# Owner's Manual

**READ THIS MANUAL CAREFULLY,**
**IT CONTAINS IMPORTANT SAFETY INFORMATION.**

## *TBM150 200E*

**MINIMUM RECOMMENDED OPERATOR AGE: 16**



This operation manual is made for Go-Kart models:

| | | | |
|---|---|---|---|
| TBM150 | TrailMaster 150XRX | TrailMaster 150XRS | |
| 200E XRS | 200E XRX | BLAZER 200E | BLAZER4 200E |
| 150E XRS | 150E XRX | BLAZER 150E | BLAZER4 150E |

## FOR OFF-ROAD USE ONLY

**This vehicle is designed and manufactured for off-road use only.**
**USA only:**
**It does not conform to Federal Motor Vehicle Safety Standards, and in regards to operation on public streets, roads, or highways is illegal.**

## EMISSION CONTROL SYSTEM WARRANTY

Below is the emission control system warranty printed in the owner's manual, the copy of the owner's manual is available upon your request..

### YOUR WARRANTY RIGHTS AND OBLIGATIONS

The U.S. Environmental Protection Agency, and **QJ North America Inc.**(hereinafter "**QJ**") are pleased to explain the emission control system warranty on your 2020 Model Year ATV. New vehicle must be designed, built and equipped to meet U.S. EPA Federal emission standards over the full useful life. QJ must warrant the emission control system on your vehicle for 5,000 km or for 30 months, whichever comes first, provided that there has been no abuse, neglect or improper maintenance of your vehicle.

Your emission control system may include parts such as the carburetor or fuel injection system, the ignition system, catalytic converter and engine computer, if it is equipped. Also included may be hoses, belts, connectors and other emission-related assemblies.

Where a warrantable condition exists, QJ will repair your vehicle at no cost to you, including diagnosis, parts and labor.

If an emission-related part on your vehicle is defective, the part will be repaired or replaced by QJ. This is your emission control system defects warranty.

**NOTICE!** Use of any QJ vehicles in any type of competitive event completely and absolutely voids thisand all other warranties offered by QJ.

### OWNER'S WARRANTY RESPONSIBILITIES

As the vehicle owner, you are responsible for the performance of the required maintenance listed in your owner's manual. QJ recommends that you retain all receipts covering maintenance on your vehicle, but QJ cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

You are responsible for presenting your vehicle to the QJ's dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.
As the vehicle owner, you should be aware that QJ may deny your warranty coverage if your vehicle ora part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

If you use your vehicle in any type of sanctioned competitive event, this warranty is immediately and completely void.

If you have any questions regarding your warranty rights and responsibilities, you should contact QJ North America Inc.,1920 Hutton Court Suite 400 Farmers Branch TX 75234,TEL: 214-390-3362

QJ warrants that each new 2020 and later QJ's ATV:

A. is designed, built and equipped so as to conform at the time of initial retail purchase with all applicable regulations of the United States Environmental Protection Agency; and

B. is free from defects in material and workmanship which cause such vehicle to fail to conform

with applicable regulations of the United States Environmental Protection Agency for the periods specified above.

**I.** **Coverage.** Warranty defects shall be remedied during customary business hours at any authorized QJ's dealer located within the United States of America in compliance with the Clean Air Act and applicable regulations of the United States Environmental Protection Agency. Any part or parts replaced under this warranty shall become the property of QJ.

**II. Limitations** This Emission Control System Warranty shall not cover any of the following:

**A.** Repair or replacement as a result of
(1) accident,
(2) misuse,
(3) repairs improperly performed or replacements improperly installed,
(4) use of replacement parts or accessories not conforming to QJ's specifications which adversely affect performance and/or
(5) use in competitive racing or related events.

**B.** Inspections, replacement of parts and other services and adjustments required for required maintenance.

**C.** Any vehicle equipped with an odometer or hour meter on which the odometer mileage or hour meter reading has been changed so that actual mileage cannot be readily determined.

**III. Limited Liability**

**A.** The liability of QJ under this emission control system warranty is limited solely to the remedying of defects in material or workmanship by an authorized QJ's dealer at its place of business during customary business hours. This warranty does not cover inconvenience or loss of use of the vehicle or transportation of the vehicle to or from the QJ's dealer. QJ shall not be liable for any other expenses, loss or damage, whether direct, incidental, consequential or exemplary arising in connection with the sale or use of or inability to use the vehicle for any purpose. Some states do not allow the exclusion or limitation of any incidental or consequential damages, so the above limitations may not apply to you.

**B.** No express emission control system warranty is given by us except as specifically set forth herein. Any emission control system warranty implied by law, including any warranty of merchantability or fitness for a particular purpose, is limited to the express emission control system warranty terms stated in this warranty. The foregoing statements of warranty are exclusive and in line of all other remedies. Some states do not allow limitations on how long an implied warranty lasts so the above limitations may not apply to you.

**C.** No dealer is authorized to modify this QJ Limited Emission Control System Warranty.

**IV. Legal Rights**. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**V.** This emission control system warranty is in addition to the standard limited warranty for all vehicles.

**VI. Additional Information.** Any replacement part that is equivalent in performance and durability may be used in the performance of any maintenance or repairs. However, QJ is not liable for these parts. The owner is responsible for the performance of all required maintenance. Such maintenance may be performed at a service establishment or by any individual. The warranty period begins on the date the motorcycle is delivered to an ultimate purchaser.

**QJ North America Inc.**
1920 Hutton Court Suite 400 Farmers Branch TX 75234
TEL: 214-390-3362

# CONTENTS

**OWNER' S MANUAL**

Page


1. FOREWORD ---------- 1
2. A FEW WORDS ABOUT SAFETY ---------- 2
3. IMPORTANT SAFETY INFORMATION ---------- 3
4. SAFETY LABELS ---------- 5
5. ARE YOU READY TO DRIVE ? ---------- 6
6. SAFE DRIVING PRECAUTIONS ---------- 8
7. P.D.I ---------- 10
8. SPECIFICATIONS ---------- 11
9. OPERATION ---------- 13
10. OPERATION/SERVICE INSTRUCTIONS---------- 17
11. SERVICE INSTRUCTIONS---------- 18
12. REPAIR---------- 21
13. PARTS OF BLAZER SERIES ---------- 23
14. PERIODICAL CHECK SERVICES ---------- 27
15. MANUAL OF EFI SYSTEM---------- 29

Thank you for purchasing our Kart. We hope you will enjoy it. Before you start to operate the Kart, please read through this Owner's Manual carefully as it contains important safety and maintenance information. Failure to follow the warnings contained in this manual can result in serious injuries or death.

Be sure to follow the recommended maintenance schedule and service your kart accordingly. Preventive maintenance is extremely important to the longevity of your Kart.

Beginners should seek instructions from your dealer or qualified instructors before and during initial use of the kart. It is also recommended to practice in a large open area and familiar with operations of this kart.

We hope you will have a pleasant experience with our products and thanks again for choosing our Kart.

In order to keep everyone safe, you must take responsibility for the safe operation of your Kart.

To help you make informed decisions about safety, we have provided operating procedures and other information on labels and in this manual. This information alerts you to potential hazards that could hurt you or others.

It is not practical or possible to warn you about all hazards associated with operating or maintaining a Kart. You must use your own good judgment.

You will find important safety information in a variety of forms, including:

**Safety Labels** – On the Kart.

**Safety Messages** – Preceded by a safety alert symbol  and one of two signal words: **WARNING,** or **CAUTION**.

**These signal words mean:**




Physical harm may result from failure to adhere to the instructions that are described within the WARNING labels.

**Safety Headings** — such as Important Safety Reminders or Important Safety Precautions.

**Safety Section** — such as Kart Safety.

**Instructions** — how to use this Kart correctly and safely.

This entire manual is filled with important safety information—please read it carefully.

Your Kart will provide you with many years of service and pleasure.Providing you take responsibility for your own safety and understand the challenges you can meet while driving.

There is much that you can do to protect yourself while operating your kart. You'll find many helpful recommendations throughout this manual. The following are a few that we consider most important.

**Follow the Age Recommendation**

Adult Supervision should be present for all people under the age of 16.

**Always Wear a Helmet**

It's a proven fact: helmets significantly reduce the number and severity of head injuries. Always wear an approved motorcycle helmet. We also recommend that you wear eye protection, sturdy boots, gloves, and other protective gear.

**Drive Off-Road Only**

Your Kart is designed and manufactured for off-road use only. The tires are not made for pavement, and the Kart does not have turn signals and other features required for use on public roads. If you need to cross a paved or public road, get off and walk your Kart across.

**Take Time to Learn & Practice**

Even if you have driven other Karts, take time to become familiar with how this Kart works and handles. Practice in a safe area until you build your skills and get accustomed to this Kart's size and weight.

Because many accidents involve inexperienced or untrained drivers, we urge all drivers to take a training course approved by the Go-Kart Safety Institute. Check with your dealer for more information on training courses.

**Be Alert for Off-Road Hazards**

The terrain can present a variety of challenges when you drive off-road. Continually "read" the terrain for unexpected turns, drop-offs, rocks, ruts, and other hazards. Always keep your speed low enough to allow time to see and react to hazards.

**Drive within Your Limits**

Pushing limits is another major cause of Kart accidents. Never drive beyond your personal abilities or faster than conditions warrant. Remember that alcohol, drugs, fatigue, and inattention can significantly reduce your ability to make good judgments and drive safely.

**Don't Drink and drive**

Alcohol and driving don't mix. Even one drink can reduce your ability to respond to changing conditions, and your reaction time gets worse with every additional drink. So don't drink and drive, and don't let your friends drink and drive either.

**Do not operate this Kart at night.**

Dark vision can greatly reduce a driver's visibility and judgment. So driving at night is dangerous and can increase the possibility for an accident.

**Never run your Kart indoors.**

The exhaust from the engine contains a tasteless, odorless and poisonous gas called carbon monoxide.

**Keep away from moving parts of the Kart**

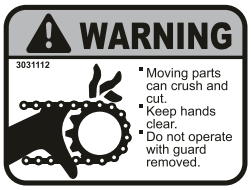
The operator of the Kart should never place their hands or other parts of their body near any moving part of the Kart. Failure to adhere to this warning will cause physical harm to your body.

**Skidding or Sliding**

The terrain surface can be a major factor affecting turns. Skidding in a turn is more likely to occur on slippery surfaces such as snow, ice, mud and loose gravel. If you skid on ice, you may lose all directional control. To avoid skidding on slippery terrain, keep you speed low and drive carefully.

This section presents some of the most important information and recommendations to help you drive your Kart safely. Please take a few moments to read these pages.

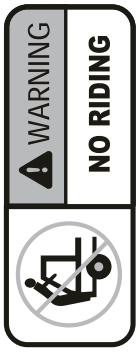
The labels should be considered permanent parts of the Kart. If a label comes off or becomes hard to read, contact your dealer for warning label replacements.





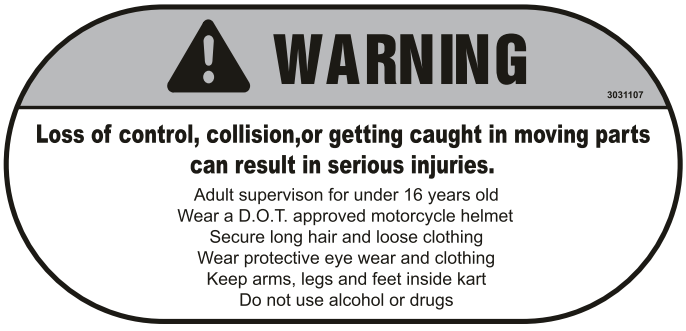










# ARE YOU READY TO DRIVE ?

Before each drive, you need to make sure that you and your kart are both ready to drive. To help get you prepared, this section discusses how to evaluate your driving readiness, what items you should check on your kart, and adjustments to make for your comfort, convenience, or safety.

Before you drive your kart for the first time, we urge you to:

- Read this owner's manual and the labels on your kart carefully.
- Make sure you understand all the safety messages.
- Know how to operate all the controls.

Before each drive, be sure:

- You wear your seat belt at all times while driving your kart.
- You feel well and are in good physical and mental condition.
- You are wearing an approved motorcycle helmet (with chin strap tightened securely), eye protection, and other protective clothing.
- You don't have any alcohol or drugs in your system.

**Protective Apparel**

For your safety, we strongly recommend that you always wear an D.O.T. approved motorcycle helmet, eye protection, boots, gloves, long pants, and long-sleeved shirt or jacket whenever you drive.

Although complete protection is not possible, wearing proper gear can reduce the chance of injury should you have an accident.

The following suggestions will help you choose the proper protective gear.

**Helmets and Eyes Protection**

Your helmet is your most important piece of protective gear because it offers the best protection against head injuries. A helmet should fit your head comfortably and securely.

An open-face helmet offers some protection, but a full-face helmet offers more. Regardless of the style, look for a D.O.T. (Department of Transportation) sticker on any helmet you buy. Always wear a face shield or goggles to protect your eyes and help your vision.

**⚠WARNING**

**Operating this kart without wearing an approved motorcycle helmet, eye protection, and protective clothing could increase your chances of head and/or eye injury, and the possibility of death in the event of a severe accident.**

**Always wear an approved motorcycle helmet that fits properly and wear eye protection (goggles or face shield), gloves, boots, long-sleeved shirt or jacket and long pants.**

**Additional Driving Gear**

In addition to a helmet and eye protection, we also recommend:

Sturdy off-road motorcycle boots to help protect your feet, ankles, and lower legs.

Off-road motorcycle gloves to help protect your hands.

Driving pants with knee and hip pads, a driving jersey with padded elbows, and a lder protector.

**Driver Training**

Developing your driving skills is an on-going process. Even if you have driven other karts, before take time to become familiar with how this kart works and handles. Practice driving the kart in a safe area to develop your skills. Do not drive on rough terrain until you get accustomed to the kart's controls, and feel comfortable with its size and weight.

**⚠WARNING**

**Operating this kart without your seat belt could cause you to be thrown from the kart, causing serious injury or death.**

**No Alcohol or Drugs**

Alcohol, drugs and karts don't mix. Even a small amount of alcohol can impair your ability to operate a kart safely. Likewise, drugs-even if prescribed by a physician-can be dangerous while operating a kart. Consult your doctor to be sure it is safe to operate a vehicle after taking medication.

**⚠WARNING**

**Operating this kart after consuming alcohol or drugs can seriously affect your judgment, cause you to react more slowly, affect your balance and perception, and could result in serious injury or death.**

**Never consume alcohol or drugs before or while operating this kart.**

# IS YOUR VEHICLE READY TO DRIVE ?

Before each drive, it is important to inspect your kart and make sure any problems you find are corrected. A pre-drive inspection is a must, not only for safety, but because having a breakdown, or even a flat tire, can be a major inconvenience.

If your kart has overturned or has been involved in a collision, do not drive it until your kart has been inspected by your dealer. There may be damage or other problems that you can not see.

**⚠WARNING**

**Improperly maintaining this kart or failing to correct a problem before driving can cause a crash in which you can be seriously hurt or killed.**

**Always perform a pre-drive inspection before every drive and correct any problems.**

**Off-Road Use Only**

Your kart and its tires are designed and manufactured for off-road use only, not for use on paved surfaces. Driving on paved surfaces can affect the kart handling and control.

**⚠WARNING**

**Operating this kart on paved surfaces may seriously affect handling and control of the kart, and may cause the vehicle to go out of control.**

**Never operate the kart on any paved surfaces, including sidewalks, driveways, parks lots and streets.**

When driving off-road, also remember to always obey local off-road driving laws and regulations. Obtain permission to drive on private property. Avoid posted areas and obey "no trespassing" signs.

You should never drive your kart on public streets, roads or highways, even if they are not paved. Drivers of street vehicles may have difficulty seeing and avoiding you, which could lead to a collision.

**⚠WARNING**

**Operating this kart on public streets, roads or highways could cause a collision with another vehicle.**

**Never operate this kart on any public streets, roads or highways, whether they are dirt, gravel or paved surfaces.**

**Keep Hands and Feet on Controls**

When driving your kart, always keep both hands on the steering wheel and both feet on the foot controls. It is important to maintain your balance and to control the kart. Removing hands or feet away from the controls can reduce your ability to react and control the kart.

**⚠WARNING**

**Removing your hands from the steering wheel or feet from the foot controls during operation can reduce your ability to control the kart or could cause you to lose your balance and fall off the kart.**

**Always keep both hands on the steering wheel and both feet on the foot controls of your kart during operation.**

**Control Speed**

Driving at excessive speed increases the chance of an accident. In choosing a proper speed, you need to consider the capability of your Kart, the terrain, visibility and other operating conditions, plus your own skills and experience.

**⚠ WARNING**

**Operating this Kart at excessive speeds increases your chances of losing control of the Kart, which can result in an accident.**

**Always drive at a speed that is proper for your Kart, the terrain, visibility and other operating conditions, and your experience.**

**Use Care on Unfamiliar or Rough Terrain**

Before driving in a new area, always check the terrain thoroughly. Don't drive fast on unfamiliar terrain or when visibility is limited.(it's sometimes difficult to see obstructions like hidden rocks, bumps, or holes in time to react.)

**⚠ WARNING**

**Failure to use extra care when Operating this Kart on unfamiliar terrain could result in the Kart overturning or going out of control.**

**Go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when operating the Kart.**

Never drive past the limit of visibility. Maintain a safe distance between your Kart and other off-road vehicles. Always exercise caution and use extra care on rough, slippery and loose terrain.

**⚠ WARNING**

**Failure to use extra care when operating on excessively rough, slippery or loose terrain could cause loss of traction or vehicle control, which could result in an accident, including an overturn.**

**Do not operate on excessively rough, slippery or loose terrain until you have learned and practiced the skills necessary to control the Kart on such terrain. Always be especially cautious on these kinds of terrain.**

**Do Not Perform Stunts**

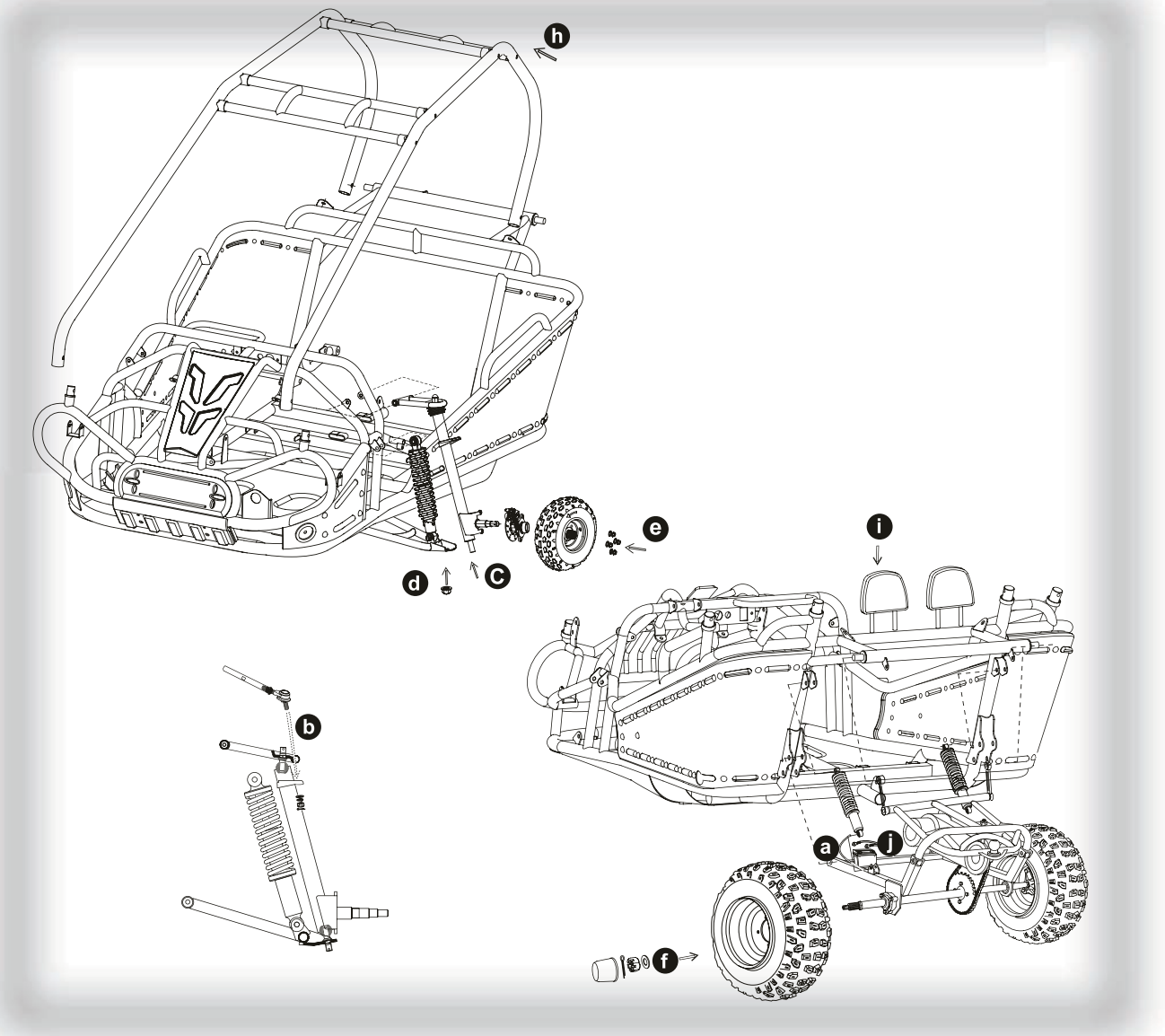
You should always operate your Kart in a safe and reasonable manner. When driving, always keep all four wheels on the ground.

**⚠ WARNING**

**Attempting wheelies, jumps, and other stunts increases the chance of an accident, including an overturn.**

**Never attempt stunts, such as wheelies or jumps. Don't try to show off.**

**a**. Install RR. Shocks and tighten the nuts.
**b**. Install Ball Head, Tie Rod, tighten the Castle Nut and insert the cotter Pin.
**c**. Install Dust Seals, align the Ball Head Bolt, Knuckle Support to the square hole on the Lower A-Arm.
**d**. Install Flange Nut and tighten it (> 88.9 foot lbs)
**e**. Install Front Tires and tighten the nuts.
**f**. Install Rear Tires, tighten the nuts, insert cotter Pin and put on the Rubber Cover.
**h**. Install C.B.C custom bar cage RR., put on R-Washer.
**i**. Install Head-Rest.
**j**. Check all nuts and bolts, wiring, cables, fuel line, switches and tire pressure.
**k**. Fill battery with Acid and charge, check and fill the engine with the recommended oil.
**l**. Fill fuel tank with Unleaded Gasoline, and turn on the ignition switch to start the engine.



## DIMENSIONS

Overall Length ---------- 85 in. (2160mm)
Overall Width ---------- 53 in. (1346mm)
Overall Height ---------- 57.4 in. (1458mm)
Wheelbase ---------- 59 in. (1500mm)
Front Track ---------- 45.7 in. (1160mm)
Rear Track ---------- 39.4 in. (1000 mm)
Ground Clearance ---------- 6.7 in. (170mm)

## ENGINE

Type ---------- Forced air-cooled. 4-Stroke
Engine capacity ---------- 150cc
Bore / Stroke ---------- 57.4mm x 57.8mm
Displacement ---------- 149.6cm$^3$
Corrected compression ratio ---------- 9.5:1
Carburator ---------- PD24J
Output Power ---------- 6.4Kw/7000rpm
Maximum Torque ---------- 9.5/6000r/min
Starting ---------- Electric
Ignition ---------- C.D.I.
Lubrication ---------- Force & Splash
Transmission ---------- Automatic (C.V.T system)
Spark plug ---------- CR7HSA(NGK)
Plug gap ----------0.7-0.8mm
Fuel Type ---------- RQ90 (unleaded)
Lubricate oil ---------- SAE-10W/40

## CAPACITIES

Maximum load---------- Double Seats/400lbs
Fuel tank ----------1.75 Gal
Engine oil ---------- 30 Oz
Starting ---------- <5s
Climbing ---------- 20 -25
Battery ---------- 12V 10Ah
Head Light ---------- 12V 35W/35W
Tail Light ---------- 12V 21W/5W
Fuse ---------- 10A

Brake Track ---------- < 7 m@20miles/h
Top speed ---------- 30 miles/h(or limited as customers require)

## CHASSIS

Front, Rear brake ---------- Hydraulic disc, left foot control
Front tire ---------- 20 x 7-8
Rear tire ---------- 22 x 10 -10
Front Suspension ---------- Independent Dual A-Arm
Rear Suspension ---------- Swing Arm/Double Oil Damped Shock
Restraint System ---------- Dual 4-point Harness
Final Drive Chain ---------- (KMC) O-Ring Chain

## TIRE PRESSURE

Front ---------- 8 psi
Rear ---------- 8 psi

## WEIGHT

Net Weight ---------- 465lbs/518lbs

## ENGINE(EFI System)

Type ---------- Forced air-cooled ,4-Stroke
Engine capacity ---------- 169CC
Bore/Stroke ---------- 61.0mm*57.8mm
Displacement ----------169CC
Corrected compression ratio ---------- 9:2:1
Output Power ----------7.6Kw/7000rpm
Maximum Torque ---------- 11Nm/6000rpm
Starting ---------- Eectric
Ignition ---------- ECU
Lubrication ---------- Force & Splash
Transmission ---------- Automatic(C.V.T system)
Spark plug ---------- CR7HSA(NGK)
Plug gap ---------- 0.6-0.8mm
Fuel Type ---------- 87minimum
Lubricate oil ---------- SAE-10W/40

## A. Operation controls

**WARNING** - Do not attempt to start or operate the engine until completely familiar with the location and use of each control necessary to operate this vehicle. The operator must know how to stop this machine before starting and driving it.

### a. Throttle

The right foot pedal is the throttle that controls the Kart speed. As the engine speed increased above idle, the clutch automatically engages and moves the vehicle forward. To disengage the clutch at any time, allow the throttle to return to the idle position.
(See Fig. 1)

**⚠ WARNING**

**Each time prior to starting the engine, check the throttle assembly to ensure that when the pedal is pushed all the way forward the assembly is working smoothly and returns to idle when released. Do not operate if pedal or engine throttle linkage fail to return to idle. If unable to correct the problem through lubrication, adjustment or replacement of worn parts, contact your dealer for assistance.**

### b. Brake

The brake is located on the left side of the kart (See Fig.1). Applying pressure to the pedal draws the brake caliper around the brake pump at the rear wheel and slows or stops the kart.

### c. Start engine

Insert the key into key-switch, turn the key clockwise, release the key when the engine starts. The engine will warm up within 5 minutes and the engine choke will close automatically and operate at the normal RPM (Warning: Don't crank starter more than 5 seconds at one time).

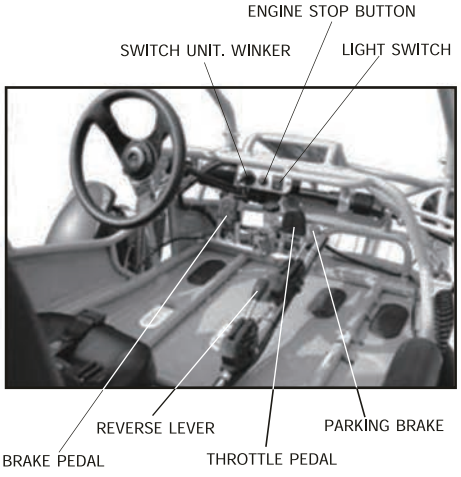



**Figure 1**

### d. Engine stop button

Important-stop button test.

Before driving this vehicle, test the Engine Stop Button to assure that it is operating properly. With the engine running, push and hold the Engine Stop Button for two seconds for the engine to shut down.

## B. Pre-Drive Inspection

**⚠ WARNING**

**Perform this pre-drive inspection everyday before driving vehicle. If not performed, serious damage to the vehicle or personal injury may result.**

**a.** Check for Engine Oil Level. Check for leaks, add oil if required.
**b.** Check for Fuel Level. Add fuel as necessary and do not overfill. Check for leaks.
**c.** Check for Brakes. Depress the rear brake pedal several times, then check for proper brake pedal freeplay. Make sure there is no brake fluid leakage. Adjust if necessary.
**d.** Check Tires. Check tires condition and pressure. The pressure on both Front and Rear tire is 5 and 8 lbs respectively.
**e.** Check Drive Chain. Check for drive chain's condition and tension. Lubricate if necessary.
**f.** Check Throttle. Check for smooth operation. Assure throttle "snaps" back to idle.
**g.** Check Engine Stop Button. Perform engine stop button test. Repair as necessary.
**h.** Check all Nuts, Bolts, and fasteners. Check wheels to see that all axle nuts and lug nuts are tightened properly. Check and tighten as necessary all other fasteners to specified condition.
**i.** Check C.B.C Bar. Ensure all protective C.B.C bars are in place before operating the Kart.
**j.** Check Brake Light. Check for proper operation.
**k.** Check Wheels. Check for tightness of wheel nuts and axle nuts; check that axle nuts are secured by cotter pins.
**l.** Check Steering. Check for free operation for any unusual looseness in any area.

**⚠ CAUTION**

**Always follow rules for safe operation and wear a helmet.**

## Component locations

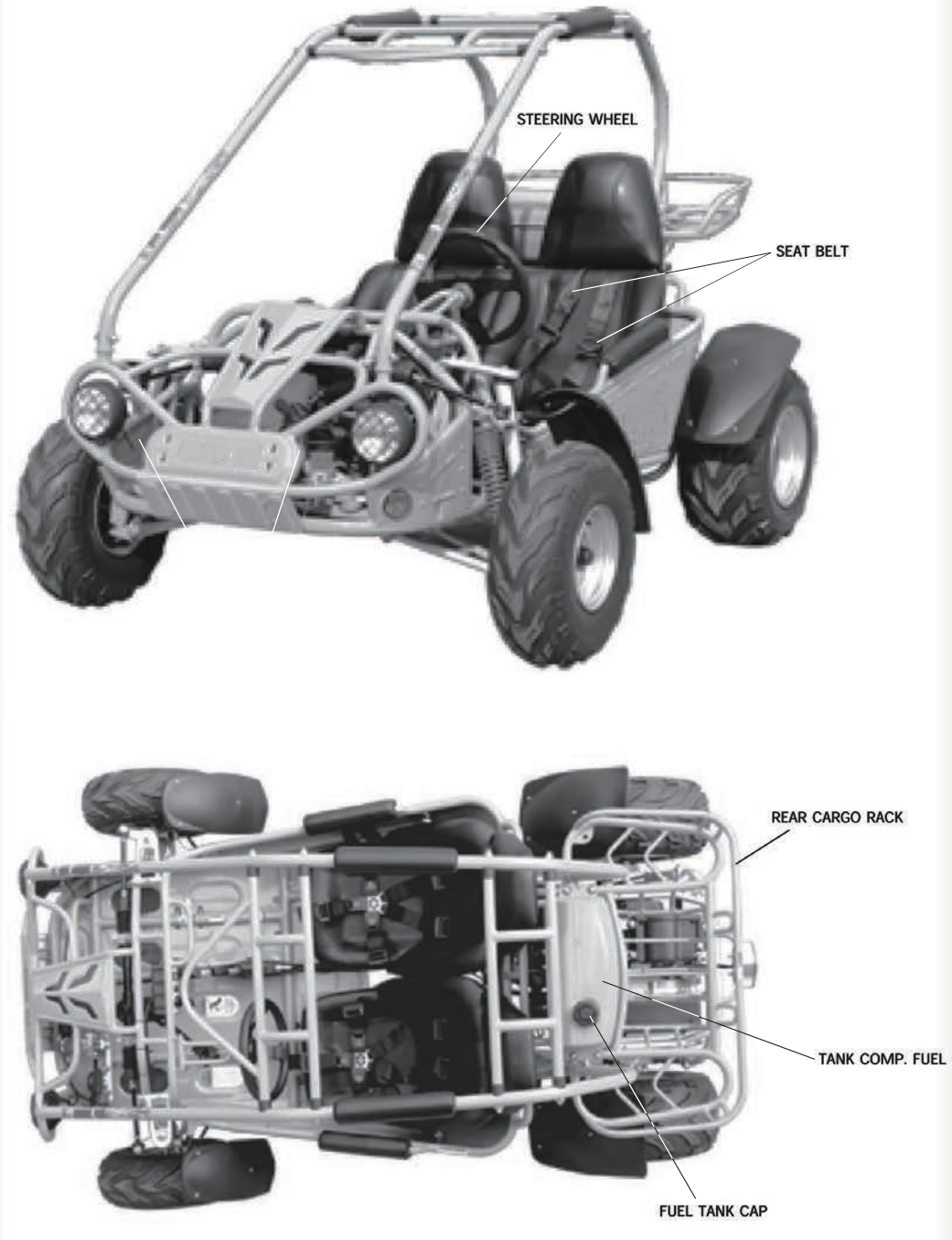



**Figure 2**

## C. Passengers

The vehicle allows for two riders only. Combine maximum weight of driver and the passenger should not exceed 180kg or 400lbs.

## D. Seat Adjustment

**The seat must always be securely fastened in the position which best affords the operator control of the foot pedals, steering wheel, and the remote stop button.**

**a**. Pull seat adjustment handle upward to disengage seat slide.
**b**. Move seat to desired position.
**c**. Be sure seat adjustment handle snaps back into place and that seat is locked into position.

**Figure 3**

**⚠ WARNING**

**Before attempting to adjust the seat, ensure that kart engine is stopped.**

**⚠ WARNING**

**Never operate this Kart when the provided seat is not securely fastened, to do so could result in a strong possibility of severe personal injury or loss of life. Before attempting to adjust the seat, ensure the kart engine is stopped.**

## E. Reverse Adjustment

**a**. Push forward the reverse lever to the "D" position so that the unit can move forward, pull back the lever to "R" so that the unit can move backward. (See Fig.4)

**b**. When reverse lever is in the drive position, there need to be 1/2 inch of freeplay in the reverse level. If the adjustment is not correct, then loosen the lock nut #2, then adjust lock nut #1 to the proper amount of freeplay.

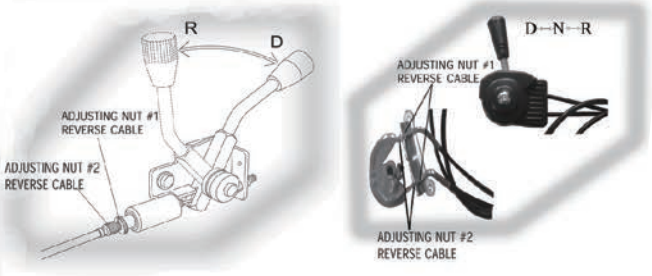



**Figure 4**

**Always stop the kart befor changing gears.**

## F. Starting And Operating Instructions

**a**. Before starting the engine, be sure that the driver is seated properly in the Kart with the seat belt.

**b**. Testing the Kart in an open space at the beginning to learn how to start, turn and stop.

**c**. Operate the Kart slowly until you are familiar with it.

**d**. The turning radius of this Kart is small and agile, so the centrifugal force is very high when turning at high speed. Slow down to a more controllable speed when turning to prevent the Kart from rolling over.

**e**. To prevent vehicle from rolling over, be sure to only turn the vehicle at a slow more controllable speed. Heel on the ramp of the main board when turning. (See Fig.5) Keep your leg rely on the foot pedal, you can feel the kart is stable because of the gravity is adjusted and won't roll over.



**Figure 5**



## A. Service Air Cleaner

Service air cleaner every 20 hours
NOTE: Service more often under dusty conditions.

**a**. Remove cleaner cover
**b**. Remove air cleaner element 2 (See Fig.6)
**c**. Fill the non-flammable cleaning agent into a basin and dip the element in it.
**d**. Dry it after cleaning.

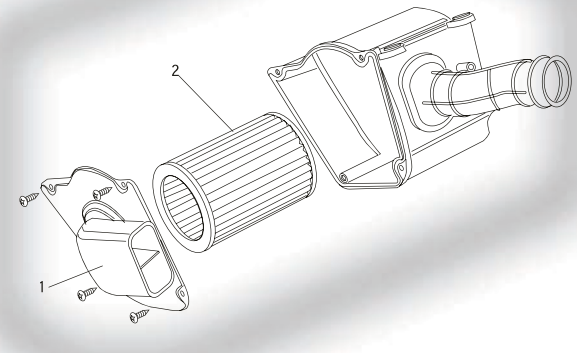



**Figure 6**

## B. Engine Lubrication

You must change the oil in the crankcase after the first 5 hours of operating of your new engine (See Fig. 7) and after 10 hours of use thereafter. That will insure proper lubrication of internal parts and prevent costly repairs due to excessive wear.

**⚠ WARNING**

**Used Oil Must Be disposed of at a proper collection Center**

**a. Remove drain plug located on the right rear side of** engine. Tip kart backwards slightly by blocking up the front end and drain oil into suitable container.

b. Remove and clean Oil Screen.

**c**. Replace drain plug and tighten securely. Place kart in a level position.

**d**. Refill crankcase (approximately 1 1/4 pint) to top of filler neck with SAE 10W40 oil. Use same grade of oil as used originally.

**e**. Check oil level before each use of kart or after each 10 hours of operation. Add oil to bring up to proper level. Do not mix various grades of oil.

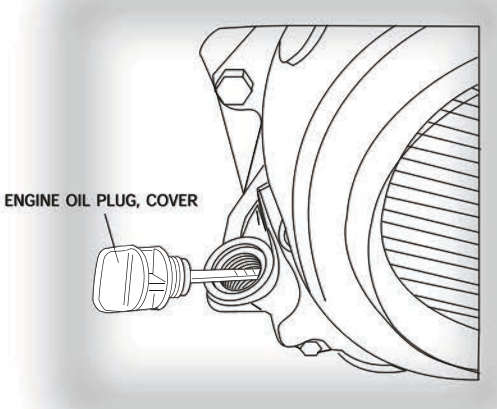



**Figure 7**

## C. Spark Plug

**a**. Remove the spark plug and inspect it each time you change the oil. (Use a spark plug wrench) The electrodes should be kept clean and free of carbon. The presence of carbon or excess oil will greatly reduce proper engine performance. If possible, check the spark plug gap (area between electrodes) using a wire feeler gauge. This specification is 0.7~0.8mm.

**b**. Before installing spark plug coat threads lightly with graphite grease if possible, to ensure easy removal next time the spark plug needs inspection.

**c**. It is advisable to replace the spark plug at least once a year to insure easy starting and good engine performance.

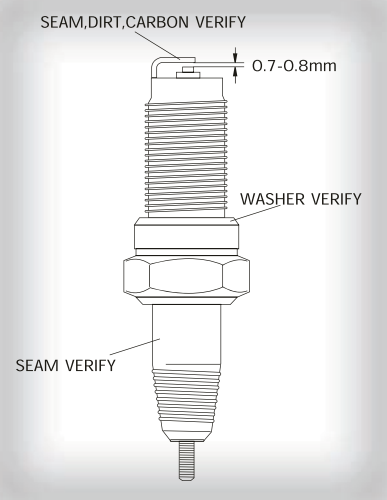



**Figure 8**

## D. Carburetor Adjustment

Never make unnecessary adjustments. The factory recommended settings are correct for most applications.

**a**. Warm up the engine (5~10min)

**b**. Tighten the air screw gently. Backout 2-3/8 turns counter clockwise.

**c**. Connect the tachometer, adjust the throttle to limit the idle speed. The standard value is (1400RPM).

**d**. Turn the air screw counter clockwise slowly and observe the RPM of the engine, stop adjusting as the RPM reaches the top speed.

**e**. Adjust the screw and adjust the idle speed to an ideal value.

**f**. Recheck and readjust the idle speed if necessary.

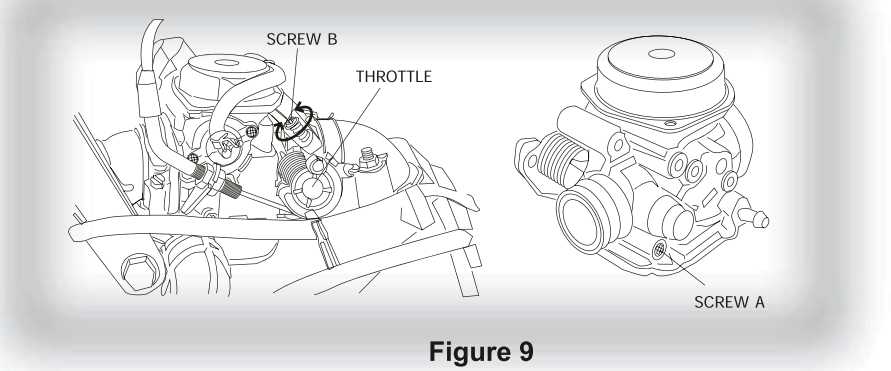



**Figure 9**

## E. Cleaning Instructions

Keep your kart clean. With a clean rag, wipe off and dirt and oil from around controls. Wipe off any spilled fuel and oil. Keep the engine clean of foreign objects, and be sure to check that air intake fan is free of debris for proper cooling.

## F. Kart Lubrication

Lubricate vehicle every 90 days of use. Lubrication should be done sooner, if kart is used everyday.

## G. Chain Lubrication

To increase chain life, it should be lubricated with a spray on type chain lubricant. (See Fig. 10)

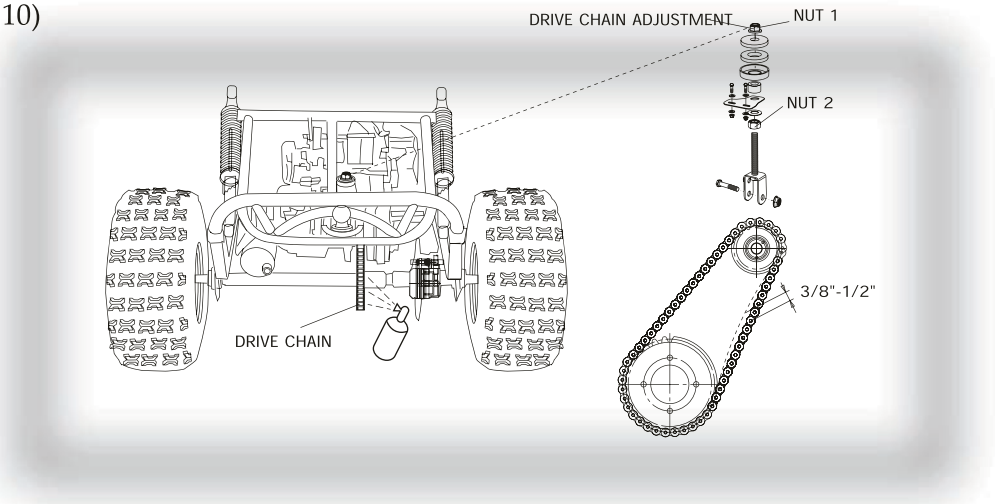



**Figure 10**

## H. Chain Adjustment

Check the chain adjustment after first two hours of use. Readjust if it has more than 1/2" flex.

**a**. Loosen Nut #1

**b**. Adjust Nut #2. Turn Nut #2 clockwise in 1/2 turn increments, then turn nut #1 until tight. Follow this procedure until chain is at proper tension (See Fig. 10).

**c**. Repeat the above two steps until chain is adjusted to desired fit.

## I. Adjustment of Front And Rear Shock

There are five adjustable positions on each shock. The default position is in the middle set by manufacturer (See Fig. 11)

Use a round nut wrench as you adjust the shock, the tension of shock spring will increase as you screw to left, decrease as you screw to right. Adjust according to the weight of the riders.

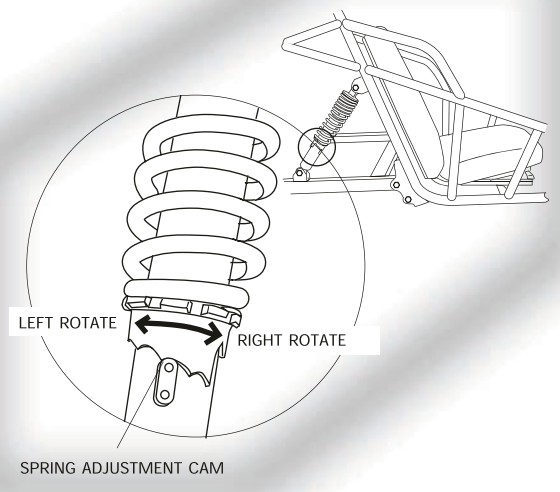



**Figure 11**

## J. Storage Instruction

In the event your kart is not to be operated for a period in excess of 30 days or at the end of each driving season prepare for storage as follows:

**a**. Drain fuel tank and carburetor by allowing engine to run out of fuel, and use a fuel stabilizer.

**b**. Lubricate engine cylinder by removing the air cleaner, then spray engine fogging oil through the carburetor until motor dies.

**c**. Do not save or store gasoline over winter. Using old gasoline, which has deteriorated from storage, will cause hard starting and affect engine performance.

**⚠ WARNING**

**Do not drain fuel while engine is hot. Be sure to move Kart outside before draining fuel.**

## A. Front Wheel Replacement

**Do not disassemble the castle nuts when you replace the front wheels.**

It is only necessary to remove the 4 lug nuts to remove the wheel. (See Fig. 12)

Tighten the nuts after replacing the wheels.

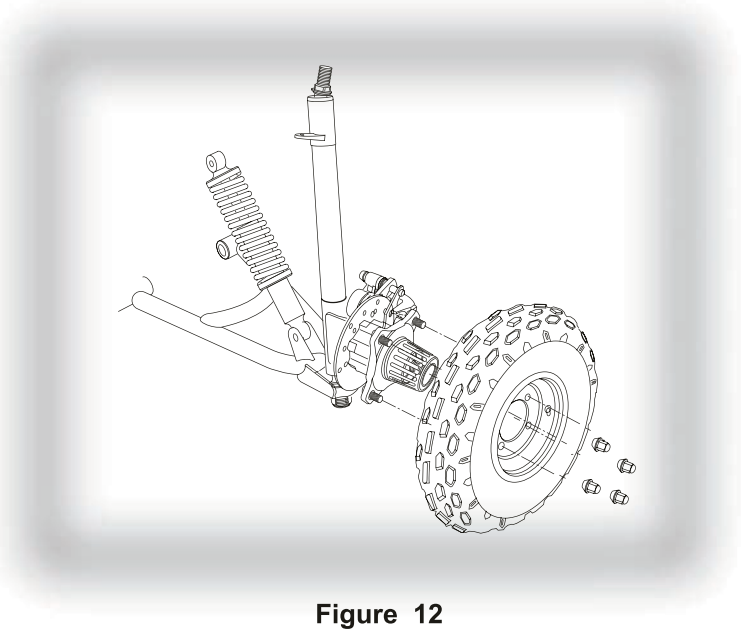


**Figure 12**

## B. Rear Wheel Replacement

**Do not disassemble the castle nuts when you replace the rear wheels and hub assembly.**

Remove the cotter pin and then 24mm nut. Then slide off wheel and hub assembly.

It is only necessary to remove the 4 lug nuts to remove the wheel by itself. (See Fig.13)

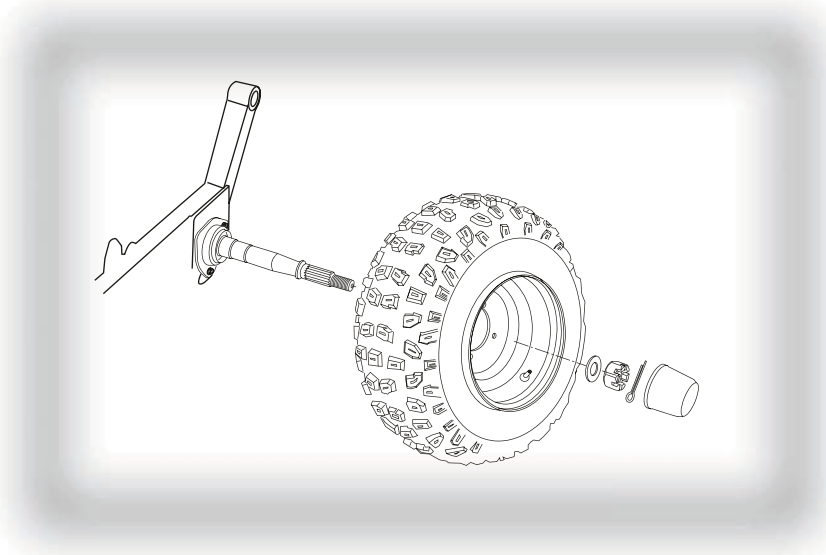


**Figure 13**

## C. Front Wheel Alignment

**a**. The front wheels should be "toe-in" from 1/8" to 1/4". To check for alignment, measure distance A and B between the centerline (CL) of the wheels. The proper toe-in dimension A should be 1/8" – 1/4" greater than dimension B.

**b**. To adjust the alignments, loosen the lock nuts on both sides of Front Tie Rods. To make Dimension B smaller, turn the rod to left. Adjust the rod to right direction to make Dimension B larger. After adjusting to the desired length, tighten the lock nut against the rod end. Recheck the dimensions for proper alignment.

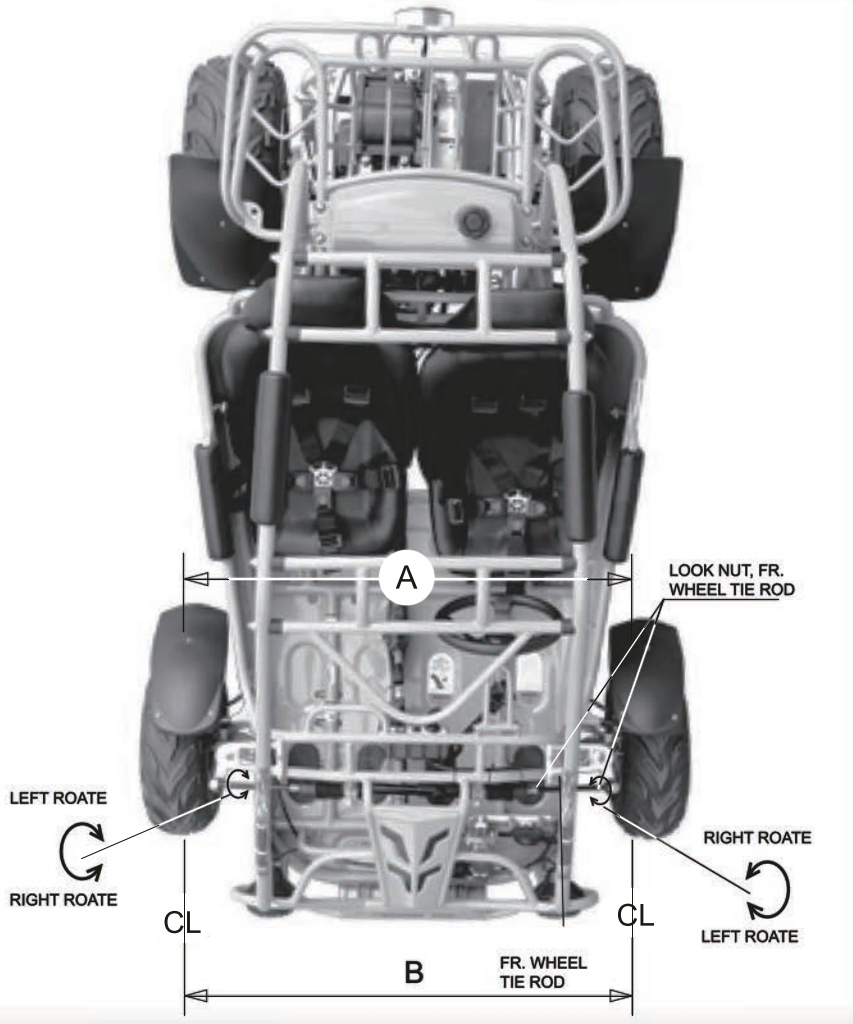
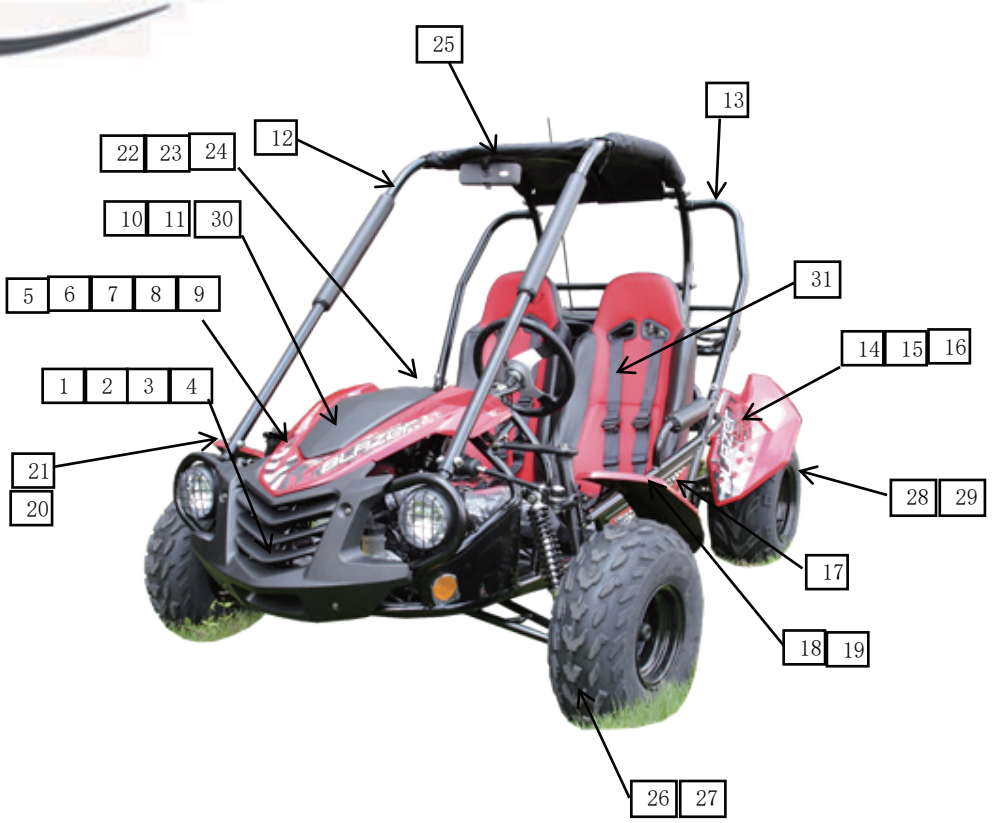
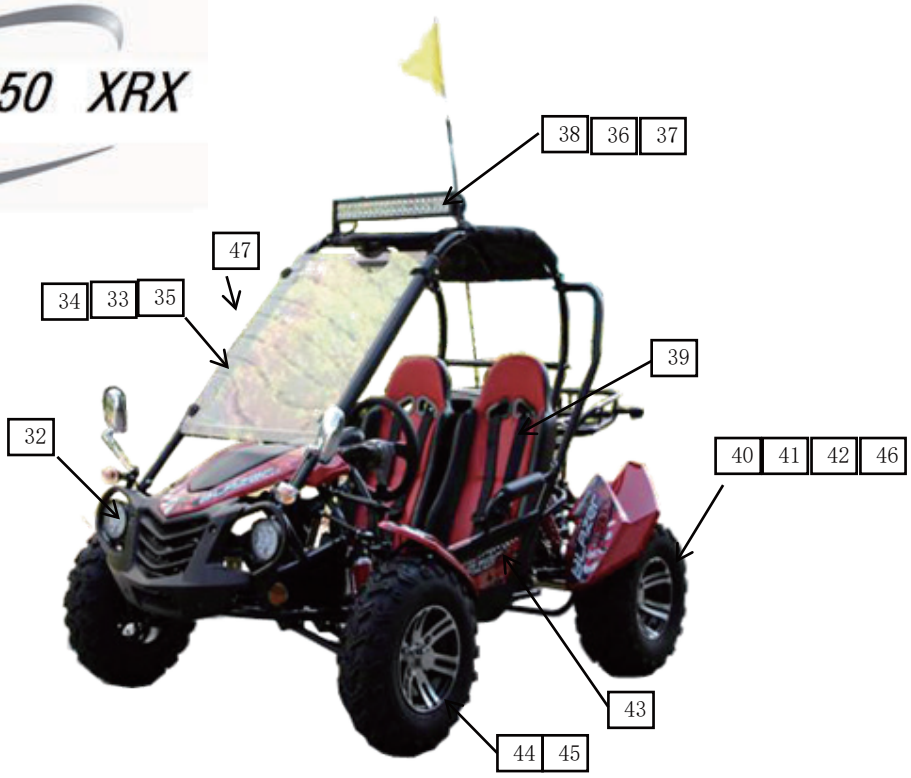



**Figure 14**

# Blazer 150




# Blazer 150 XRX



| No. | Code | Description | Qty. | Comments |
|---|---|---|---|---|
| 1 | 6503000150G000 | Fender | 1 | |
| 2 | 57890602010005 | Bolt M6*20 | 4 | |
| 3 | 61870600012505 | NUT M6 | 4 | |
| 4 | 96000600000005 | Washer | 4 | |
| 5 | 6501000150G000 | Panel | 1 | |
| 6 | 9070600150G001 | Label panel-L | 1 | |
| 7 | 9070600150G002 | Label panel-R | 1 | |
| 8 | 94000000600005 | NUT M6 | 5 | |
| 9 | 57890602010005 | Bolt M6*20 | 5 | |
| 10 | 6502000080G000 | Decorative board | 1 | |
| 11 | 28234201300005 | Bolt 4.2*13 | 5 | |
| 12 | 8070064150GH02 | Custom bar cage. | 2 | |
| 13 | 8070067150GH02 | Custom cross bar | 2 | |
| 14 | 7010064150G001 | FENDER-R.F | 1 | |
| 15 | 9070600150G006 | Label fender-L | 1 | |
| 16 | 9070600150G008 | Label side-L | 1 | |
| 17 | 9070600150G011 | Label fender-L | 1 | |
| 18 | 7010034150G001 | FENDER-F.R | 1 | |
| 19 | 9070600150G005 | Label side-R | 1 | |
| 20 | 7010034150G000 | FENDER-F.L | 1 | |
| 21 | 9070600150G004 | Label side-L | 1 | |
| 22 | 7010064150G002 | FENDER-R.R | 1 | |
| 23 | 9070600150G007 | Label-R | 1 | |
| 24 | 9070600150G009 | Label-R | 1 | |
| 25 | 6010062150GH00 | C.B.C.CUSTOM<br>CROSS BARTOP.FR(R.S.B) | 1 | |
| 26 | 7020050250G000 | TIRE,F A007 20*7-8 | 2 | |
| 27 | 6000142250G000 | Steel rim,F | 2 | |
| 28 | 7020052150G000 | TIRE,R A004 21*10-10 | 2 | |
| 29 | 6000143250G000 | Steel rim,R | 2 | |
| 30 | 9070600150G003 | Label | 1 | |
| 31 | 6000355150G000 | Safety belt | 2 | |
| 32 | 6000104150G001 | LED light,F | 2 | |
| 33 | 6503001150G000 | Windshield | 1 | |
| 34 | 6000195150G000 | Foam radding for windshield | 2 | |
| 35 | 6503002150G000 | Belt | 4 | |
| 36 | 6000104150G000 | LED toplight | 1 | |
| 37 | 5802200150GH01 | Frame for toplight | 2 | |
| 38 | 5802200150GHB0 | Frame for toplight II | 2 | |
| 39 | 6000356150G000 | Safety belt | 2 | |
| 40 | 7020053150G000 | TIRE,R A001 22*10-10 | 2 | |
| 41 | 6000143150G002 | Steel rim,R | 2 | |
| 42 | 7020039150G000 | Hub cover | 4 | |
| 43 | 9070600150G017 | Label-L | 1 | |
| 44 | 7020050150G000 | TIRE,F A001 22*7-10 | 2 | |
| 45 | 6000142150G001 | Steel rim,F | 2 | |
| 46 | 8010056150GH02 | Hub | 2 | |
| 47 | 9070600150G018 | Label-L | 1 | |

# Blazer4 150X



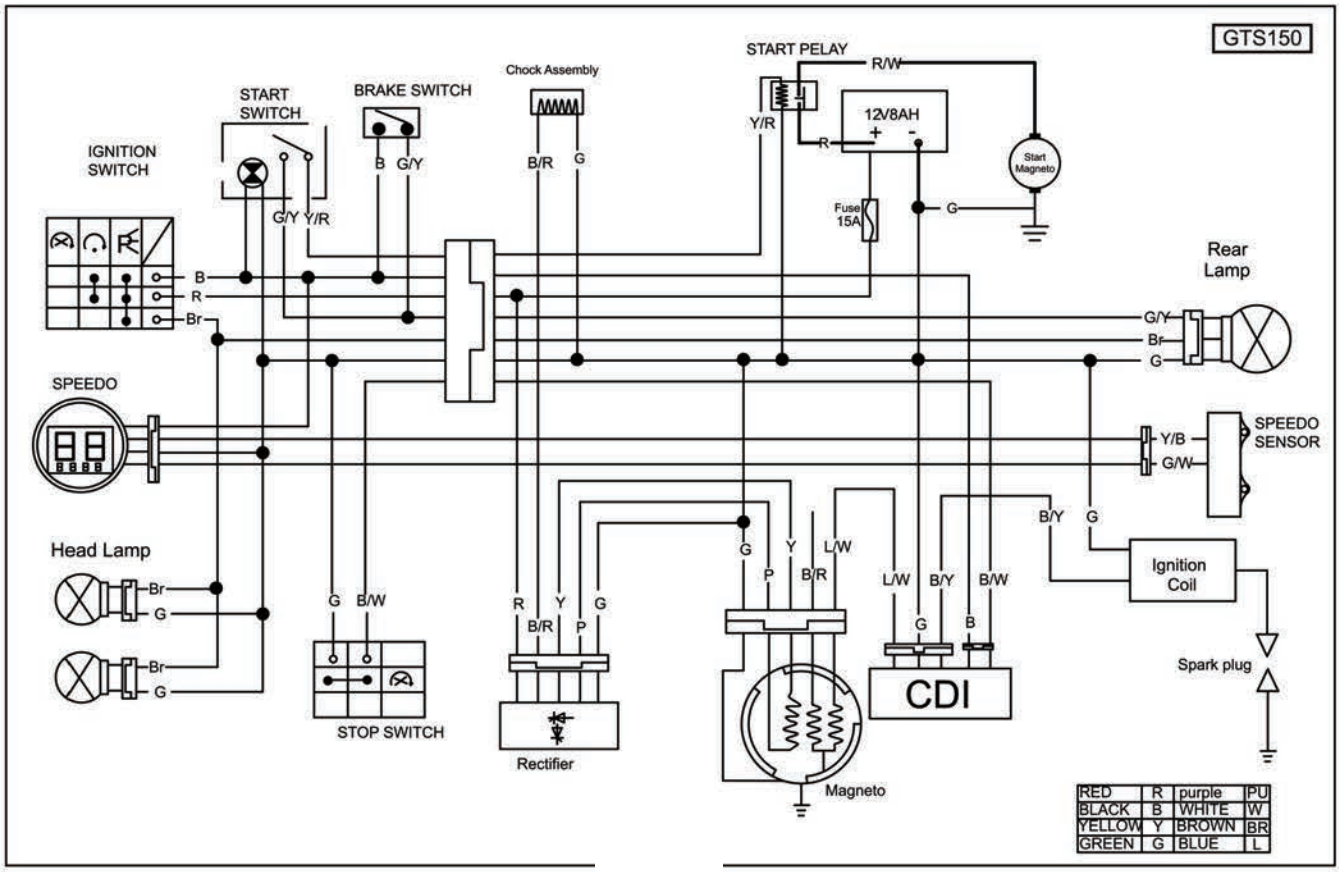
| No. | Code | Description | Qty. | Comments |
|---|---|---|---|---|
| 1 | 8070055150GH00 | Custom bar cage. | 2 | |
| 2 | 6010063150GH00 | C.B.C.CUSTOM<br>CROSS BARTOP.FR(R.S.B) | 1 | |
| 3 | 6000321150G000 | Awning | 1 | |
| 4 | 8070069150GH00 | Custom cross bar front-R.F. | 2 | |
| 5 | 8070056150GH00 | Custom cross bar rear-R.F. | 2 | |
| 6 | 8080036150GH00 | Straight bar | 1 | |
| 7 | 7020052150G000 | TIRE,R A004 21*10-10 | 1 | |
| 8 | 6000143250G000 | Steel rim,R | 1 | |
| 9 | 9070601150G007 | Label fender-L | 1 | |
| 10 | 9070601150G008 | Label fender-R | 1 | |
| 11 | 6000331150G002 | Seat | 1 | |
| 12 | 9070601150G005 | Label fender-L | 1 | |
| 13 | 9070601150G006 | Label fender-R | 1 | |
| 14 | 8070066150GHB2 | Frame | 1 | |
| 15 | 7020050250G000 | TIRE,F A007 20*7-8 | 2 | |
| 16 | 6000142250G000 | Steel rim,F | 2 | |
| 17 | 6000380150G003 | Leader cable | 1 | |
| 18 | 6000381150G002 | Subfeeder cable | 1 | loan |
| 19 | 6000232150G002 | Throttler cable comp | 1 | |
| 20 | 4510001150G000 | Hydraulic brake | 1 | |
| 21 | 6013000150G001 | Gear guy | 2 | |
| 22 | 6001000150G000 | Brake cable | 1 | loan |
| 23 | 6000325150G004 | Shock absorber F. | 2 | |
| 24 | 6000006150G004 | Shock absorber R. | 2 | |

The maintenance intervals in the following table are based upon average driving conditions. Driving in unusually dusty areas, require more frequent servicing.

| Items \ odometer | Initial service ( 300km ) | 1000km | 3000km | 10000km |
|---|---|---|---|---|
| Tire pressure/wear | I | I | | |
| Brake performance | I | I | | |
| Tightness of screws | I | I | | |
| Air cleaner | | | C | I |
| Carburetor | I | A | | C |
| Spark plug | | | C, A | |
| Drive chain | I | I | C, A, L | |
| Brake oil | | | I | |
| Replace gearbox oil | | I | R | |
| Chassis | | C, I | L | |
| Fuel switch/fuel tank | | I | | C |
| Battery | | | I | |
| Valve clearance of engine | | | A | |

**A:** adjust **C:** clean **I:** inspect, clean or replace if necessary. **L:** lubricate **R:** replace

# WIRING DIAGRAM



The maintence intervals in the folloeing table are based upon average driving conditions.Driving in unusually dusty areas,reguire more freguent servicing.

| Time of service (of odometer) / Items | Initial service (first week or 300km) | Monthly (1000km) | Quarterly (3000km) | Yearly (10000km) |
|---|---|---|---|---|
| Tire pressure/wear | I | I | | |
| Brake performance | I | I | | |
| Tightness of screws | I | I | | |
| Air cleaner | | | C | I |
| Throttle body | I | | C | |
| Spark plug | | | C,A | |
| Drive chain | I | I | C,A,L | |
| Brake oil | | | I | |
| Replace gearbox oil | | I | R | |
| Chassis | | C,I | L | |
| Oil pump screen/fule tank | | | I | C |
| Battery | | | I | |
| Valve clearance of engine | | | A | |

A:adjust C:clean I:inspect,clean or replace if necessary. L:lubricate R:replace

# I. Composition and working principle

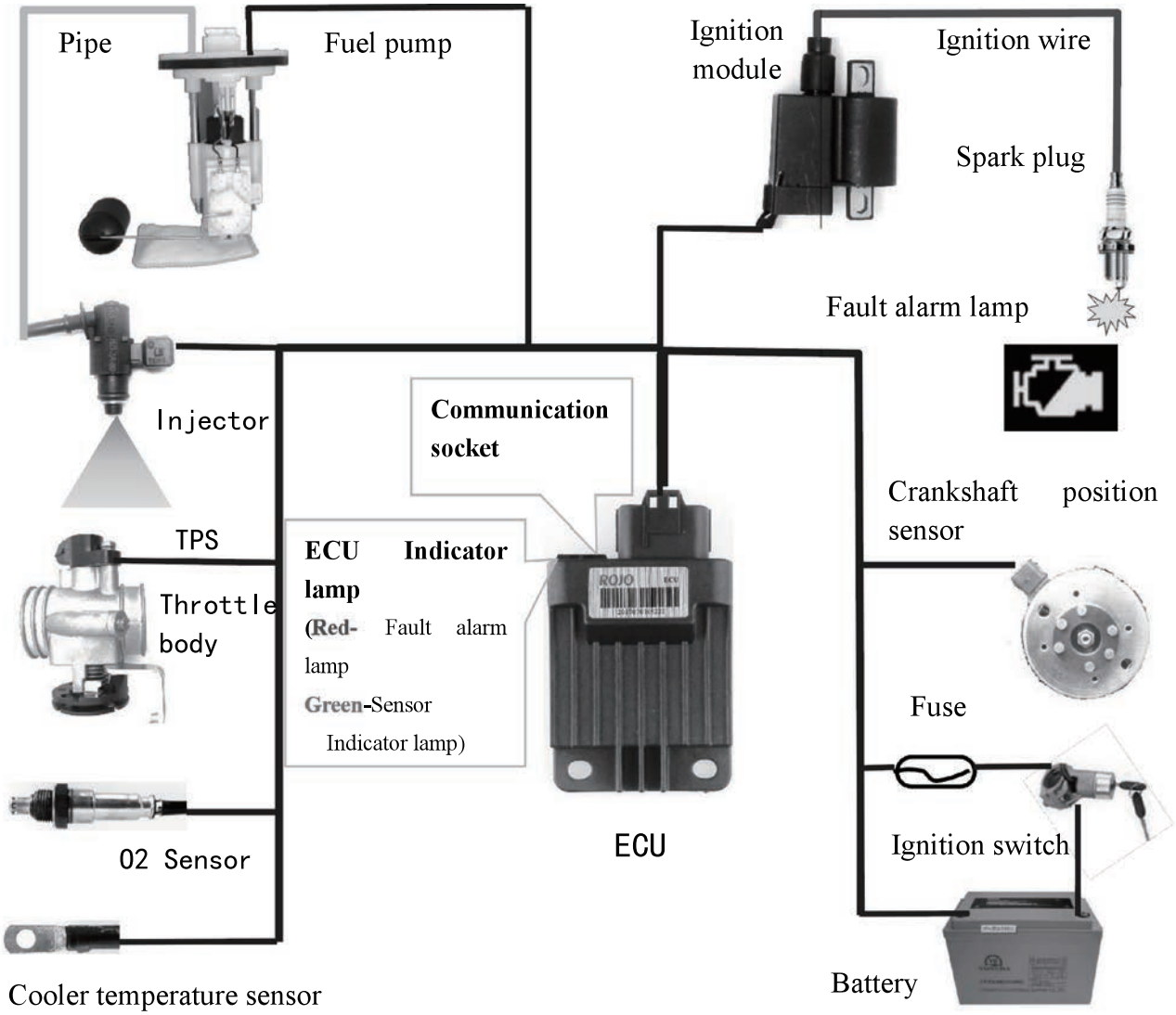



**Fig. 1 Schematic diagram of EFI system**

The functions of the EFI are fuel injection management and ignition management, that achieved by the following parts:

**1、ECU**(Electronic control unit), undertakes the task of receiving signals from sensors, making control strategies, and outputting the control signals.

**2、Fuel supply device**, composed of fuel pump, pipe and injector. The fuel pump is installed in the tank, it pressurizes the fuel to 2.5 bar. The injector is installed in the engine intake pipe, it performs fuel injection timing and amount.

**3、Ignition device**, composed of ignition module, ignition wire and spark plug. The ignition module contains DC capacitor igniter and ignition coil, it boosts the 12V battery voltage to more than 15,000 V, and transfers it to the spark plug to produce spark discharge.

**4、Sensors**，including:

(1) O2 sensor, mounted on the exhaust pipe, its function is detecting the oxygen concentration in the exhaust gas and achieves closed-loop regulation of the fuel mixture concentration. It outputs alternating signal from 0 V to 0.9V when in closed- loop regulation state.

(2) Cooler temperature sensor, is installed on the engine cylinder head, it is used to measure the engine temperature. It can affect added fuel injection amount in start-up conditions.
(3) Crankshaft position sensor(TPS), is integrated in the magnetic motor, is used to measure crankshaft angle signal, which is the time base for injection and ignition timing control.
(4) Throttle position sensor, which is used to measure the throttle valve rotation angle.

**5、Others,** including:

（1） Throttle body, which controls the intake air amount through the throttle line.
（2） Fault alarm lamp, installed on the dashboard, is used for fault alarm.
（3） Battery, ignition switch and fuse, they undertake the task of power supply to the EFI system.

# II. Common troubleshooting methods

## 1、Startup failed

1) If the Fault alarm lamp lights, you can pull the throttle twice in one second to make the system into flashing code mode. Determine the faults referring to Annex 1 " Flash code description of Fault alarm light ".
2) You can also determine the faults referring to Annex 2 "ECU indicator light".
3) If the problem remains, pull out the ignition wire end that connected to the spark plug, keep about 1 cm out of the engine body or motorcycle frame, start the motor, if no spark, or weak spark occurs, exclude and deal with the following failures by these steps till the spark becomes normal: Ignition module connector failure, ignition module failure, the gap between the crankshaft position sensor and the magnet motor (normal gap is between 0.3 ~ 0.8mm)
4) If the spark is normal, but startup is still failure, remove the injector from the intake pipe (note: keep the pipe connected to it), start the motor, observe the fuel spray and the atomization quality, if abnormalities, exclude injector or pump failure by replacement method, you can also measuring pipe pressure by a pressure gauge, the normal pressure is more than 2.4 bar.

## 2、 Misfire

1) Exclude the following factors firstly: Whether the spark plug or spark plug cap was replaced by non-resistive type？ Whether the rectifier was replaced by semi-wave type? Whether the connection location of the signal ground was changed? If the above errors exist, correct them firstly.
2) If the problem still exists, you can then exclude the possibility that idling intake air is too large. Do idle intake air adjustment according to Annex 3.
3) If the problem still exists, try replacing the spark plug.
4) If the problem still exists, check the fuel pressure by a pressure gauge(normal pressure is more than 2.4 bar). You can also try replacing the pump.
5) If the problem still exists, try changing the ignition module.
6) If the problem still exists, try changing the injector.

## 3、 Low power output or exhaust pipe blasting

1) Referring to Annex 2, if the ECU green lamp is always off even if the engine is warmed up, it indicates that the O2 sensor can’t output signal. Re-insert the O2 sensor's connector or replace the sensor. Temporary approach: Separate the connector of the O2 sensor, do a fast self-learning according to Annex 4.

2) If the problem still exists，check the supply pressure of the fuel pump by pressure gauge or try replacing it.
3) If the problem still exists，try replacing the injector.

### 4、 Idle speed is too high

1) According to Annex 2, judge if there is throttle opening calibration error reference to the green ECU lamp. If the error exits, quickly pull the throttle to maximum opening and then release, repeat this more than two times, if the problem is still exists, Try to replace the TPS.
2) If the problem still exists，try reducing the idle intake air according to Annex 4.

# III. Precautions in maintain

1) Don't add excessive lubricating oil in engine, or blue smoke will appear, and the O2 sensor will breakdown.
2) Every 5,000 km running, you should take out of the fuel pump from the tank and replace the fuel filter on it, otherwise injector plug or the pump stuck might occur.
3) Don't arbitrarily change the connection location of the signal ground, or the EFI system will works abnormally.
4) All the electrical plug should be combined firmly, or they will separated in using.
5) Wire harness and pipes should be bundled by standard, or it will break in use, and resulting in short circuit or oil spills.
6) When the spark plug cap or spark plug is replaced, the replacement must be resistance type, the resistance value is between 4KΩ ~ 8KΩ.
7) When the rectifier is replaced, the replacement must be qualified full-wave rectifier, otherwise it will make the EFI system working unsteadily. Simple judgment method: when the engine is running, move away the fuse above the battery, if the engine can still working normally , it is qualified.
8) When the motorcycle is out of the run-in period , it is recommended to reduce the idle intake air (under the premise without affecting the cold start performance), according to Annex 3.

## Annex 1 Description of the flashing code

If the Fault alarm lamp light, you can pull the throttle twice in one second to make the system into flashing code mode. The code is described in the following table

| flashing code | Fault source | Fault information | Troubleshooting |
|---|---|---|---|
| 2 | Idle valve(Note: Applies only to types with idle valves installed) | Open or short circuit | Check the connector, measure the resistance between the idle valve electrodes, If circuit open or shot fault occurs, replace the idle valve. |
| 3 | Electromagnetic interference | The ECU is reset by interference | Check according these steps: Whether the spark plug or spark plug cap is with resistance? Whether the connection location of signal ground has been changed? whether the rectifier is failed? |
| 4 | Crankshaft position sensor | Open circuit error, or the signal is disturbed | Is the connector is well connected? Is the distance between the wiring harness and the ignition wire is more than 2 cm? Is the spark plug and spark plug cap with resistance? |
| 5 | Battery voltage | Voltage is more than 15.6V | Replace the rectifier (Note: It must be full wave type) |
| 6 | O2 Sensor | Oxygen heating circuit is open or short; Oxygen signal is abnormal | Check the O2 sensor connector. If the problem cannot be resolved, try replacing the sensor |
| 7 | Cooler temperature sensor | The signal is over reasonable range | Check the connector, or replace the sensor |
| 8 | Injector | Open or short circuit | Check the connector, try replacing the injector |
| 9 | Pump | Open or short circuit | Check the connector, try replacing the fuel pump |
| 10 | Ignition output | Open circuit | Check the connector, try replacing the ignition module |
| 11 | Throttle position sensor | Throttle calibration error, or TPS output is over reasonable range | Turn on the key switch, re-calibration throttle: Quickly pull the throttle to maximum opening and then release, repeat more than two times. If the problem is not resolved, try replacing the TPS. |
| 12 | ECU | Software failure | Firstly eliminate interference factors just as indicated by code 3, then replace the ECU |
| 13 | Intake air temperature | The signal is over reasonable range | Replace ECU |

## Annex 2 Description of the ECU indicator lamp

ECU indicator lamp, located on the ECU, as shown in Figure 1

| Color | Name | Normal Performance | Abnormal Performance and Notice | Troubleshooting method |
|---|---|---|---|---|
| Green | sensor indicator lamp | In stop condition, it indicates throttle position. The lamp lights when the throttle is in the maximum or minimum position | If the lamp can't light in the two limit position, throttle calibration error occurs | Re-calibration throttle opening by quickly pull the throttle to maximum opening and then release, repeat more than two times. If fault remains, replace TPS |
| | | In start condition, it indicates crankshaft position signal | Keep off when start the motor | Check the corresponding connectors, wiring harness and the gap between the sensor and the magneto motor |
| | | Indicates the O2 sensor signal when the engine is in closed-loop adjustment, it lights 1-3 times per second after the engine is warming up. | keep off, indicating no O2 signal received | Check the sensor connector, wiring harness , if the fault remains , try replacing the O2 sensor |
| Red | Fault alarm lamp | Same with the fault alarm lamp on the dash board. | If it is always on, pull the throttle twice in one second to make the system into flashing mode. | Refer to Annex 1 " Description of the flashing code " |
| | | | If unstable light and dark during engine operation, ECU is likely to get interfered | Eliminate the interference factors referring to flashing code 3 in the Annex 1 |

## Annex 3 Adjustment of idle intake air & fast self-learning

The purpose this function is to quickly eliminate the engine dispersion, and make it into the best state, the steps are as follows:

（1） Pull the throttle to the maximum opening, and then turn on the key switch, release it in 1 second, if the fault alarm lamp is on, it indicates that the system has already been in the "fast self-learning mode";

（2） Start the engine, pull the throttle to make the engine warm up quickly, loose the throttle, observe the fault alarm lamp (or ECU red lamp) after the steady idle. If the idle intake air is suitable, the fault alarm lamp will quench after the idle note completes self-learning. But if quick flashing occurs, it means that the idle intake air is too less , You need to adjust the "idle adjustment screw" counterclockwise (shown in Figure 2), else if slow flashing occurs, it means excessive intake air, you need to adjust clockwise.

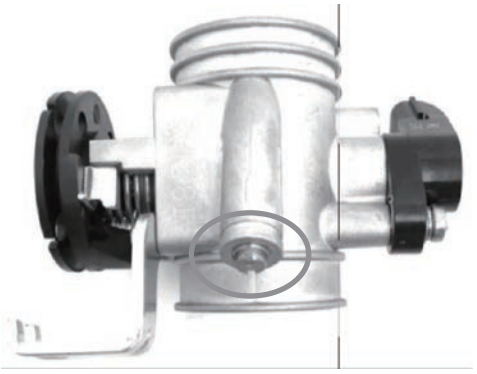


Fig. 2 idle speed adjustment screw

（3） There are 5 self-learning nodes, the corresponding throttle opening are: 0% (idle opening), 8%, 25%, 50%, 100%;

（4） When the throttle close to the above nodes, the fault alarm lamp will light, stay in the node till the self-learning process of this node finishes and the lamp is off, pull the throttle to the next self-learning node;

（5） When all the nodes have completed self-learning, the engine will automatically stop running. If the engine is still running, it means there is still uncomplete node, pull the throttle to find the node that the lamp lights, stay till the lamp is off, then turn off the key switch to finish the self-learning process.

**Performance Testing**

(1) Start again, pull the throttle observe: weather the power output is strong? Weather the maximum speed can be reach? relax the throttle quickly and observe: Is there any exhaust pipe blasting or flameout phenomenon occurs?

(2) After the engine is completely cooled, observe whether the cold start is well;

(3)If all is successful, self-learning process can be finished, otherwise, do the above process again.

## Annex 4 Description of the wiring harness

The diagram of wiring harness is shown in Figure 3.

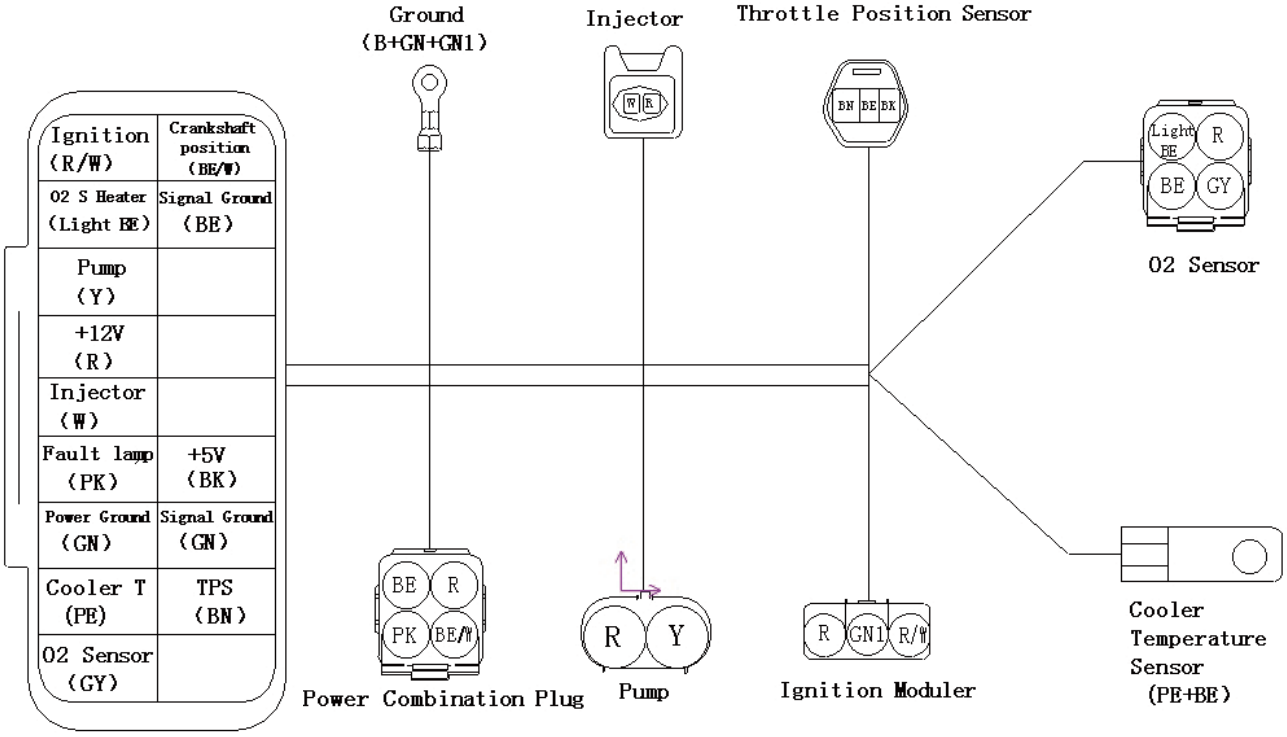



**Fig. 3 Wiring harness diagram**

If you have any other questions, please contact distribution or customer service.

# Introduction of mobile phone and computer communication tool

## I、Mobile APP

### 1、 Installation

Download mobile phone APP (for Android system) by WeChat or QQ, and install it.

### 2、 Main interface

As shown in figure 1, the upper location is the title bar that showing various states.



Fig. 1 Bluetooth transceiver and ECU

### 3、Submenu

**（1） Bluetooth connection**

- Connect a Bluetooth transceiver to ECU's communication port (Fig. 1), turn on the ignition switch.
- Click on the mobile phone, the main interface is shown in Figure 2.
- Click the "Bluetooth connection" icon, figure 3 appears.
- The "visible device" column shows the name of the Bluetooth connected with the EFI, clicks the ">" mark on the right, figure 4 appears.
- In the column next the right side of the "Default connection device", click " √ ", then Bluetooth connection will be automaticlly done next time.




Fig. 2

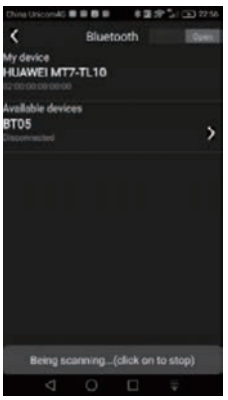



Fig. 3

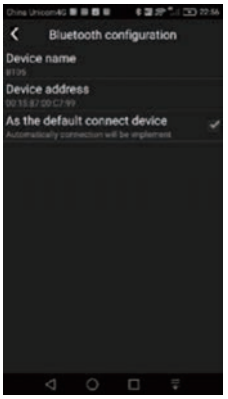



Fig. 4




Fig. 5

**（2）Log in to ECU**

- Click "login ECU" icon, figure 5 appears, enter the initial login password "333333", click “OK”;
- If you want to change the initial password, click the "Setting" icon on the main interface, but if you forget it, you will never be able to log in to this ECU.

**（3）Monitoring**

At the main interface, click "monitoring ", fig.6 appears. There are 3 switchs of "parameter monitoring", "historical failure" and "current fault" in the bottom.

**(4) Performance test**

➢ In the main interface, click the "Performance test", figure 7 appears.




Fig. 6




Fig. 7




Fig. 8

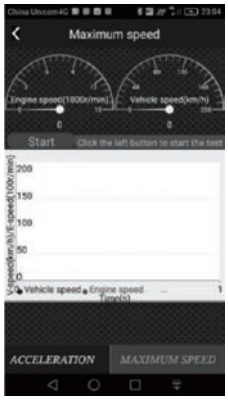



Fig. 9

➢ By the bottom switch, function can be switched among "Fuel consumption measurement"(Fig. 9), "Acceleration measurement" (Figure 8) or "The max-speed test" (Fig. 9).

**(5) Parameter modification**

➢ Click "Parameter modification" in the main interface, figure 11 appears.

➢ Click "Read" firstly.

➢ Click "Send" after modifying the parameters. If you want to change it permanently, click "write".

➢ There is a circular mark on the lower left corner. If clicking, the "Fast self-learning" interface shown in Figure 12 appears.

**Note:**

➢ "Downtime" is only for motorcycles with fast start functions, it means the delay time from motorcycle stopping to engine stopping.

➢ "Fast self-learning" can make the EFI system adapt to the characteristics of the engine quickly. You can do it by the following steps:

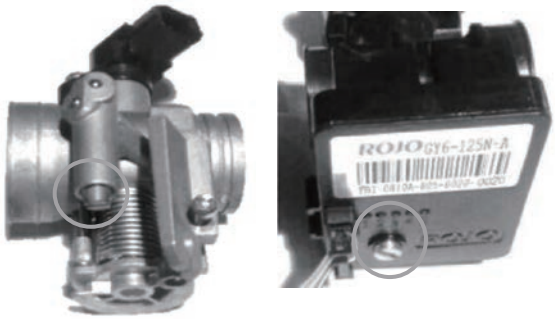


Fig.10 Idle adjustment screw

✧ Before learning, you should put down the big support of a scooter, or hang to Idling position for a straddle type motorcycle. Add a flexible isolation pad under it

✧ Control the throttle to the position that the inverted triangle mark showed and stay until the

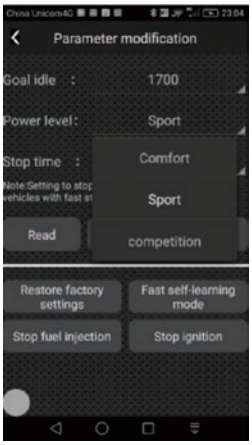



Fig. 11




Fig.12

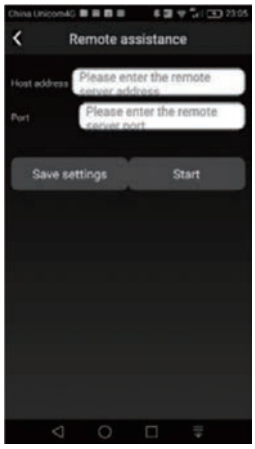



Fig.13

mark turns green.

- ✧ Then pull the throttle to the next node;
- ✧ IF all inverted triangles turn green, the engine will automatically flameout, turn off the switch.
- ✧ Restart the engine and check if the performance is improved. If not, repeat the above process.
- ✧ Attention: when in idle point (0 opening) self-learning, look at the fault alarm lamp on the instrument panel, if it begins rapid flicker instead of off after self-learning, it means the idle intake air is too small, the "idle adjustment screw" (shown in the red circle in figure 10) should be adjusted anti-clockwise, if slow flicker, it means the idle intake air is too large, adjust clockwise till the lamp off.

**(6) Remote assistance**

- ➢ Click "remote assistance" in the main interface, figure 13 appears.
- ➢ Contact the ROJO customer service and get its IP address then fill in.
- ➢ Fill in the port number”5100”.
- ➢ Click "Save remote settings" and click "Start remote assistance".

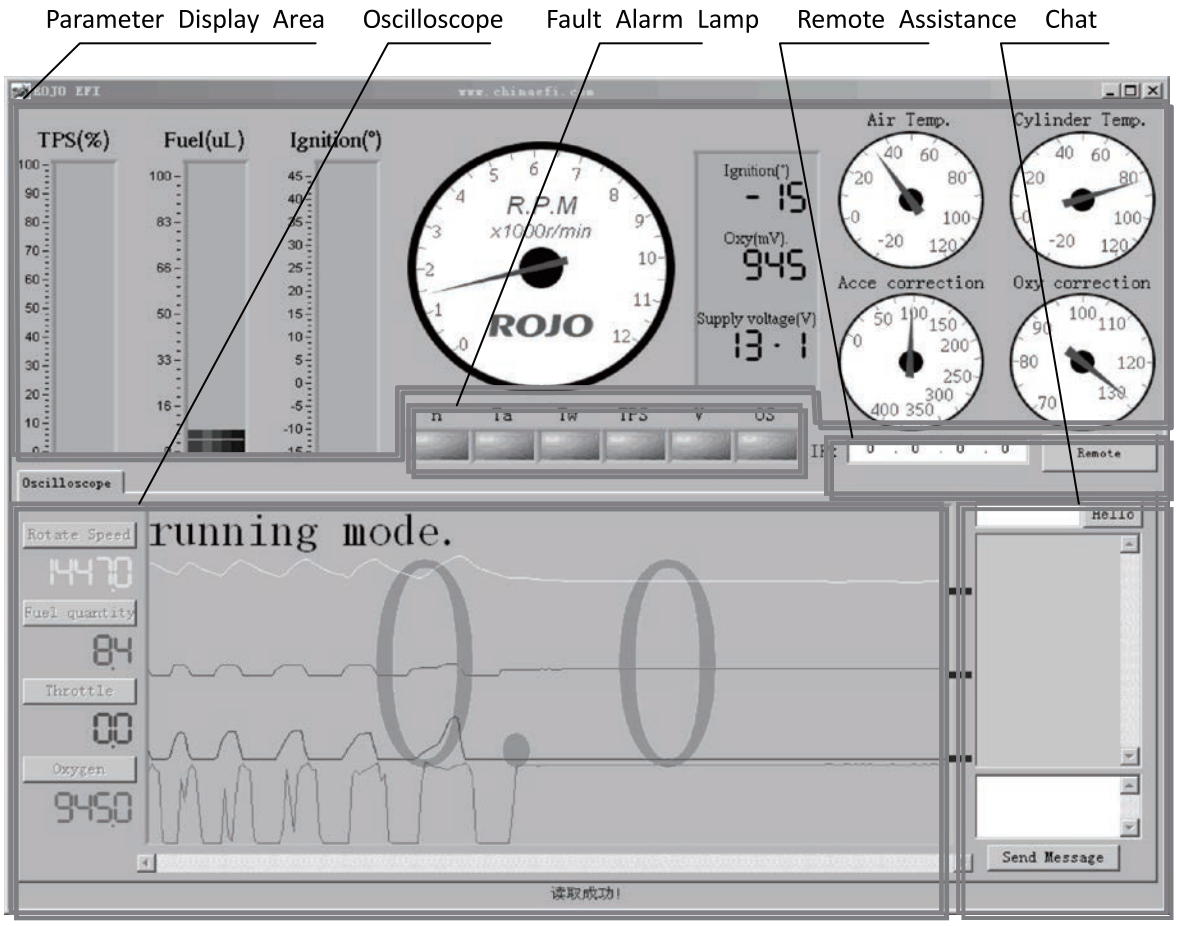
**(7) Locking & Unlocking**

Click "Locking & unlocking" in the main interface, you can switch from "locking" and "unlocking" states. This function is for burglary preventing.

# II Communication tool of computer

## 1、Install

- ➢ The communication tool can be downloaded to the computer by WeChat or QQ and other communication tools;



➢ A special communication cable needs to be connected between the communication port of ECU and the computer USB port, showed in the right figure.



## 2. Main interface

Double click the icon, main interface shown above appears. It consists of 5 functional areas.

## 3、Areas introduction

1) Working parameter display area

It shows the following parameters: throttle opening, fuel injection amount, ignition timing, intake air temperature, cooler temperature, battery voltage, acceleration correction (100 represents no correction), oxygen concentration correction (100 represents no correction).

## 2、Function area

**(1) Oscilloscope**

Click "Oscilloscope", a oscilloscope interface as shown above appears.

**(2) Idling speed adjustment**

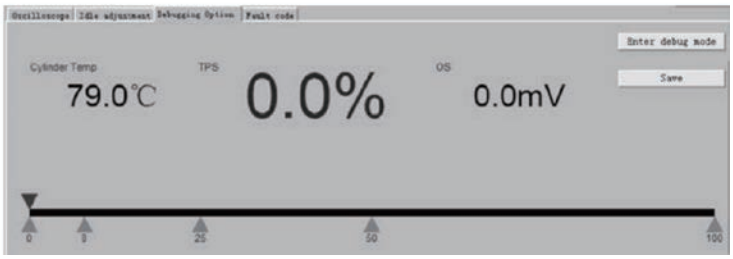
Click "Idle speed adjustment", the following figure appears. Drag the slider with the mouse to change the idle speed setting, click the memory to remember the setting value.

Note: All memory will only be reach in engine stopping state.




**(3) Fast self-learning**

Click “Fast self-learning”, the figure below appears. This function is the same with APP.




**(4) Fault code**

Click the "fault code", you can read the history fault and the current fault code.

## 3. Fault light

There are 6 common fault lights in the middle of the interface.

## 4. Remote service (right picture)




➢ Get ROJO IP address and fill in. Click the "Remote assistance" button on the right.

## Methods and steps of performance optimization

The performance of the engine can be optimized by the following steps:

1. Use the appropriative communication cable, one port is inserted on the ECU communication socket (Figure 1a, or b), the other port is inserted on the computer USB socket, then turn on the ignition key switch;
2. Double-click to open the communication program, as shown in Figure 2, click the "Degugging option" button, figure 3 appears ;
3. Click the "Enter Debug Mode" button;
4. Repeatly pull the throttle to heat the engine, until the oxygen sensor indicator turns green (shown in the red circles in Figure 2 or 3).
5. Pull the throttle to the situation marked by the triangle mark, stay until the inverted triangle

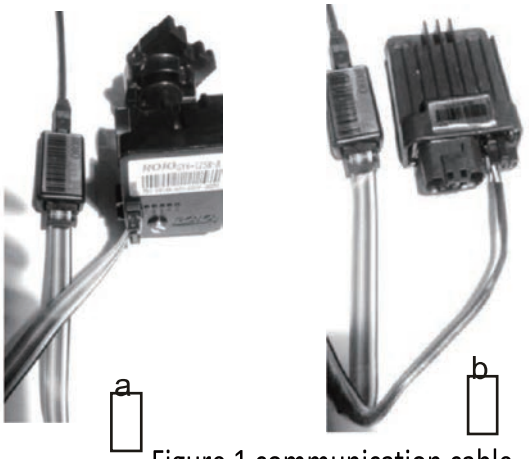
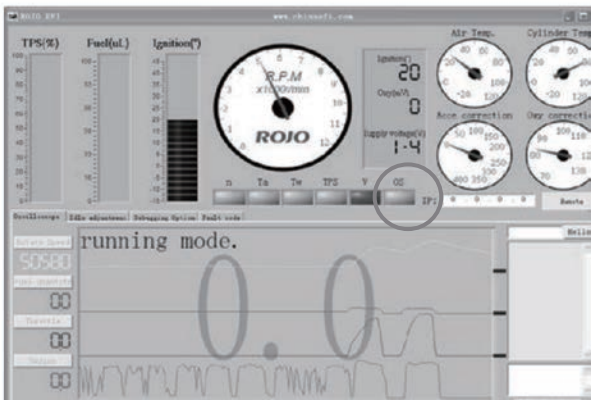
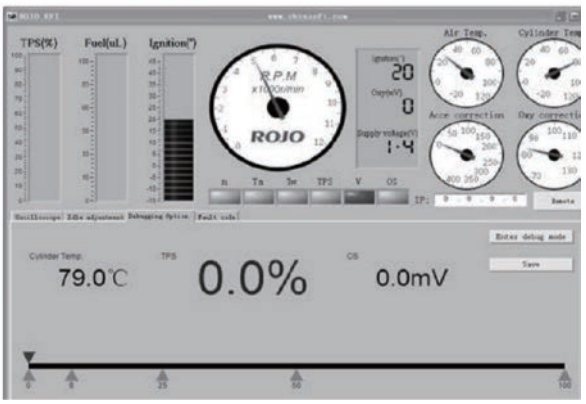


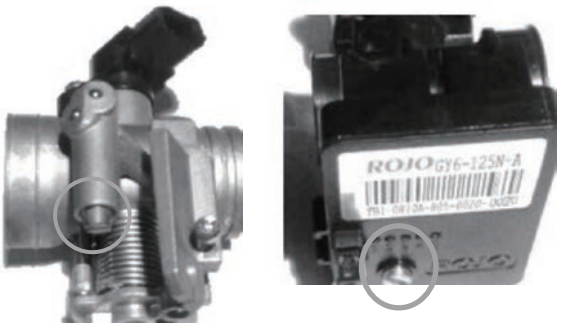
Figure 1 communication cable




mark becomes green, this indicating that the self-learning has been finished at this throttle opening, then pull the throttle to the next opening.

6. When all the 5 points turn green, the engine will automatically stop, clicking "Save" and turn off the ignition key switch.
7. Restart the engine, observe whether the acceleration and deceleration performance is improved, if not, repeat the above steps.




**Note：**

- Before self-learning process, it is recommended to lay down the stents of the motorcycle, and add flexible cushions under it.
- In self studying at 0 throttle openning , the fault alarm lamp on the dashboard should be observed at the same time. If the lamp does not off but quick flashing after the study finished, it indicating that the intake air of idle case is too small. It is necessary to adjust the idling screw (Fig. 4) anticlockwise. If slowly flashing, it indicates large intake air, and the Idling screws should be adjusted clockwise.

| Flash Code Comparison Table for EFI (electronic fuel injection ) | | |
|---|---|---|
| Item No. | Flash Code number of times | Fault Description |
| 1 | 3 | The system was disturbed and reset |
| 2 | 4 | Corner mark sensor open circuit or disturbed |
| 3 | 5 | Battery voltage >15.5v |
| 4 | 6 | Oxygen sensor heating circuit or sensor failure |
| 5 | 7 | Cylinder head temperature exceeds reasonable value |
| 6 | 8 | Fuel injector open circuit or short circuit |
| 7 | 9 | Oil Pump open cirucuit or short circuit |
| 8 | 10 | Ignition output open circuit |
| 9 | 11 | TPS voltage out of range |
| 10 | 13 | The intake temperature exceeds the reasonable value |
| 11 | 14 | ECU power tube damaged |

