



ROUGH-RIDER 700 UTV

Maintenance Manual

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General Information

1. Description





1.1 Identification code

1.1.1. Frame No. |

Frame No. is carved in the lower right side of Figure 1-1



Figure 1-1

1.1.2. Engine NO.

Engine NO. Is carved on the right side of the engine,

Figure 1-2



Figure 1-2

1.2 Special tools, instruments and meters

1.2.1 Oil filter detacher

To fasten and detach the oil filter



1.2.2 Height gauge



To gauge the height of various components

1.2.3 Vernier

To measure the length of various components



1.2.4 Outside micrometer

To accurately measure external
Diameter of a column



1.2.5 inside micrometer

To accurately measure internal
Diameter of a hole



1.2.6 Dial indicator

To accurately measure a small distance



1.2.7 Torque Spanner

To measure torque force



1.2.8 Feeler gauge

To measure gap-width



1.2.9 Multimeter

To check electrical circuits and parts



1.2.10 Barometer

To measure pressure of the tire



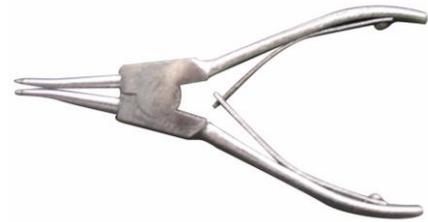
1.2.11 Magneto drawing device

To detach the magneto



1.2.12 Snap ring clamp

To install and detach snap rings



1.2.13 Steering wheel pull tool



1.3 Maintenance schedule

Maintenance schedule

ITEM	ROUTINE	Whichever comes first	EVERY			INITIAL		
			month	1	3	6	6	12
			km	320	1,200	2,400	2,400	4,800
			(mi)	(200)	(750)	(1,500)	(1,500)	(3,000)
hours	20	75	150	150	300			
Valves	<ul style="list-style-type: none"> ● Check valve clearance. ● Adjust if necessary. 		○		○	○	○	
Sparkplug	<ul style="list-style-type: none"> ● Check condition. ● Adjust gap and clean. ● Replace if necessary. 		○	○	○	○	○	
Air filter element	<ul style="list-style-type: none"> ● Clean. ● Replace if necessary. 	Every 20–40 hours (More often in wet or dusty areas.)						
Carburetor*	<ul style="list-style-type: none"> ● Check and adjust idle speed/starter operation. ● Adjust if necessary. 			○	○	○	○	
Crankcase breather system*	<ul style="list-style-type: none"> ● Check breather hose for cracks or damage. ● Replace if necessary. 				○	○	○	
Exhaust system*	<ul style="list-style-type: none"> ● Check for leakage. ● Tighten if necessary. ● Replace gasket(s) if necessary. 				○	○	○	
Spark arrester	<ul style="list-style-type: none"> ● Clean. 				○	○	○	
Fuel line*	<ul style="list-style-type: none"> ● Check fuel hose for cracks or damage. ● Replace if necessary. 				○	○	○	
Engine oil	<ul style="list-style-type: none"> ● Replace. (Warm engine before draining.) 		○		○	○	○	
Engine oil filter cartridge	<ul style="list-style-type: none"> ● Replace. 		○	○	○		○	
Engine oil strainer*	<ul style="list-style-type: none"> ● Clean. 		○	○	○		○	
Final gear oil	<ul style="list-style-type: none"> ● Check for oil leakage. 		○				○	
Differential gear oil	<ul style="list-style-type: none"> ● Replace every 12 months. 							
Front brake*	<ul style="list-style-type: none"> ● Check operation/fluid leakage. (See NOTE page 8). ● Correct if necessary. 		○	○	○	○	○	
Rear brake*	<ul style="list-style-type: none"> ● Check operation. ● Adjust if necessary. 		○	○	○	○	○	

Select lever safety system cable	<ul style="list-style-type: none"> ● Check operation. ● Adjust if necessary. 			○	○	○
V-belt*	<ul style="list-style-type: none"> ● Check operation. ● Check for cracks or damage. 	○		○	○	○
Wheel	<ul style="list-style-type: none"> ● Check balance/damage/ ● Repair if necessary. 	○		○	○	○
Wheel bearing*	<ul style="list-style-type: none"> ● Check bearing assemblies for loose/ Damage. ● Replace if necessary. 	○		○	○	○
Front and rear suspension*	<ul style="list-style-type: none"> ● Check operation. ● Correct if necessary. 			○		○
Steering system*	<ul style="list-style-type: none"> ● Check operation./Replace if damaged ● Check toe-in. /Adjust if necessary. 	○	○	○	○	○
Drive shaft universal joint*	<ul style="list-style-type: none"> ● Lubricate with lithium-soap-based grease. 			○	○	○
Axle boots*	<ul style="list-style-type: none"> ● Check operation. ● Replace if damaged. 	○	○	○	○	○
Fittings and fasteners*	<ul style="list-style-type: none"> ● Check all chassis fittings and fasteners. ● Correct if necessary. 	○	○	○	○	○
Lights and switches*	<ul style="list-style-type: none"> ● Check operation. ● Adjust headlight beams. 	○	○	○	○	○

Engine

2. Inspection and adjustment of engine

2.1 Inspection of cylinder head, intake

And exhaust valve

Preheat the engine, then misfire and unplug the spark plug. Fix pressure gauge into the hole, open the choke and throttle handle, and start for 4-6 times.

Note: Giving a leakage check to the pressure gauge. Rotate the engine until the pressure gauge stop rising. The maximum reading would be greater than 0.7-0.9Mpa

after starting for 4-6 times.

See figure 2-1.



Figure 2-1

Check the valve lash

Note: when adjust valve lash, the engine must be cooled.

(The temperature should be less than 35°C)

Remove the seat cushion and fuel tank, unplug the vision hole cover, round the flywheel of magneto anti-clockwise to aim “T”

At the signal of fore cover on the left.

Note: The piston must be fixed to the dead enter. (Figure 2-2)



Figure 2-2

Remove cylinder valve cover, check the lash between the valve stem by feeler gauge.

Valve clearance: inlet and exhaust valve: 0.05~0.08mm.

See figure 2-3.



Figure 2-3

Loose the lock nut, rotate the adjusting screw until it appears that the feeler gauge be pulled .Then fasten the adjusting screw by valve adjuster, tighten the lock nut and check the valve lash .Afterword install the cylinder valve cover , vision hole cover, the fuel tank and cushion. See figure 2-4.



Figure 2-4

2.2 Inspection of spark Plug

1. Unplug the Spark-Plug cap: remove
The spark plug by box key, look over
To see if spark-plug insulator and
Electrode is damaged or sooting.
If so, see figure 2-5.

2. Check the spark clearance
By feeler gauge whether it
Is between 0.6~0.7mm. Or adjust
The gap, clean incrustation
With spark-plug cleaner and steel
Wire brush and check if
The spark plug sealing
Washer (Figure 2-6).



Figure 2-5



Figure 2-6

item		standard value:mm	limit value:mm
cylinder	bore diameter of cylinder	$\phi 102 \sim \phi 102.03$	$\phi 102.1$
	taper	0.0040	0.005
	out of roundness	0.0035	0.005
	degree of touristy	0.04	0.06
Piston,	external diameter of piston	$\phi 101.95 \sim \phi 101.97$	$\phi 101.92$
	bore diameter of piston pin hole	$\phi 22.002 \sim \phi 22.010$	$\phi 22.010$
piston ring and piston pin	gap between piston pin and piston pin hole	0.007~0.020	0.02
	Piston ring end clearance	Top ring/the second ring	0.25~0.40
Piston ring and piston groove	gap between oil ring and top ring	0.3~0.9	1.2
	gap between top ring and the second ring	0.3~0.07	0.10
	gap between cylinder and piston	0.02~0.06	0.09
	external diameter of piston pin	0.03~0.08	0.09
connecting rod	bore diameter	$\phi 21.995 \sim \phi 21.990$	$\phi 21.96$
	Gap between small end of connecting rod and piston pin	$\phi 22.016 \sim \phi 22.027$	$\phi 22.03$
		0.016~0.033	0.035

3. Swirl the when spark plug and tighten to 18~20N.m by box key ,then fix the spark plug cap when assembling.

2.3 Inspection of cylinder, piston and piston ring

Camshaft lube is injected by a hole of engine body into cylinder, so the hole must not jam. It is necessary to fix the cushion and adjust without dust permeated into the crank case before assembly.

Diagnosing and eliminating of malfunction:

● Emission of black smoke for abrasion of cylinder or piston,

1. Cylinder, piston or piston ring is worn out.
2. The piston ring is not properly assembled.
3. The piston or cylinder wall is scraped.

● **overheated**

1. Excessive incrustation of piston.
2. Blast and abnormal noise.
3. Abrasion of cylinder or piston.

Inspection of cylinder.

1. Check whether the cylinder is damaged.
2. Measure the bore diameter of cylinder at three spots.
3. At the top, the middle and the bottom of the piston stroke .And measure the bore diameter at directions of right-angle intersection.

Repairing limit value:

Out of roundness: 0.005 mm

Taper : 0.005mm

Inspection of piston and piston ring

Measure the gap between piston ring and piston groove.

1. Unplug the piston ring;

Note: It is forbidden to damaging the piston ring when assembling. Check whether the piston and the piston groove is cracked and abraded. See figure 2-7



Figure 2-7

2. Insert piston ring into Cylinder, and measure the End gap. Repairing limit Value: the first ring/the Second ring: 0.5mm



See figure 2-8.

Figure 2-8

Measure the bore diameter of piston pin hole.

Repairing limit value: see figure 2-9



Figure 2-9

3. Measure the external diameter 10mm

Above the bottom of the piston skirt.

Extreme position: The gap between

Cylinder and piston repairing

Limit value: 0.1mm See figure 2-10



Figure 2-10

7 Measure the external diameter of piston pin:

The gap between piston and piston pin:

Repairing limit value: 0.02mm .See figure 2-11



Figure 2-11

2.4 Inspection of crankshaft

Check that whether crank and connecting rod can rotate without stuck and whether the clearance between crank and connecting rod is 0.5~0.6mm. The hop of crank shaft should be 0.05mm. If not so, replace it. See figure 2-12-1, figure 2-12-2.



Figure 2-12-1

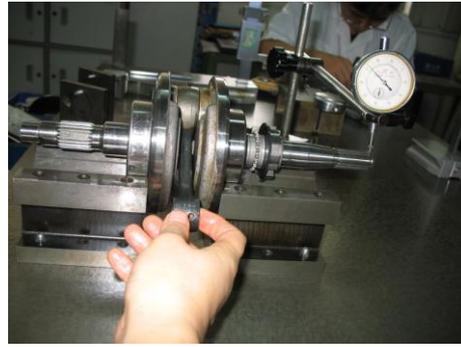


Figure 2-12-2

2.5 Inspection of clutch

The wear condition of shoe block and friction plate: See Figure 2-13



Figure 2-13

2.6 Inspection of carburetor

1、Inspect the idle of carburetor

The engine speed should be 1500 ± 150 r/min 10 minutes after starting at normal idle and will not misfire when briskly accelerate. If not so, rotate the carburetor idle adjusting screw clockwise to raise the idle, anti-clockwise to lower.

When adjusting is unavailable, check

That if there is a jam in
Carburetor idle nozzle or a
Air leakage of intake pipe.
See figure 2-14



Figure 2-14

2.7 Inspection of air filter

- 1、Disassemble the air cleaner, remove cartridge, clean the cartridge with non-flammable cleaning solvent, and then make it dry.

Note: Petrol is forbidden.

2. Dip the air filter cartridge into 20# oil, then take it out and squeeze the excessive oil, assemble it orderly. Impermeability is necessary. See figure 2-15, figure 2-16.



Figure 2-15



Figures 2-16

2. 8 Inspection of oil filter

Cleaning of lubricator oil strainer: remove **clarifier** (Figure 2-17), clean it to ensure a well work- condition. Then fix it up.

**Note: Clean the clarifier
Before injecting oil
Into crankcase.**



Figure 2-17

2.9 Inspection of lubrication system

Lubricant of engine: the vehicle is oiled with lubricant of **APISGSAE10W/40**. Others are forbidden.

Capacity:

1. The capacity is 1.9L after disassembly and assembly.
2. The capacity is 1.8L when fueling up after drain.

Inspection of lubricant: locate the dune buggy on the ground to look over the capacity with dip stick. If the level is lower than the bottom indicator, fuel up with recommended lubricant to the upper indicator.

Inspection of oil pump:

Flow of oil pump:

r/min	1000	2000	3000
L/min	3.78	7.43	10.89

Measure clearance of the top of internal external rotor

Limit value: 0.20mm

2.10 Lubrication of engine

Check the oil level, start the engine and let it running for a few minutes to make it heated and lubricated completely, then misfire. Unplug the dip stick to do cleaning and dip it into the oil case again. Then unplug the dip stick and look whether oil level is lower than the indicator. See figure 2-18

Note: Ensure that the engine is landed by both four wheels in flat ground.

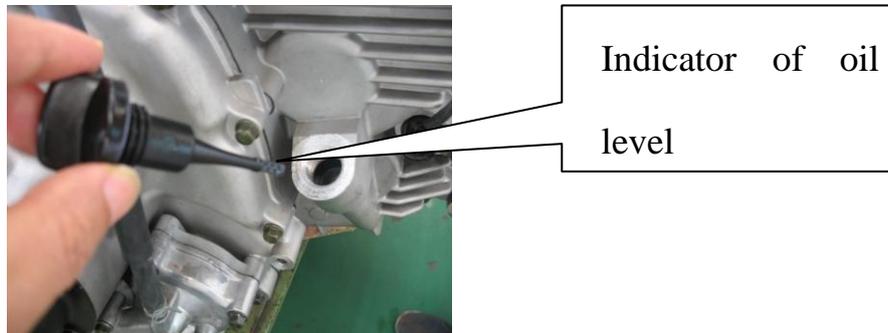


Figure 2-18

2.11 Inspection of cylinder head

1. Check whether the spark plug and valve seat is cracked and whether the cylinder head is out of shape. Examine the flatness of cylinder head by flat or knife edge gauge and clearance gauge.

Repairing limit value:

0.05mm. See figure 2-19

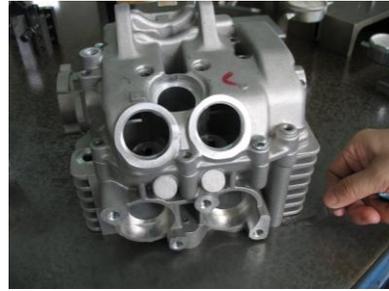


Figure 2-19

2 Remove and examine the width of valve.

Repairing limit value: 2.0mm.

See figure 2-20-1, 2-20-2, and 2-20-3.

If the mating surfaces are coarse, corrode or cannot contact with valve seat normally. replace it.



Figure 2-20-1



Figure 2-20-2



Figure 2-20-3

Measure the width of mating surfaces of valve

Repairing limit value: 1.5mm

If the valve seat is too wide or narrow or cracked, grind it to ensure impermeability.

4、Measure bore diameter of valve guide with internal micrometer and special gauge. At last calculate clearance between valve stem and valve guide.

Repairing limit value: intake: 0.12mm exhaust: 0.14mm

Note: Eliminate carbon in the pipe before measuring.

If the pipe will be replaced, grind the valve seat again.

5、Inspection of valve and valve pipe:

Check whether the valve is bent, burnt or the valve stem is worn out.

Check the motion of valve and measure external diameter.

Repairing limit value: intake: 5.95mm exhaust: 5.95mm See figure 2-21.

Fix valve into guide and look over the motion.

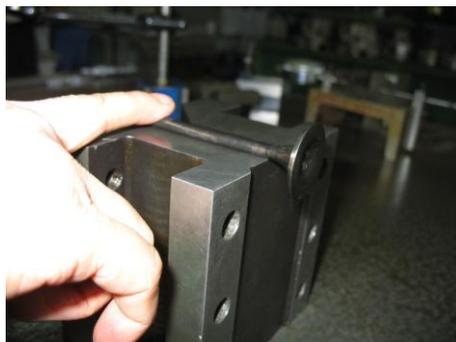


Figure 2-21

Inspection of valve spring

Measure the free height and squareness

Repairing limit value : (intake and exhaust)

See figure 2-22-1, 2-22-2

Free height of inlet valve spring: 32.5mm, squareness:

0.10mm

Free height of exhaust valve spring: 36.2mm squareness:

0.10mm



Figure 2-22-1



Figure 2-22-2

6、Examining lifting distance of breaker cam.

Measure the length of fillet with micrometer and check

If it is worn out.

Repairing limit value: inlet lifting distance: 5.73mm

Exhaust lifting distance: 6.53mm. See figure 2-23.



Figure 2-23

7、 Check whether the crankshaft journal is worn out and measure the external diameter of crankshaft journal.

Repairing limit value: $\phi 22.939\text{mm}$

Inspection of rocker arm.

Check whether the rocker arm is worn out, or damaged and whether the oil hole is blocked.

Note: If there is a rocker arm to be replaced, examine the peak of breaker cam

Measure the bore diameter of rocker arm

Repairing limit value: $\phi 12.038\text{mm}$. See figure 2-24



Figure 2-24

7. Inspection of rocker arm shaft.

Examine if the rocker arm is worn out or cracked.

Measure the external diameter of rocker arm shaft with micrometer.

Repairing limit value: $\phi 11.96\text{mm}$

The repairing limit value of clearance between rocker arm shaft and hole: 0.05mm , See figure 2-25



Figure 2-25

3. Disassembly of engine

3.1 cylinder head and block

① Unplug the intake pipe and spark plug. (Figure 2-26-1,



Figure 2-26-1

②Remove cylinder valve cover, cam chain wheel cover and

Figure 2-27-1

③remove valve chain wheel Figure 2-27-2



Figure 2-27-1



Figure 2-27-2

④remove lower rocker arm shaft. See figure 2-28

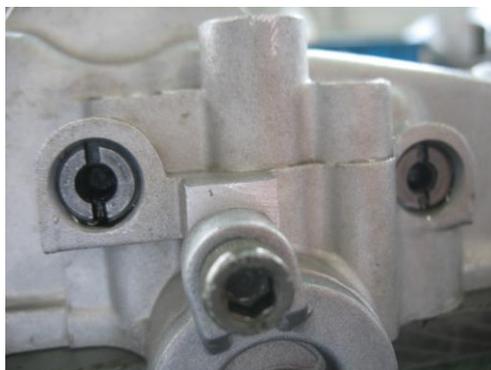


Figure 2-28

⑤Remove vision hole cover of left front cover . See figure 2-29



Figure 2-29

Alignment: adjust these two " ● " symbols of the cam chain wheel to be at the same level with cylinder cover.

Alignment of top dead center:

Rotate the crankshaft with "T" sleeve anti-clockwise until these two " ● " symbols of the cam chain wheel to be at the same level with cylinder cover .That is to say the piston of cylinder is at the top dead center.

Inspection of compression top dead center:

See figure 2-30-1 and figure 2-30-2.



Figure 2-30-1



figure 2-30-2.

When inlet valve spring rise, rotate the crankshaft until the “T” indicator on the magneto rotor to be at the same level with the center of vision whole cover of left front cover. That is to say the piston is at the compression top dead center and there is valve clearance in these four rocker arms of cylinder head. See figure 2-31



Figure 2-31

Remove chain tensioner adjuster. See figure 2-32.



Figure 2-32

Remove the cylinder head

Loosen the bolt by intersection manner before remove the bolt.

See figure 2-33.



Figure 2-33

Remove
Adjuster cotter sealed ring
Of cylinder head tensioner

Adjuster guide board

See figure 2-34.



Figure 2-34

Remove cylinder block seal
Adjuster cotter
Sealed ring of cylinder head
See figure 2-35.



Figure 2-35

3.2 piston and connecting rod

①remove the piston snap ring

Note: block the crankcase breather with a piece of cleaning cloth to avoid the snap ring falling into the case. See figure 2-36.



Figure 2-36

②remove piston pin and piston

Clean the buckle of piston and piston pin hole to facilitate the removing of piston pin.

Note: it is forbidden to knock the piston pin with a hammer. See figure 2-37.



Figure 2-37

3.3 starting mechanism

3.4 sensor

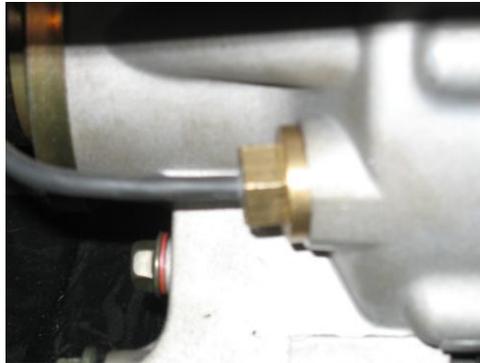


Figure 2-38

3.5 left crankcase cover

See figure 2-39

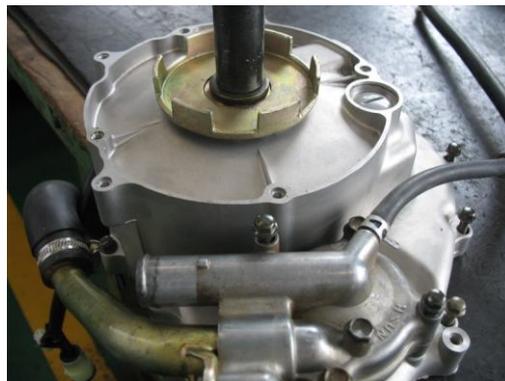


Figure 2-39

3. 6 magneto

Remove the stator coil

Remove the pulse coil

Remove the stator with rotor

Stripper. See figure 2-40.



Figure 2-40

Remove the woodruff key. See figure 2-41



Figure 2-41

3.7 oil pump

Remove the bolt of oil pump cover .See figure 2-42.

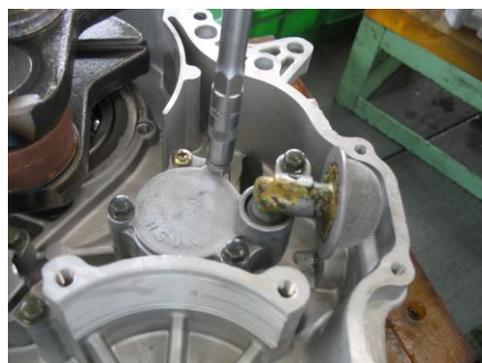


Figure 2-42

Remove right cover
.See figure 2-43.



Figure 2-43

Remove the right support frame, clutch pulley disc .See figure 2-44-1, figure 2-44-2, figure 2-44-3.

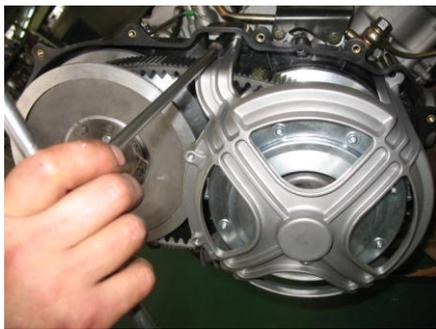


Figure 2-44-1

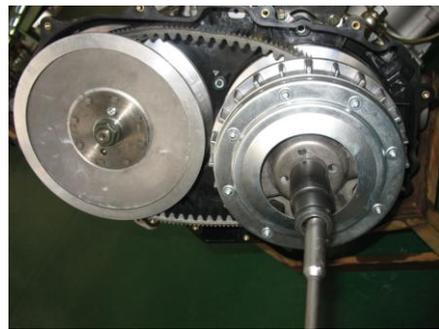


Figure 2-44-2

Figure 2-44-3



3.8 clutch

①remove the clutch

Remove bolts. See figure 2-45.



Figure 2-45

Remove the clutch shoe
Block and clutch cover.
See figure 2-46



Figure 2-46

Check the wear condition
Of the clutch shoe block
And clutch cover.
See figure 2-47.

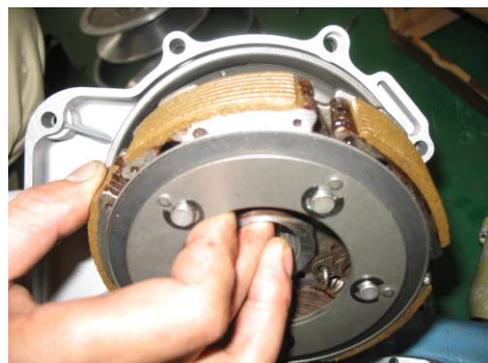
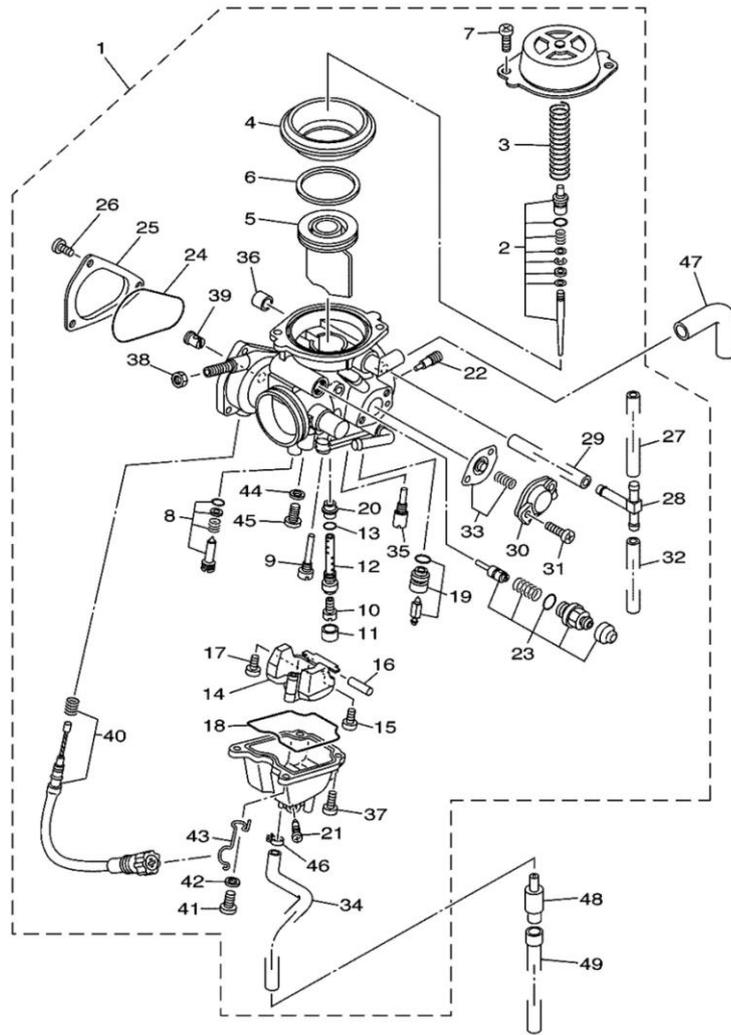


Figure 2-47

3.9 carburetor

3.9.1 Structure of carburetor



1. carburetor assembly 2.oil needle component 3.Plunger spring 4. Big diaphragm 5.Plunger 6.Diaphragm circlip7.Screw on upper cover 8.Mixture ratio adjusting screw component. 9 .idle metering jet 10.High speed jet 11.Liner 12.Foam pipe 13.O-ring of foam pipe 14.Float 15. Screw M4×816. Float pin 17.Big screw 18.Float seal ring 19.Fuel inlet valve component 20.High speed jet 21.Drain screw 22.idle metering air jet 23.Enriching Plunger component 24.Seal ring of external shaft cover 25.External shaft cover 26.Screw M4×8 27.Suction pipe A 28.T- plastic pipe 29.Suction pipe B 30.ACV valve diaphragm cover 31.Screw M4×12 32. Suction pipe C 33.ACV valve diaphragm component 34.Fuel inlet pipe 35.Starting jet 36.Dust-proof cover 37.Screw 38.Nut 39.accelerator pull cable locating dowel loop 40.adjusting screw component 41.Screw 42. Washer 43.Fixing clamp 44.Washer 45. Screw 46. Clip 47.Robber pipe 48.Non-return valve 49.Flood pipe

3.9.2 Inspection and adjusting the carburetor

Decomposition

1. Remove the evacuated chamber cover
2. Spring
3. Piston valve



Remove permanent seat

Spring

Spring block

Oil needle

Remove pilot screw

Spring

Washer



Note: the pilot screw is set at maximum performance. Before removing pilot screw, note the revolutions of screw in order to fix it back.

Remove float chamber cover

Washer

Remove float pin

Float

Triangular needle

Remove the cover

Nut

O-rings

Spring

Starting plunger

Pilot jet

Check the carburetor body

Float bowl

Oil passage

Gas-fouling block→cleaning

Chap/damage→replace the carburetor assembly

Cleaning steps:

Check the float

damaged→replace

Check the float triangular needle

Triangular needle seat

O-rings

Filter gauze

Damaged/worn out/block→replace

Check the piston valve

crack→replace

Diaphragm

rupture→replace

Piston valve oil stick

Bent/worn out → replace

Note: If the piston valve is damaged, inject the petrol into valve. Replace it when there is oil leakage.

Check the main jet

Main jet

Pilot jet

Pilot screw

O-scrapers

Pilot jet

Bent/worn out/damaged → replace

Gas-fouling block → blow with compressed air

Chassis

Automobile body fastener locking moment of force

Locking spare part	Fastener specification	Force (N. m)	Note
F/Rocking shaft and frame	M10	45	
Disk and the wheel hub	M8	23	

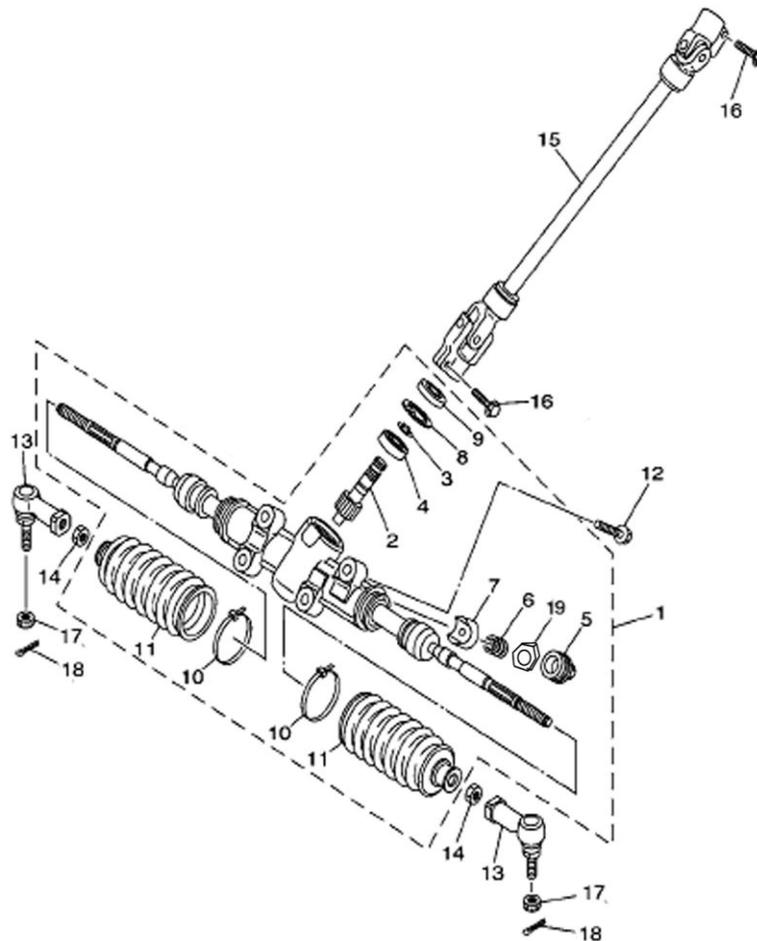
F disk and the front wheel steering knuckle	M8	33	
R disk and the rear wheel steering knuckle	M10	45	
F/R wheel and the wheel hub	M10	55	
Direction column and direction stylobate	M14	60	
Inside and outside direction column and direction column	M8	33	
Direction and direction column	M8	33	
F/R bridge gear box and frame	M10	55	
Front wheel hub and drive shaft	M18	120	
Engine and connecting board	M6	10	
The setting base of the engine and the frame	M10	45	
The engine and the setting base	M10	45	
King pin ball head	M10	45	
F/R shock absorber and and frame/rocker shaft	M10	45	
Rear steering knuckle and	M10	45	

Other uses	M8	23	
Other uses	M6	10	
Other uses	M5	6	

(The behind torsion revise follow to this table)

4.1 Direction system

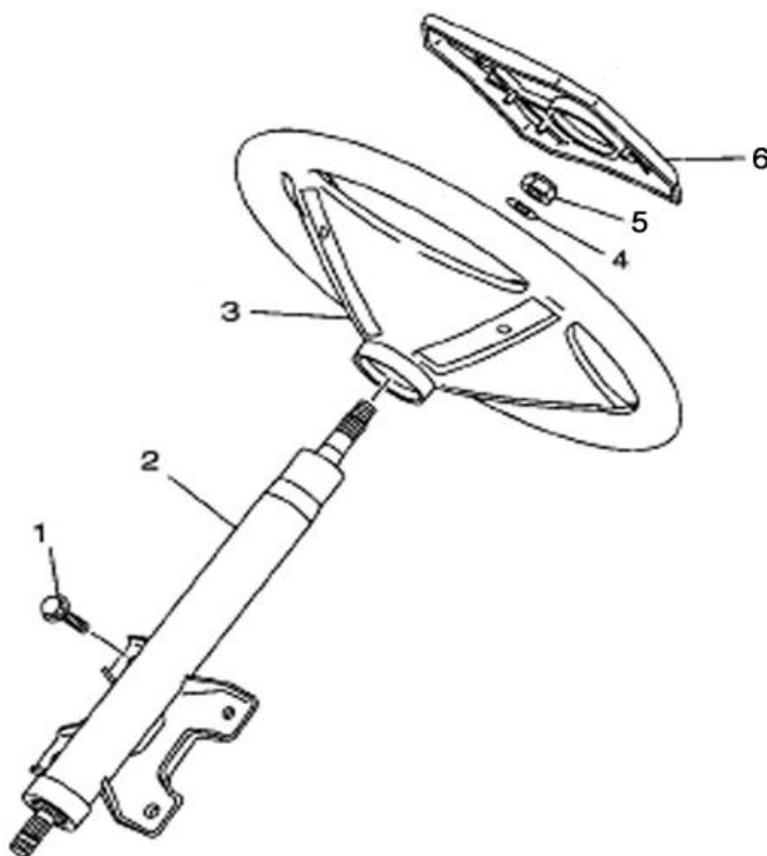
The structure of the steering



1、 Direction column groupware 2、 Azimuth training gear drive gear 3、 Spring elastic ring 4、 Seal packing collar 5、 Regulator cover 6、 Compression spring 7、

Compresses the pad 8, gasket 9, gasket 10. The rubber dirt-proof boot holds the band 11, Left rubber dirt-proof boot 12, Flange bolt M10×30 13, Azimuth training gear ball head 14, tension bar locking nut M10 15, Changes the drive shaft part 16, Flange bolt M8×20 17, Slot nut M12 18, 2 Cotter pin3.2×32

The structure of Steering wheel part



1、 Flange bolt M8×16 2、 mast jacket part
 3、 Steering wheel part 4、 gasket $\phi 12.5$ 5、 Flange self-locking nut M12×1.25 6、 Plastic center lid

Daily inspection

- 1、 Inspect it whether has the crack and the distortion
- 2、 Inspect the ends ball whether becomes less crowded; the dustproof rubber set does appear the aging, bursts.
- 3、 Inspects the steering wheel whether appears the crack, flexible and moves.
- 4、 Check the steering wheel to rotate whether nimble, do not have stagnation.
- 5、 Inspects the torque of the steering wheel whether obviously increases.

Attention

The steering force cutting which exerts to transfers in steering wheel outflow boundary is smaller than 245N.

- 6、 Inspects the reverse running clearance whether does surpass the limited stipulation.

Attention

The reverse running clearance is smaller than 30mm.

If find some problems in the daily inspection, it should be service immediately to ensure the normal work of the steering system.

Warning: Any quality flaw of the steering system can cause the serious damage to the driver or send its death.

4.1.1 Dismantle, inspect, maintain and reinstall the steering system

4.1.1.1 Dismantle the parts of the steering wheel

- 1、 Takes down the plastic center lid
- 2、 Takes down the steering wheel fixing nut, the gasket.

Attached figure 4-1-1.



Attached figure 4-1-1

1. gasket ϕ 12.5

2. Flange self-locking nut M12 \times 1.25

3.) Use the special tools (attached figure 1.2.14) pull out the steering wheel. (Attached figure 1.2.14)



Attached figure4-1-2

1. Steering wheel

4.1.1.2 Inspect the steering wheel

- 1、 Inspects the steering wheel whether has the hidden danger which the fissure and possibly breaks, if has, must replace the steering wheel.



Attached figure4-1-3

1. The framework of the steering wheel
- 2、 Inspect fastens nut of the steering wheel whether does have flaw and fissure, if it is, must replace. (Attached

figure4-1-3)

3、 Inspects the grip part which is covered by the foam whether has damaged, if it is, must replace a new steering wheel

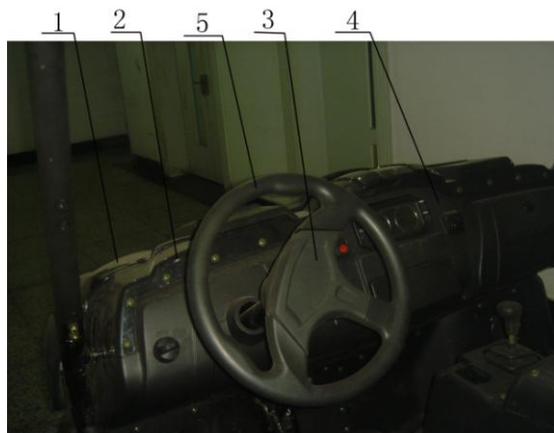
4、 Check the internal spline between the steering wheel and steering column whether have damaged, if the attrition is serious, must replace the steering

Wheel.

The tolerance clearance between the internal spline on the steering wheel and outer spline on the steering column is smaller than 0.1MM.

4.1.1.3 Dismantle the steering column parts

1、 Takes down the parts of the front panel (engine covers), the connection covers part, the display board and the steering wheel center covers (attached figure 4-1-4).



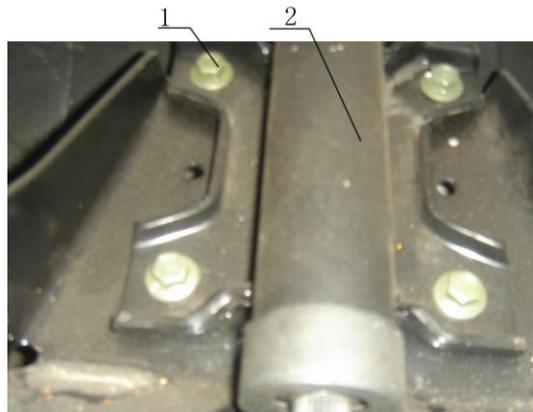
Attached figure 4-1-4

1. Front panel
2. Connecting cover parts
3. **Steering wheel center covers**
4. Panel
5. Steering wheel

2、 Take down the steering wheel (Attached figure4-1-4)

3、 Loose the M bolt which is on the steering drive axle, the top of spinet, draws out the cross gimbal.

4、 loose the fastening four piece M8×16bolt on the steering column, take down the steering column from the frame. ((Attached figure4-1-5)

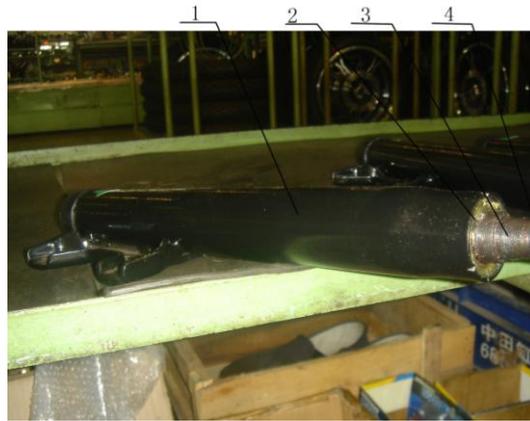


(Attached figure4-1-5)

1. Flange nut M8×16
2. **Steering column parts**
- 3、 Frame

4.1.1.4 Inspection and maintain the steering column parts

(Attached figure4-2-6)



Attached figure4-2-6

- 1 steering column tube
- 2. Bearing
- 3. Central axis of the steering shaft
- 4. Spline

1、Inspect the central axis of the steering shaft whether flexible and moves. If does, dismantle and check the axis, bearing and retaining ring whether ware or damaged, according to the inspection situation to instead the parts.

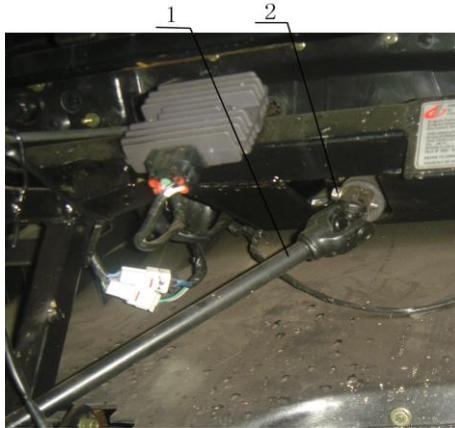
2. Check the two ends of the spline on the central axis whether is wear out, if so, instead the central axis.

3、Check the spline in the tow ends of the central axis whether have wear, if dose, instead the central axis.

4、Inspect the steering column tube and welding line of the branch whether have cracked and corrosion, if it does, instead the steering column tube

4.1.1.5Dismantle the steering drive axle

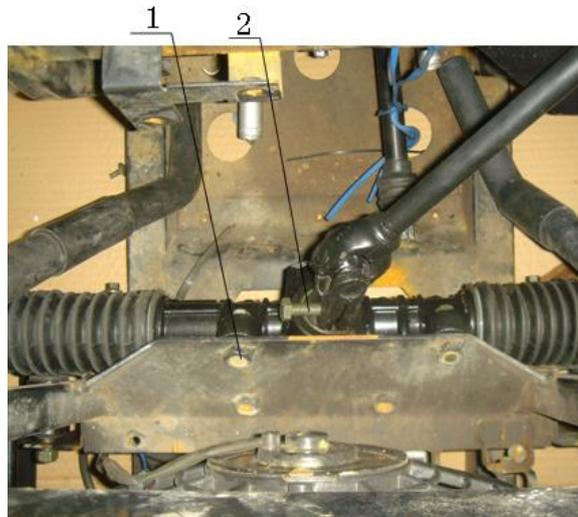
1、Loose the clamp bolt in the cross gimbal, internal spline on the top of the steering drive axle, pull out the top of the steering drive axle. (Attached figure4-1-7)



Attached figure4-1-7

1. The steering drive axle
2. Flange bolt M8×20

2、Loose the clamp bolt in the cross gimbal, spline on the bottom of the steering drive axle, pull out the lower of the steering drive axle. (Attached figure4-1-8)

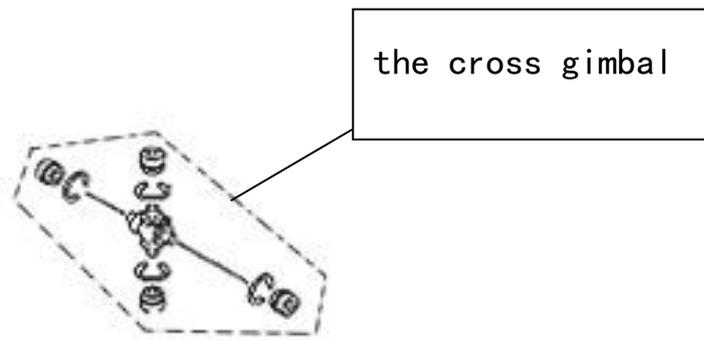


- 1 Flange bolt M8×16
2. Flange bolt M8×20

4.1.1.6 Inspect and maintain the steering drive axle

1、Inspect the cross gimbal turn agility with no stagnation.

If does, dismantle and check the cross axis, needle bearing, and the bearing hole on the cross gimbal fork whether have wear and corrosion, to instead the parts based on the check. (Attached figure4-1-9)



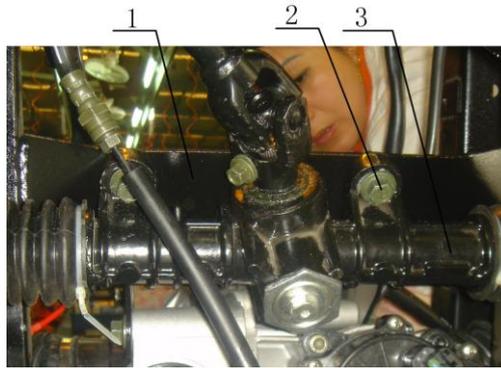
Attached figure4-1-9

Attention Install the cross gimbal, dab the lithium grease on the surface of the bearing.

2、Inspect the transmission shaft whether have cracked and distortion. If it does, instead the parts.

4.1.1.7 Dismantle the direction machine part

1、Loosen the four bolts, dismantle the direction machine from the frame. (Attached figure4-1-9)



Attached figure4-1-9

1. Frame jointing board
2. Connecting bolt
3. Direction machine

2、Loose the open-groove nut on the L/R turning steering knuckle, take down the steering tension rod from the steering knuckle.

(Attached figure



Attached figure4-1-11

1. Cotter pin 3.2×32
2. Open-groove nutM12
3. Direction machine ball
4. Steering knuckle

4.1.1.8 Inspect and maintain the direction machine parts

1、 Inspect the drive of the gear whether angle.

If it is not agile, dismantle the direction machine to see the gear and rack have wear, instead the parts according to the inspection.

2、 Whether the inspection gear drive reverse gap does surpass the rating

If it does, adjust the gap and the bolt.

If cannot reduce the gap through the adjustment, instead the gear, rack

3、 Inspects the dustproof rubber set whether gets older and dehiscence. Replace the older and dehiscence rubber wrap

4、 Inspect the tow balls on the steering tension rod whether rotates nimbly with no loose. If it is not, replace the ball.

5、 Inspects the dustproof rubber set of the ball whether gets older and dehiscence. Replace the older rand dehiscence rubber wrap.

6、 Inspect the steering tension rod whether have cracked and distortion. If it does, through the sizing repair

Warning: Do not use the welding to repair the steering tension rod.

Attention

1、 When replace the rubber set of the ball, must enter 1/2 volume in lithium grease in to the rubber.

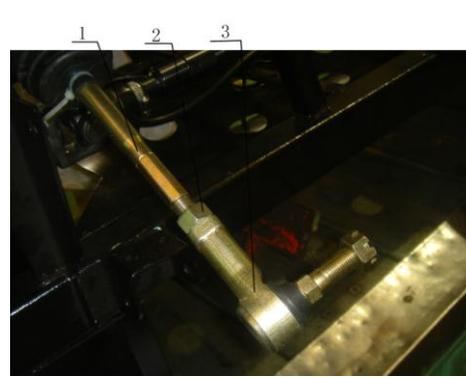
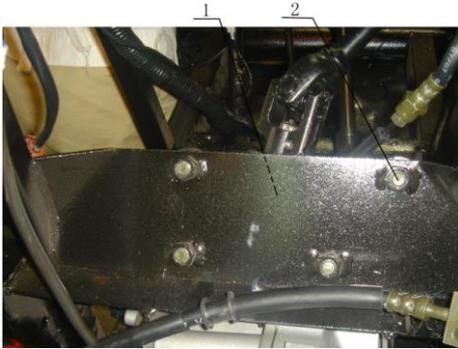
2、 When replace the direction mechanism, cleaning all the parts, and daub the lithium grease in to the movement.

Attention: continue to use
the hidden danger Ball
pin may causes the serious
accident or the death.

4.1.1.3Reinstalls the steering system parts

1. Connecting the direction machine with four pieces bolt M10 ×30 on the frame, then use tow pieces of locknut to connect the direction machine ball and the rod. (Attached figure4-1-12-1)

Figure4-1-12-2



Attached figure4-1-12-1

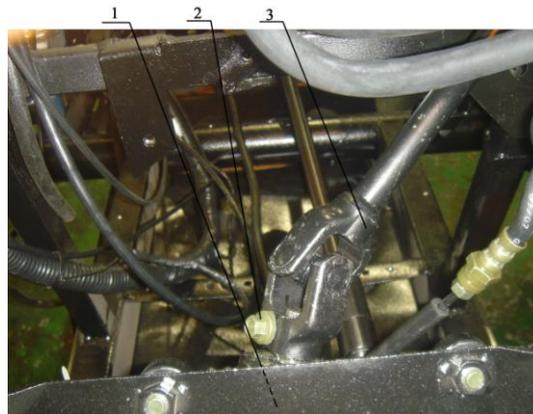
figure4-1-12-2

- | | |
|----------------------|---|
| 1. Direction machine | 1. Tension rod |
| 2. Set bolt | 2. Locknut 3. Direction machine ball |

M10*30Bolt tight of force, 40N.m
M10Nut tight of force, 36N.m

2. Connecting the steering transmission shaft and direction machine with one piece of flange boltM8×20.

(Attached figure4-1-13)



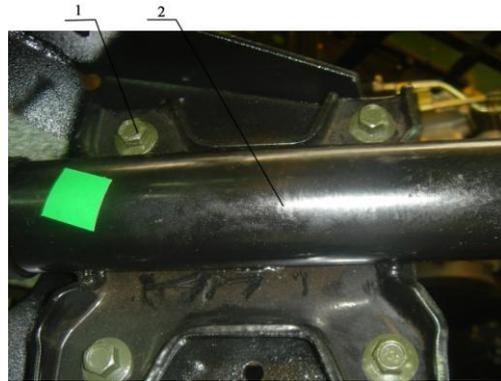
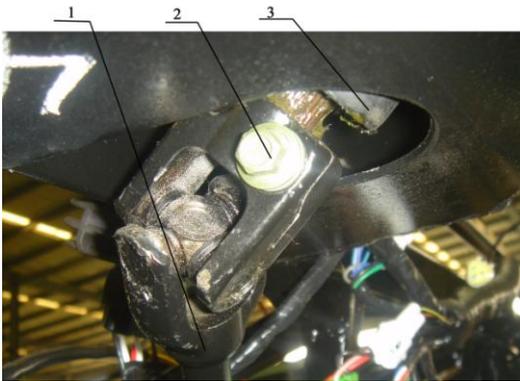
Attached figure4-1-13

1. Direction machine
2. Hexagon flange nutM8x20
3. Steering transmission shaft

M8*20 Bolt tight of force, 32N.m

3. Connecting the steering transmission shaft and steering

column tube with one piece of flange bolt M8×20, then use four pieces of flange nut M8×16 fix the steering column tube on the frame. (Attached figure4-1-14-1 figure4-1-14-2)



Attached figure4-1-14-1

figure4-1-14-2

1. Steering transmission shaft
1. Hexagon flange nut M8×12
2. Hexagon flange nut M8×20
2. Steering column tube
3. Steering column

M8 Bolt tight of force, 32N.m

4. Use one piece of flange self-lock nut M12×1.25 fix the steering wheel on the steering column tube, then cover the direction column plastic center lid. (Attached figure4-1-15)



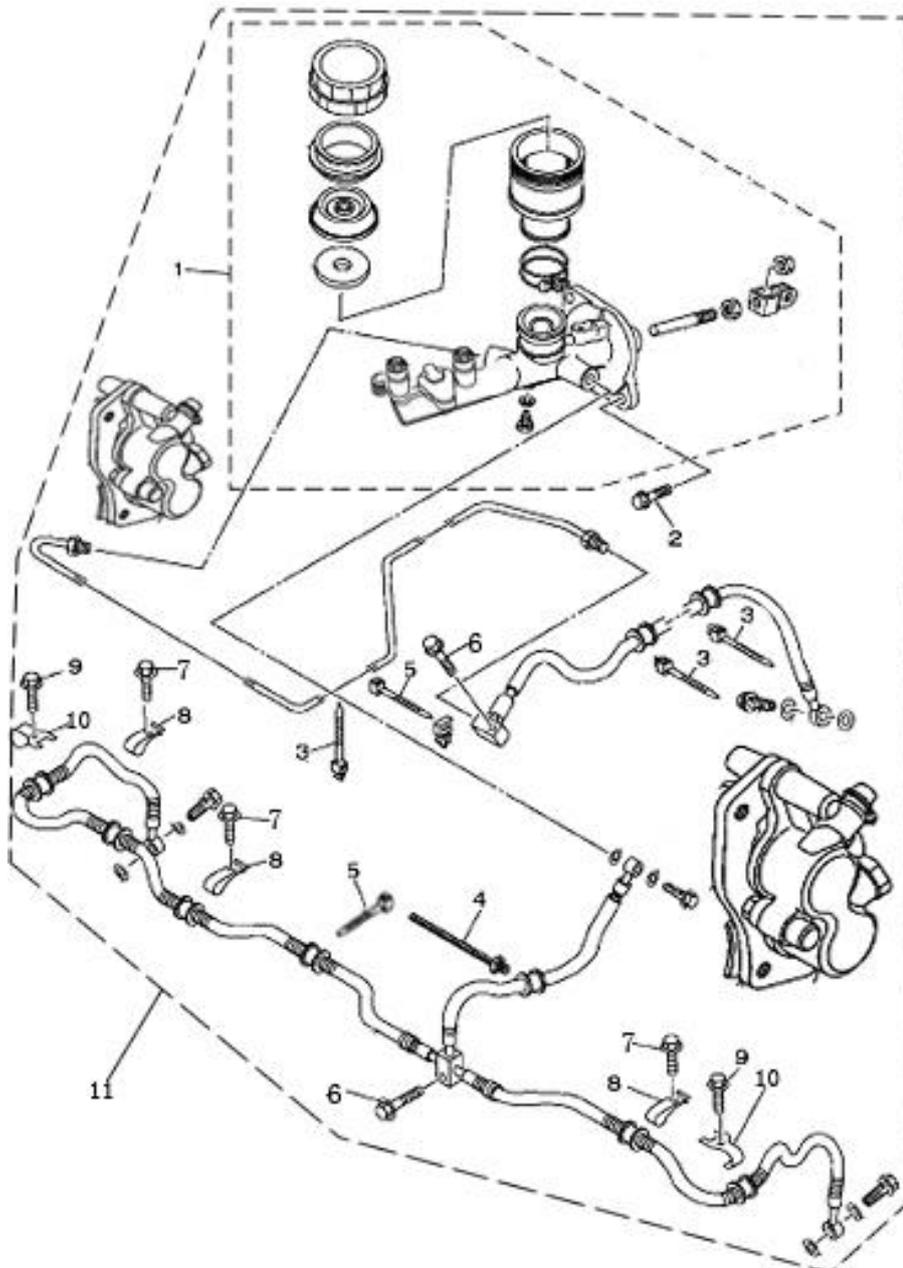
Attached figure4-1-15

1. Flange self-lock nutM12×1.25
2. Steering wheel

Steering wheel tight of force, 40N.m

4.2 Brake system

Front Disk Brake components

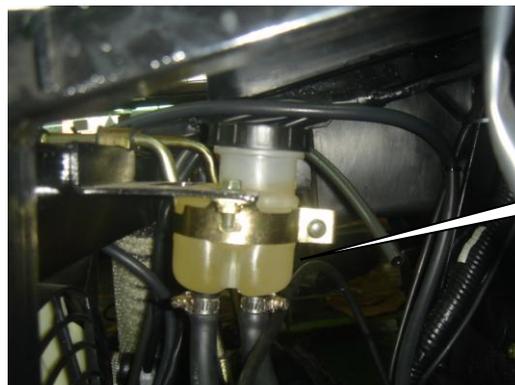


1、 Brake pump assembly 2、 flange boltM6×20 3、 tape3 (L=150) 4、)
tape4 (L=200) 5、 tape3 (L=150) 6、 flange boltM6×30 7、 flange boltM6
×20 8、 band 9、 flange boltM6×20 10、 brake tube seat 11、 **Brake components**

4. 2. 1 Preparation for inspection before the maintenance of the
brake system.

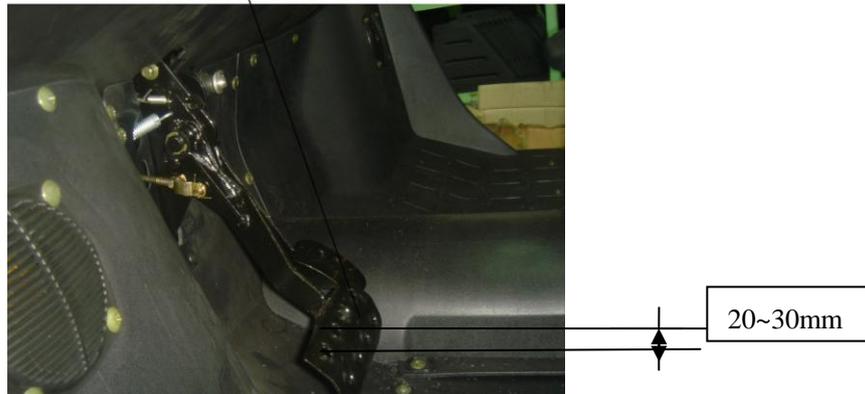
。 Brake system is crucial to the life safety of the operator
and therefore must be periodically inspected and maintained.
This vehicle uses the double return route hydraulic pressure
disc brake system. Please follow the tips of inspection as
below.

a) To check the amount of liquid in the oil cup. If
it is lower than the minimum mark (Attached
figure4-2-1), refill the box with the same type of fluid
as was recommended by the manufacturer, to ensure the
fluid level is higher than the minimum mark.



Attached figure4-2-1

b)) The brake pedal should be kept between 20mm-30mm,
Otherwise, please adjust the screw to meet required
travel distance. (Attached figure4-2-2)

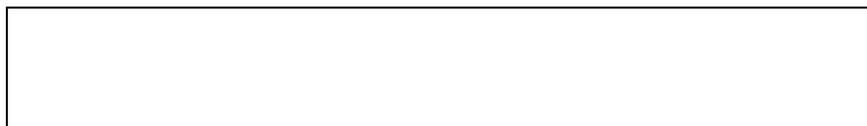


Attached figure4-2-2

1. Brake pedal

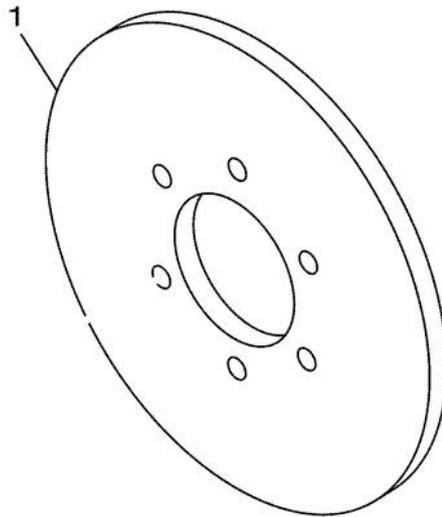
Inspect the brake pedal does maintain the certain
counter-tension (Attached figure4-2-2)

When checks disk brake plate, the saved liquid in the oil cup
will pour automatically into the pressure pipe and the liquid
level along with it to reduce, the periodic inspection the disk
brake plate liquid volume will be an important project.



Attention, must use DOT4 Brake Fluid

5. Periodical inspection of the wear condition of rear disk brake plate is also necessary. Disk brake plate must be replaced depending on its wear condition. (Attached figure4-2-3)



Attached figure4-2-3

1、 Disk Brake

6. Disk brake plate uses hydraulic pressure of the brake fluid. Therefore, fuel pipe must be periodically inspected and replaced.

Inspection method: If the oil tubing has the aging, crack or

Distortion, must replace the oil tubing.

4.2.2 Disassembly, inspection, maintenance and assembly of the hydraulic brake system.

4.2.2.1 Disassembly of front disk brake plate and the brake plate clip parts.

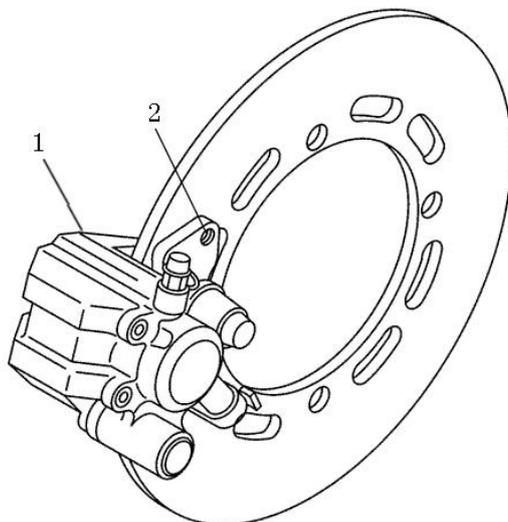
1. Take down the front wheel parts (Attached figure4-2-4)



Attached figure4-2-4

1. Conical Nuts M10

2. Loose the tow pieces of bolts fixed the brake plate clip and take down it. (Attached figure4-2-5)

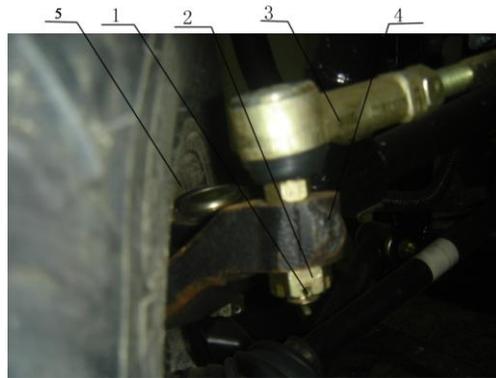


Attached figure4-2-5

1. Brake plate clip
2. Bolt

3. Sequently remove the cotter pins, open-groove nuts, cushion and front wheel hub from the front wheel shaft.

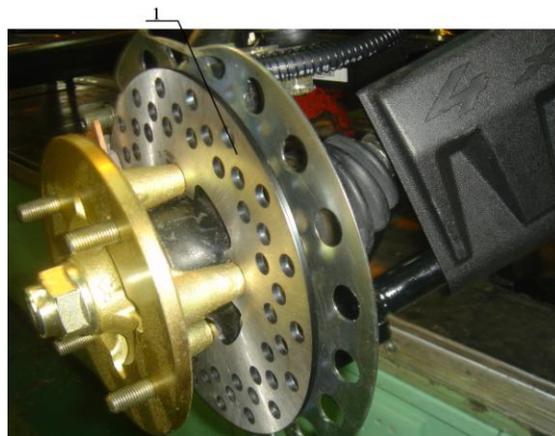
(Attached figure 4-2-6)



Attached figure 4-2-6

1. Cotter pins 3.2×32
2. Open-groove nut M12
3. Direction machine ball
4. Front Sheep horn
5. Front wheel hub

4、 Take down the brake plate from the front wheel hub. (Attached figure 4-2-7).

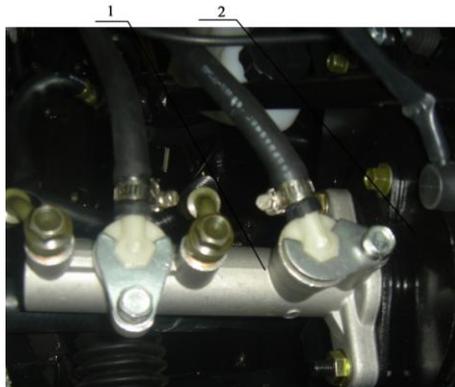


Attached figure4-2-7

1. Front disk brake plate

4.2.2. Dismantle the disk brake pump

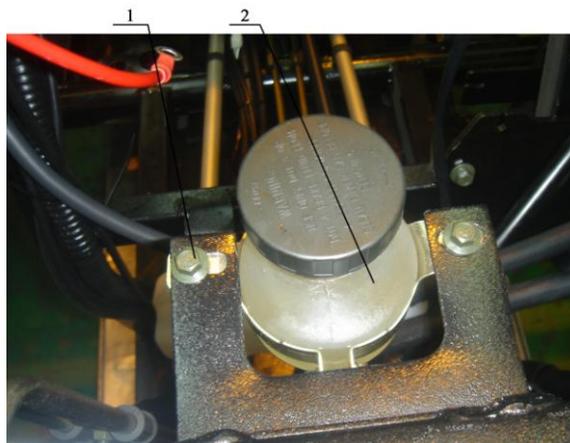
1. Dismantle the disk brake pump installment place and take down the disk brake pump unit. (Attached figure4-2-8)



Attached figure4-2-8

1. The disk brake pump
2. The disk brake pump installment place

2. Loosen the bolt M 6×12 which fixed the tighten disk brake oil cup, and take down it. (Attached figure4-2-9)



Attached figure4-2-9

1. Hexagon BoltM6×12
2. Disk brake oil cup

4.2.2.3 Dismantle the rear brake plate clip and the rear disk brake plate

1、Dismantle the rear wheel parts (Attached figure4-2-10)

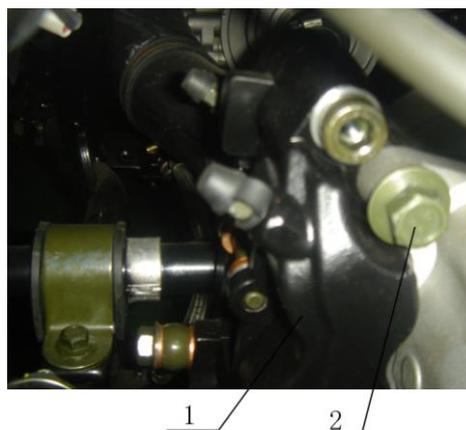


Attached figure4-2-10

1. Conical Nuts M10
2. Wheel hub

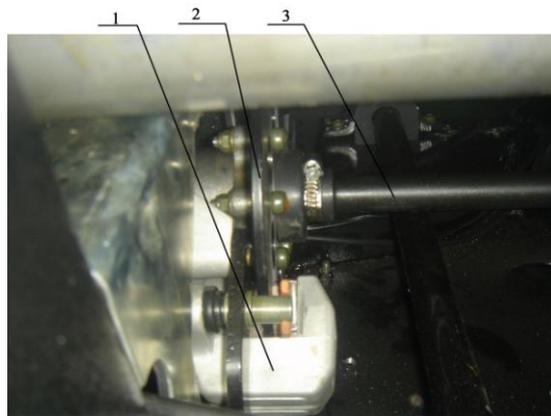
2、Remove rear disk brake clip from the rear bridge gearbox.

(Attached figure4-2-11)



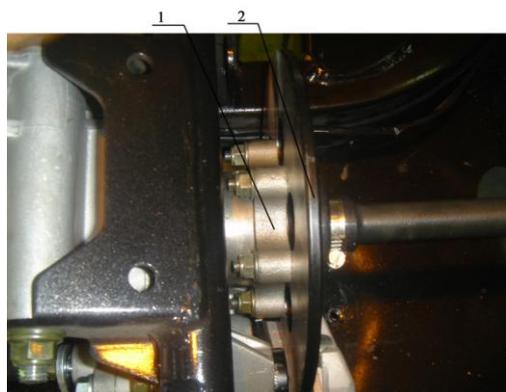
Attached figure4-2-11

- 1、Rear Disk Brake Clip
- 2、Hexagon BoltM10x30
3. Loose the rear bridge gearbox on the frame, take down the middle transmission shaft parts. (Attached figure4-2-12)



Attached figure4-2-12

1. Disk Brake Clip
2. Disk brake plate
3. Middle transmission shaft
4. Take down the disk brake plate installment place from the rear bridge gearbox. (Attached figure4-2-13)



Attached figure4-2-13

1. The disk brake plate installment place
 2. The rear disk brake plate
5. Dismantle the disk brake plate from the installment place (Attached figure4-2-14)

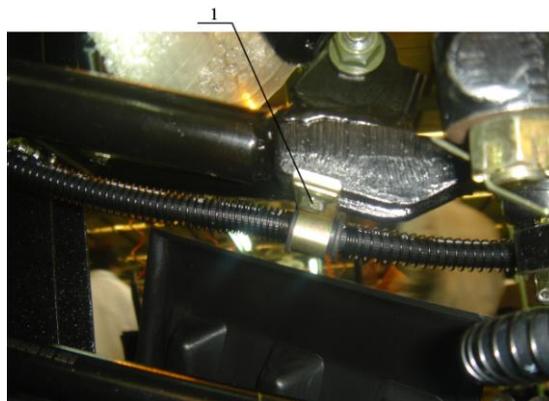


Attached figure4-2-14

1. Rear disk brake plate

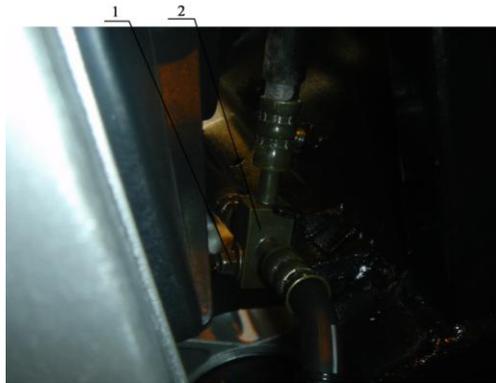
4.2.2.4 Dismantle the disk brake vita

- 1、Loose the vita fixed nut on the front arm shaft and take down the front vita. (Attached figure4-2-15).



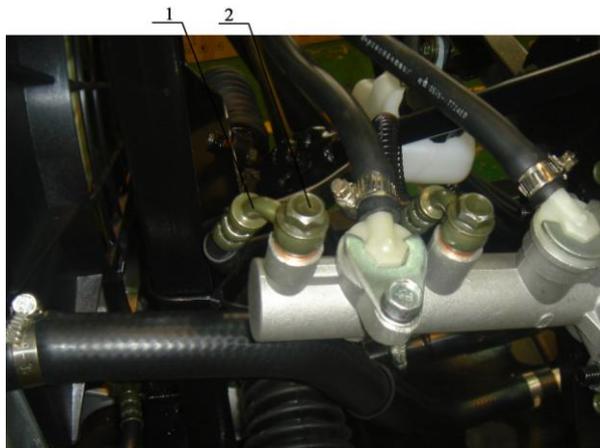
Attached figure4-2-15

1. Hexagon BoltM6×12
2. Loosen one piece of nut, which fixed the three Contacts tubing, and then take down it. (Attached figure4-2-16)



Attached figure4-2-16

1. Hexagon flange Bolt M6 × 20
2. Three Contacts tubing of the disk brake
3. Loose one piece of M nut, which fixed the right fuel pipe bracket on the frame and take down the fuel pipe. (Attached figure4-2-17)

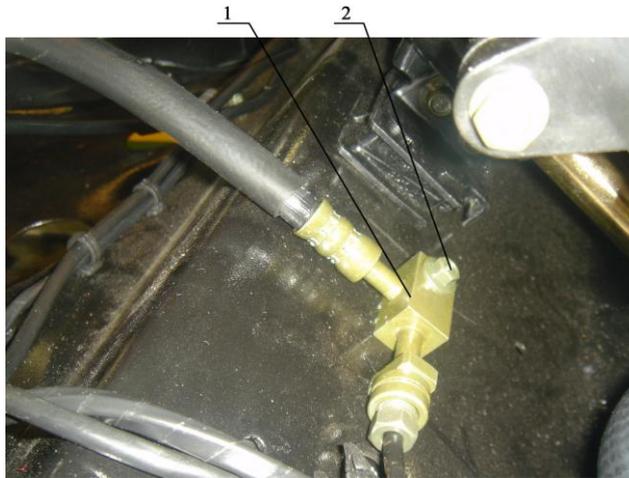


Attached figure4-2-17

1. Connecting bolt
2. Rear disk brake vita

4、 Loosen one piece of M nut which fixed the three contacts tubing of the rear fuel pipe and take it down.

(Attached figure4-2-18)



Attached figure4-2-18

1. Two tubes of the disk brake
2. Hexagon flange Bolt M6 × 20

5、 Break out the hydraulic brake system from the bodywork.

4.2.2.3 Inspect and maintain the hydraulic brake system

1. Inspect the brake oil cup whether have crack and leak oil, if so, replace the back oil cup.

2、 Inspect all fixed nuts on the two ends of the fuel

pipe whether become flexible and damaged

Maintain method; fix the flexible nut, instead the damaged nut.

Locking Torque: 30N.m

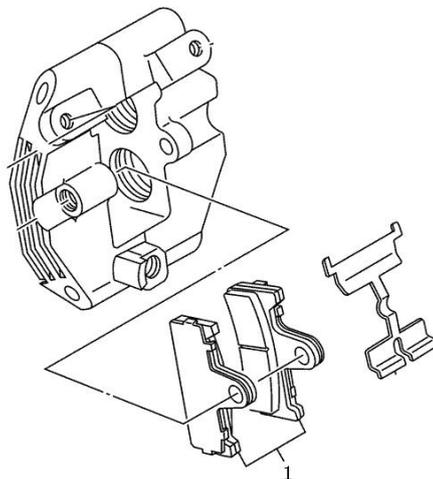
3、 Check all Fuel Pipes for deterioration, distortion, crack, wear and other hidden defects.

Maintain method, instead the fuel pipes with problems.

4、 Check the Brake Plate Clip for distortion, crack, rust and stuck.

Maintain method, instead the brake plate with problems.

5、 Inspect the Disk Brake Shoe for wear condition. Brake shoe must be replaced when worn out. (Attached figure4-2-19)



Attached figure4-2-19

1、 Brake Shoe

Attention: Brake shoe must be replaced

When the thickness is less than 1mm

6. Inspect the Brake Shoe for maximum wear, distortion and crack, in which case it must be replaced.

Attention, 1. The standard thickness of the front disk brake plate is 4mm. Brake shoe must be replaced when the thickness is less than 3.5mm.

2. Replace the brake shoe when it is distortion and crack.

Attention: 1. The standard thickness of disk brake plate is 7.5mm. Disk brake plate must be replaced when the thickness is less than 6.8MM.

2. Replace the disk brake plate when it is distortion and crack.

4.2.2.4 Assembly of front Brake System

Use two nylon tape connect the fuel pipe clip with both left and right higher front shaft arms.

Attention: Fuel Pipe must avoid physical contact with other components in movement.

Fix the Disk Brake Plate onto the Front Wheel Hub with four

pieces of M Bolts.

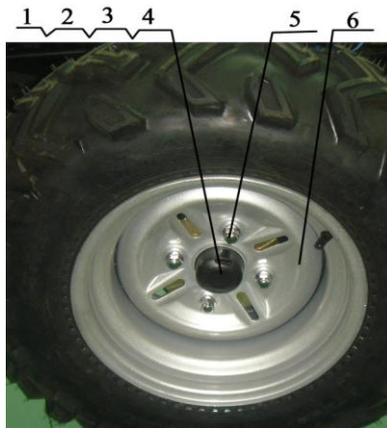
Attention: grease the bolt with thread glue when fastening.

Fastening Torque of the Bolt: 22 N.m -28N.m

3、 Fix the Front wheel Hub onto the Front Wheel Shaft with gasket, open-groove nuts and cotter pins.

(Attached Figure 4-2-20)

Fastening Torque of the open-groove nut , 50 N.m -60N.m



Attached Figure 4-2-20

1. Front Wheel Shaft
2. Gasket
3. open-groove nut

4. Cotter pin 3.2x32

5. Conical Nut M10

6. Front wheel Hub

4. Fix the Plate Clip onto Front Turning Joint with four pieces of M10×22 Bolts.

Fastening Torque: 18 N.m --22N.m

5. Assemble Front Wheel Components onto Front Wheel Hub with four pieces of GB/T802M10 Conical Nuts.
(Attached Figure 4-2-20)

Fastening Torque of Conical Nut: 50 N.m -55N.m

6. Fix Front Disk Brake Pump onto the frame with two pieces of M10×55 bolts.

Fastening Torque of the bolt, 40N.m

Attention: Do not operate the vehicle immediately after assembling the brake system. Please apply the Brake Lever several times to fully engage the Disk Brake Plate and have the Brake Fluid circulating before riding the

vehicle.

7. Fix Disk Brake Plate onto the Bottom Seat with six pieces of M8 Bolts.

Attention, Grease the bolt with thread glue when fastening

Fastening Torque of bolt: 22 N.m -28N.m

8. Mount the Bottom Seat of disk brake plate and rear middle transmission shaft and Rear Bridge onto the rear bridge. (AttachedFigure4-2-12)

9. Mount the Disk Brake Clip onto Rear Bridge with two pieces of M bolt.

Fastening Torque, 18 N.m -12 N.m

10. Sequently fix the F/R three contacts of front fuel pipe F/R fuel pipe.

4.2.3 Dismantle, inspect, maintain and inspect the Parking system

4.2.3.1 Dismantle the parking system

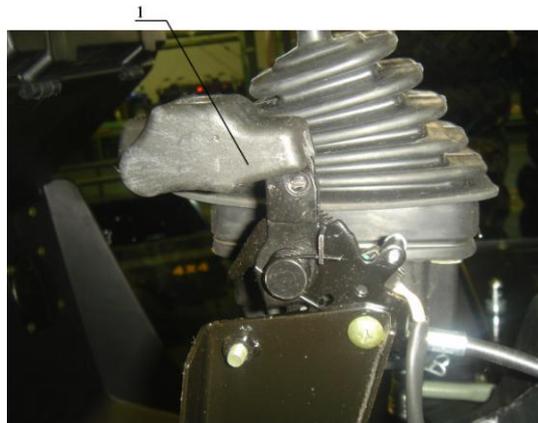
1. Take down the central lid(AttachedFigure4-2-21)



1. The Central lid

2、Loose the two pieces M bolt, take down the parking handle.

(AttachedFigure4-2-22)



AttachedFigure4-2-22

1. Parking handle

3、Take down the Parking Cable from the Parking handle

(AttachedFigure4-2-23)

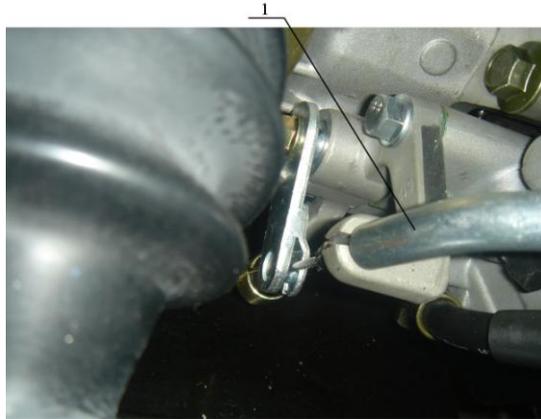


AttachedFigure4-2-23

1. Parking Cable

4. Take down the Parking Cable from the rear disk brake clip.

(AttachedFigure4-2-24)

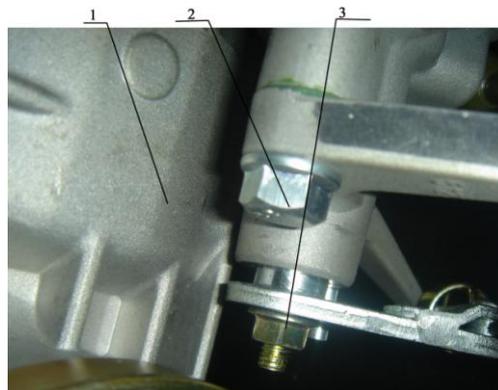


AttachedFigure4-2-24

1. Parking Cable

5. Loose two pieces of inner hexagon M nuts, take down the parking institution from the rear disk brake clip.

(AttachedFigure4-2-25)



AttachedFigure4-2-25

1. Rear disk brake clip
2. Connecting bolt

3. Rectangle four-head bolt

4.2.3.2 Inspect and maintain the Parking system

1、Inspect whether the Parking handle is loose or distortion carries on the adjustment to the loose and distortion part. Instead the parking handle when the adjustment can not get the request.

2、Inspect the parking Cable

Instead the breaks cable

Replace the crack and loosen protective covering of the cable.

Pour some lubricating oil to increase the flexibility of the cable.

3、Inspect the parking institution

After cleaning the parking brake, check whether the rectangle four-head thread in it is worn out and install it.

4.2.3.3 Reinstall the Parking system

1、Grease the Lithium lubricating on the rectangle four-head thread. Then load it in the parking bracket.

(AttachedFigure4-2-25)

2、Assemble the parking brakes onto the rear disk brake clip with two pieces of inner hexagon M nuts.

3、Assemble the back-end of the parking cable onto the parking brakes.

4、 Assemble the parking handle onto the frame with two M nuts.

5、 Assemble the front of the parking cable onto the parking handle.

6、 Adjust the inner hexagon nuts until the rear brake shoe exactly contact with the rear disk brake plate, then finish the adjustment with lock the inner hexagon nuts with spanner,

Attention: after the adjustment, the UTV can parking stabilized in the 12° pitch with the fully loaded. (The total quality is 920KG)

4.3 Wheel and Tire parts

4.3.1 Preparation for maintenance of wheel.

1. Inspect the wear condition of the tire. (Attached Figure 4-2-21)



Attached Figure 4-2-21

Check if the Wheel Hub is worn-out or damaged. (Attached Figure 4 - 2 - 21)

3. Check if the Wheel Hub is rusted or cracked.

4.

Check if the conical nuts of the Wheel Hub are loosen or distorted.

4.3.2 Disassembly, inspection and assembly of wheel components.

4.3.2.1 Disassembly of wheel components

Remove M10 Conical Nuts (4pcs) and detach the tire. (Attached Figure 4-2-20)

4.3.2.2: Inspection of wheel components

1、 Check if the wheel hub has any distortion, rust, crack or other potential defects. If so, please replace the wheel hub.

2、 Check if the tire has reached its maximum wear condition in which case it should be replaced.

3、 Check the joining condition of the tire and wheel hub. If the joint of tire and wheel hub is loose, replace the tire immediately.

4、 Check for vibration of tire and wheel hub. Vibration of assembled Tire must be controlled within 3mm. Otherwise, please replace with new tire.

Remove the tire for vibration test of the wheel hub. Should the vibration exceed 1.2mm, the wheel hub must be replaced.

5、 Inspect the four conical bores on the wheel hub. In occasion of angular distortion or wear, the wheel hub must be replaced.

The angle of the conical bores is 60°

4.3.2.3 Assembly of wheel

Attach the wheel hub onto the wheel with four pieces of M10 Conical Nuts and a dustproof lid.

Caution: assemble the wheel in correct direction (shown as the arrow). (Attached Figure4-2-22)



(Attached Figure4-2-22)

4.3.3 Specifications and operation guide of Wheel Hub and Tire.

Since wheels and tires are crucial to the vehicle operation, inspection for tire pressure and profile depth is necessary.

Specification of Wheel and Tire

	Wheel Hub Dimension	Tyre Dimension	(kPa/PSI) Tire Pressure
Front Wheel	12×6.AT	25×8-12	70/10
Rear Wheel	12×8AT	25×10-12	35/10

To ensure maximum security and longer life expectancy of the wheel, please periodically inspect the tire pressure and profile depth. Insufficient tire pressure can result in not only intensified wearing of the tire but also instability during the course of operating the vehicle (such as hard turning). Excessive tire pressure can also reduce the friction force between the tire and ground, causing spinning or lose of control. Therefore, please ensure the tire pressure strictly complies with figures shown in the chart above.

Before operating the vehicle each time, please check if

profile depth of the tire is over worn, which might result in spinning, instability, lose of control and other potential security risk of the vehicle.

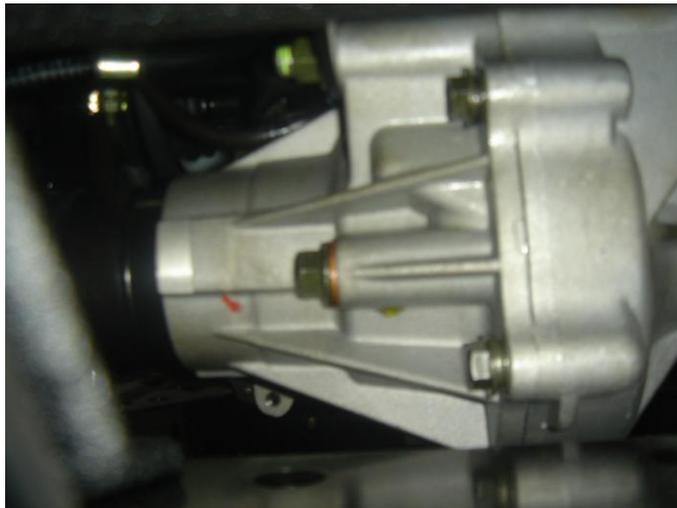
Warning:

The profile depth falls below 3mm, please replace the tire immediately.

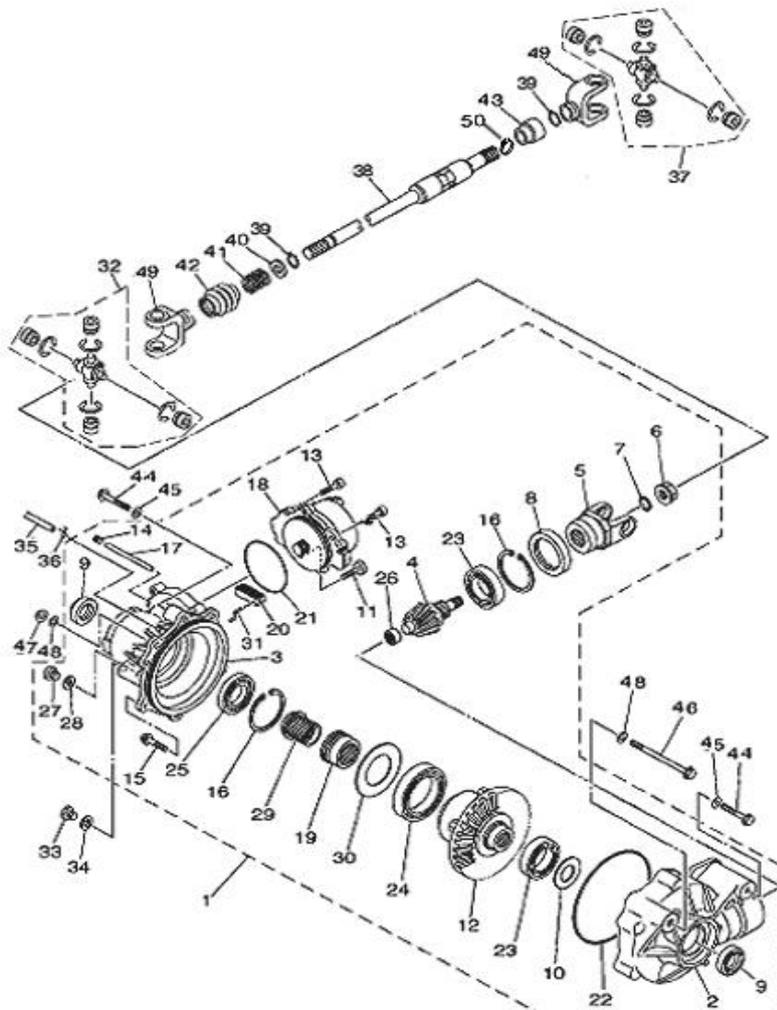
(AttacheFigure4-2-13)

4.4 Transmission System

Front Bridge



Front case components



1、 front axle differential components 2、 2 front retarder shell2 3、 retarder shell1 4、 initiative gear 5、 knot fork I 6、 M10×1.25flange surface self-lock Bolt 7、 front bridge initiative gear"O"ring8、 1front case export axes oil envelop1 9、 front case export oil envelop210、) gasket with jack (0.4T)) gasket with jack (0.2T) gasket with jack (0.3T) gasket with jack (0.1T) gasket with jack (0.5T) gasket with jack (1.0T) 11、 inner hexagon boltM8×25 12、 driven gear 13、 inner hexagon boltM8×25 14、 inner hexagon boltM8×10 15、 M10×16 M10×16 oil change bolt 16、 Carry ring with hole 17、 $\phi 5 \times 80$ column pin 18、 power divider assembly 19、 power divider coupling 20、 rack 21、 power divider"O"ring 22、 front case cover "O"aring 23、 sulfate ball bearing6007R 24、 sulfate ball bearing 6912 25、 sulfate ball bearing 16007 26、 needle bearing15BM2112 27、 bolt M14×15 28、 copper gasket $\phi 14 \times 2$ 29、 power divider coupling 30、 gasket with jack II (0.1T) gasket with jack II (0.2T) gasket with jack II (0.3T) gasket with jack II (0.5T) gasket with jack II (1.0T) (1.5T) gasket with jack II (1.5T) 31、 axes fork 32、 front bridge cross gimbal combination 33、 boltM14×15 34、 copper gasket $\phi 14 \times 2$ 35、 tube (L1700) 36、 pipe clamp I 37、 front bridge cross gimbal combination 38、 front bridge middle transmission shaft 39、 spring flange 40、 gasket 41、 front bridge middle transmission shaft spring 42、 front middle axes front dustproof cover 43、 front middle axes rear dustproof cover 44、 Hexagon flange surface self-lock BoltM10×25 45、 gasket $\phi 10$ 46、 flange boltM10×110 47、 flange nut M10 48、 gasket $\phi 10$ 49、 knot fork II 50、 front bridge middle transmission shaft cover anchor ear

4.4.1 Disassembly, inspection, assembly of front bridge

components (Reference the front bridge assembly, the figure of the front box parts).

4.4.1.1 Preparation for disassembly and maintenance of front bridge components.

1. Check if the connection between wheel hub and conical nuts is reliable and not loose.

2. If there is any distortion on the front wheel hub; the wheel hub must be replaced immediately.

3. Whether the spare part does coordinate with the sheep horn, whether the sheep horn bearing exists stagnation, check for noise, if bearing is unreliable, and must disassemble the front bridge

Assembly (refer to the front bridge assembly, the figure of the front box parts), then instead the bearing to use. Check the sheep horn whether have rupture, if so, instead it.

4. Whether the constant velocity joint does coordinate, to be correct to the position; If is not correct or the coordination is not

Good causes to the position hits the tooth and the different sound,

Must dismantle it, installs and driving agine after the position correct.

5. Check if there exists any slip thread on the open-groove nut.

6. Disassemble the front bridge transmission box parts, check each joggle whether contraposition and right, the joggle have no intervene.

7. Whether the oil nozzle does stop up, if so, first to use the needle to poke the material if it will not be able to solved, replace the oil nozzle to install the original position of the front box.

8. If there are any problems with the sensor, it must be inspected and maintained by the special serviceman.

9. The gear is easy to wear out, and it is in the transmission system.

4.1.2 Disassemble, inspection and assembly of the front bridge

4.4.2.1 Disassemble the front bridge

1. Take down the left and right front wheel parts.

2. Sequently remove the front disk brake clip, cotter pin, open-groove nut, cushion and front wheel hub.

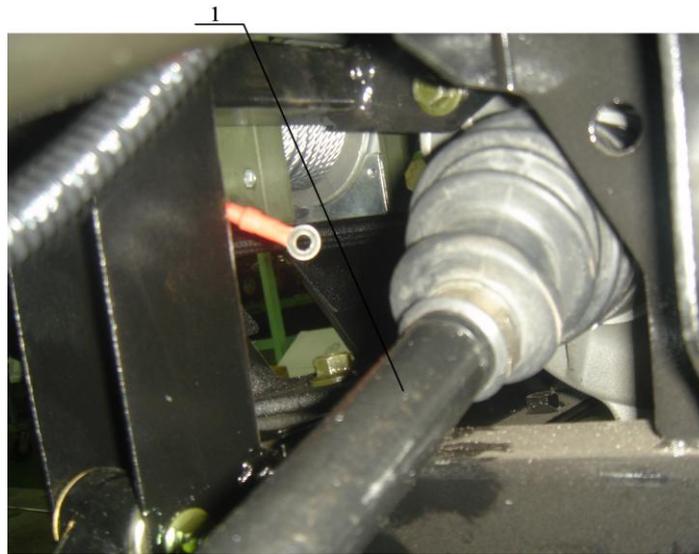
3. Disassemble the left and right arm rocker and cross steering knuckle.

4. Disassemble the differential device

5. Take down the front bridge from the frame

6. Emit the oil in the differential device

7. Pull out the left and right transmission shaft from the differential device. (Attached Figure 4-4-1)



4.4.2.2 Inspection and maintain the front bridge

1、 Check whether the dustproof rubber wrap on the left and right transmission shaft is dilapidation and aging, if so, instead the new one.

2、 Check whether the inner and outer ball cage of the left and right transmission shaft movement is smooth less. If it is stagnation and obvious becoming less loosen, replace it.

3、 Disassemble the left and right transmission shaft, cleaning and assemble it again.

Attention,

- 1、 The dustproof rubber wrap on the ball cage is not allowed to contact with the gas and diesel oil.
- 2、 The dustproof rubber wrap does not allow to be scratched, a slight scratches can damage the dustproof rubber wrap very quickly.
- 3、 When reassembles the left and right transmission shaft, in the ball cage must sufficiently
Enter 2/3 volume with the Lithium lubricating.
- 4、 Open the differential device and inspect the damage of the gears, axes and gasket, instead those parts according to the check.

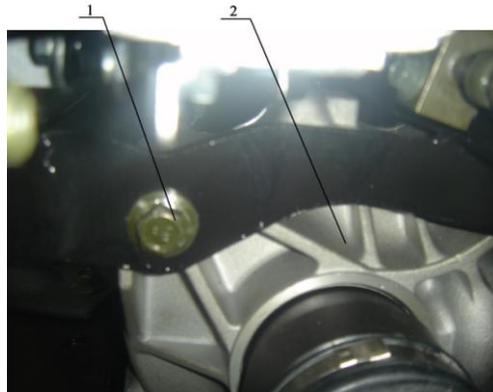
4.4.2.3 Assemble the front bridge parts

- 1、 Put the left and right transmission shaft in the front bridge differential device. (Attached Figure4-4-1)
- 2、 Pour 0.32L SAE 80 API GL-4 the high quality gear grease into the front bridge differential device and screws tight the oil filler bolt

Fastening Torque of Conical Nut, 23N.m

3、 Install the front bridge differential device onto the frame with two pieces of hexagon boltsM10×110,two pieces of nutsM10 and two pieces of flat gasket. (Attached Figure4-4-2)

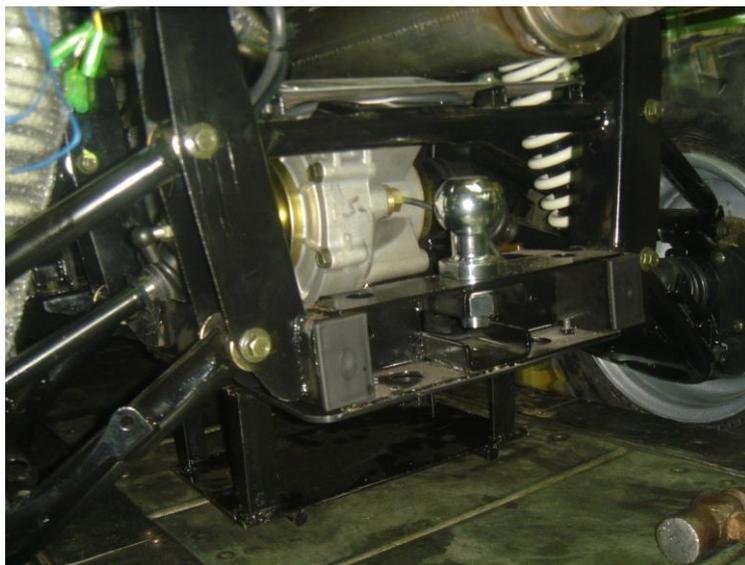
Fastening Torque of the Bolt, 40-50N.m

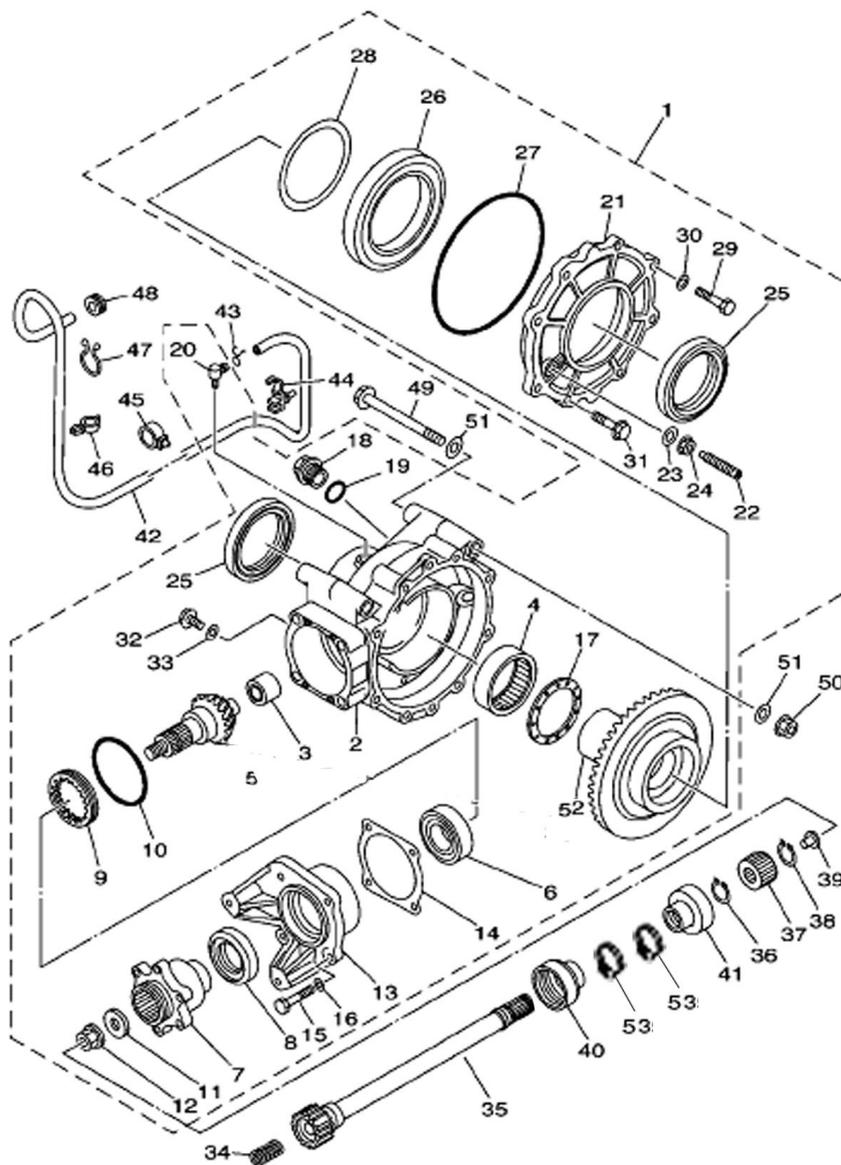


Attached Figure4-4-2

- 1. Flange boltM10×110
- 2. Front bridge differential device

Rear Bridge box parts



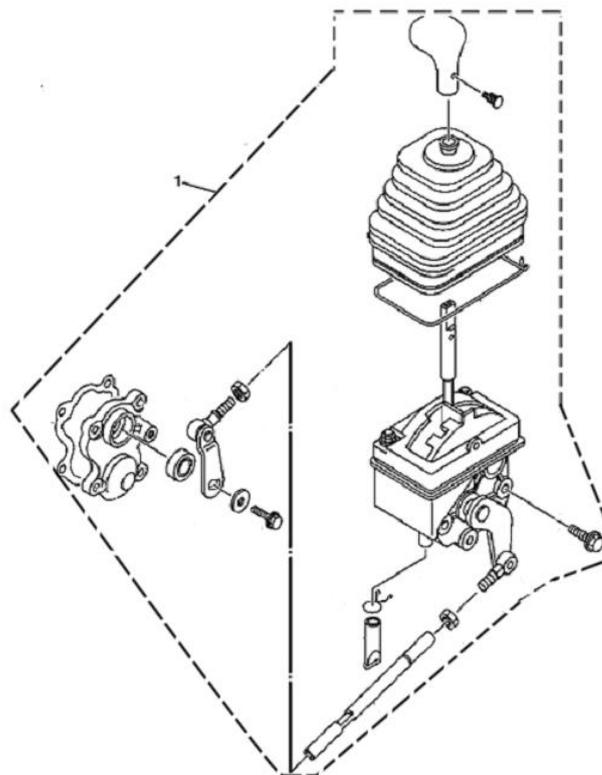


- 1、Rear axle differential components
- 2、Retarder shell I
- 3、Sulfate ball bearing6305
- 4、Needle bearing55BM6720
- 5、Initiative gear
- 6、Sulfate ball bearing6206c3-22
- 7、Rear disk brake install seat
- 8、Rear case import axes oil envelop
- 9、Needle bearing55BM6720
- 10、Rear case initiative gear "O" ring

11、 I rear retarder adjustment gasket I 12、 flange nut M12 13、 rear disk brake leading install plate 14、 drive piston gasket (0.25T) drive piston gasket (0.30T) drive piston gasket (0.35T) drive piston gasket (0.40T) drive piston gasket (0.45T) drive piston gasket (0.50T) 15、 bolt M8×20 16、 gasket ϕ 8.5 17、 drive piston gasket (0.25T) drive piston gasket (0.30T) drive piston gasket (0.35T) gasket with jack (1.8T) gasket with jack (1.8T) 18、 rear case oil filler hole bolt 19、 oil filler hole "O-ring 20、 rear retarder pipe 21、 retarder shell II 22、 column axes boltM8 23、 gasket ϕ 8.5 24、 flange nut M825、 1rear case export axes oil envelop1 26、 sulfate ball bearing 16017c2 27、 rear case cover "O-ring 28、 circle bearing (0.25T) circle bearing (0.30T) circle bearing (0.40T) 29、 boltM8×25 30、 gasket ϕ 8.5 31、 flange nutM10×22 32、 boltM8×30 33、 gasket ϕ 8.5 34、 compression spring 35、 rear bridge middle transmission shaft 36、 spring flange 37、 rear bridge middle Transmission shaft connecting cover

(The service method of the rear bridge parts is as the same as the front bridge parts, please refer to the before-mentioned to operate.)

4.5. Reverse mechanism parts



1.Reverse mechanism operate parts

4.5 Inspection and maintain of reverse mechanism(refer to the selector mechanism figure)

1、Inspect the reverse mechanism handle whether is nimbly, if it is not, disassemble the reverse mechanism to check the inner striking fork is stagnation, the steel ball is locked by something, and the spring is natural. If exist the problems all the above, replace the parts, and try again. if still not good to inform the special serviceman to service the reverse mechanism.

2、If the reverse mechanism appears lacks files, adjust the connecting nut on the striking fork to have contraposition then fasten the reverse mechanism again.

3、Disassemble the reverse mechanism to check the connecting rod of the reverse mechanism whether is rupture, if so, instead the connecting rod.

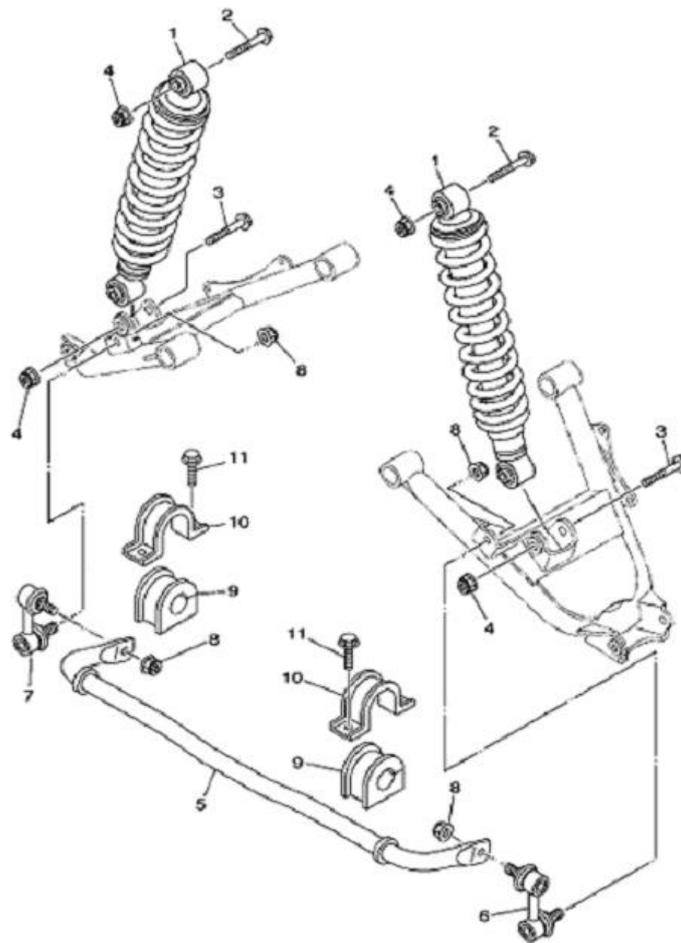
4、Check the tension of the pull-off spring whether is enough.

5、Check whether the gear is nicety, whether have jump or drop. If so, inform the special serviceman to inspect and service

6、 To check the few aspect if it is not reverses, ①whether the clutch is open completely. ② whether the shifts gears to lubricate is reliably (the oil tubing in the reverse mechanism whether is stopped up). ③there is any stagnation in the reverse mechanism. If so, inform the special serviceman to service.

4. 6. Suspension

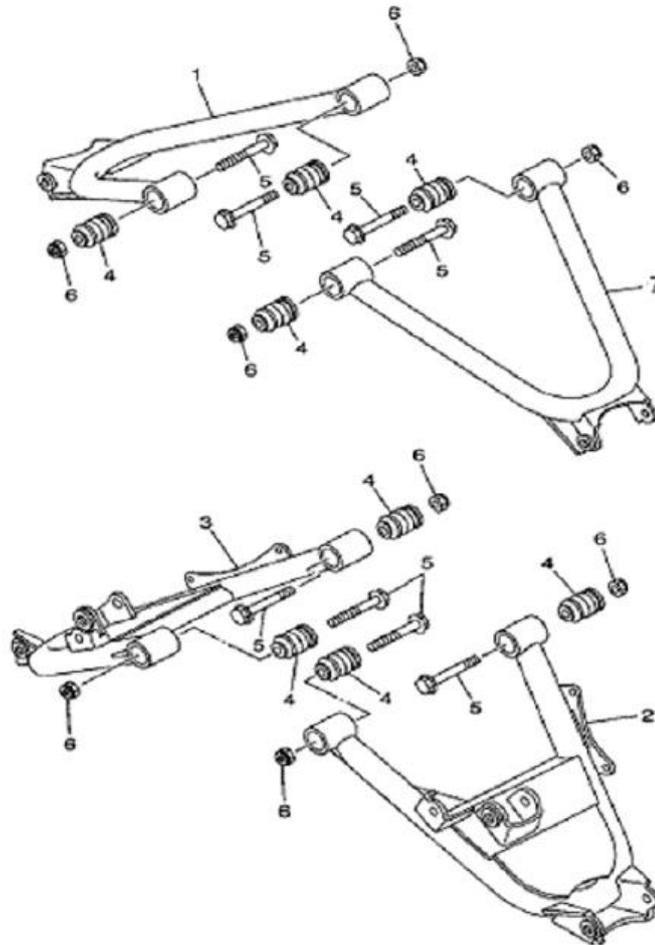
4. 6. 1. Rear Suspension



1、 simple rear shock absorber(left/right) 2、 hexagon flange surface boltM12×1.25×70 3、 hexagon flange surface bolt M12×1.25×65 4、 self-lock nutM12×1.255、 rear balancing pole 6 left ball pull-rod balancing pole 7、 right ball pull-rod balancing pole

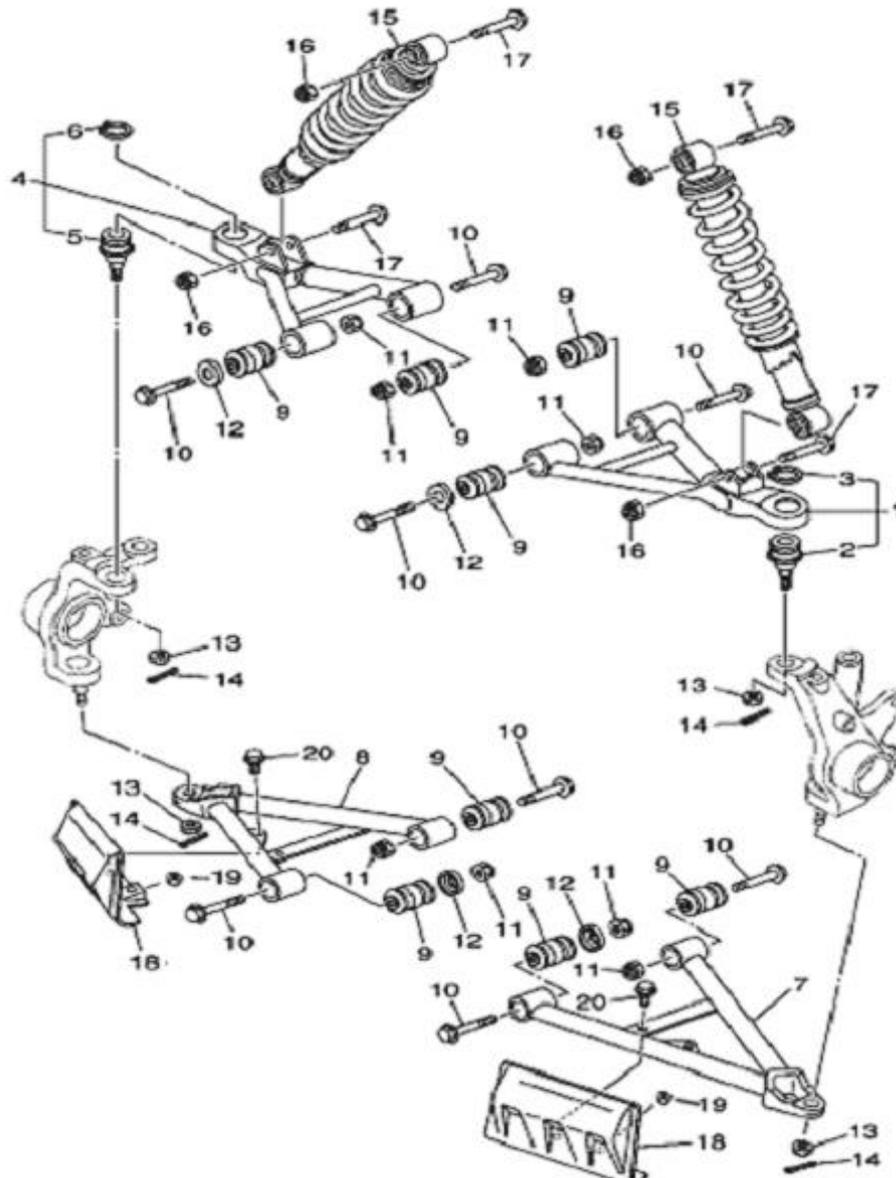
8、 self-lock nutM8 9、 rear balancing pole amortize rubber cover 10、 balancing pole board 11、 hexagon flange surface bolM8×16

Rear arm shaft



1、 rear left upper rocker combination 2、 rear right lower rocker combination 3、 rear left lower rocker combination 4、 rocker rubber middle membrane 5、 M10×1.25×70 6、 rocker rubber middle membrane 7、 rear right upper rocker combination 8、 rocker cushion collar gasket

4.6.2. Front Suspension



- 1, axes using spring flange 2, front right upper rocker combination 3, front ball pin parts
 4, axes using spring flange
 5, front left lower rocker combination 6, front right lower rocker combination 7, rocker
 rubber middle membrane 8, hexagon flange surface bolM10×70 9, hexagon self-lock
 nutM10×1.25 10, rocker cushion collar gasket 11, hexagon self-lock nutM10×1.25 12, cotter pin
 3.2×32 13, simple front shock absorber (left/right) parts 14, hexagon self-lock
 nutM10×1.25 15, hexagon flange surface bolt M10×52 16, Rocker baffle 17, hexagon flange surface

bolt M618、 hexagon flange surface bolt M6×12

4.6.3 Disassembly, Maintenance and Assembly the supporting rocker parts

1、 Disassembly and Maintenance

In the suspension, there is easy to appear the problem with bushing, cotter pin and shock absorber.

A、 If the left and right rocker rocks fiercely, check the few aspect, either the bushing of the rocker is crushed, the middle rubber separate or aging and chapped.

B、 check whether the cotter pins is credible, if it is not instead the same spec cotter pin.

C、 The problem with the shock absorber and maintain method, whether it can returns to the position under the pressure and the tensional spring is ruptured. If it's ruptured or nearly to ruptured, replace the shock absorber. Whether it leak oil, if so instead the same spec shock absorber. According to the different request, if there is an oil cup on the rocker must check it whether complete and refuels.

2、 Assembly (See the figure)

1、 Use 16pieces of Hexagon Flange BoltM10×70 and 16pieces of bolt to connect the front upper left and right rocker, front lower L/R rocker, rear upper L/R rocker and rear lower L/R

rocker with the frame. To ensure the fastening torque is 40–45Nm.

2、 Connect the front shock absorber, frame and rocker with 4pieces of Hexagon Flange BoltsM10×52 and 4pieces of self-lock nutsM10.

3、 Connect the rear shock absorber and rear lower rocker combination with 2pieces of Hexagon Flange BoltsM10×65 and 2pieces of self-lock nutsM10.

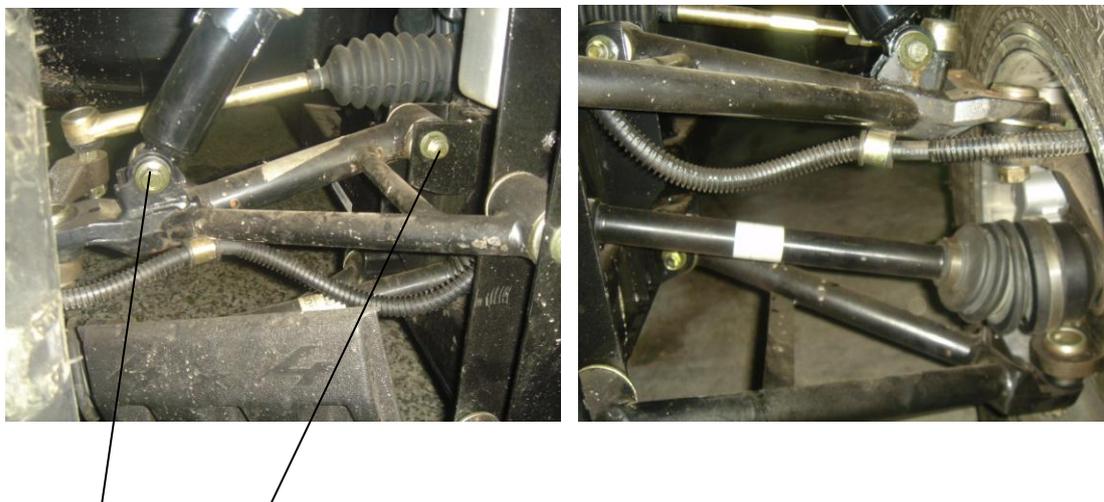
4、

Connect the rear shock absorber and frame with 2pieces of Hexagon Flange BoltsM10×70 and 2pieces of self-lock nutsM10.

Attention:

A、 Put on the butter to each part when it is assemble.

B、 Do not scratches the surface of the spare part surface.



1

2

1. Hexagon Flange BoltsM10x52

2. Hexagon Flange BoltsM10x70



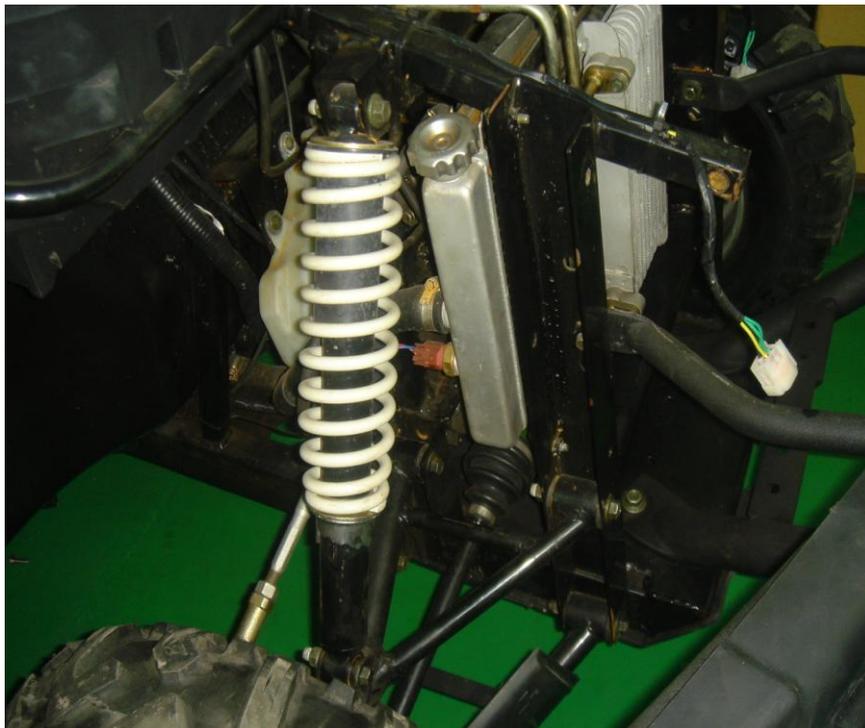
1

2

1. Hexagon Flange BoltsM10x65

2. Hexagon Flange BoltsM10x70

To check whether put or not the butter before fix, then fix the upper and lower rockers and L/R front shock absorber.



4.6.4 Inspection and Maintenance of Rear Suspension

- 1、 It is similar to the front suspension

Check if there exists any distortion or crack on the install axis of the shock absorber in which case it must be replaced.

- 2、 inspect the rocker bushing and the middle rubber separate is integrant. (According to the front Suspension)
- 3、 The cotter pin on the head of the install axis which in the rear shock absorber whether is credible.

Attention,

After disassemble the rear shock absorber, check if there exists any distortion or crack on the frame connection hole and the rear shock absorber, if so, inform the special serviceman to inspect and service first or install the rear shock absorber on the frame after instead. (Attention, the bolts must be the special self-lock nut; the fastening torque must be 45–55N.m)

4.7. Cooling System of Engine

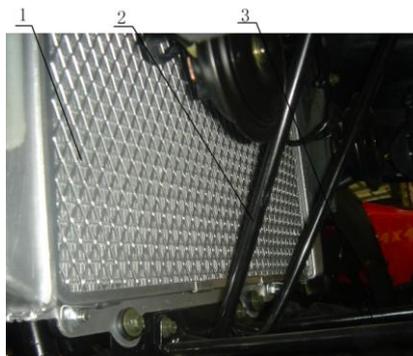
4.7.1 Disassembly, Inspection and Assembly of Water Cool System

4.7.1.1 Disassemble the Water Cool System

- 4、 1. Disassemble the bumper and front faceplate (Attached Figure4-5-1)

Attached Figure4-5-1

1. Bumper
 2. Front faceplate
2. Take down the water tank bracket combination and slanting support combination. (Attached Figure4-5-2)



Attached Figure4-5-2

1. Cooling System
 2. Water tank bracket combination
 3. Water tank slanting support combination
3. Take down the rubber water pipe and water tank inductor.

(Attached Figure4-5-3)



Attached Figure4-5-3

4. Take off Cooling System. (Attached Figure4-5-2)

4.7.2 Inspection of Water Cooling System

1. Check if the rubber pipe of Water Cooling System is torn or worn out. If so, please replace with new pipe.

2. Check the tightness of the hoop on the rubber pipe connected with Water Cooling System. If loosen, please have the hoop tightened immediately.

3. Inspect if ventilator is damaged. If so, please replace with new ventilator.

4.7.2.1 Assembly of Water Cooling System

1. Mount Water system onto the Frame with buffer cushion (4pcs), Collar Sheath (4pcs), $\phi 6$ Cushion (4pcs) and Hexagon Flange Bolt M6*20 (4pcs).

2. Connect the water tank bracket combination on the frame with 2pieces of Hexagon Flange BoltsM6 \times 12.

3. Connect the water tank slanting support combination on

the frame with 2pieces of Hexagon Flange BoltsM6.

4. Use Hoops (4pcs) and Rubber Pipes (2pcs) to connect Water Cooling System with Engine.

Pour the high quality refrigerating fluid into the water tank after install.

Recommended antifreeze:

High quality ethylene glycol antifreeze containing corrosion inhibitors for aluminum engines.

Antifreeze and water mixing ratio:

1:1

Total amount:

1.8L(1.58 Imp qt, 1.90 US qt)

Coolant reservoir capacity

(Up to the maximum level mark):

0.3L (0.26Imp qt, 0.32 US qt)

。 Start engine when pour full the refrigerating fluid, loose the exhaust nut on the pipe, the water level will get lower at this time, Supply the refrigerating fluid until the water level stop to change, then screw the exhaust nut, cover the water tank lid. The water tank inspection is finished. .

4.7.2.2 Oil Cooling System

Except the Cooling System of the engine, this UTV is also equipped with Oil Cooling System. (Figure)

4.7.2.3 Disassembly, Inspection and Assembly of Oil Cooling System

- 1、 Disassemble the oil cooler
- 2、 Disassemble the connecting steel oil pipe
- 3、 Disassemble the connecting pressure resistance rubber pipe

4.2.2.4 Inspection and maintain the Oil Cooling System

- 1、 Check if the oil cooler is distortion and leak oil. To adjust the distortion one, and welding the leak one. If it cannot solve, instead the oil cooler

Check if the steel oil pipe is distortion and leak. To adjust, instead the serious distortion one and leak oil pipe.

Check if Rubber Pipe is torn, aged, worn out or distorted.

- 4、 Check if the "O" rubber gasket ring which is connect with the tee oil pipe and the oil cooler is aging and damaged, instead the aging and damaged one.

4.2.2.5 Assembly Oil Cooling System

1、 To take a pressure resistance inspection to the Oil Cooling System after maintenance, the pressure is 0.3MPA. a

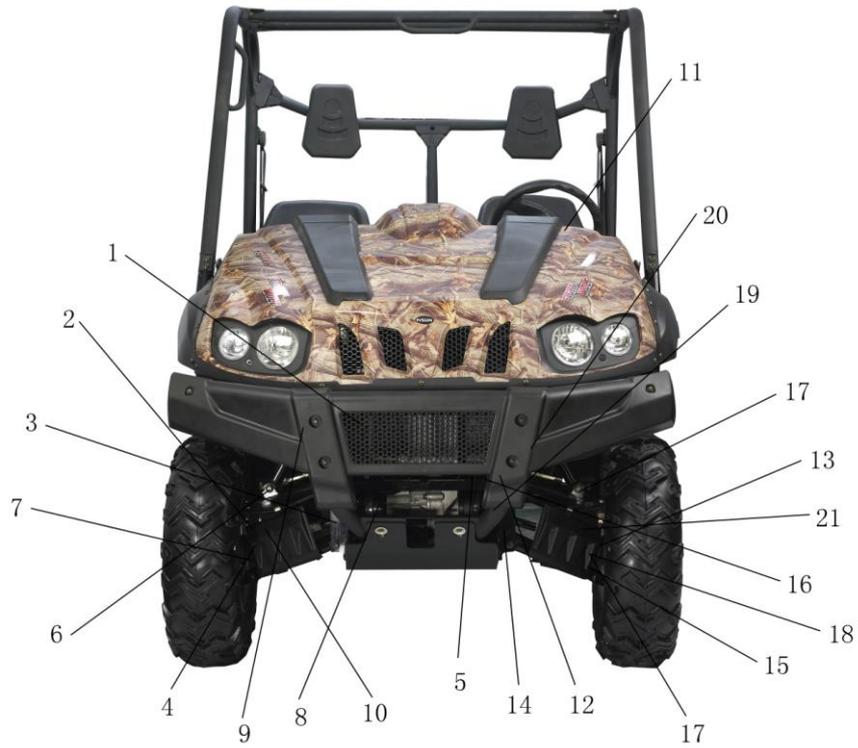
2、 After take the pressure resistance inspection, pass over 0.03MPA compressed air through the connecting oil cooler, steel oil pipe and Rubber Pipe for 3 minutes, and do not leak.

3、 According to the disassembling order, reverse carries on the assembly.

4、 When it is finished assembly, pour the " L " engine oil, then start the engine for 10 minutes to check whether leaks. If it is not, the Oil Cooling System maintenance is finish.

4.8. Lubrication points

The details of the chassis lubrication is as below





- 1、 right upper rocking shaft and frame connection(plus engine oil)
- 2、 right upper rocking shaft and Yanggakdo connection (plus butter)
- 3、 right lower rocking shaft and frame connection (plus engine oil)
- 4、 right lower rocking shaft and Yanggakdo connection (plus butter)
- 5、 right steering rod and steering vertical column connection (plus butter)
- 6、 right steering rod and Yanggakdo connection (plus butter)
- 7、 front right half shaft and wheel hub connection (plus engine oil)
- 8、 front right half shaft and front case connection (plus engine oil)
- 9、 front right shock absorber and frame connection (plus butter)
- 10、 front right shock absorber and rocker connection (plus butter)
- 11、 steering vertical column and frame connection (plus butter)
- 12、 left upper rocker and frame connection (plus engine oil)
- 13、 left upper rocker and Yanggakdo connection (plus butter)
- 14、 left lower rocker and frame connection (plus engine oil)
- 15、 left lower rocker and Yanggakdo connection (plus butter)
- 16、 left steering rod and steering vertical column connection (plus butter)
- 17、 left steering rod and Yanggakdo connection (plus butter)
- 18、 front left half shaft and wheel hub connection (plus engine oil)
- 19、 front left half shaft and front case connection (plus engine oil)
- 20、 front left shock absorber and frame connection (plus butter)
- 21、 front left shock absorber and rocker connection (plus butter)

- 22、 rear wheel import axis and the case connection (plus engine oil)
- 23、 rear left shock absorber and frame connection (plus butter)
 - 24、 rear left shock absorber and rocker connection (plus butter)
- 25、 rear left upper rocker and frame connection(plus engine oil)
- 26、 rear left lower rocker and frame connection(plus engine oil)
- 27、 rear left upper rocker and Yanggakdo connection(plus butter)
- 28、 rear left lower rocker and Yanggakdo connection (plus butter)

- 29、 rear left half shaft and wheel hub connection (plus engine oil)
- 30、 rear left half shaft and front case connection (plus engine oil)

- 31、 rear right shock absorber and frame connection (plus engine oil)
- 32、 rear right shock absorber and rocker connection (plus butter)
- 28、 33、 rear right upper rocker and frame connection(plus engine oil)
- 34、) rear right lower rocker and frame connection (plus engine oil)
- 35、 rear right upper rocker and Yanggakdo connection (plus butter)
- 36、 rear right lower rocker and Yanggakdo connection (plus butter)

- 37、 rear right half shaft and wheel hub connection (plus engine oil)
- 38、 rear right half shaft and front case connection (plus engine oil)

5. Electrical system

Route color indication

- | | |
|-----------------|-------------------------|
| 1. Black-----B | 18.Blue White-----L/W |
| 2. Red-----R | 19.Blue Black-----L/B |
| 3. Yellow-----Y | 20.Red Black-----R/B |
| 4. Green-----G | 21.Red White-----R/W |
| 5. Orange-----O | 22.Green White-----G/W |
| 6. White-----W | 23.Brown White-----Br/W |

- | | |
|--------------------------|--------------------------|
| 7. Gray-----Gr | 24. Brown Blue----- Br/L |
| 8. Blue-----L | 25. Red Brown-----R/Br |
| 9. Brown-----Br | 26. Yellow Red-----Y/R |
| 10. Dark Green-----Dg | 27. Green Red-----G/R |
| 11. Dark Red-----Dr | 28. Green Black-----G/B |
| 12. White Green-----W/G | 29. Black White-----B/W |
| 13. White Red-----W/R | 30. White Blue-----W/L |
| 14. White Black-----W/B | 31. Yellow White-----Y/W |
| 15. Light Blue-----Lb | 32. Green Blue-----G/L |
| 16. Light Green-----Lg | 33. Purple-----V |
| 17. Black Yellow-----B/Y | |

Troubleshooting and repair

No electrification: 1. First, check the safety.

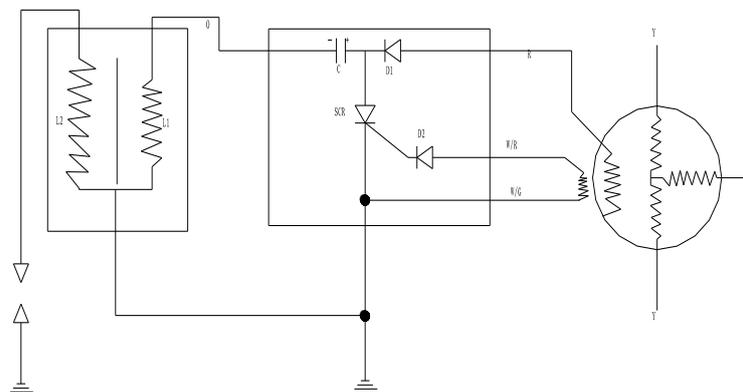
2. Second, if the safety is good, then check the battery whether it is power on.

3. Finally, check the switch lock and electric route, whether they are bad.

Other troubleshooting and causations as follows

	PROBLEM	cause	measure	remark
ignition system	1 ,no spark	1.switch lock ※ carve out a way or short circuit, connection badness ※ line bonding badness 2.CDI set ※ After electrify no noise from the CDI 3.high voltage ※ high voltage lead insulated badness ※high voltage lead carve out a way or short circuit 4. magneto ※ signal loop and charge loop carve out a way or short circuit	★repair ★repair ★replace ★replace ★replace ★replace	
	2 . spark weak or spark over intermittence	1. spark plug ※ pollute or wear intermittence 2. high voltage bag ※high voltage lead wire insulated badness	★replace ★replace	
electrification system	1,discharge self 2, uncharge or shortage-charge	1. cover polluted or drenched by rain 1.carve out a way or short circuit, caused by connected wire badness 2.rectifier damaged 3.baterry ※lower-electrolyte ※electrode failure	★ water-proof, keep clean of the cover and replace electrolyte ★repair ★replace ★entered distilled water ★replace	
	1 . flash not bright or weak 2 , horn sound	1. the switch of flash lamp or emergency light contacted badness 2. lamp ※ filament of lamp damaged ※ the watt of lamp larger or smaller than regulated number 3.routing	★ repair or replace ★replace ★replace	107

5.1 ignition system

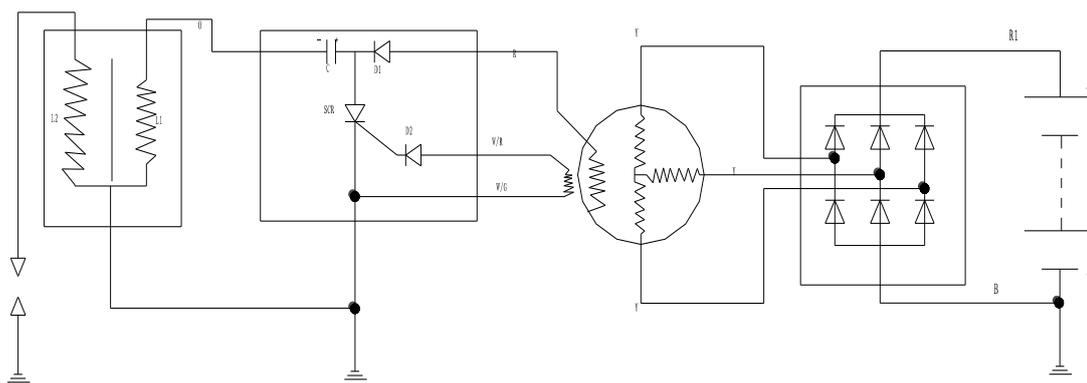


The key diagram of ignition elements ignition elements:

Ignition pressure provided by magneto ignition coil through diode commutated, by R (red line) input CDI (capacitance discharge ignition), charge to capacitance C. at the same

time ,spring coil produce spring signal ,provided to SCR as the turn on spring signal ,when reaching the ignition timing, SCR turn-on capacitance began to discharge at the elementary coil L1 caused instant lower pressure ,while at the secondary coil caused induce pressure. Its instant pressure up to 10000V, sparkover at the clearance of sparkplug (0.6mm). so the engine ignited

Charge system



The key diagram of charge elements

5.2 magneto and charge system

The elements of charge:

When the engine running, driven magnet rotor circumgyrate, so on the stator coil produce alternating current then induce electromotive force come into to being the pressure. Through 3 lines Y (yellow) output into the rectifier, through rectifier into direct current pressure and output. Through R1

to charge the battery.

5.3 Battery

Under the following problems, please change the battery

1. With long time charge but the pressure do not increase to a set value.
 2. At the bottom of case there is something dirty or electrode have become white or the case with a sulfate function
 3. Electrode former scratched or scratched by press or insulation without work.

Pay attention when using

1. Long time out of using but without charge is not correct.
2. Too much charge (so long time charge is not correct, generally if battery empty, the normal charge time hours)
3. Do not charge under a much higher pressure or electric current
4. Keep battery at a low temperature and dry place
5. Charge battery before fix it.

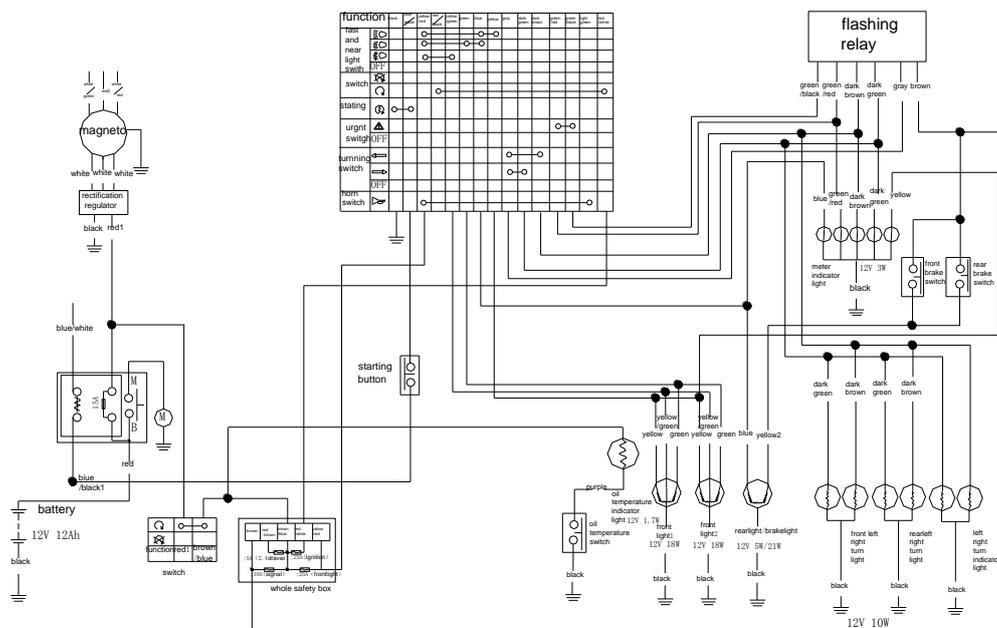
If battery without electrolyte, it may cause the

rectifier damaged. And the electrolyte is venomous and dangerous. As it contains vitriol it may cause burn accident. Battery also contains explode gas, so keep it far away spark and flame and cigarette. When charge or using in house, keep the air easy floating. When work near the battery, please take care of your eyes and keep kids away from the battery.

If under such accidents, please deal with it as follows or ask for help from the doctors.

1. Exterior, wash lots of cleaning water
2. Interior, drink milk or water and then milk of magnesia or egg or rap oil and hospitalize as soon as possible.
3. Eyes wash cleaning water at least 15 minutes and hospitalize as soon as possible.

5.4: Lighting system



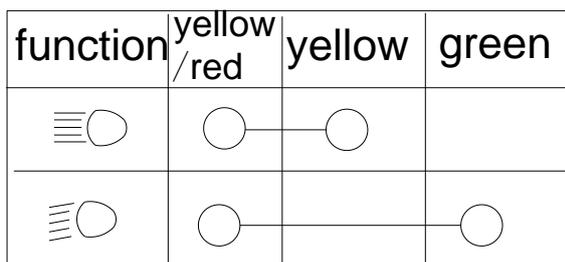
The key diagram of illumination system

5.5 Meter and signal system

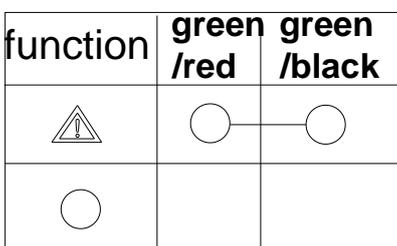
: Operation and working way:

1、 Headlight

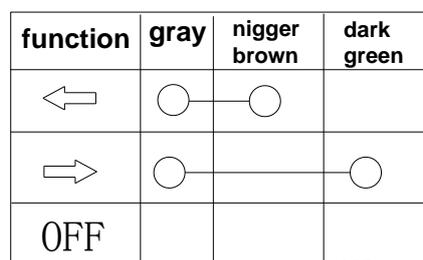
Headlight Switch



2、 Emergency light switch



3、 Turing light switch



Turn on the start switch on the left handlebar; the battery can supply power for the CDI. Then the CDI supply power for the stator relay, then the power from the battery can be sent to the stator motor through the stator relay and the stator motor works help the engine to work.

Note:

1. When electrical starting, please keep the battery with enough power and the time of pressing button will be within 55 seconds. If longer time more than 5 seconds, it may cause the damage of stator relay and the stator relay motor and may also cause the damage of the battery that it can not be charged or not charge enough.
2. When starting, if heard some noises from the stator relay, the battery must be without enough power. Please stop starting and change a powerful battery or charge for it.
3. If the stator motor cannot work normally, please check according to the 2 rule to see if it is not lubricated enough

6. Appendix

6.1 Specification

6.1.1 Specification of technique

A) Specification of vehicle

Overall length	3010mm
Overall width	1460mm
overall height	1840mm
Wheel base	1890mm
Wheel gauge	F1100mm/ R1150mm
Mini. Clearance to the ground	245mm
Seat height	790mm
turning radius	2500mm
Suspension	Front: Hydraulic spring swing arm Rear: Hydraulic spring swing arm
)Braking pattern (Normal condition)	Front dual disk, Rear single disk/front and rear linkage, Right foot/left hand operation
(1): (E-mark)Braking pattern Primary Brake (1): (E-mark)	Front dual disk, Rear single disk/front and rear linkage, right foot/right hand operation
Emergency brake:	hand operation
Braking	hand operation
(2): Primary Brake (2):	Front dual disk, Rear single disk/front and rear linkage, right foot/right hand operation
Emergency brake:	Engine/ hand operation, Gear shift

	handle
Parking brake:	Engine/ hand operation, Gear shift handle
Wheel Hub	Front: Alloy/ Steel wheels Rear: Alloy/ Steel wheels
Tire dimension	25x8-12 Front 25x8-12 (Vacuum Tire) 25x10-12 Rear 25x10-12 (Vacuum Tire)
Tire pressure	70kpa Front 70kpa 70kpa Rear 35kpa
Fuel tank Vol.	29L±0.1L
Dry weight	524kg
Max. loading weight	300kg
Total weight(including hitch):	843kg

B) Specification and model of engine

Engine Model/Brand	HS1102MU-2/ HSUN
Pattern	Single cylinder, water cool, dual exhaust, four stroke
Bore×Stroke	102mm×84mm
Compression Ratio	9.2:1
Volume	686ml
Max. power	25kW (5000r/min- 5500r/min)
(E-mark) Max. power	13kW (5500r/min)
(E-mark)	
Rated power	24kW (6000r/min-6500r/min)
Max. Torque	49N·m (5000r/min)
(E-mark) Max.	27N·m (4000r/min)

Torque (E-mark)	
Mini. Idle speed	1400±100r/min
Fuel type	Unleaded #90
Lubrication	Pressure Splash
Starting system	Electric Start and hand recoil start
Ignition	C. D. I
Drive train	Axle
Transmission	continuous

Belt drive ratio	5.0695~0.7679
L Drive ratio:	5.3595 (30/17 × 41/21 × 24/18)
H Drive ratio	3.2230 (26/21 × 41/21 × 24/18)
R Drive ratio	3.8282 (25/17 × 41/21 × 24/18)
Engine Drive ratio	16.339~2.475

Clutch	Wet automatic centrifugation
Lubrication (Crankcase)	Comply with GB11121-1995 standard. Depending on regional weather condition, choose either SAE 5W-40 or SAE 10W-30 (Cold region) SAE. 20W-40 (Warm region)
Oil capacity	1.9L
Engine dry weight	71kg

C) Specification and model of spare parts

Carburetor model	PD42J-A
Pattern	Parallel Vacuum

Spark plug	DR8EA	
Speed meter	Electronic	
Battery	12V 32Ah	
Headlight	12V 35W/35W	White light
Front Indicator	12V 3W	White light
Rear Indicator	12V 5W	Red light
Brake light	12V 21W	Red light
Rear license plate light	12V 5W	White light
Turning light	12V 10W	Amber light
Rear reflector		Red light

D) Specification and model of other parts and structure

Disk brake hydraulic oil	DOT4
Turning operation system	Hand operating steering bar
Driving method	Two wheel/ four wheel drive (2W means two wheel drive, 4W means four wheel drive)
Shaft arms	Front and Rear dual shaft arms
Parking brake	Mechanical
Frame	Steel pipe
Magneto	Rotate DC output
Spark plug gap	0.6–0.7 mm
Safety fuse	30A

6.2 Performance Requirement

6.2.1 Starting Performance

Starting time must be less than 15s

6.2.2 Accelerating Performance

Starting accelerate must less than 14s/200m, superpass accelerate must less than 13s/200m.

6.2.3 Max. Speed

65km/h. The Max Speed is 65km/h (e-mark is 65km/h)

6.2.4 Climbing power

The climbing angle must more than 18°

6.2.5 Lowest fuel oil consumption rate

Lowest fuel oil consumption rate is $\leq 340\text{g/Kw}\cdot\text{h}$

6.2.6 Reliability

The reliable actual service life is 7000KM. The testing method carries on according to GB/T5374-1995.

6.2.7 Durability

The durability actual service life is 16000KM; the testing method carries on according to GB/T4570-1995.

6.2.8 Exhaustion

The pollutant limiting value should conform to GB 14621-2002, the GB14622-2002 request

a) idle speed discharges

$\text{CO} \leq 3.8\%$, $\text{HC} \leq 800\text{ rpm}$

b) The operating mode discharges

$\text{CO} \leq 7.0\text{ g/km}$, $\text{HC} \leq 1.5\text{ g/km}$, $\text{NO}_x \leq 0.4\text{ g/km}$

6.2.9 Braking performance

a) Braking distance $\leq 27\text{m}$ (Initial speed is 60km/h)

B) the brake to reduce the speed must more than 5.88m/s^2

6.2.10 Noise

The acceleration travel noise is not bigger than 79dB (A), installment noise is 93dB (A), rotate speed is 2750min²

6.2.11 Radio harassment characteristic

The multipurpose vehicle produces the radiated interference permissible value and the ignition system noise remover insertion loss value, the radio harassment characteristic should conform to GB14023-2006

6.2.12 parking performance

Multipurpose vehicle when neutral position use parking brake of in the vehicle arresting gear should guarantee the vehicles in the slope are 18%, coefficient of adhesion between the tire and the road surface is not smaller than on 0.7 slope way, the counter- two directions maintains static fixed is motionless, meantime between many to 5min

6.2.13 the side leans the steady constant angle

The multipurpose vehicle under the idling, the static condition, and right flank inclines the biggest side to left side to lean the steady constant angle not to have to be smaller than 25° .

6.2.14 Front illuminator performance

6.2.14.1 The vehicle should be loaded with conforms to GB 5948-1998 or the GB 4599-94 request front illuminator

6.2.14.2 The high beam of each front light luminous

Intensity should achieve 8000cd. When test, its electrical power System should be at the charge condition

6.2.14.3 The front light beam shines the position to be supposed to conform to the following stipulation

A) Under the regular service condition, the front light beam shines the position to be supposed to maintain stably

- B) Front is loaded with the illuminator multipurpose vehicle to be supposed to have the low and far beam transducer and when the headlight high beam becomes the headlight low beam, all headlight high beams ought to be able also to extinguish. On the identical vehicle Front illuminator does not allow left, right to be far, and the low-beam lights. Alternately starts brightly;
- c) When apposed setting the front illuminator far and low-beam lights, the low-beam lights should be located on leans, in other situations the low-beam lights should be located the flank
- D) The front headlight low beam all does not allow dazzling.
- e) The shines position of the front headlight low beam light beam, the front illuminator shines when is away from 10m on the screen, the first illuminator headlight low beam light beam light and shade closure line corner or the center point highly should be $0.6H \sim 0.8H$ (H is front illuminator datum center highly);
- f) The front headlight high beam light beam and the headlight high beam single light beam lamp should conform to the GB 7258-20048.4.7.3rd corresponding requirement according to the position.

6.2.15 Light signal installment request

6.2 Requirements for torque of fastener

Tight spot	(N.m) Torsion value (N.m)
Column tight torque	35~45
Even fork axis nut	45~50
Front shock absorber upper nut	35~45
Front shock absorber lower nut	35~45
Rear shock absorber upper nut	45~55

Rear shock absorber lower nut	45~55
left rocker upper nut	40~50
left rocker lower nut	40~50
right rocker upper nut	40~50
right rocker lower nut	40~50
engine hanging nut	35~45
Even fork and cradle connecting nut	40~50
front wheel nut	45~55
rear wheel nut	45~50

6.3 Electrical circuits

The characteristic of the electrical circuits,

1. Actualize the electrical starting when it in Neutral or parking and brake.
2. When it is in the H gear, the H gear switch of the engine is on the ground, the H gear is lighting by the CDI inner transistor to control the dash light earth connection.
3. The function of the diode in this circuitry is that after parking and brake to actualize the electrical starting.
4. The relay electrical source, to provide the electricity through the CDI working, it can protect the relay and to extend

the useful time.

5. Use the pan-fuse box, each operating circuit is working independence, and easy to service, there is no connect with the inner cable and the functional line, it is hard to emerge the dummy section.

