tested. Strongly recommended to select accessories made by CFMOTO. If other supplier's accessories selected, CFMOTO will not be responsible for its quality and safety.

## PARTS LOCATION & FUNCTION

### (1).Parts location

#### 1. Left side view

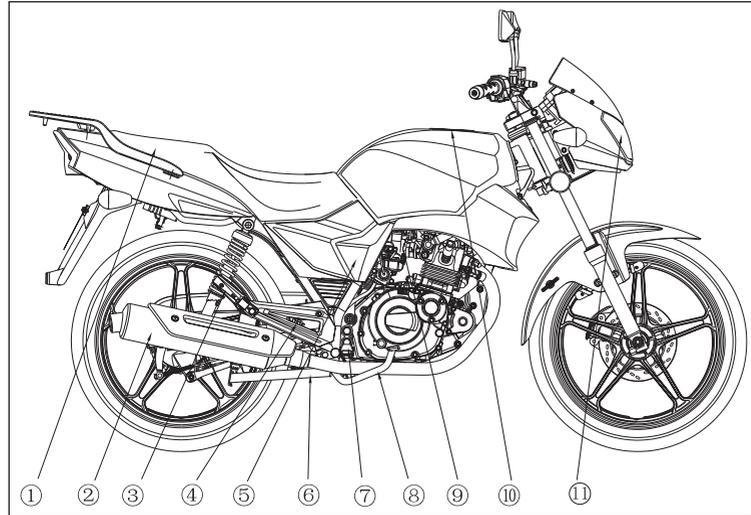
- ① Front brake
- ② VIN No.
- ③ Fuel switch
- ④ Oil drain bolt
- ⑤ Gearshifting lever
- ⑥ Front step , LH
- ⑦ Air filter (inside leftside cover)
- ⑧ Side stand
- ⑨ Rear step , LH
- ⑩ Rear handrest (Load limit is 3Kg. )



Pic1 : Left side view

## 2. Right side view

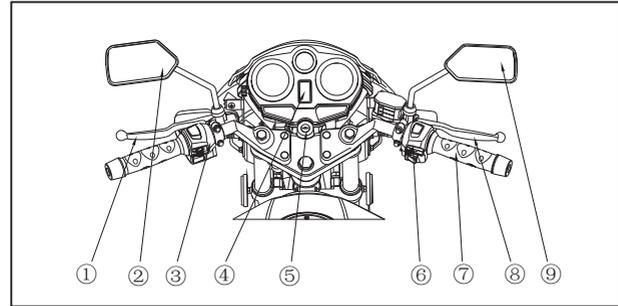
- ① Seat
- ② Muffler
- ③ Rear step , RH
- ④ Rear brake switch
- ⑤ Battery
- ⑥ Main stand
- ⑦ Front step , RH
- ⑧ Rear brake pedal
- ⑨ Carburetor
- ⑩ Cover of fuel tank
- ⑪ Headlight



Pic2 : Right side view

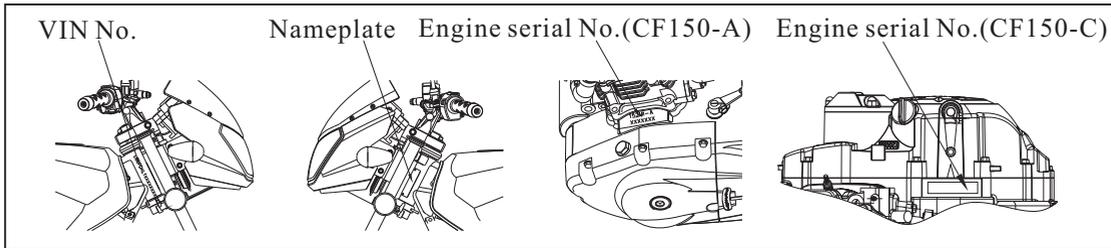
### 3. Front part of vehicle

- ① Clutch lever
- ② Rear view mirror (LH)
- ③ Left handlebar switch comp
- ④ Dashboard
- ⑤ Ignition switch comp
- ⑥ Right handlebar switch comp
- ⑦ Throttle lever
- ⑧ Front brake lever
- ⑨ Rear view mirror (RH)



Pic3 : Front part of vehicle

4. Location of VIN No. Name plate and Engine serial No.  
VIN No. is at right side of front fork as drawing shows.  
Name plate is at left side of front fork as drawing shows.  
Engine serial No. is at bottom of cylinder as drawing shows.



Pic 4: Location of VIN,Nameplate and Engine serial No.

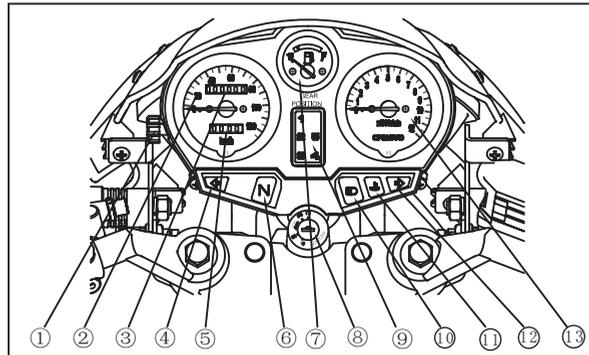
## (2)Dashboard and Ignition switch

The following is function table of dashboard.

Sheet 1

<b>Item No.</b>	<b>Part name</b>	<b>Function description</b>
1	“Zero” mileage setting lever	Recover 0 mileage setting for short distance when use it
2	Speedometer	It shows vehicle running speed
3	Mileage	It shows total drive distance
4	Left turn signal light	It flashes green light when turn left
5	Short-distance mileage	It shows distance between two drivings
6	Neutral signal light	It shows Neutral position of gear when it’ s lighted
7	Fuel level meter	It shows remaining fuel volume
8	Ignition switch	It controls engine start, lighting and signal light
9	Gear indication	It shows gear position ( at 1-speed, 2-speed, 3-speed, 4-speed, 5-speed 6-speed,CF150-A has 5-speed gear and CF150-C has 6-speed gear)

Item No.	Part name	Function description
10	High-beam light	It flashes blue light to light long-distance
11	Water temp. alarm signal light	Water temp. too high if lighted
12	Right turn signal light	It flashes green light when turn right
13	RPM meter	It shows RPM data



Pic 5: Dashboard

## Ignition switch:

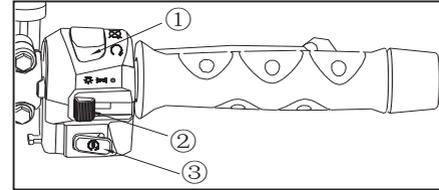
it's location as drawing shown, Switch on ignition before starting engine. Ignition key position and it's function as follows.

### Sheet 2

Key position	Function	Status
OFF “  ”	Electric circuit is open, cannot start engine and signal light is off	Key can be taken out
ON “  ”	Electric circuit is closed, can start engine when gear on Neutral position	Key cannot be taken out
STEERING LOCK “  ”	Electric circuit is open, steering is locked	Key can be taken out
POSITION LIGHT “  ”	Position signal lighted, and steering locked	Key can be taken out
<p><b>ATTENTION:</b> 1. Keep key at “” position when not using motorcycle. If switch at “” position, Position light will use power and make battery out of power long time.</p> <p>2. When parking, be sure to lock steering. Turn left the steering bar, insert key into steering lock hole, and turn anti-clockwise to lock steering. Unlock steering as reverse procedure.</p> <p>3. Need to lock steering when not using motorcycle.</p>		

### (3)Right handlebar switch comp.

- ① Kill switch
- ② Headlight & Position light switch
- ③ Start button



Pic 6: RH handlebar switch Comp

#### [Kill switch]

There're two position of kill switch “⊗” and “○”

“⊗” : Press this button, engine stop.

“○” : Press this button, engine can be started.

**ATTENTION: When start engine, switch must be “○” position.**

#### [Start button]

Press this button “Ⓜ” to start engine.

#### [Headlight and Position light ]

There're three position “●” “☰” “☼” for headlight and position light switch.

“☼” : Headlight, dashboard light and tail light are on.

“☰” : Position light, tail light and dashboard are on.

“●” : Headlight, dashboard light, tail light and position light are on.

#### (4) Left handlebar switch comp.

- ① Horn button
- ② Turn light switch
- ③ Headlight switching beam control
- ④ Passing light switch
- ⑤ Choke cable lever

#### [Horn button]

Press this button, horn will speak to remind other driver or people.

#### [Turn light switch]

There're 3 positions “”、 “”、 and “Middle” for turn light switch.

“” : Left turn light on and turn left.

“” : Right turn light on and turn right.

“Middle”: In the middle position, go straight.

#### [Headlight switching beam control]

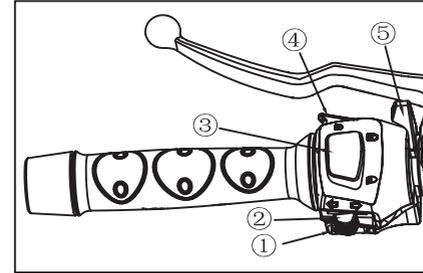
There're two position “” and “”

“” : Low beam

“” : High beam

#### [Passing light switch]

When press passing light switch, passing light “ON” , it means passing action will be taken.



Pic 7: LH handlebar switch Comp

**⚠ WARNING: When making turn or lane change, be sure to switch on turn light and switch off until go straight.**

## [Choke lever]

Turn the choke lever backwards to close the choke and turn it forth to open.

**Note: Please close the choke while start a cold engine; Choke must be fully open after engine is pre-heated for 2 to 5 minutes(steady idle)**

## (5)Fuel and fuel tank cap

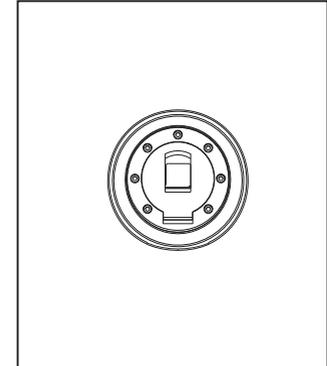
### [ Fuel ]

It is recommended to use fuel of 90# or above ;

### [ How to open the fuel tank cap ]

Insert the key into fuel tank hole and then turn close wise ; Press the pin on the fuel tank cap into groove of fuel tank neck and then take out the key.

**Warning: 1.Fuel is highly flammable, and refuel must be performed after engine is off and in well-ventilated place; It is forbidden to smoke and create related fire in surrounding;  
2.Never over refuel (below the refuel neck );  
3.Never mix oil and fuel to avoid damage to engine.**

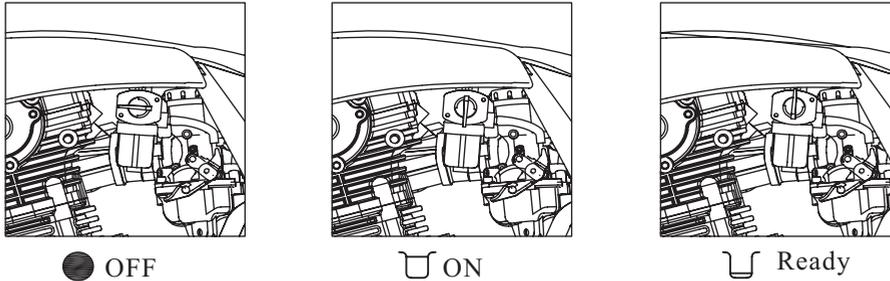


Pic 8: Fuel tank cap

## (6)Fuel switch (see pic 9)

The fuel switch is on the left rear position of fuel tank. Fuel flows into carburetor through the

filter, see illustration. There are three positions for the switch. “●” is “OFF” and “☐” is “ON” and “☐” is spare fuel pipe.



Pic 9: Fuel switch

In ● position, it means no fuel to the carburetor and in “☐” position, fuel is flowing to the carburetor; in “☐” position, it is for spare fuel with capacity of 1.5L and refuel must be carried shortly.

**⚠ WARNING:**

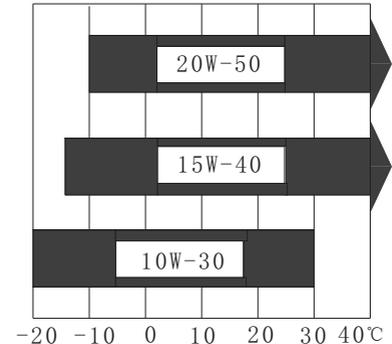
- 1. In order to avoid sudden stop due to lack of fuel, fuel switch must be in position of “☐” position;**
- 2. Do not get burnt by heated engine while operating the switch.**

### (7) Use of engine oil:

Use of quality and proper engine oil can extend the engine life; engine oil should be SG or over SG level with SAE15W-40. If this is not available, please select as following:  
10W-30 should be used in cold areas.

Sheet 3

SG level	SAE10W-30
	SAE15W-40
	SAE20W-50



Pic 10: Engine oil



### **WARNING:**

**Engine life and performance will be damaged due to unqualified engine oil.**

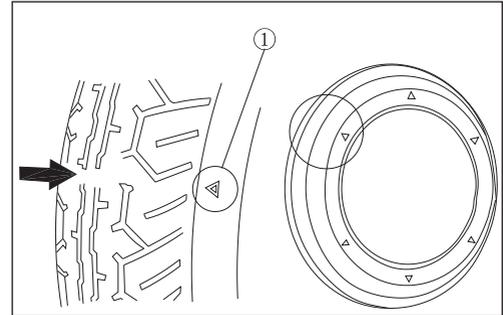
### (8) Tire (Illustration 11)

Appropriate tire pressure will promise steady and enjoyable drive and also will prolong the tire life. Inspection of the tire pressure should be carried out in a “cold” situation.

See chart 4 to check tire specs of tires:

#### Sheet4

Tire pressure at cold con- dition	For one person			For two persons		
	kPa	kgf/cm <sup>2</sup>	psi	kPa	kgf/cm <sup>2</sup>	psi
Front wheel	175	1.75	25	175	1.75	25
Rear wheel	200	2.00	29	225	2.25	33
	Front wheel			Rear wheel		
Tire size	2.75-18 42P			3.25-18 52P		



Pic 11: Tire

It is dangerous to ride on worn tires and also will defect tire performance , turning, operating , stability, etc. Tire must be replaced when tire is worn to ① position. Check before ride if there are cuts or nails, or deformation of tires and rims.

#### Note:

1. Extra tire wearing can be caused by improper tire pressure and lead accidents;
2. Damage of the tire or tire off the rims can be caused due to insufficient tire pressure.

# OPERATION GUIDE

## (1).Break-in

Break-in period is to guarantee parts surface to be polished well and keep a good performance in future ride.

New vehicle break-in mileage: 1500km.

### **Notes:**

**1.During break-in, do not drive in full throttle, and keep engine below 6500rpm;**

**2.Each gear should be practiced;**

**3.Do not drive at a fixed throttle position;**

**4.Do not carry over max loading capacity;  
Replace three times of engine oil.**

### **Operation tips during break-in period:**

1. 0-300km:

Keep throttle open less than a half and speed within 35km/h;

2. 300-600km:

Keep throttle open less than a 2/3 and speed within 45km/h;

3. 600-1500km:

Keep throttle open less than a 3/4 and speed within 55km/h.

### **[ Replace engine oil three times during break-in ]**

Replace engine oil three times at 300km, 600km and 1000km, and replace after each 1500km.

**Engine oil: SG or above.**

**Note:**

- 1. Replace the engine oil in engine warming condition ;**
- 2. Contact CFMOTO for service or inspection if necessary during break-in; Maintenance in the service place is needed when break-in is over.**

**(2) Inspection before driving.**

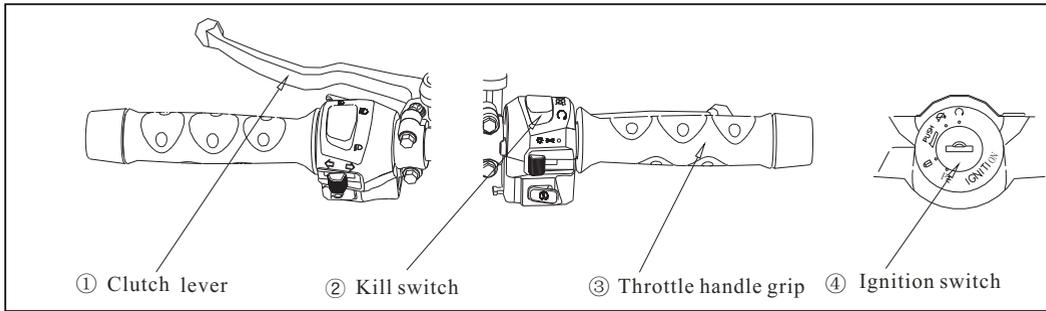
To ensure the performance and safety, a routine inspection shall be performed before daily drive.

**Procedures:**

1. Check engine oil(see P29) and make sure there is no leakage ;
2. Check if there is enough fuel ;
3. Check if there is enough coolant and make sure there is no leakage ;
4. Check front and rear brakes(free distance: front 10-20mm & rear 10-20mm) for smooth operation ;
5. Check front and rear tire air pressure and for cuts or wearing ;
6. Check driven chain to see if lubrication status is good ;
7. Check throttle hand lever: free distance is 2 to 6 mm, and easy operation ;
8. Check lights and signals: front headlights, tail lights, brake lights, turning lights, signals, and horns ;
9. Check the battery and add distilled water if necessary ;
10. Checking steering for smooth operation, no loose position ;
11. Check clutch lever: free distance should be between 10 to 20 mm and easy handling ;

12. Tightening inspection: front and rear shocks, wheel shafts, engine suspension, steering, handlebar, front and rear brakes, clutch, rear suspension, rack, and electronic parts, bolts, screws, etc.

### (3)Starting(Illustration 12)



Pic12: Ready to start

### **[ Starting preparations ]**

1. Turn on and to position “” and turn kill switch to “” and turn throttle lever to start the engine.
  2. Put gear position at low or neutral ;
  3. Left hand hold tight and clutch lever.
- Starting preparations are finished to finish above three steps.

## **[ Starting the vehicle ]**

After finishing starting preparations, press button “

### **Notes:**

- 1. Always drive after 2 to 5 minutes for pre-warming;**
- 2. Release “

-22-**

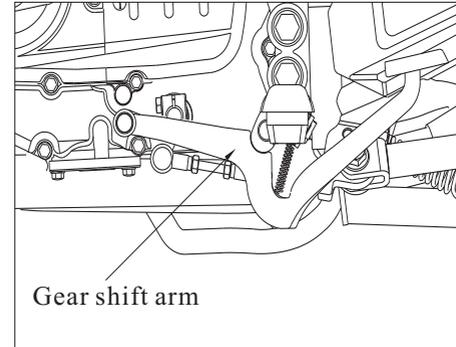
#### **(4).Ride**

##### **[Gear shifting operation ]**

This the model CF150-A has five gear, 1 and 2 is low gear, 3 is middle gear and 4 and 5 are high gear. And the model CF150-C has 6 gear, 1-speed and 2-speed are low speed gear, 3-speed is middle speed gear and 4、 5、 6-speed are high gear.

shifting operations procedures as follows:

- a. During idle, release clutch lever and put foot on the gear lever to position ①;  
Slowly increase engine turning and release clutch lever slowly to start the engine steadily;
- b. When vehicle steadily drive, decrease engine turning and release clutch lever and put foot onto gear lever and to ② position;
- c. Increase engine turning and release clutch lever slowly;
- d. Gears of ③、④、⑤、⑥ follow operation of “b” procedure.in case of decrease gear , follow operation of “a” procedure;
- e. During gear shifting, make sure gear lever is pressed to bottom and then release clutch lever.



Pic13: Location of gear shift



Pic14: Gear shift flowchart

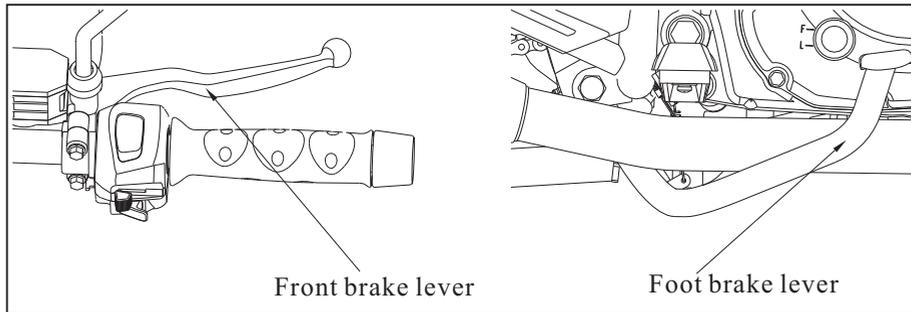
**⚠ WARNING:**

**Never perform gear shifting with open throttle or do not hold the clutch lever, this will lead to damage to engine and transmission, and cause accidents.**

## **[CLIMBING OR TURNING]**

1. During climbing, power is also very limited due to high gear. In this case, shift to low gear when climbing to avoid clutch slippery due to too sharp speed deceleration;
2. During turning, clutch slippery may occur due to sudden throttle release and deceleration. In this case.

## **[BRAKE]**



Pic15 : Brake position

1. During acceleration, front and rear brake are both needed (Slowly grasp front brake lever and put foot on rear brake, never brake with only front or rear brake) for brake;
2. In case of emergency, switch off vehicle and use front and rear brake to stop;
3. Try to avoid sudden brake, because sudden brake will cease the front and rear wheel suddenly and cause vehicle out of control;

4. Do not accelerate or decelerate or turn sharply on soft or slipper road to avoid falling and vehicle out of control ;
5. During long downgrade, use the front or rear brake once in a while and shift to low gear. Brake with the engine to avoid paws and rims too hot and reduce the braking capability.

### **[STOP VEHICLE]**

1. Slowly release throttle and decelerate;
2. Gently use the front and rear brake to stop the vehicle ;
3. Switch off vehicle “”, or turn off the engine switch ;
4. Use the main stand to support the vehicle;
5. Lock the wheel for anti-theft.

## VEHICLE MAINTENANCE

Follow suggestions and instructions in below chart for vehicle maintenance and vehicle must be cleaned before maintenance.

Sheet 5

Items	Times	Intervals	Odometer KM (Remarks 2)				Remarks
			1000km	4000km	8000km	12000km	
* Fuel tank and fuel hose			Replace in case of damage or aging				Pre-ride
* Throttle			I	I	I	I	Pre-ride
* Coolant			I	I	I	I	Pre-ride
Air filter element	Remarks ①	I	C for every 2000Km				R for every 20000Km
Spark plug			I for every 2000Km				R for every 6000Km
Engine oil		Replace at 300, 600, 1000Km for new vehicle and replacement for every 1500Km					
Oil filter		Replace at 300, 600, 1000Km for new vehicle and replacement for every 1500Km					
Drive chain/chain sprocket	Remarks ①	I and L for every 500Km					
* Brake pads		I and R for every 1000Km					
** Brake fluid		Change for every 2 years					
** Front/Rear brake system	Remarks ③	I	I	I	I		Pre-ride
* Switches		I	I	I	I		Pre-ride
* Lighting & Horn		I	I	I	I		Pre-ride
* Battery	Every month	I	I	I	I		
Fuse or overload protector		I	I	I	I		
Connecting wiring		I	I	I	I		
** Valve clearance	Remarks ③	Initial: 20 hours or I for 200Km; I for every 80 hours or 2000Km					
* Clutch		I for every 80 hours or 2000Km.					Pre-ride
* Suspension system		I	I	I	I		
* Tightening bolt		I	I	I	I		Pre-ride
* Wheels		I	I	I	I		Pre-ride
** Bearing of steering handlebar	Remarks ③	I	I	I	I		
** Engine overhaul	Remarks ③	I	I	I	I		

REMARK: I means on-time inspection, cleaning, adjustment, lubrication or replacement.

C means cleaning, R means replacement, L means lubrication.

**\* No such mark means customers can do the service himself or go to CFMOTO service point for service or maintenance;**

**\* One such mark means service should be done in CFMOTO service station, but can also be handled by customer himself if tools, parts are available;**

**\* Two marks mean service must be done in CFMOTO service station for safety drive;**

Remark① means cleaning period should be reduced in drive roads with a lot of sand or dust;

Remark② means service periods must be respected again after odometer data is over maximum reading data ;

Remark③ means related service or adjustment must be done in CFMOTO service station.

### **Engine oil inspection or change**

Uses of engine lubrication oil : reduce scrub, increase sealing, cool down parts, clean parts and anti-corrosion ;

Engine life can be reduced or parts wear due to poor quality, lasting use or insufficient volume of engine oil. And also they will cause engine overheating, clutch wear or burnt, power decrease , abnormal noise or engine oil over consumed.

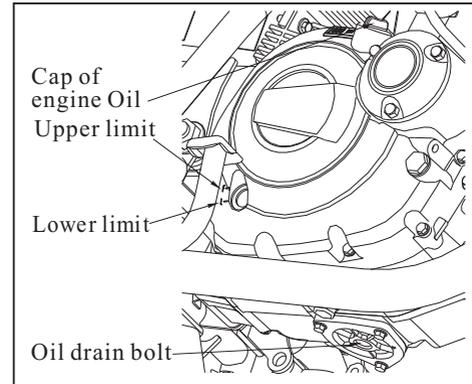
Please refer to Page 8 for choice of the oil.

### **(2) Engine oil inspection**

Before every use, check level of engine oil, which should be over the marked level (see Pic 16) on oil window on cover of right crankcase .

1. Use main stand on flat surface of the road ;
2. In case of insufficient engine oil, add SAE15W-40/SG or oil above to upper marked level ;
3. Install the engine oil cap to check for oil leakage.

**⚠ WARNING: Engine can be seriously damaged due to lack of engine oil.**



Pic16: Inspection of engine oil

### **【 Change of engine oil 】**

1. Please refer to Page 19 “Run-in period ” for engine oil change for new vehicles ;
2. Run-in period should be every time of 1500 km ;
3. Before change , heat the engine and then switch off the key and then drain engine oil (Do not get burnt by the warm up) ;
4. Place an empty case for drained oil and remove the drain bolt ;
5. Clean oil filter and drain bolt after oil drainage and check if it is necessary to replace gasket as well. Install oil filter, spring, gasket and then drain bolt cap ;
6. Add 1200 ml of engine oil and install engine oil cap if there is no oil leakage. If oil filter has to be replaced at the same time , 1250ml oil should be filled.

### **(3) Selection of spark plug and replacement;**

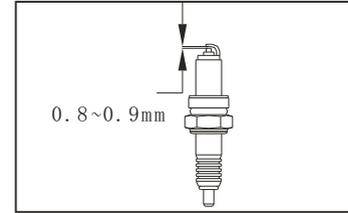
#### **[ Selection of spark plug ]**

Model number: CR9EP;

CFMOTO genuine part must be used.

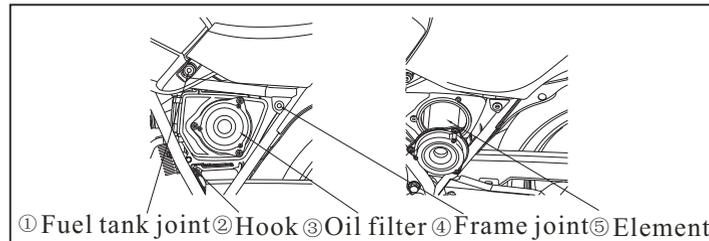
#### **[ Inspection and replacement of spark plug ]**

1. Replacement period: 6000km;
2. Take off spark plug and clean surrounding. Use tool to remove the spark plug and use steel thread to clean carbon deposition or dust;
3. Check spark plug for any damage or burnt and also check if seal is working and replace parts if necessary;
4. Use a feeler gauge to check electro polar, standard is 0.8 to 0.9 mm;
5. During spark plug, put spark plug onto thread and then tighten with spark plug wrench;



Pic17

### **(4) Air filter cleaning and installation**

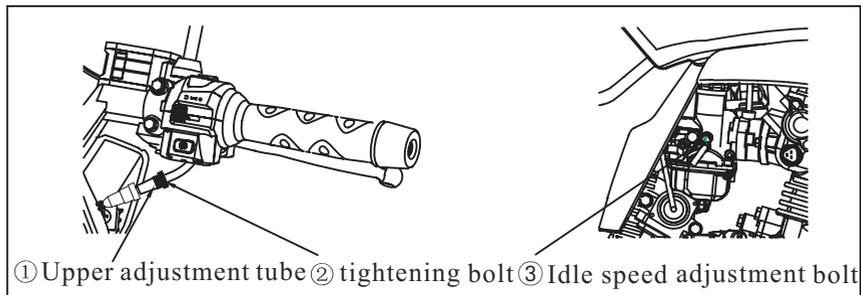


Pic 18: Position of air filter.

1. Element of air filter must be replaced in certain period. Service period should be shortened in places with a lot of dust or high temperature ;
2. Air filter must be cleaned after 1000km ride, and after 4000km, air filter must be checked carefully and cleaned ;
3. Replace the element in case of dirty or crack or damaged ; clean air filter can improve engine performance and prolong its life ;
4. Vehicle is equipped with foam element and could be cleaned with non-flammable coal oil or cleaning liquid ;
5. Disassembly: Remove left side cover and then remove tightening bolt and then take out the element ;
6. Follow the reverse procedures for assembly ;

**NOTE: Don't get water into the element during wash, it will damage engine starting or acceleration performance.**

### (5) Throttle lever inspection and adjustment



Pic19: Throttle operation line inspection ;

1. Check RH turning lever to full right position for normal turning and whether position fixing is reliable;
2. Upper adjustment bolt allows minor adjustment, and same for lower adjustment bolt tube ;
3. During minor adjustment, release tightening screw 2 and then turn 1 for adjustment.

#### **Throttle lever adjustment:**

1. Throttle lever free travel: 2-6 mm;
2. Upper adjustment bolt tube can be slightly adjusted and bottom bolt tube(join between throttle body & throttle cable) can be adjustmend to a certain extent;
3. During slight adjustment, loose tightening bolt 2 and adjust 1;
4. When doing bigger-range adjustment, loose tightening bolt 4 and adjust free travel between 2-6 mm.

#### **NOTE:**

- 1. Re-assembly must be done in case of throttle operation line incorrect;**
- 2. Replace the operation line in case of throttle line broken or performance failure.**

#### **[ Carburetor adjustment ]**

The vehicle idle speed is  $1500 \pm \text{RPM/min}$ (Neutral gear). Adjust the idle speed after starting the engine ;

Adjustment: Turn nut 3 clockwise and idle increases ;

Turn nut 3, idle decreases ;

Carburetor idle speed can be adjusted lower decreased in higher temperature ; and higher in lower temperature.

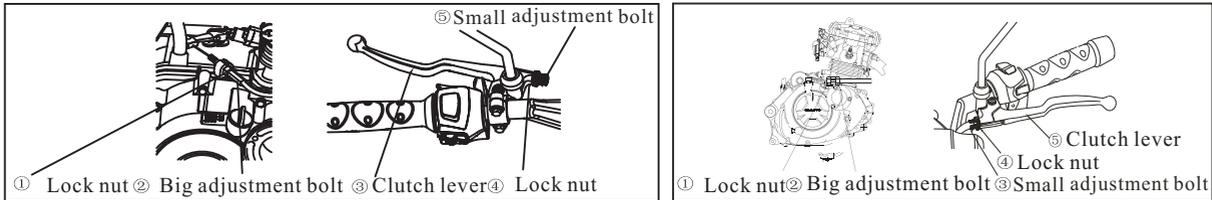
**⚠ WARNING: Users can not often adjust the idle speed and never adjust idle speed below 1300, or head cylinder will faster damage wear or damage the engine due to insufficient fuel.**

## (6)Clutch adjustment:

Clutch is operated by hand. Clutch lever: free play is 10 to 20 mm ;

Clutch is used to pass power from engine to transmission or cut the power if necessary ;The clutch lever must be grasped completely or released completely. Try to avoid doing only half (half-clutch), or clutch will be worn or damaged. PIC 20 shows bigger range of adjustment ,and left pic shows smaller adjustment ;

1. Smaller range adjustment: Release tightening bolt and turn small adjustment bolt tube. Turn adjustment tube 5 clockwise and clutch free stroke is increased and decreased in anti-clockwise ;
2. Bigger range adjustment: Release 1 tightening bolt on the crankshaft clutch operation line and adjust 2 big adjustment bolt tube ; Clutch free stroke is increased when big adjustment bolt is turning clockwise and decreased in anti-clockwise ;
3. Ride for a while after clutch adjustment to see if clutch can be released ;
4. In case of clutch worn too much or burnt, replacement must be done in CFMOTO service station.



Pic20: Inspection of clutch cable

**NOTE: Please go to CFMOTO service station if vehicle is not in good status after your adjustment.**

## ( 7 ) Driven chain inspection, adjustment or lubrication

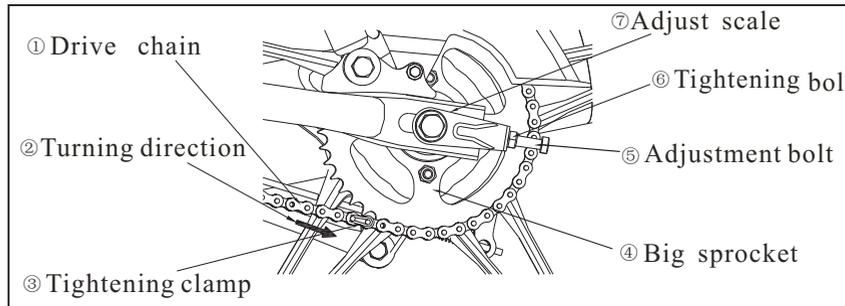
Driven chain contains a lot of parts working together. Good lubrication and proper adjustment decides its last life. Ignorance of chain service or maintenance will lead chain wear or damage. Chain must be serviced in certain period and replace the chain, big sprocket or small sprocket if necessary.

### **Inspection:**

- 1.Shift to neutral gear and switch off the engine ;
- 2.Put figure on 1 and sway the chain, swaying from 10 to 20mm;
- 3.Check any wear, missing part or damage, replace if necessary ;
- 4.Check any wear of big & small sprockets and replace in case of any wear, teeth missing or broken teeth;

### **Lubrication:**

- 1.Clean driven belt, big sprocket and small sprocket. Add proper volume of oil or new lubricant onto these parts ;
- 2.Lubricate every 500 km and maintenance should be more frequent in places with a lot of dust.



Pic21: Inspection of drive chain

## **[ Drive chain adjustment & replacement ]**

### **If adjustment**

1. Stop engine and stand up vehicle with main stand, shift to Neutral position
2. Loosen nut of rear wheel shaft, move adjustable bolt of ⑤ to make chain swing between 10mm and 20mm. Left & right adjustment indication should be at ⑦ position. Check chain tension properly, Finally tighten nut of rear wheel shaft and lock nut ⑥ .

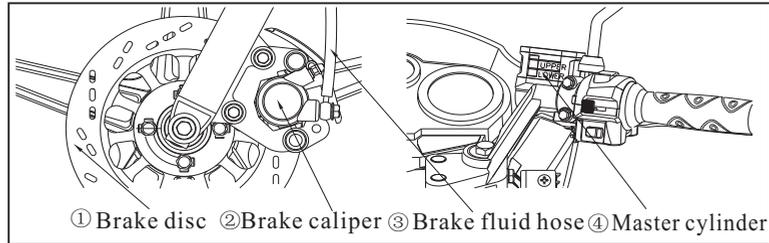
### **If replacement**

1. Use snipe nose pliers to remove lock plate ③ of drive chain.
2. Use tool to remove big chain sprocket and small sprocket.
3. Reinstall chain as reverse procedures and adjust free play of drive chain.
4. Assemble lock plate with open end in the opposite direction of chain running.

## **(8)Front brake check & adjustment**

### **[If check]**

1. Check fluid level of fluid reservoir, and check brake caliper if it's ok.
2. Check if any leakage or damage of brake fluid reservoir or brake hose.
3. Check brake disc wear
4. When move brake lever, if pressure not enough, please check air bubbles of brake hose or brake system. Must eliminate air bubbles to guarantee brake effect. This work should be done by CFMOTO authorized local dealer workshop.



Pic22: Inspection of front brake

### **[Replacement for brake disc & pad]**

1. When limit thickness of brake disc reaches 3mm after long-time wear, new disc must be replaced.
2. When limit thickness of brake pad reaches 1.5mm after long-time wear, new pad must be replaced.
3. Before replace brake disc, brake caliper and front wheel should be removed.
4. Before replace brake pad, remove brake caliper and loosen brake spring of caliper.
5. After replacement of brake disc or brake caliper, don't drive immediately. Operate brake lever several times to make sure brake disc can fit brake caliper very well.

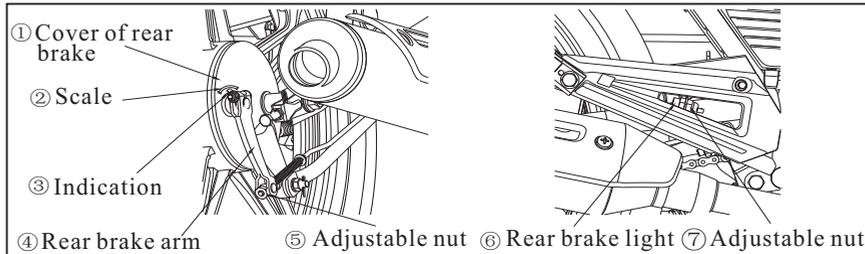
### **[Front brake light switch]**

1. Front brake light switch is located at between front brake lever and master cylinder.
2. When grasp brake lever, brake light is on and loosen brake lever, it will be off.
3. If brake light switch broken, replace it immediately.

**⚠ WARNING:**

- 1. Use and refill DOT 3 or DOT 4 brake fluid, and DON'T mix DOT 3 and DOT 4 fluid together.**
- 2. Fluid is strong corrosive, DON'T splash to human skins. DON'T drink fluid. If it happen, please wash it immediatly with lots of clean water and go to hospital .**
- 3. Make sure to replace brake disc and pad periodically according to maintenance periodical table.**
- 4. Brake system repair and maintenance shoud be done by CFMOTO authorized local dealer.**

**(9)Rear brake check & adjustment**



Pic23: Inspection of rear brake

**[If check]**

Free play of rear brake pedal: 10~20mm

Stand up motorcycle with main stand and measure free play of rear brake pedal.

There's indication ④ on rear brake arm ③ . There's scale on cover of rear brake drum ① .

If brake indication align with brake scale when step pedal brake, that mean brake shoe is worn out, please replace brake shoe immediatly.

## [Adjustment & replacement]

When adjust rear brake, rotate adjustable nut ⑤ clockwise to reduce free play and increase free play if by anti-clockwise.

Disassemble muffler and drive chain, then remove nut of rear wheel shaft and undo fixing nut of rear brake, finally remove rear wheel and rear brake to replace rear brake or brake shoe. This work should be done by CFMOTO authorized local dealer workshop.



### **WARNING:**

- 1. When brake shoe assembled into brake drum, spring hook should be fixed completely and properly.**
- 2. After adjusting free play of rear brake, Need to check by testing drive.**
- 3. Step on and off rear brake pedal several times, rotate rear wheel to check if it can run freely.**
- 4. After adjustment of free play, ⑤ arc groove must be in the arm pin of rear brake.**
- 5. If not adjustable properly, please go to local dealer workshop to do it.**

## [Rear brake light switch adjustment]

Rear brake light switch is located on bracket of footpedal which is at the rear and right side of engine.

If light ON lately, rotate ⑦ adjustable nut by anti-clockwise direction.

If light ON earlier, rotate ⑦ adjustable nut by clock-wise direction.

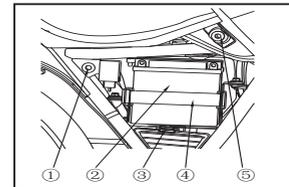
## (10) Battery maintenance

### NOTE:

1. Use distilled water to fill into battery. Normal water can reduce lifetime of battery use.
2. Keep electrolyte between upper and lower level.
3. If overfilled, use clean water to wash.
4. When use new battery, if produced for over 6 months or surrounding temperature is lower 0 degree, NEED to recharge battery to use.

Location of battery

1. Connection hole
2. Battery
3. Hook hole of right side cover
4. Tie band of battery
5. Connection hole of fuel tank



Pic24: Location of battery

### **⚠ WARNING:**

1. When charging battery, it will generate flammable gas, so keep far away from fire, spark or cigarette lighting. Keep well-ventilated at changing place.
2. There are sulphuric acid in electrolyte, DON'T touch it with skin or splash to eyes, because it will burn skin or eyes. Please wear protecting clothes and goggles.
3. Use clean water to wash immediately if electrolyte splash to skin.
4. Wash eyes with clean water at least 5 minutes and go to hospital if it splash to eyes.
5. Electrolyte is toxic, DON'T drink it. If carelessly it goes into stomach, DO drink

**lots of clean water or milk and edible oil , then go to hospital immediately.**

**6. Keep away from children.**

**[Fill electrolyte of battery]**

Battery specification is 12N7-4A. Battery is located inside right side panel. When remove right side panel, need to disconnect fixing points with frame ① and fuel tank. ⑤ Finally remove right side panel from hook hole③ .

When filling electrolyte, open cover of battery, then fill electrolyte into each unit of battery. Keep it's level between upper and lower line. Waiting for 30 minutes to check if its leverl between upper and lower line. After that, if it's lower than Lower line , only distilled water can be refilled. If over Upper line, it's overfilled and will erode frame and other components. It will also cause short circuit between each unit and burn battery. When refilling distilled water , be sure to use air blow-by hose to remove air inside battery.

**[Check & Adjustment]**

Check electrolyte level monthly to guarantee it's between upper and lower line. If it's lower than Lower line, need to refill distilled water into battery, but don't overfill to over Upper line.

If Not using motorcycle for long time, please remove battery from vehicle and fully charged.

Disconnect cathode of battery firstly.

Regularly clean anode and cathode of battery. Connect anode firstly and then cathode.

DON' T connect wrongly.

If repalce battery, be sure to use same specification of battery.

**[Replacement of fuse]**

Rated current of starter relay fuse is 20A. Starter relay fuse is located behind battery.

Auxuliary fuse is inside rubber protector.

Fuse of main cable is under seat. Its rated current is 10A. There's also auxiliary fuse.

If fuse is often burned, please go to CFMOTO authorized local dealer workshop to repair.  
Replace new fuse after disconnect used fuse.



**WARNING:**

**When replace fuse, ignition switch and other switches must be off to avoid short circuit. Never use fuse which is different rated current with above-mentioned rated current. Otherwise it will burn vehicle. It will cause light cannot be switched on when driving or use at night.**

## **(11)Maintenance for engine cooling system**

### **[Location of radiator]**

② is located at front of vehicle as picture shows.

### **Coolant type**

Only high-quality of anti-freezing and anti-corrosion long life coolant can be used for aluminium-alloy engine. There're 50% anti-freezing coolant and 50% distilled water.

**ATTENTION:**

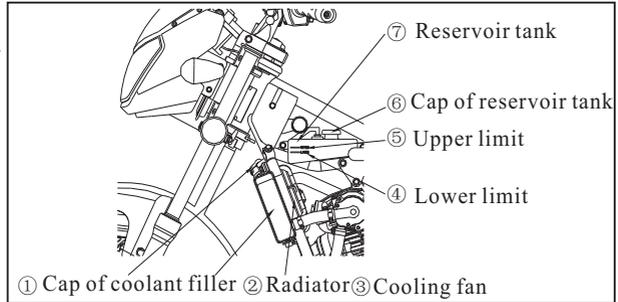
- 1. Engine coolant is special liquid, cannot use normal water or other liquid. Otherwise it will damage engine.**
- 2. Please go to CFMOTO authorized local dealer to buy good quality coolant.**

### **How to check coolant level**

1. Stand up motorcycle with main stand
2. Check coolant level when engine is cooling down
3. Coolant level should be between UPPER line and LOWER line

## How to refill coolant when coolant level is under LOWER line

1. Stand up motorcycle with main stand
2. Remove left and right side cover of fuel tank
3. Remove fuel tank
4. Open ⑦ cover of reservoir tank as picture shown and refill until coolant level close to ⑤ UPPER line
5. Reverse above procedure to finish operation.



Pic25: Cooling system

### **ATTENTION:**

**When refill coolant or coolant leakage, please go to CFMOTO authorized local dealer workshop to do or repair.**

## (12)Cleaning & Storage

### [Cleaning]

Regularly clean motorcycle and check if any damage ,wear or leakage.

After cleaning, start engine for several minutes. Use lubricant to make drive chain smoother and check if brake is ok before driving.

**⚠ WARNING:**

- 1. Components which cannot be washed by high-pressure water pipe: Ignition switch, Electric switches, Dashboard, Electric components, Battery, Air filter, Wheel rim, Outlet of Exhaust pipe, Parts under fuel tank.**
- 2. Cleaning sometimes reduces brake performance. Need to check and adjust before driving.**

**[Vehicle storage]**

After daily use, keep motorcycle at dry and well-ventilated place.

If long-time storage (more than 30 days), NEED to check and maintain before storage to avoid problems when driving.

Besides above-mentioned maintenance, following action should be done.

1. Clean and make it dry and cerated for painted plastics.
2. Drain out fuel from fuel tank and spray anti-corrosion material.
3. Remove spark plug and inject 15~20ml oil into cylinder, then reassemble spark plug.
4. Remove battery and keep it at well-ventilated and dry place. Avoid sunshine on motorcycle for long time.
5. Charge air into tire to stipulated pressure and keep front wheel and rear wheel away ground.
6. Use good quality mantle to cover motorcycle and keep dry and well-ventilated place.

**[Driving after storage]**

1. Remove mantle from motorcycle and clean it.
2. Measure battery voltage, if voltage value is lower than 12. 30V, NEED to recharge battery slowly. Afterc harged fully, assemble it on motorcycle.
3. Clean anti-corrosion material and refill fuel into fuel tank.
4. Test motorcycle at safety place to check if it's ok.

### **(13)Motorcycle use time–limit and Disposal**

#### **[Use time–limit]**

Please follow local transportation department regulations or rules.

#### **[Disposal]**

How to deal with used engine oil

Pour used engine oil into plastic barrel and send it to recycled company.

DON'T drain used engine oil to anywhere to avoid pollution.

How to dispose other used material

1. Classify these parts such as used battery, used bulb, used filter element, used plastics, used tires and so on, and put them into dustbin for recycle. DON'T throw at your disposal and drain out electrolyte to pollute environment.
2. Scrap motorcycle upon regulations of local transportation department.

### **(14)Adjustment values of motorcycle**

Freeplay of hand brake lever: 10–20mm

Freeplay of throttle lever: 2–6mm

Freeplay of pedal brake lever: 10–20mm

Freeplay of clutch lever: 10–20mm

Drive chain looseness: 10–20mm

Clearance of spark plug: 0.8–0.9mm

Clearance of inlet&outlet valve: 0.10–0.15mm

Torque of tighten nut of rear shock absorber: 35–45N.m

Torque of tighten nut of handlebar: 10–14N.m

Torque of tighten nut of front fork: 50–80N.m

Torque of tighten nut of front wheel shaft: 50–80N.m

Torque of tighten nut of steering system: 60–90N.m

Torque of tighten nut of rear wheel shaft: 50–80N.m

Torque of tighten bolt fixing front shock absorber and upper connecting plate: 10–14N.m

Torque of tighten bolt fixing front shock absorber and steering column: 10–14N.m

Torque of tighten nut of suspension: M8 (20–30N.m) , M10(30–40N.m)

### (15)Main specifications for CF150-A

Item		Specifications	Specifications
Vehicle chassis	Maker	Zhejiang CFMOTO Power Co., Ltd.	Zhejiang CFMOTO Power Co., Ltd.
	Model	CF150-A	CF150-C
	Technical Standard	Q/CFD004	Q/CFD013
	Brand	CFMOTO	CFMOTO
	Type	2-wheel motorcycle	2-wheel motorcycle
	VIN serail No.	LCEPDKL2XXXXXXXX	LCEPDKL6XXXXXXXX
	Persons	Max. 2 people (driver and passenger)	Max. 2 people (driver and passenger)
	Steering	Handlebar	Handlebar
	Gear type	5-speed gear	6-speed gear
	Brake	Front: Disc brake / Rear:Drum brake	Front: Disc brake / Rear:Drum brake
	Brake operation	Front: Hand brake/Rear: Pedal brake	Front: Hand brake/Rear: Pedal brake
	Clutch	Wet	Wet
	Clutch operation	Clutch lever	Clutch lever
	Engine Starting	Electric start	Electric start
	Length.Width. Height	2040mmx750mmx1070mm	2040mmx750mmx1070mm
	Wheel base	1280mm	1280mm
	Minimum Ground Clearance	170mm	170mm
	Complete vehicle kerb mass	128kg	128kg
	Max. load	150kg	150kg
	Volume of fuel tank	15 L	15 L
Number of tire	2	2	
Size and pressure of front wheel and tire	2.75-18 42P	2.75-18 42P	
Size and pressure of rear wheel and tire	3.25-18 52P	3.25-18 52P	
Ignition	CDI	CDI	
Spark plug type	CR9EP	CR9EP	

Vehicle chassis	Headlight Turn light Tail light/ Brake light Fuse Battery  Initial gear ratio 1-speed gear ratio 2-speed gear ratio 3-speed gear ratio 4-speed gear ratio 5-speed gear ratio 6-speed gear ratio Final gear ratio Max. speed Climbing ability Fuel consumption	12V/ 35W 12V/ 10W 12V /21W/ 5W 20A (1 unit) 10A (1 unit) 12V. 7A. H 3.471 3 1.857 1.368 1.143 0.957 — 2.867 100Km/h >20 degree <2. 90L/100Km	12V/ 35W 12V/ 10W 12V /21W/ 5W 20A (1 unit) 10A (1 unit) 12V. 7A. H 3.5 3 1.857 1.368 1.143 0.957 0.875 2.867 100Km/h >20 degree <2. 90L/100Km
Engine	Engine type  Engine model Compression ratio Cylinder volume Max. power Max. torque Bore X Stroke Idle speed Engine oil type Engine oil change  Fuel type Spark plug clearance	Vertical, Single cylinder, 4-stroke Liquid-cooled 157MJ-2A 9.80:1 144.90ml 10.00KW/9000RPM 11.90N.m/6500RPM 57 X 56.80 1500RPM+/-10% SAE15W-40/SG Regular change: 1.2L Overhaul: 1.45L #90 gasoline and over 0.80-0. 90mm	Vertical, Single cylinder, 4-stroke Liquid-cooled 157MJ-3A 10.5:1 149.40ml 10.5KW/9000RPM 12.2N.m/6500RPM 57 X 58.60 1500RPM+/-10% SAE15W-40/SG Regular change: 1.2L Overhaul: 1.45L #90 gasoline and over 0.80-0. 90mm

## (16)Frequent troubles of motorcycle and causes

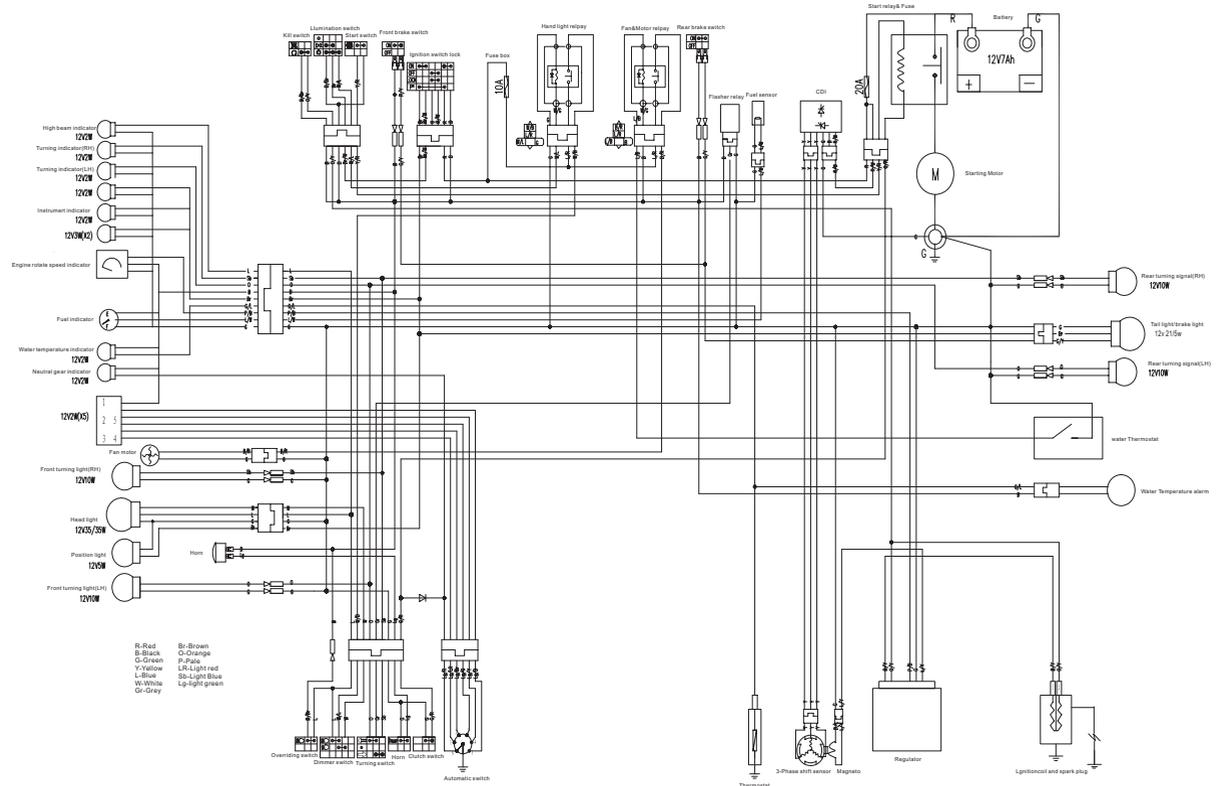
Troubles	Related system	Possible causes	Remarks
Cannot start engine	Fuel system	<ol style="list-style-type: none"> <li>1. Wrong angle of check valve or No fuel inside fuel tank</li> <li>2. Screen of fuel switch blocked or damaged, or bad quality of fuel</li> <li>3. Fuel hose blocked or bad quality of fuel</li> <li>4. Intake air pipe leakage or use with fatigue</li> <li>5. Needle of carburetor blocked or bad quality of fuel</li> </ol>	<p>Adjustment angle or refill fuel</p> <p>Clean or replace</p> <p>Clean or replace</p> <p>Adjustment or replace</p> <p>Clean or replace</p>
	Igniiton system	<ol style="list-style-type: none"> <li>1. Spark plug problem, too much carbon on spark plug or too long time to use</li> <li>2. Problem of spark plug cap: improper connection or burned</li> <li>3. Problem of ignition coil: improper connection or burned</li> <li>4. Problem of CDI: improper connection or burned</li> <li>5. Problem of pick-up coil: improper connection or burned</li> <li>6. Problem of stator</li> <li>7. Problem of cables: improper connection</li> </ol>	<p>Check or replace</p> <p>Check or Adjust</p>
	Cylinder head system	<ol style="list-style-type: none"> <li>1. Problem of starter: overwear or damage Problem of inlet&amp;outlet valve and valve seat: too much colloid of fuel or overuse</li> <li>2. Air leakage of intake pipe: overuse</li> <li>3. Timing problem</li> </ol>	<p>Check or replace</p> <p>Check or replace</p> <p>Check or replace</p>

Power not enough	Valves and piston	Too much carbon of inlet&outlet valve and piston; bad fuel quality or bad oil quality	Repair & adjust
	Clutch	Clutch skid: bad oil quality or overuse or overload	Adjust & replace
	Cylinder or piston ring	Cylinder or piston wear: bad oil quality or overuse	Repair & replace
	Brake system	Difficult to split of brake pad and caliper: Brake too tight	Adjust
	Drive chain	Chain too tight: improper adjustment of chain	Adjust & replace
	Engine	Overheating: too strong or too lean mixtures, bad quality of fuel or oil	Adjust or replace
	Spark plug	Incorrect clearance: out of range (0.8–09mm)	Adjust or replace
	Intake air pipe	Air leakage: overuse	Adjust or replace
	Cylinder head	Air leakage of cylinder head or valves	Adjust or repair
	Electric system	There' re problems of electric system	Check & repair
No light of headlight and tail light	Air filter	Air filter blocked	Clean or replace
	Wires & Cables	Improper or poor connecting between wires and cables	Adjust
	Switches	Damaged or poor contact	Adjust & replace
	Headlight	Damaged or poor contact	Adjust & replace
	Regulator	Burned or poor contact	Check or replace
No sound of horn	Flywheel	Burned or poor contact	Check or replace
	Battery	No power or not enough power	Recharge or replace
	Left switch	Check button of left switch	Replace or repair
	Wires & cables	Improper or poor contact	Adjust & repair
	Horn	Damaged	Replace

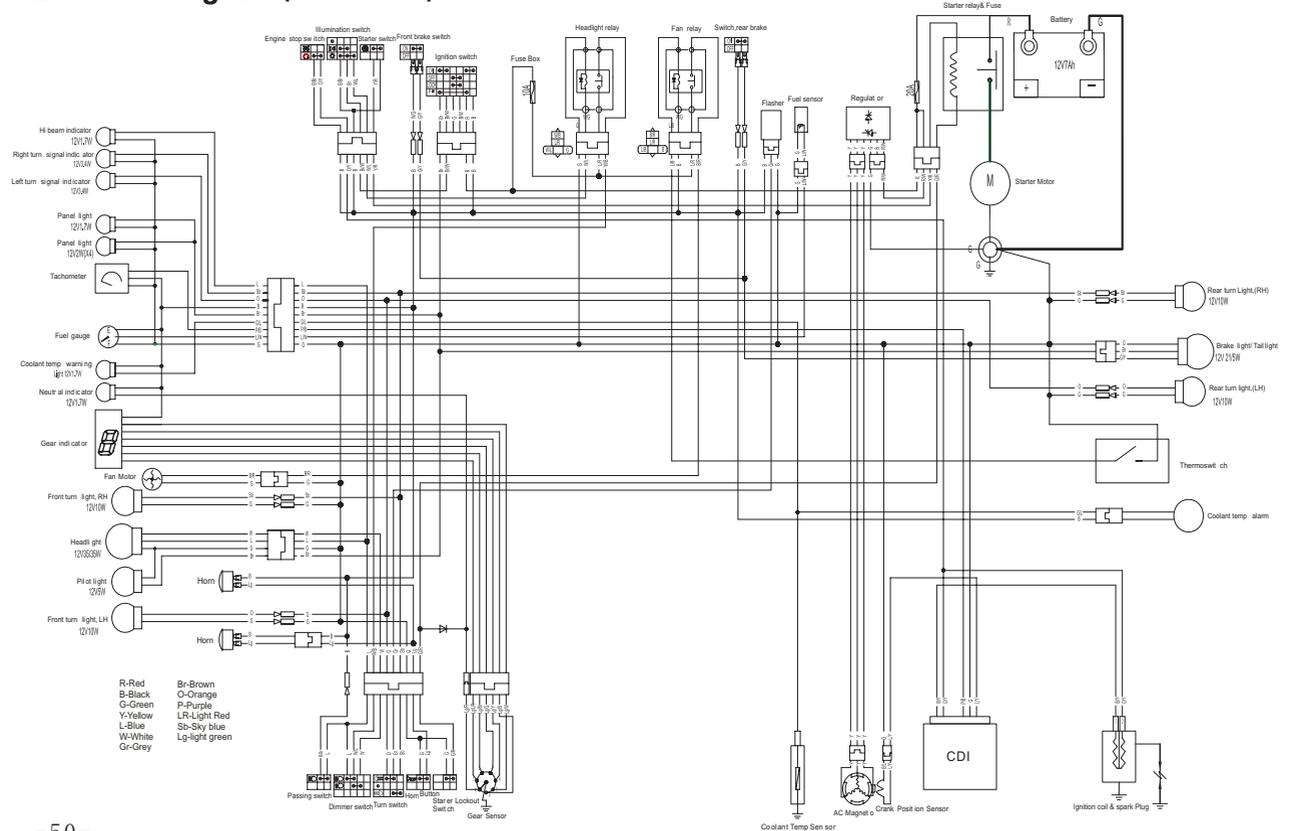
Above list is frequent problems for motorcycles. If your motorcycle has some problem, Please go to CFMOTO authorized local dealer workshop for repair and maintenance.

**KINDLY REMINDED: DON'T deal with motorcycle problems by yourself. It's better go to CFMOTO authorized local dealer workshop to have repair and maintenance for your driving safety.**

# (17) Electric diagram(CF150-A)



# Electric diagram(CF150-C)





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