Werkstattbuch
Aeon-Access-Unilli-Herkules
Adly 50 -100ccm

Reparaturanleitung

www.motorsportgoetz.com

1. Identification of the ATV Body and Engine

1.1 Stenciling Position of VIN Number
2nd European Code

100CC：RK3STL0014A000001

50CC：RK3STL0034A000001

For non-road

100CC：RK3ATDCLC3A000001

1.2 Stenciling Position of Engine Number

100CC：E01000101

90CC：E02000102

50CC：E03000103

2. Important Notes

A. Preparations

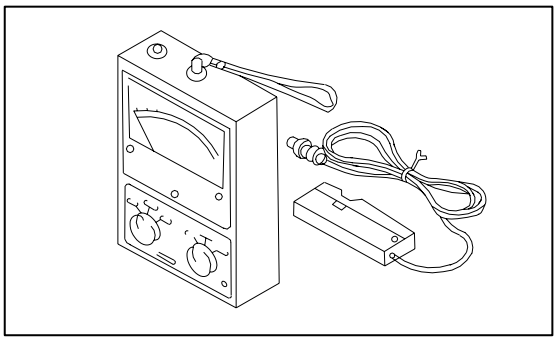
1. Assuredly clear up dirt and dust on the engine of automobile to avoid it to be interfused in the engine or other parts.
2. Special tools, appropriate instrument, and correct operation should be applied to special places in efforts not to damage the special parts, e.g. double open-box wrench set and socket wrench shall be used instead of spanner.
3. It is noticeable for dismantlement and assembly.
   - Measure and record the dismantlement as reference for the assembly.
   - Keep the dismantled parts by classification in order to avoid mixing and loss.
   - Clean the engine, gears and other parts with kerosene and diesel oil and have them dried with air after being dismantled.
   - Compare the repaired and maintained parts to that before being dismantled and then assemble them.
   - Parts for assembly must be kept from any foreign matter.
   - All bumpers must be operated before assembly.
   - All movable parts must be supplied with lubricants or greases.
   - Lock screws with the designed torque.
   - Closely coordinate with each other in order to avoid loss or misoperation.
4. No fire is permitted during the maintenance and in the maintenance place.

B. Gasket, Oil Seal and O-typed Oil Ring

1. Gaskets, asbestos gaskets, oil rings, bolts and small clips shall not be reused after being dismantled.

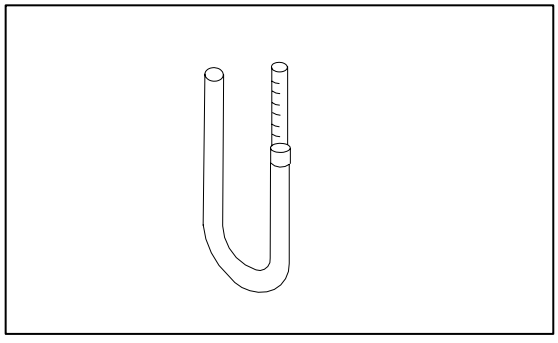
C. Special Tools

Special tools shall be applied to special places in efforts not to damage the special parts during dismantlement and assembly.

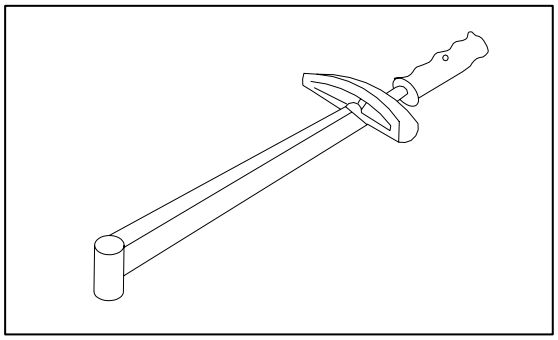


Adjustment and Measurement

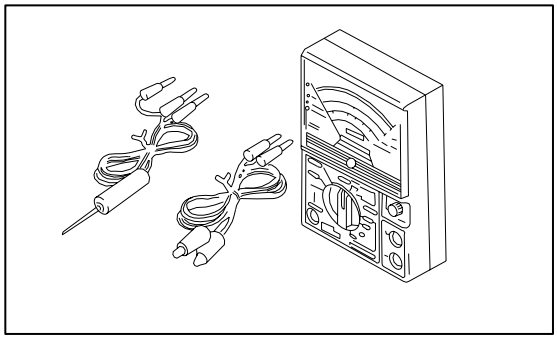
1. Engine Speed Meter: to test the engine speed



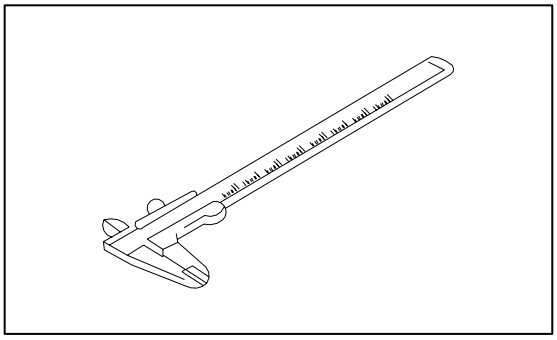
2. Gage:
To measure the gasoline level of the floating chamber



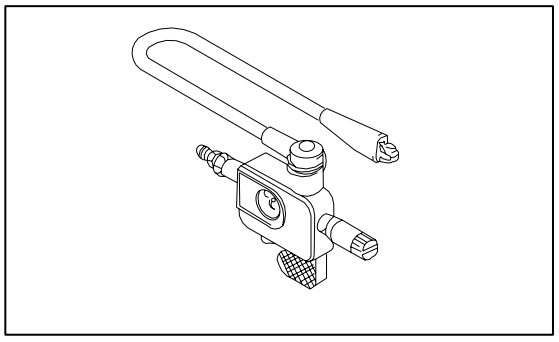
3.Torque Wrench:
To lock screw caps and bolts and measure the torque



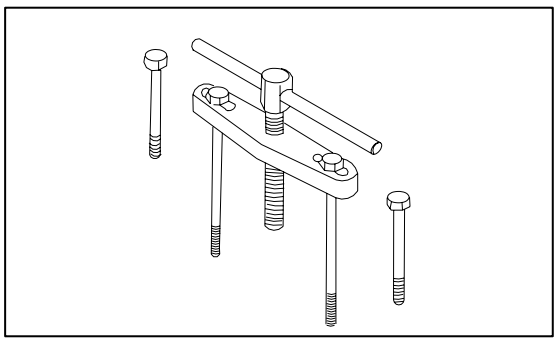
4. Avometer:
To test the voltage, current and resistance



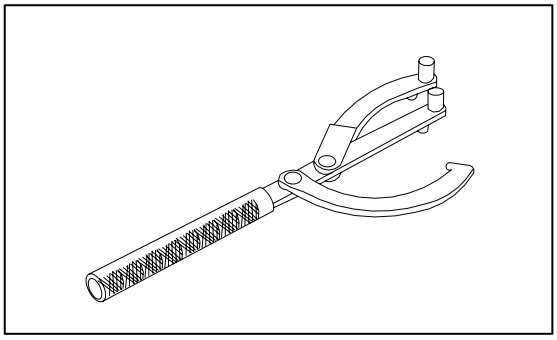
5. Vernier Scale:
To measure the depth, inside diameter and diameter etc.



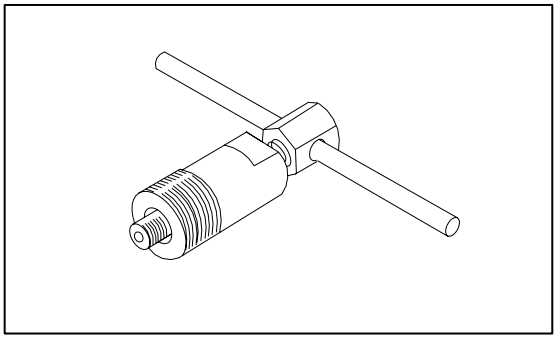
6. High Voltage Coil Meter:
To detect the gap of the spark plug



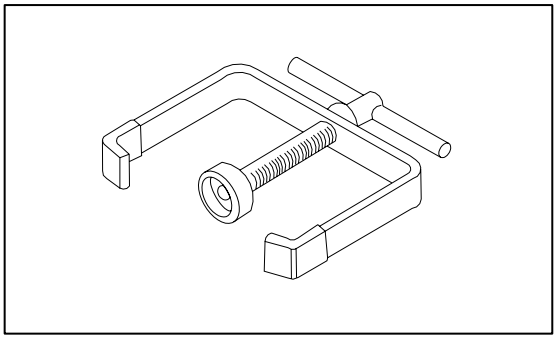
Engine
1. Crankcase Tools
To dismantle the crank shaft and the crank case



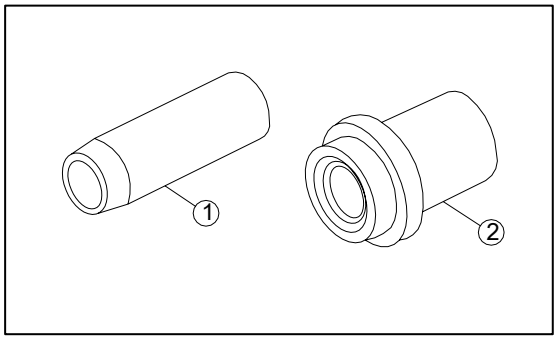
2. Rotating Part Fixer
To unfasten and fasten the screw caps and fix the clutch assembly and generator



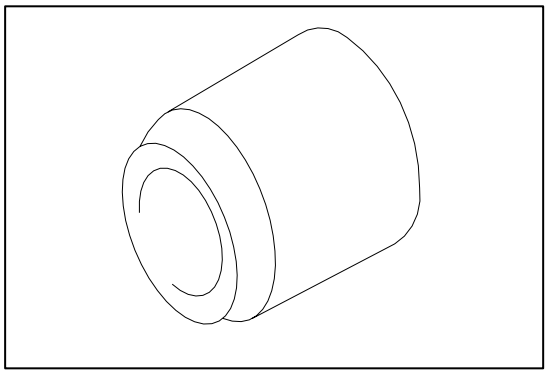
3. Generator Flyer Drawer
To dismantle the generator



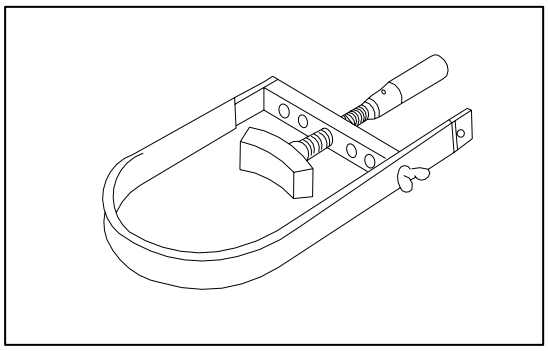
4. Clutch Twister
To remove the clutch springs



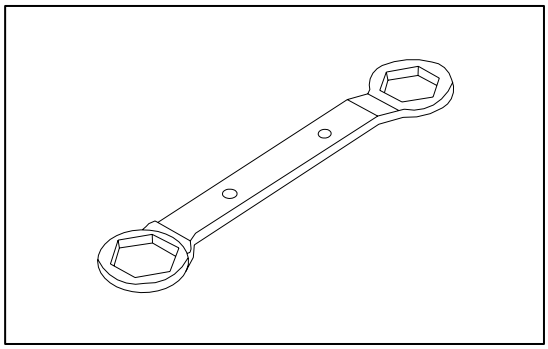
5. Oil Seal Assembly Tools
Oil Seal Leading Tools
Oil Seal Assembly Tools
To be used to assemble the oil seal of the crank shaft



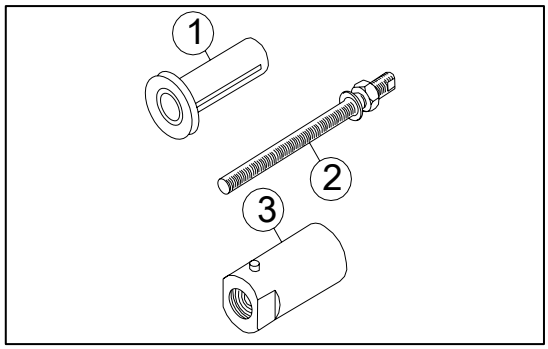
6. Oil Seal Leading Tools
To be used to assemble the oil seal of the clutch



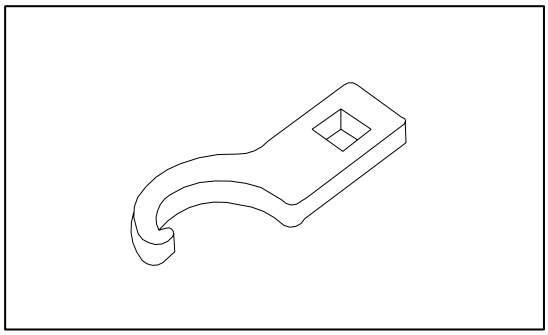
7. Clutch Cover Scotch
To fix the clutch disk



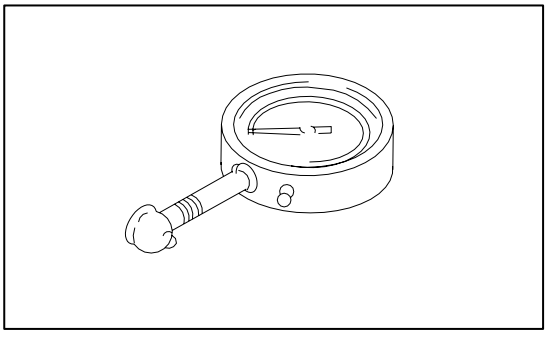
8. Wrench
To fasten or unfasten the caps on the clutch



9. Crank Assembly Tools
Crank Assembly Tube
Crank Assembly Bolt
Crank Assembly Connecting Tube
To be used to assemble the crank shaft and the crankcase



10. Shock Eliminator Adjustable Wrench
To adjust the shock eliminator's springs



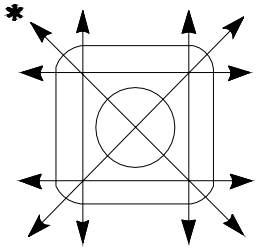
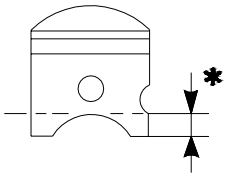
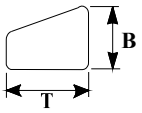
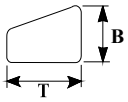
11. Tyre Pressure Gauge
To be used to detect the tyre pressure

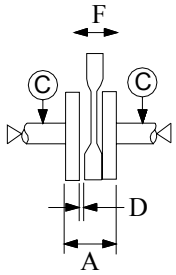
Data Sheet

Specifications:

Types	ST100/90/50LL(SL)		ST100/90/50LA(SA)	
Length	**1, 600mm**	**1,450mm**	**1, 600mm**	**1,450mm**
Width	**980mm**	**890mm**	**980mm**	**890mm**
Height	**980mm**	**890mm**	**980mm**	**890mm**
Distance between shafts	**1, 100mm**	**980mm**	**1, 100mm**	**980mm**
Weight	**132kg**		**132kg**	
Engine				
Original Type	**Air-Injection Crankcase for Two-Stroke Engine**		**Air-Injection Crankcase for Two-Stroke Engine**	
Layout of Cylinders	**Single Cylinder**		**Single Cylinder**	
Total Piston Displacement	**96cm³ 82cm³ 49cm³**		**95cm³ 82cm³ 49cm³**	
Bore * Stroke	**54.0mm*42.0mm**		**52.0mm*45.0mm**	
	50.0mm*42.0mm		**50.0mm*42.0mm**	
	40.0mm*39.2mm		**40.0mm*39.2mm**	
Compression Ratio	**9.5:1**		**7.5:1**	
Types of Start	**Electric/Food Pedal**		**Electric/Food Pedal**	
Method of Lubricating	**Separate Lubrication**		**Separate Lubrication**	
Brands of Lubricants				
For Engine	**2 Stroke SAE #20**		**2 Stroke SAE #20**	
For Gears	**SAE #40**		**SAE #40**	
Amount of Lubricants				
Engine Oil	**110+10cc**		**110+10cc**	
Gear Oil				
Amount Changed	**0.1L**		**0.1L**	
Total Amount	**0.11L**		**0.11L**	
Air Filter	**Wet Materials**		**Wet Materials**	
Fuel				
Type	**Only unleaded gasoline**		**Only unleaded gasoline**	
Amount in Gasoline Tank	**5.5**		**5.5**	
Carburetor				
Brands and Types	**TK (VM16SS)**		**TK (VM16SS)**	
Spark Plug				
Types and Brands	**BPR7HS /NGK**		**BPR7HS /NGK**	
Gap	**0.9~1.0mm**		**0.9~1.0mm**	
Types of Clutch	**Dried Inward Direct-Loaded**		**Dried Inward Direct-Loaded**	

Types	ST100/90/50LL	ST100/90/50SL
Bulb W*QTY		
Headlight	**12V, 20W/20W*2**	**12V, 20W/20W*2**
Taillight/Stop Light	**12V, 5W/21W*2**	**12V, 5W/21W*2**
Turn Signal	**12V, 10W*4**	**12V, 10W*4**
Alarm Lamp W*QTY		
Turn Indicator	**12V, 1.7W*1**	**12V, 1.7W*1**
Alarm Lamp for Lubricant Level	**12V, 1.7W*1**	**12V, 1.7W*1**
High Beam Indicator	**12V, 1.7W*1**	**12V, 1.7W*1**

Types	ST100/90/50
Cylinder Head: Torque Limit: 	 **0.03mm** *** Check according to the six directions**
Cylinder Inside Diameter: (Upper Limit) Taper Limit Out of Round Limit	 **(53.993~54.012/51.993~52.012/39.993~40.012mm)** **0.1mm** **0.05/100mm** **0.006mm**
Piston: Size of Piston: Measurement Position***:**  Piston Clearance:	 **39.958~39.972mm** **5mm** **0.035~0.040mm**
Piston Ring: Sectional Drawing:  Top Ring: 2nd Ring: 	 **BxT=1.2x1.6(mm)** **BxT=1.2x1.6(mm)**
Depth of Ring Groove: Top Ring : 2nd Ring: Close Gap: Top Ring: 2nd Ring:	 **0.15~0.35(mm)** **0.15~0.35(mm)** **0.03~0.05(mm)** **0.03~0.05(mm)**

Types	ST100/90/50
Crank Shaft:  Width A for Crank Shaft Assembly: Width C for Crank Shaft Assembly: Gap D for Big End of Connecting Rod: Oscillation Amplitude E for Bid End of Connecting Rod: Gap F for Small End of Connecting Rod:	 **37.90~37.95mm** **0.03mm** **0.2~0.5mm** **0.004~0.017mm** **0.4~0.8mm**
Clutch Thickness of Clutch (Upper Limit) Length of Pressure Spring External Diameter of Balanceing Weight (Upper Limit)	**0.4~0.8mm** **2mm** **1mm** **29.9mm** **15.0mm** **14.5mm**
V-Belt Width of Belt (Upper Limit)	 **16.6mm** **14.6mm**
Foot Pedal Type Designed Value of Spring Pressure	 **Gear Idle** **0.15~0.25Kg**
Leaf Valve Thickness Obstruct Height	 **0.150~0.154mm** **6.0~6.4mm**

Engine Fastening Torque

Item	Thread Dia	Torque (Kg-cm)	q'ty
Spark Plug	M14x1.25	150~250	1
Cylinder Head	M7x1.0	130~150	4
Double-Headed Bolts for Cylinder	M7x1.0	140~200	4
Bolts for Water Pump Cover	M6x1.0	70~100	2
Bolts for Dust Cap	M5x0.8	30~50	2
Lubricating Pump	M5x0.8	30~50	2
Leaf Valve	M6x1.0	70~100	4
Air Filter	M6x1.0	70~100	2
Exhaust Pipe	M6x1.0	70~100	2
Exhaust Tailpipe	M10x1.25	450~600	1
Exhaust Pipe Hood	M6x1.0	50~80	2
Crankcase R, L	M6x1.0	70~100	6
Crankcase Cover	M6x1.0	70~100	8
Gear Box Cover	M6x1.0	70~100	6
Bolts for Discharging Oil	M8x1.25	70~100	1
Gear Idle Plate	M6x1.0	70~100	2
Foot Starting Rod	M6x1.0	70~100	1
Starting Motor	M6x1.0	70~100	2
Counter Grooved Wheel Assembly	M28x1.0	450~550	1
Clutch Cover	M6x1.0	100~160	
One Way Clutch	M10x1.25	250~350	1
Generator Seat	M6x1.0	70~100	1
Generator Rotor	M10x1.25	250~350	1
Drive Sprocket	M14x1.5	300~400	1

Car Body

Types	ST100/90/50
Front Damper Stroke Length of Springs (Upper Limit)	
Rear Damper Stroke Length of Springs (Upper Limit)	
Wheel Types of front wheel Types of rear wheel Size and materials of front disc Size and materials of rear disc	
Brake Type Inside Diameter of the brake drum (Upper Limit) Thickness of the brake block (Upper Limit)	 Drum 85mm (85.5mm) 3mm (1.5mm)
Rear Brake Type Thickness of the Brake Sheet (Upper Limit) Type of Brake Fluid	 Single Disc 4mm (0.8mm) DOT#4

Body Locking Torque

Item	Thread Dia.	Torque (Kg-cm)	Qty
Nuts for Holders under Handles	M10	150~250	2
Bolts for Holders above Handles	M6x1.0	75~120	4
Nuts for Steering Linkage Axle Seat Cover	M8	120~190	2
Nuts for Steering Linkage	M14	900~1000	1
Self-Lock Nuts for Front Brake Drum	M12	650~700	2
Fixing Nuts for Front Disc	M10	450~600	8
Fixing Nuts for A Arm	M10x1.25	450~600	4
Upper and Lower Bolts and Nuts for Front Shock Eliminator	M10x1.25	450~600	4
Self-Lock Nuts for Steering System	M10	450~600	4
Bolts for Gasoline Pipe	M8	200~300	2
Bolts for Engine Fixer	M8x1.25	200~300	4
Bolts for Engine	M12x1.25	650~700	1
Bolts for Rear Damper Cover	M8x1.25	200~300	2
Bolts for Rear Stirrup	M14x1.25	900~1000	1
Fixing Bolts for Rear Wheel Axle	M12x1.25	650~700	4
Bolts for Rear Brake Caliper	M8x1.25	200~300	2
Bolts for Holders of Rear Brake Disc	M10x1.25	450~600	3
Rear Shock Eliminator	M10x1.25	450~600	2
Self-Lock Nuts for Rear Disc Holder	M14	900~1000	2
Fixing Nuts for Front Disc	M10	450~600	8
Bolts for Rear Chain Wheel Base	M8x1.25	200~300	3
Bolts for Upper and Lower Chain Wheel Cover	M8x1.25	200~300	5
Bolts for Gasoline Tank	M6x1.0	75~120	2

Car Body

Types	ST100/90/50
Voltage	12V
Ignition System	
Ignition Timing	18◦/5,000rpm
Type of Advance Angle	Electrical
CDI	
Type of Generator	3XG
Ripple Coil Resistance Inside/Color	500Ω±20% W/R-B
Charging Choke Resistance Inside/Color	800Ω±20% B/R-B
Ignition Coil	
Type	3XG
Primary Winding Resistance	1.1Ω±20%
Secondary Winding Resistance	6.6KΩ±20%
Minimal Spark-Lug Gap	6mm
Spark Plug Lid	
Type	Resin
Resistance	10kΩ
Types of Charge	
Flywheel Generator	
Model/Brand	3XG
Charging Choke Resistance	0.6Ω±20%
Ignition Coil Resistance	0.5Ω±20%
Voltage Regulator	
Type	Short Circuit by Semiconductors
Selenium Rectifier	
Type	SH614-12
Capacity	8A
Storage Batteries	
Capacity	12V 5AH
Specific Gravity	1.32
Starting Motor	
Type	3XG
Breaker	
Type	Fuse 4A

Total Torque Specification (Standard Bolt)

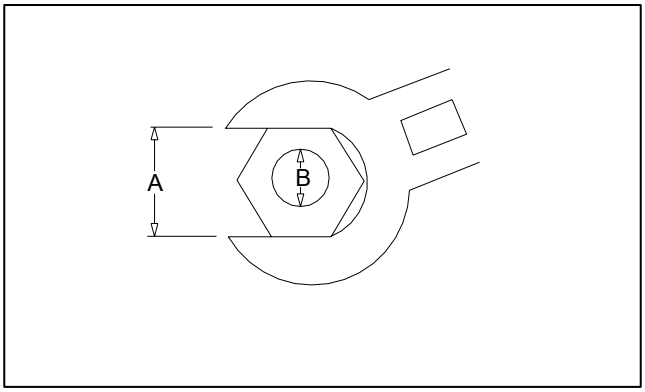
This table is conformable to the Bolt Locking Specifications released by the International Standard Association.

Lock bolts across or subject to the designed order in order to avoid any torsion or unbalance.

※ Use a torque wrench to test the torque

※1kgf.cm=0.098066N.m

A	B	Total Torque
		Kg/cm
10mm	6mm	60
12mm	8mm	150
14mm	10mm	300
17mm	12mm	550
19mm	14mm	850
22mm	16mm	1300



A: Through Space

B: External Diameter of Screw Thread

Inspection & Adjustment Section

The maintenance intervals in the follow table are based upon average riding and condition. Riding in usually dusty areas requires more frequent servicing.

Periodic Maintenance/Lubricating Table

Items	First 200km and 30-hour's Riding	Every 100 hours	Every 200 hours	Every 300 hours
Engine Oil	I	I	I	I
Gear Box Oil	R		R	
Air Filter		C		R
Fuel Filter			R	
Oil Filter				R
Spark Plug		I	I	I
Carburetor			I	
Engine Idle	I	I	I	I
Throttle Valve Operation				I
Fuel Pipe			I	
Turning of Front Arm A				L
Steering Linkage Operation				I
Brake Gasket			I	
Driving System				I
Suspension System				I
Batteries			I	
DRIVE BATTERY				I
Wheel Bearing			I	
Chains			A	
Throttle Cable				I
Cooling Water in Water Tank	Inspect and add every day before riding			
Brake System	Inspect every day before riding			
Type Pressure	Inspect and add every day before riding			
NUTS/BOLTS/FASTENERS				T

A: Adjust C: Clean I: Inspection R: Replace T: Tighten L: Lubricate

Dismantlement of Engine

Notes:

The engine shall not be dismantled in case of removal of the following parts:

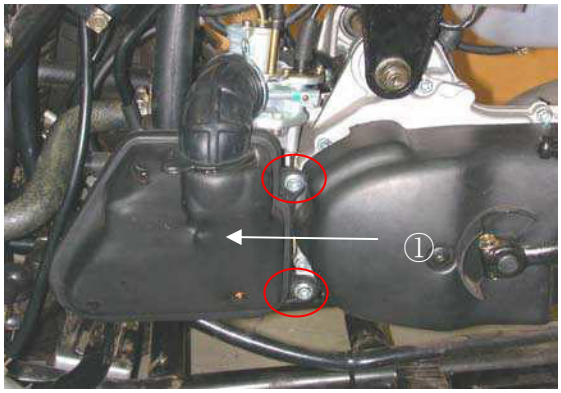
- Main and Counter Grooved Wheel
- Carburetor
- CDI Generator
- Starting Motor
- Lubrication Pump
- Cylinder Head
- Cylinder
- Piston

Cushion, Covers, Storage Batteries, Boxes and Foot Pedal

1. Dismantle:
   - Cushion
   - Covers
   - Storage Batteries

Carburetor

1. Dismantle:
   - Ventilating Tube (beside the carburetor)
   - Air Filter ①

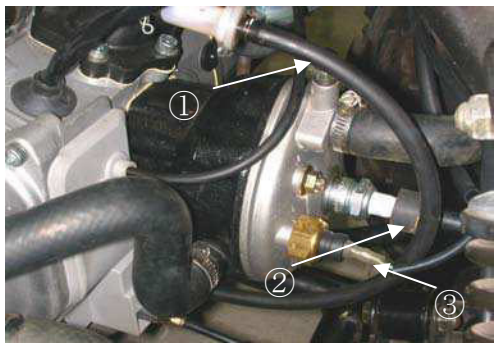


2. Dismantle:
   - Lubricating Pipe 2①
   - Carburetor Assembly②

Dismantlement of Engine

Pipes, Wire Ropes and Wires Uint

1. Dismantle:



- Lubricating Pipe ①

  (beside the lubricating box)

- High-Voltage Wires②

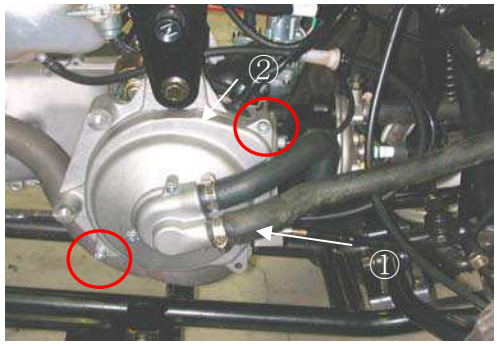
- Power Line of Thermal Switch③

Notes:

Clog the lubricating pipe ① and the openness of the

lubricating box in order to prevent lubricants from flowing.

2. Dismantle:

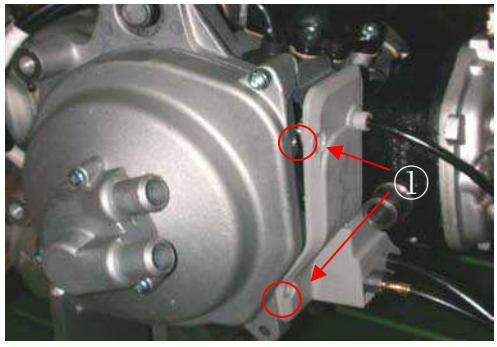


- Cooling Water Pipes 3①

  Connecting Water Tank to Engine

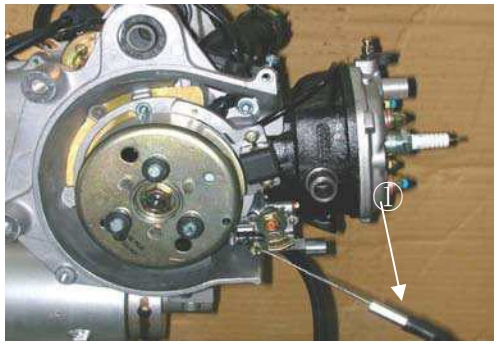
- Generator Housing②

3. Dismantle:



- Lubrication Pump Housing①

4. Dismantle:

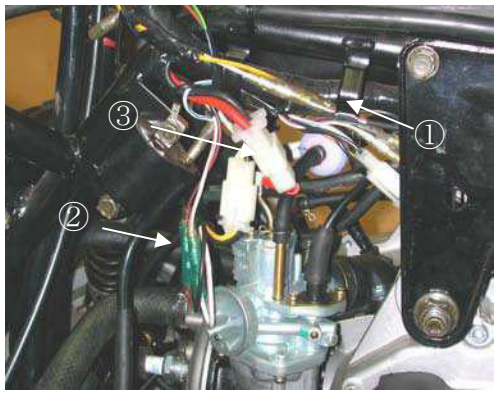


- Lubrication Pump Wire Rope①

Dismantlement of Engine

5. Dismantle:

- Lacing ①
- CDI Generator Wires Unit ②
- Starting Motor Wires Unit ③



6. Dismantle:

- Fixing Screws of Exhaust Pipe①
- Fixing Screws behind Exhaust Pipe②

Notes:

<u>Pay attention to the temperature of the exhaust pipe.</u>

7. Dismantle:

- Engine①②
- Fixing Screws for Lubricating Box③

Dismantlement of Engine

Cylinder Head, Cylinder and Piston

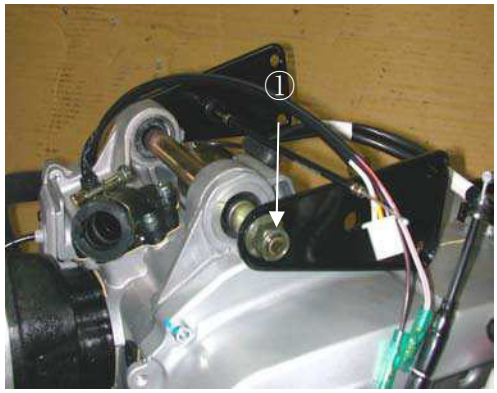
Notes:

Inspect and repair the cylinder head, cylinder and piston by removing the following parts without dismantling the engine:

- Covers
- Food Pedal
- Carburetor

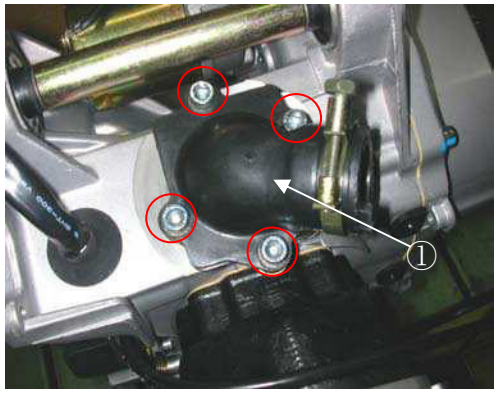
1. Dismantle:

- Engine Mount ①



2. Dismantle:

- Intake Manifold ①
- Leaf Valve
- Gaskets

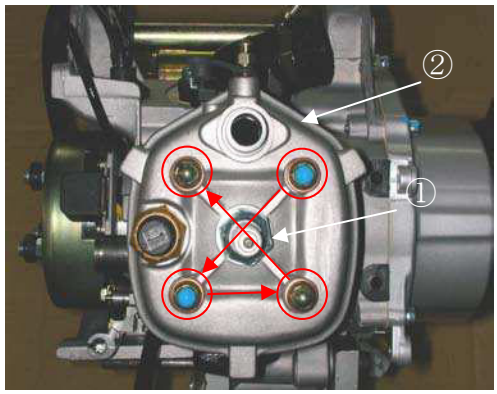


3. Dismantle:

- Spark Plug ①
- Cylinder Head ②
- Gaskets

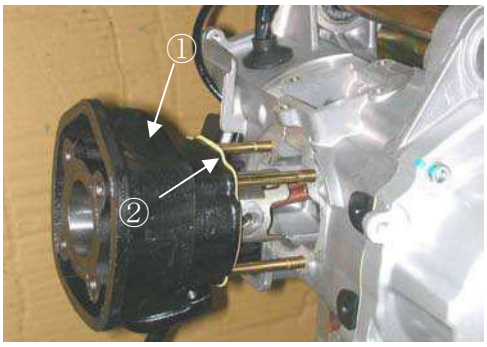
Notes:

- Loosen the nuts across
- Loosen each nut by ¼ circle and take down after loosing all nuts.



Dismantlement of Engine

4. Dismantle:



● Cylinder ①

● Gaskets of Cylinder ②

5. Dismantle:

● Grip Ring for Piston Pin ①

Notes:

Clog the opening of the crankcase with dried textile to prevent the grip ring① from slipping into the case.

6. Dismantle:

● Piston Pin ①

● Piston ②

● Bearings on Small End

Notes:

Remove the collected carbons from the grip ring groove and the pin hole before dismantling the piston pin to make the operation easy.

Notes:

A hammer is prohibited for dismantlement of the piston pin.

Dismantlement of Engine

Foot Shaft, Main and Counter Grooved Wheel and V-Belt

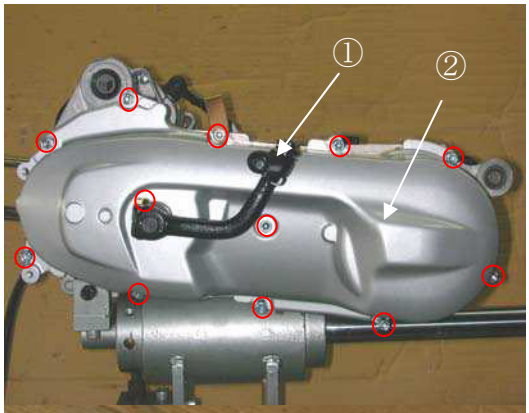
Notes:

Inspect and repair the foot shaft, main and counter grooved wheel and V-belt without dismantling the engine and any part.

1. Discharge the gear oil.

2. Dismantle:

- Foot Lever ①
- Crankcase Cover (Left) ②
- Anchor Pin

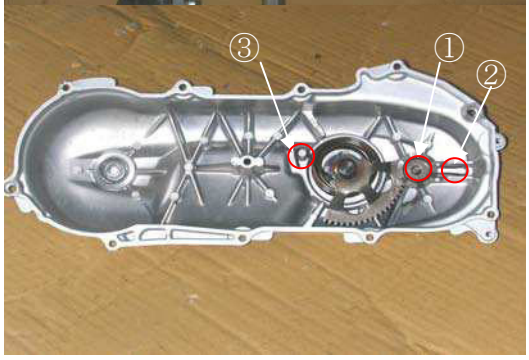


3. Dismantle:

- Foot Small Gears ①
- Clamp ②

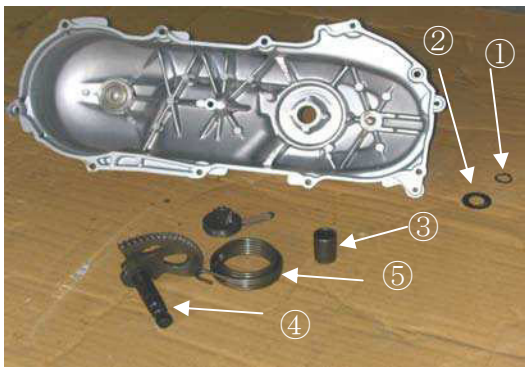
4. Take down:

- Extension Springs ③



5. Dismantle:

- Grip Ring ①
- Plain Washer ②
- Sleeves ③
- Foot Shaft Assembly ④
- Plain Washer ⑤

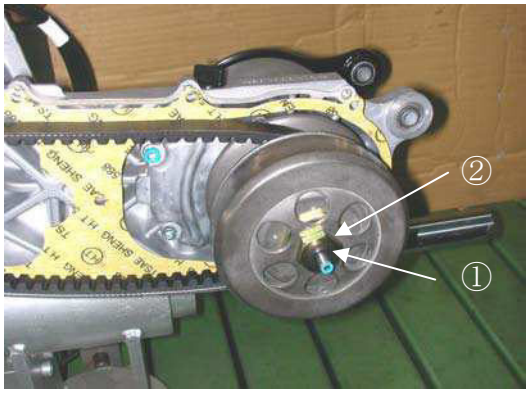


6. Dismantle:

- O-Type Oil Ring ①
- Nuts for Clutch Hub ②

Notes:

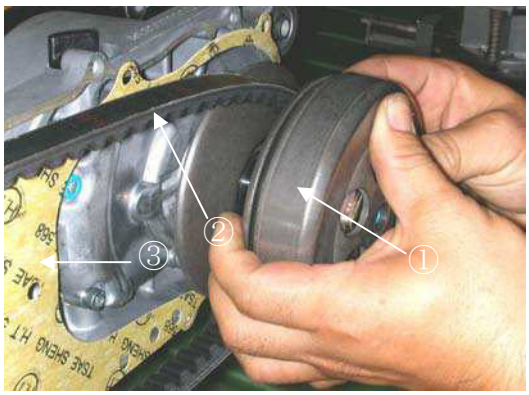
Use Pneumatic tools to dismantle.



Dismantlement of Engine

7. Dismantle:

- Counter Grooved Wheel Assembly ①
- V-Belt ②
- Gaskets ③

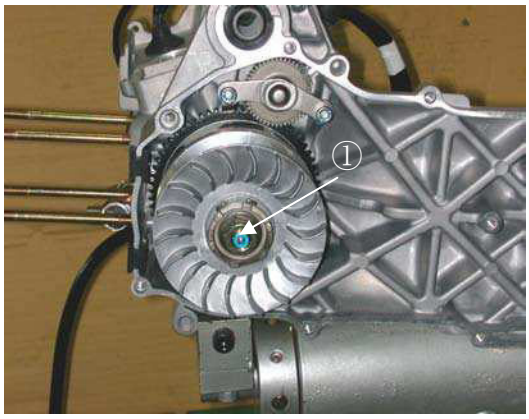


Notes:

As shown in the picture, push with hands the counter grooved wheel assembly to remove the wheel assembly and the V-belt together.

8. Dismantle:

- Nuts for Main Grooved Wheel ①

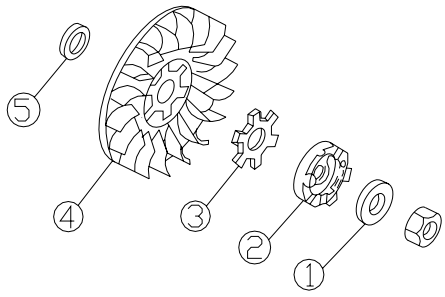


Notes:

Use Pneumatic tools to dismantle.

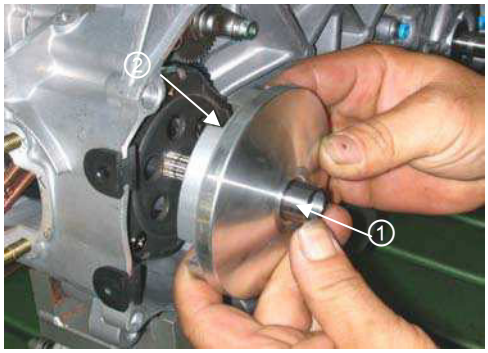
9. Dismantle:

- Fastigiate Spring Gasket ①
- One Way Clutch ②
- Gasket ③
- Main Fixing Grooved Wheel ④
- Plain Washer ⑤



10. Dismantle:

- Axle Collar
- Main Sliding Grooved Wheel



Notes:

Hold the cam and grooved wheel together to

prevent the counter-weight balls from dropping.

Dismantlement of Engine

11. Loosen:

- Nuts

Warnings:

Nuts shall not be dismantled unless the counter grooved wheel is compressed and fixed to prevent the grooved wheel from springing out.

12. Dismantle:

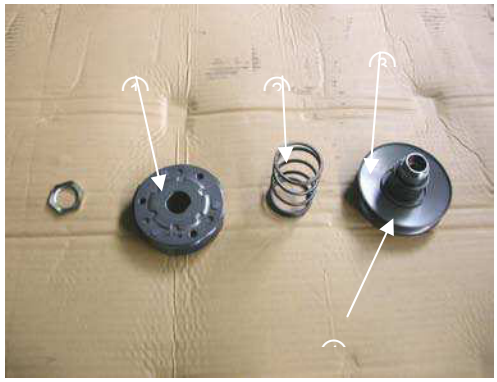
- Nuts for Clutch Carrier

Notes:

Compress and fix the counter grooved wheel with a torque tool.

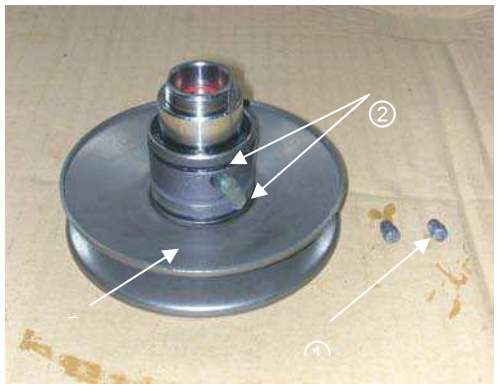
13. Dismantle:

- Clutch Carrier ①
- Pressure Spring ②
- Counter Grooved Wheel ③
- Spring Seat ④



14. Dismantle:

- Guide Pin ①
- O-Type Oil Ring ②
- Counter Sliding Grooved Wheel ③



Dismantlement of Engine

Starting Clutch

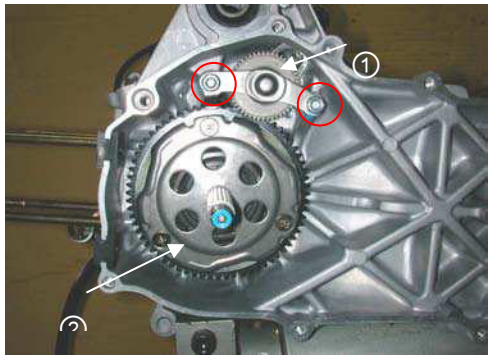
Notes:

Inspect and repair the starting clutch by removing the following parts without dismantling the engine:

- Left Crankcase Cover
- V-Belt
- Main and Minor Grooved Wheels

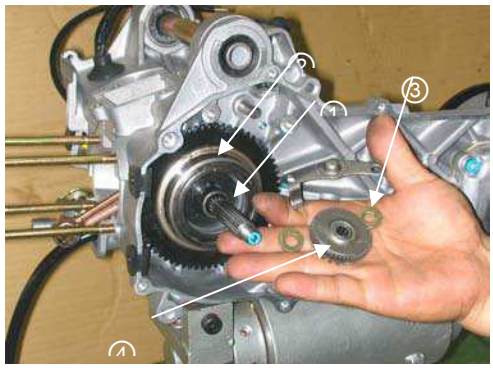
1. Dismantle:

- Gear Idle Plate ①
- Starting Clutch ②



2. Dismantle:

- Axle Collar ①
- Starting Wheel ②
- Gasket ③
- Gear Idle ④
- Gasket ③



3. Dismantle:

- Bearing ①
- Gasket ②

CDI Generator

Notes:

Inspect and repair the CDI generator by removing the following parts without dismantling the engine:

- Covers
- Foot Pedal
- Inlet eye of Cylinder 3

1. Dismantle:

- Nuts for Rotor ①
- Plain Washer

Notes:
Use Pneumatic tools to dismantle.

2. Dismantle:

- Rotor ①

Notes:

Remove the rotor with a flywheel drawer ②

3. Dismantle:

- Armature Assembly ①
- Semi-Round Key ②
- Gasket ③

Dismantlement of Engine

Lubrication Pump

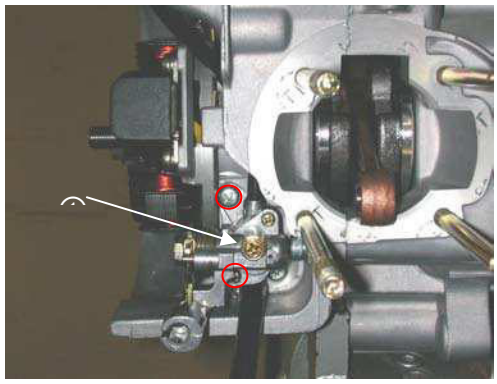
Notes:

Inspect and repair the lubrication pump by removing the following parts without dismantling the engine:

- Covers
- Foot Pedal
- Air Filter
- Inlet Eye of Cylinder
- Wire Rope of Lubrication Pump

1. Dismantle:

- Lubrication Pump ①



2. Dismantle:

- Clip Link ①
- Drive Gear ②

3. Dismantle:

- Anchor Pin ①
- Clip Link ②

Dismantlement of Engine

Driving Mechanism

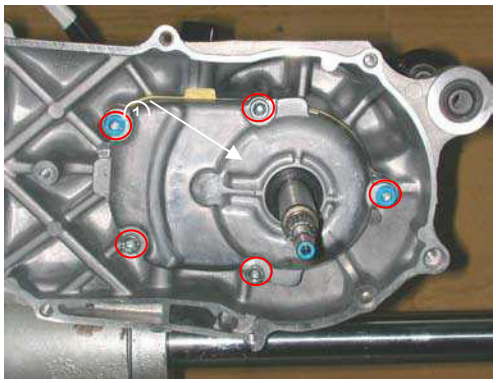
Notes:

Inspect and repair the driving mechanism by removing the following parts without dismantling the engine:

- Left Crankcase Cover
- Main and Counter Grooved Wheel
- V-Belt

1. Dismantle:

- Gear Box Cover ① (Including the main driving gear)
- Gaskets
- Anchor Pin

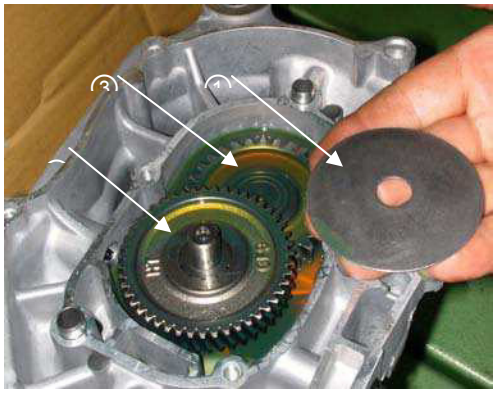


2. Dismantle:

- Oil Seal ①
- Clip Ring ②
- Main Driving Gear ③ (Right Crankcase Cover)

3. Dismantle:

- Fastigiate Spring Gasket ①
- Main Axle ②
- Driving Shaft ③



Dismantlement of Engine

Starting Motor

Notes:

Inspect and repair the starting motor by removing the following parts without dismantling the engine:

- Exhaust Pipe Assembly
- Rear Wheel

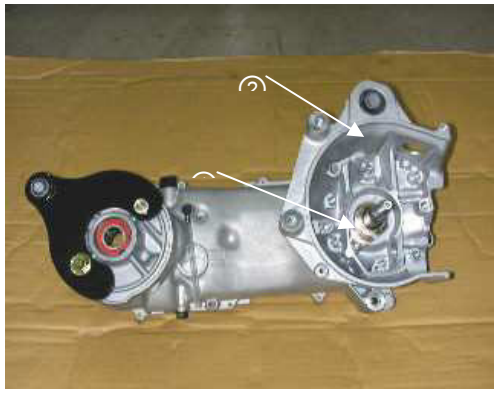
1. Dismantle:

- Starting Motor①

Crankcase (Right)

1. Dismantle:

- Screws M6x35
- Oil Seal Blocking Sheet ①

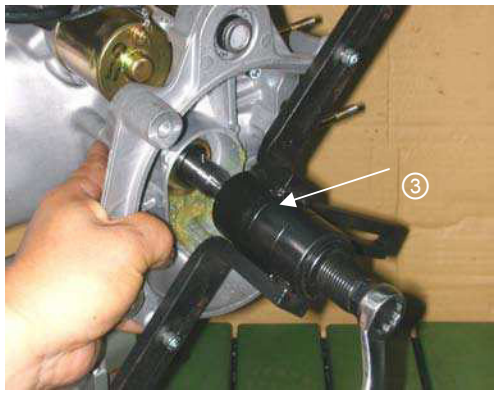


2. Dismantle:

- Crankcase (Right) ②

Notes:

Loosen each nut by ¼ circle and take down after loosing all nuts.



Process of Crankcase Dismantlement:

- Install crankcase dismantlement tools ③

Notes:

Lock the screws of the tool and make it paralleled to the crankcase. Loosen slightly one fixing screw when necessary in order to adjust the tool to parallel.

Dismantlement of Engine

- Constantly tap each installation base of the engine in turn during dismantlement operation and then remove the right crankcase.
- Tap each strengthening part of the crankcase with a plastic hammer.
- Don't tap the gasket of the crankcase.
- Pay attention to the dismantlement.
- Remove the right as well as the left crankcases completely. Take down the dismantlement tool and reinstall it if the right or the left crankcase doesn't have been removed completely. Don't dismantle the crankcases by force but check if screws haven't been unfastened.

3. Dismantle:

- Crank Shaft ①

Notes:

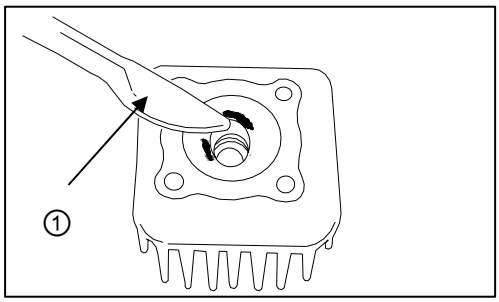
- Remove the crank shaft with the crankcase dismantlement tool②.
- Lock the screws of the tool and make it parallel to the crankcase. Loosen slightly one fixing screw when necessary in order to adjust the tool to parallel.

Inspection and Repair

Cylinder Head

1. Remove:

● Collected carbon from the combustion chamber with a scraper①



Notes:

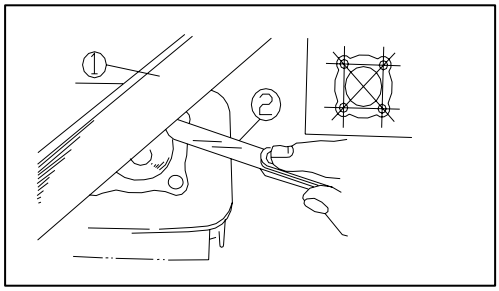
Don't use pointed tools in order to prevent the spark plug installation teeth from being damaged or scratched.

2. Inspect:

● Cylinder Head
Replace it in case of any scratch or damage

3. Measure:

● Warpage
Adjust it in case of any inconformity
Warpage Limit: 0.03mm



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Measuring Steps:

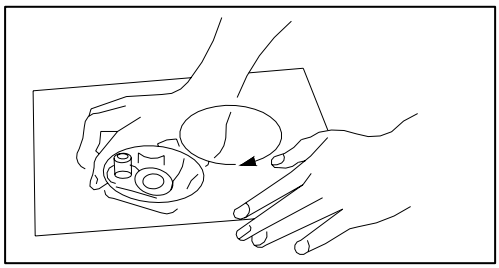
● Put an angle square ① on the cylinder head and measure the Warpage with a thickness gauge②.

● Adjust the cylinder head in case of inappropriate Warpage.

****

4. Finish

● Cylinder Head



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Repair Steps:

Put a sand paper #400~600 on a flat face and finish the cylinder head on it at an order like 8.

Notes:

Rotate the cylinder head to finish it in order to avoid much abrasion of one edge of the cylinder head.

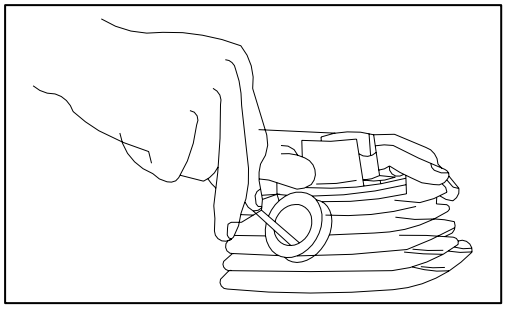
****

Inspection and Repair

Cylinder and Piston

1. Remove:

● Collected carbon with round-headed scrapper



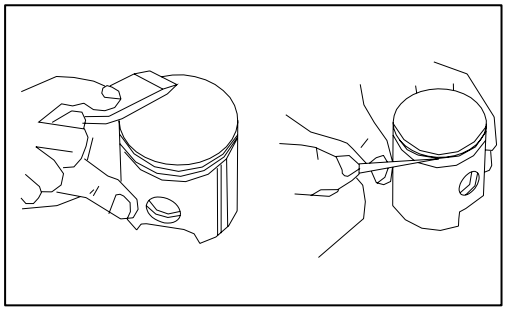
Notes:

Don't use pointed tools in order to prevent damage or scratch.

2. Inspect:

● Cylinder Wall

Hone or replace it in case of any abrasion or scratch.



3. Remove:

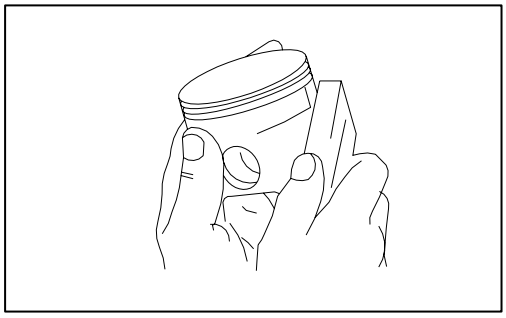
● Collected carbon from the piston crown and the ring grooves.

● Piston Crown

Replace it in case of any scratch or damage.

5. Remove:

● scratch or collected carbon from the piston walls with sand paper #600~800



Notes:

Remove it across and avoid over attrition.

6. Inspect:

● Piston Walls

Replace it in case of any abrasion, scratch or damage.

Inspection and Repair

7. Measure:

● Clearance between piston and cylinder

****

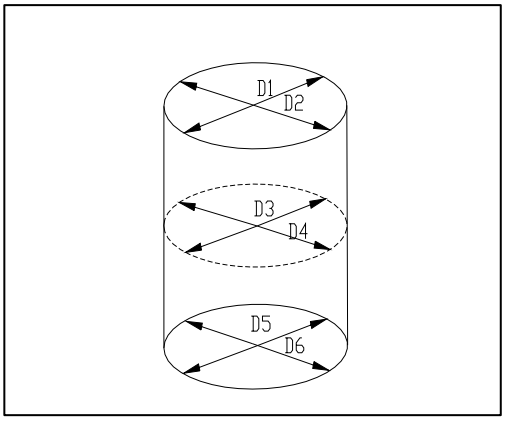
Measuring Steps:

Step 1:

● Measure the C value of the cylinder with a cylinder gauge.

Notes:

Parallel the cylinder gauge to the crank shaft at a right angle and then measure the average value.



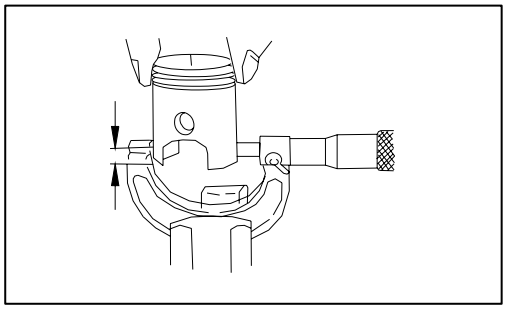
	Reference Value	Wear Limit
C Value of Cylinder	53.993~54.112m m	54.93~54.012m m
	51.993~52.112m m	52.93~52.012m m
	49.993~50.112m m	50.93~50.012m m
	39.993~40.112m m	40.93~40.012m m
Taper (T)	-----	0.05mm
Out-of Round (R)	-----	0.006mm
If C=D, the max.: T: (max. of D1 or D2)—(max. of D5 or D6) R: (max. of D1, D3 or D5)- (max. of D2, D4 or D6)		

● Hone or replace the cylinder, the piston and the piston ring in case of any inconformity.

Step 2:

- Measure the P value of the skirt section of the piston with a micrometer caliper.

ⓐ5mm shall be started from the bottom of the piston.



Piston Size “P”:

Standard Size: 53.958~53.972mm

51.958~51.972mm

49.958~49.972mm

39.958~39.972mm

- Replace the piston and the piston ring in case of any inconformity.

Inspection and Repair

Steps 3:

● Calculate the clearance between piston and cylinder according to the following formula:

Clearance to Cylinder:

C value of Piston to Cylinder － P value of skirt section of the clutch

● Hone or replace the cylinder, the piston and the piston ring in case of any inconformity.

Clearance between Piston and Cylinder: 0.035~0.040mm

Upper Limit: 0.1mm

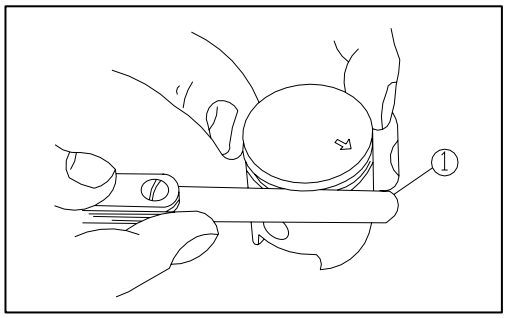
****

Piston Ring

1. Measure:

● Side Clearance

Replace the piston in case of any inconformity or/and measure it with thickness gauge①.



Side Clearance:

Top Ring: 0.03~0.05mm

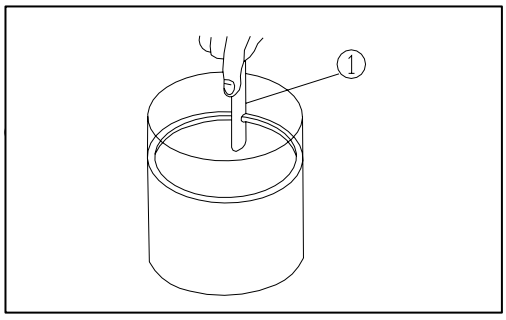
2nd Ring: 0.03~0.05mm

2. Install:

● Piston into the cylinder

Notes:

Put the piston ring into the cylinder and press it make it vertical to the cylinder walls.



3. Measure:

● Tip Clearance

Replace it in case of any inconformity

Measure it with a thickness gauge①.

Tip Clearance:

Top Ring: 0.15~0.35mm

2nd Ring: 0.15~0.35mm

Inspection and Repair

Piston Pin and Bearing

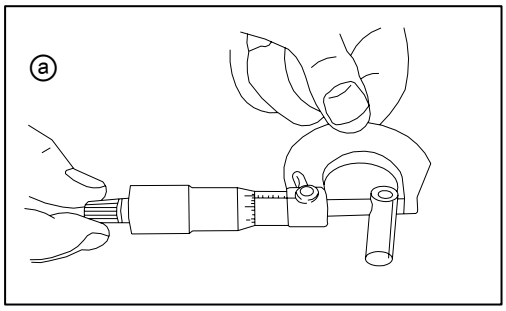
1. Inspect:

- Piston Pin

  Replace it in case of any burn or scratch and examine the lubricating system.

2. Measure:

- External Diameter of the Piston Pin ⓐ



Replace it in case of any inconformity.

ED (Piston Pin)ⓐ:

9.996~10.000mm

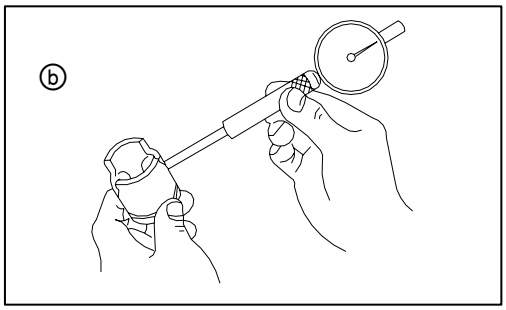
3. Measure:

- Clearance between Piston Pin and Piston.

  Replace it in case of any inconformity.

Clearance between Piston Pin and Piston:

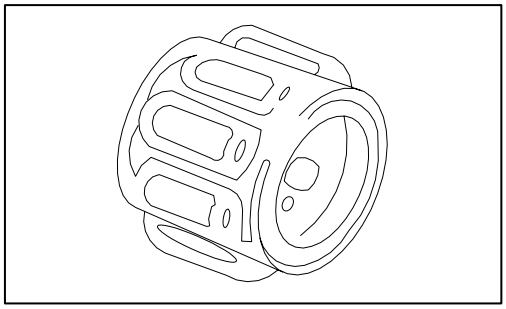
0.008~0.015mm



4. Inspect:

- Bearing of the Piston Pin

  Replace it in case of any deformation or damage.



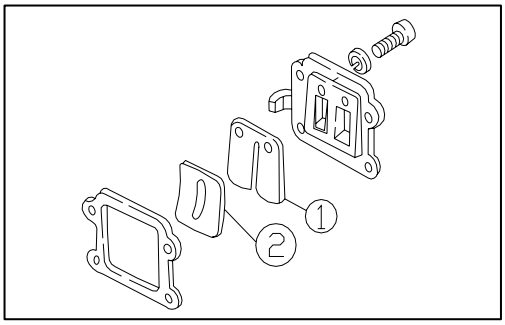
Leaf Valve

1. Inspect:

- Leaf Valve ①

- Leaf Valve Stopper ②

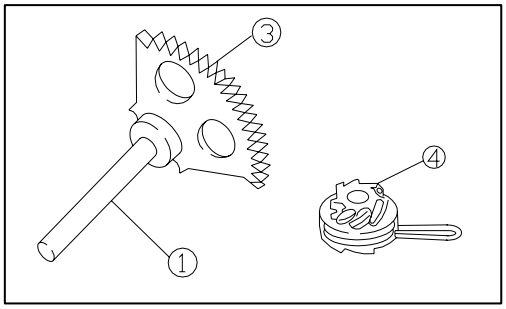
  Replace it in case of any crack or damage.



Inspection and Repair

Foot Shaft

1. Inspect:

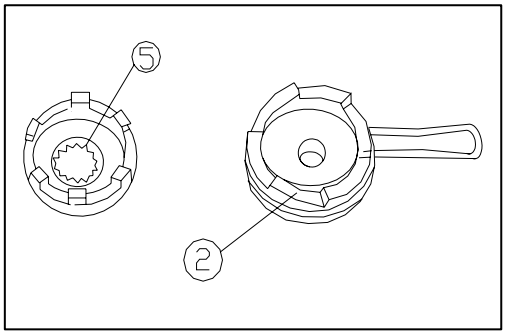


- Foot Shaft ①

  Replace it in case of any abrasion or damage.
- Return Spring

  Replace it in case of any crack or damage.
- Nail Groove (Foot Small Gear) ②
- Gear Teeth③of Foot Shaft
- Foot Small Gear Teeth④
- Toothed Fact of One Way Clutch⑤

  Replace it in case of any abrasion or damage.

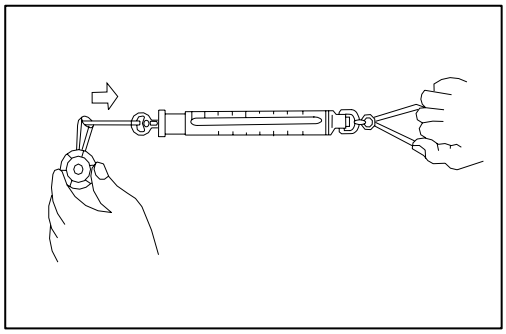


2. Measure:

- Clamp Tension← (Foot Small Gear)

  Replace it in case of any inconformity.

  Measure it with a spring balancer.



Clamp Tension:

150~250g

Clutch

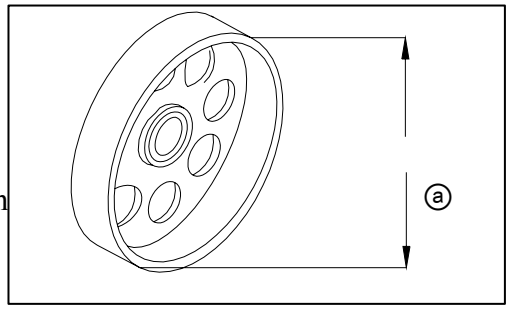
1. Inspect:

- Inside walls of the clutch hub

  Replace it in case of any scratch or rust.

  Polish the inside walls with emery clothes in case of any scratch.

2. Measure:



- ID of the clutch hubⓐ

  Replace the hub in case of any incon

ID (Clutch Hub):

112.0mm

(Abrasion Limit):

112.3mm

Inspection and Repair

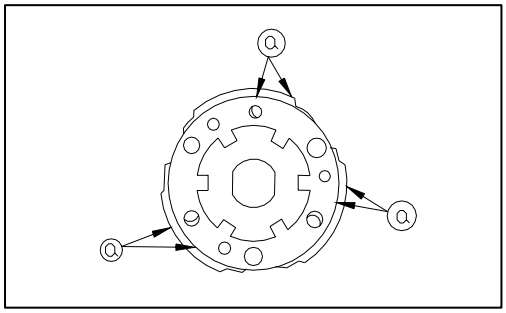
3. Inspect:

● Clutch Block

Polishing Parts→rub it with rough sand papers.

Notes:

Wipe the clutch up with a clean textile after rubbing.



4. Measure:

● Thickness of ⓐ of the clutch block

Replace it in case of inconformity

Thickness of Clutch Block: 2mm

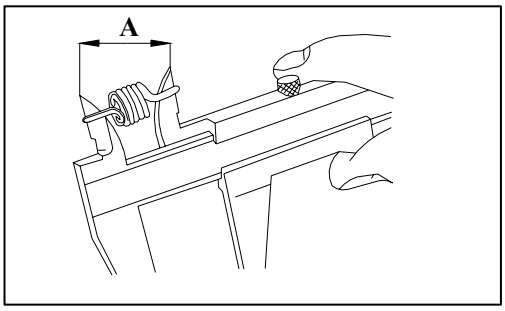
(Abrasion Limit): 1mm

5. Measure:

● Flexible Length of the Clutch Balance

Weight Spring (Balance Weight Spring)ⓐ

Replace it in case of any inconformity.



Flexible Length (Balance Weight Spring)ⓐ:

29.9mm

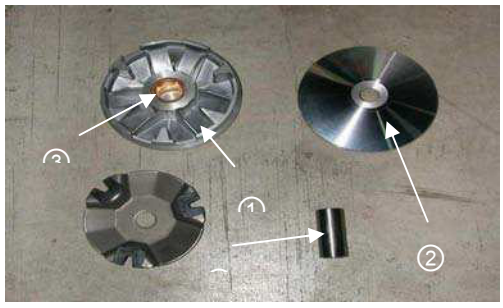
6. Inspect:

● Clutch Block Movement

Replace it in case of any unsmoothness.

Main Grooved Wheel

1. Inspect:



● Main Sliding Grooved Wheel①

● Main Fixing Grooved Wheel②

● Shaft Sleeves③of Sliding Grooved Wheel

● Shaft Ring ④

Replace it in case of any abrasion, crack, scratch or damage.

2. Inspect:

● Free Movement

Put the shaft ring①into the main sliding grooved wheel② to test the free movement.

Replace the grooved wheel or the shaft ring in case of getting stuck or loosen.

3. Inspect:

● Ball Bearings

Replace them in case of any damage

4. Inspect:

● ED of Ball Bearings

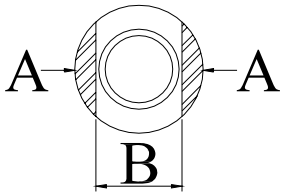
Replace them in case of any inconformity.

ED of Balance Weight: 15.0mm

(Limit): 14.5mm

A: Worn Parts

B: Measurement Points

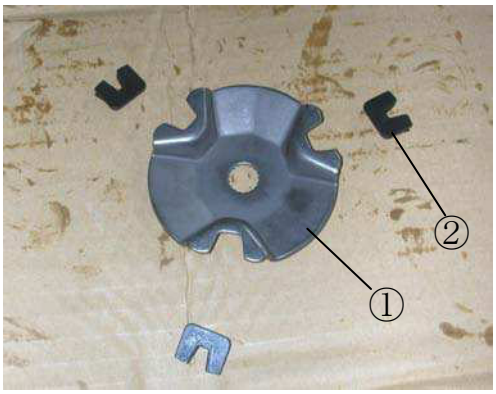


5. Inspect:

● Cam① of Main Grooved Wheel

● Sliding Fittings②

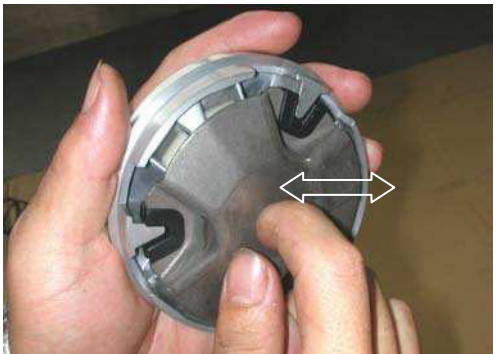
Replace them in case of any abrasion or damage.



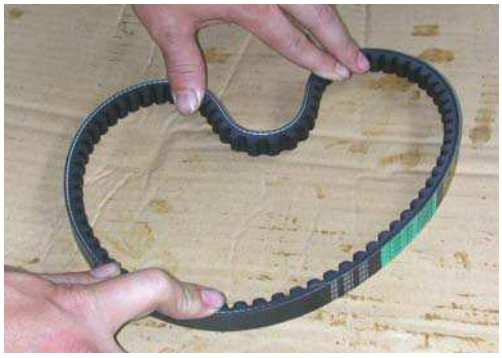
6. Inspect:

● Cam Movement Situation

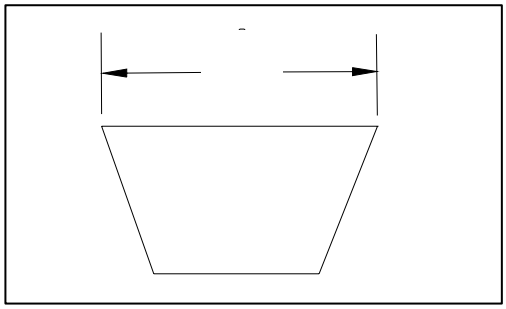
Repair in case of any unsmoothness.



V-Belt



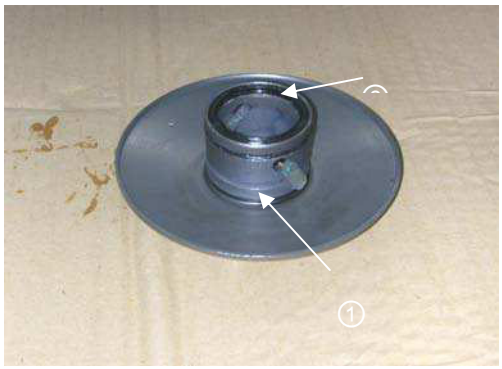
1. Inspect:
   - ● V-Belt
     Replace it in case of any crack, abrasion, off-line and gap.
     Replace it in case of any oil remains.
2. Measure:
   - ● Width of V-Belt ⓐ
     Replace it in case of any inconformity.



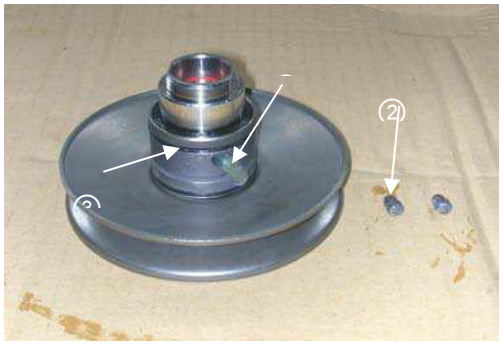
Width of V-Belt: 16.6mm
(Limit): 14.6mm
Notes:
Measure each poison of the V-belt.

Counter Grooved Wheel

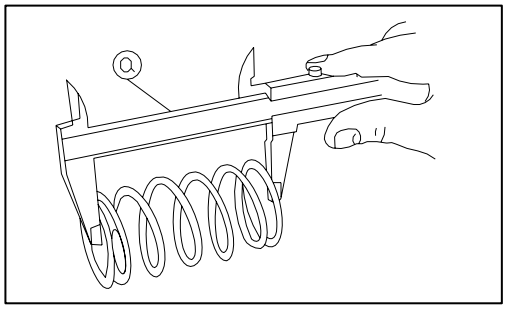
1. Inspect:
   - ● Counter Grooved Wheel (Fixed)
   - ● Counter Grooved Wheel (Movable) ①
   - ● Oil Seal②
     Replace the set in case of any scratch, crack or damage.



2. Inspect:
   - ● Torque Guide Channel①
   - ● Guide Pin②
     Replace the set in case of any abrasion or damage.



3. Inspect:
   - ● Movement of the Sliding Grooved Wheel
     Replace the set in case of any unsmoothness.
4. Measure:
   - ● Spring Flexible Length (Counter Grooved Wheel)
     Replace it in case of any inconformity.

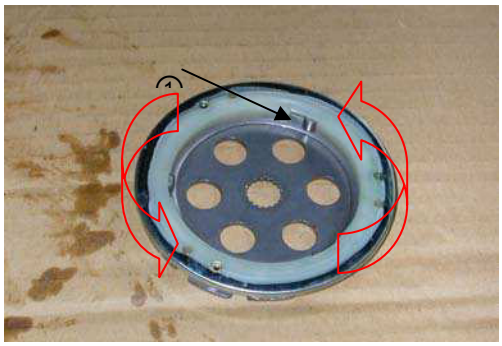


Flexible Length (Counter Grooved Wheel)ⓐ: 94.0mm

(Limit): 91.0mm

Inspection and Repair

Starting Clutch Gear



1. Inspect:
   - Starting Clutch

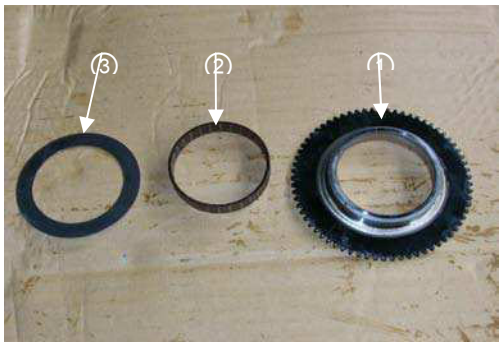
   Insert the anchor pin①into the groove and turn it counterclockwise.

   Replace the starting clutch assembly in case of unsuccessful operation.

2. Inspect:
   - Starting Gear Teeth①
   - Gear Idle Teeth②

   Replace them in case of any burn, deformation, abrasion or gap.

3. Inspect:
   - Contact Surface (Starting Wheel) ①
   - Contact Surface (Bearing) ②
   - Gasket③



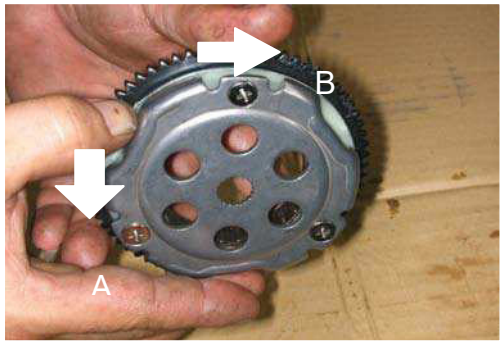
   Replace them in case of any falling or damage

4. Inspect:
   - Operation of the Starting Clutch

****

Steps:

- Install the starting wheel on the starting clutch and then make the clutch not to move.
- Turn the starting wheel counter clockwise to where marked A, and the wheel and the clutch get stuck. Their failure to get stuck indicates the clutch is damaged, so replace it.
- Turn the starting wheel clockwise to where marked B, and the wheel and the clutch can move individually. The failure indicates the clutch is damaged, so replace it.



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Inspection and Repair

Driving Mechanism

1. Inspect:

- Driving Shaft①
- Main Shaft②
- Main Driving Gear③

  Replace them in case of any abrasion or damage.

2. Inspect:

- Bearing①

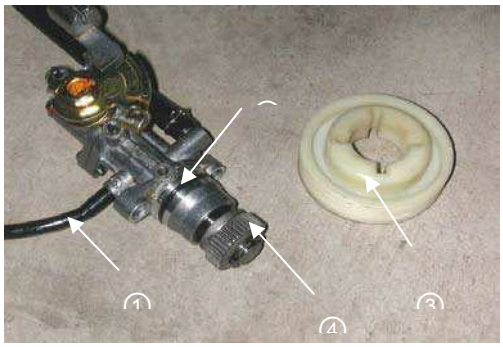
  Replace it in case of any falling or damage
- Oil Seal

  Replace it in case of any abrasion or damage

Lubrication Pump

Its abrasion and inside troubles may make the lubricant output inconsistent to the designed figure. Though this case is rare, inspect the following items in case of abnormal lubricant output.

1. Inspect:



- Lubricating Pipe1.2①

  Blow it through or replace it in case of block or crack.

- O-type Oil Ring②

  Replace it in case of any abrasion or damage.

2. Inspect:

- Driving Gear for the Lubrication Pump③
- Driven Gear for the Lubrication Pump④

  Replace it in case of any falling, abrasion and damage.

Inspection and Repair

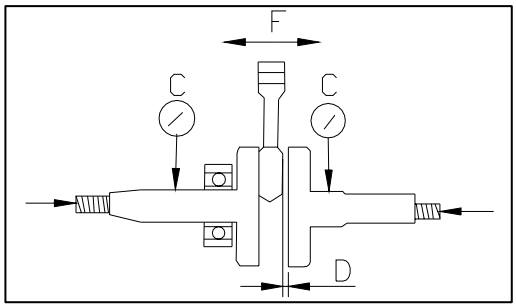
Crank Shaft

1. Measure:

- Out-Of-Round “C”
- Side Clearance “D” of the big end of the connecting rod
- Free clearance limit “F” of the small end of the connecting rod.

Replace it in case of any inconformity.

Measure the values above with V-type bearing seat, micrometer and thickness gauge.



Limit of Out-of-Round “C”: 0.03mm

Side Clearance “D”: 0.2~0.5mm

Free clearance limit “F”: 0.4~0.8mm

Crankcase

1. Clean the crankcases with neutral solvent.
2. Clean all contact surfaces on the crankcases, including the gasket contact surface and the surfaces of the right and left crankcases.

3. Inspect:

- Crankcase

Replace it in case of any crack or damage.

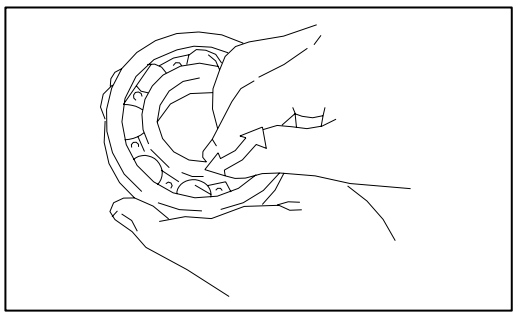
Bearing and Oil Seal

1. Inspect:

- Bearing for Engine

Rotate the inside edge by hands after being cleaned and lubricated.

Replace it in case of bad performance.



2. Inspect:

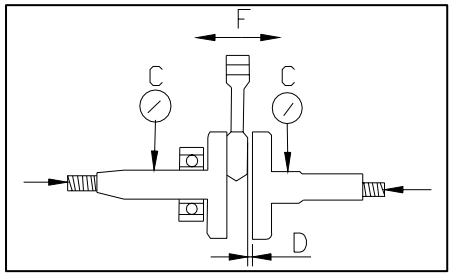
- Bearing for Engine

Replace it in case of any abrasion or damage.

Assembly and Adjustment of the Engine

Crankcase and Crankshaft

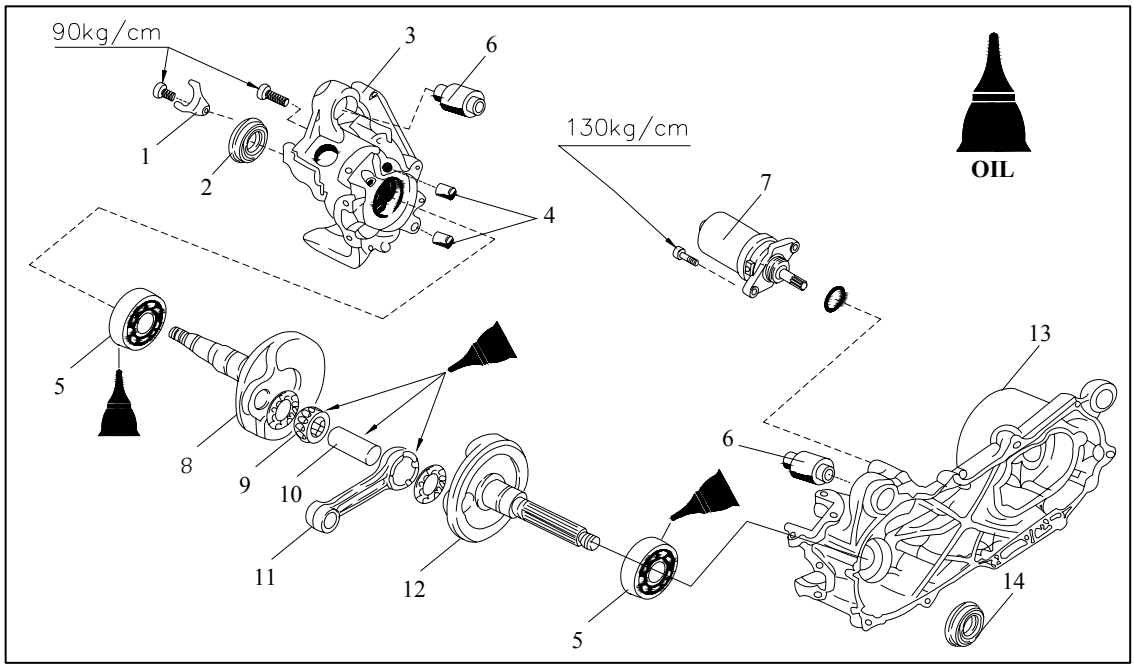
1. Oil Seal Stopper
2. Oil Seal
3. Right Crankcase
4. Anchor in
5. Bearing6204C3
6. Engine Damper Cover
7. Starting Motor
8. Left Crankcase
9. Needle Bearing
10. Crank Pin
11. Connecting Rod
12. Left Crankcase
13. Left Crankcase
14. Oil Seal



C：0.03mm

D：0.2~0.5mm

E：0.4~0.8mm

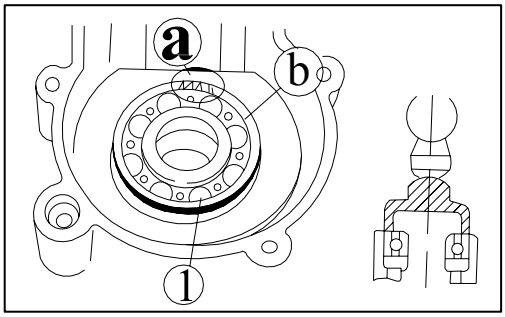


Assembly and Adjustment of the Engine

Crankshaft and Crankcase

Notes:
Lay the lithium soap greases on the oil seal lip in order to make the installation of the crankshaft easy and prevent it from being scratched and lubricate the bearings with engine oils.

1. Install:



- Bearing①

Notes:

Make the signed surface ⓐ, ⓑ of the bearing facing the crankshaft and give a pressure from the exposed part of the bearing to assemble it.

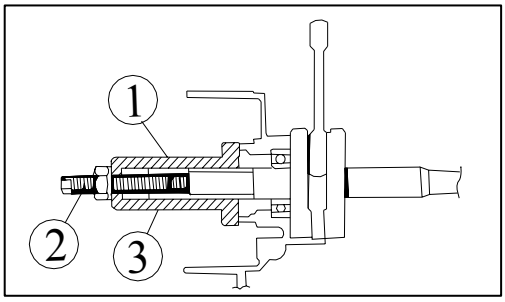
2. Lay:

- Engine oil on the crank bearing

3. Install:

- Crankshaft (to the left crankcase)

4. Install:



- Crank Assembly Tools

  Crank Assembly Tube①

  Crank Assembly Bolt②

  Crank Assembly Connecting Tube③

Notes:
Make the connecting rod stay at the top stuck point and turn the assembly tool till the lower part of the crankshaft contacts the bearing.

5. Lay:

● Binding agent on the contact surface of the left and right crankcases.

6. Install:

● Anchor Pin①

7. Install:

● Crankcase (Right)`

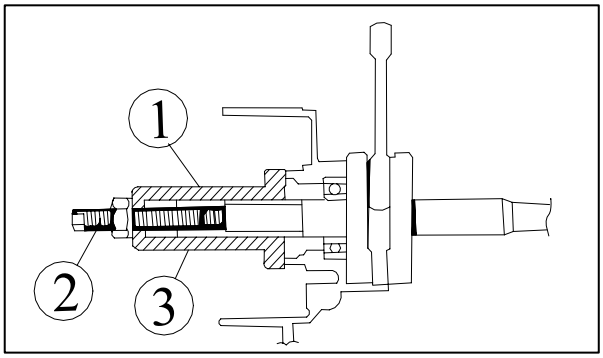
8. Install:

● Crank Assembly Tools

Crank Assembly Tube①

Crank Assembly Bolt②

Crank Assembly Connecting Tube③



Notes:

Make the connecting rod stay at the top stuck point and turn the assembly tool till the lower part of the crankshaft contacts the bearing.

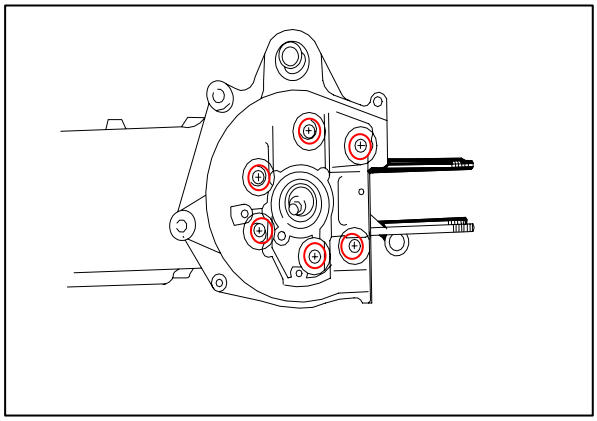
9. Lock:

● Screws(Crankcase)

Notes:

Lock it across.

Screws(Crankcase): 90Kg/cm



10. Install:

● Oil Seal (Unused)①

Into the Left Crankcase

Notes:

● With a oil seal assemble tool②

●Smear the oil seal lip with lithium soap greases.

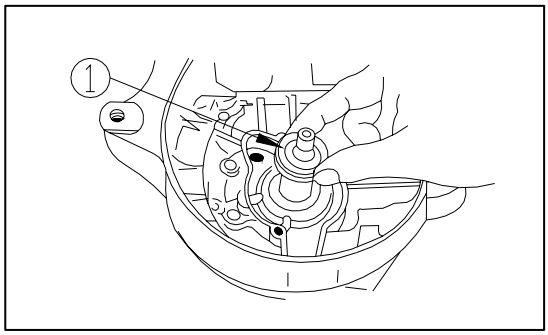
Notes:

An unused oil seal is required.

11. Install:

● Oil Seal (Unused)①

Into the Left Crankcase



Notes:

Smear the oil seal lip with lithium soap greases.

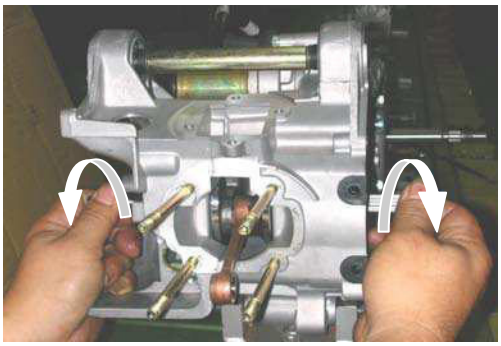
Notes:

An unused oil seal is required.

12. Inspect:

● Operation of the crank shaft.

Tap with a plastic hammer the crankcase till return to the original point.



Notes:

Do not knock the crack shaft.

13. Install:

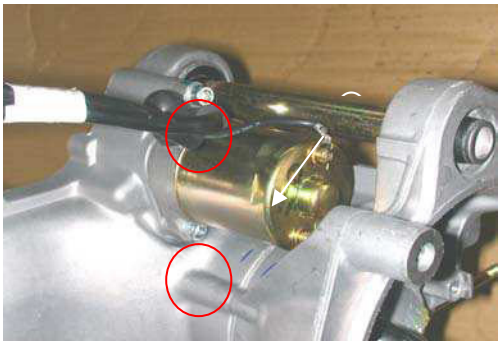
● Oil Seal Stopper①

Screws (Oil Seal Stopper): 90Kg/cm

14. Install:

● Starting Motor①

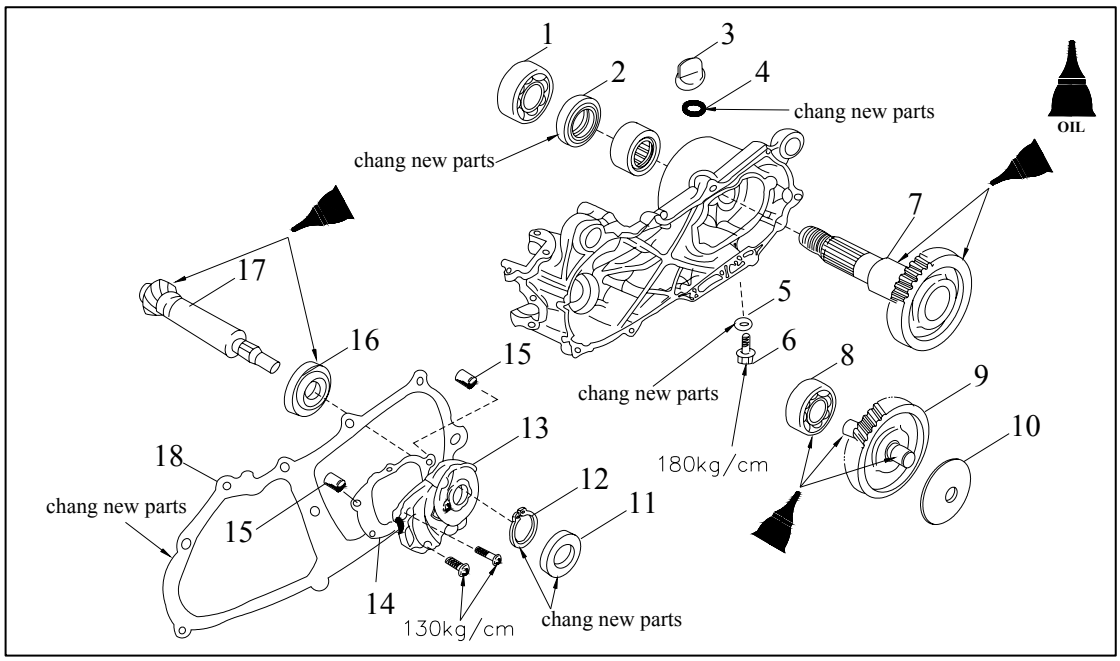
Bolts (Starting Motor): 130Kg/cm



Assembly and Adjustment of the Engine

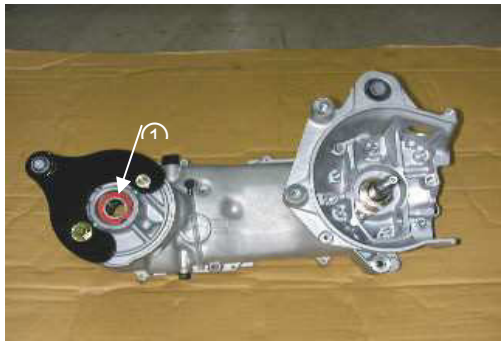
Driving Mechanism

1. Bearing
2. Oil Seal
3. Oil Filter Plug
4. O-type Oil Ring
5. Copper Plain Washer
6. Bolt for Discharging Oil
7. Driven Shaft
8. Bearing
9. Gear Idle
10. Conical Spring Gasket
11. Oil Seal
12. External Clamp
13. Gear Box Cover
14. Gasket for Gear Box Cover
15. Anchor Pin
16. Bearing
17. Main Driving Gear
18. Gasket for Left Crankcase Cover



Assembly and Adjustment of the Engine

Driving Mechanism



1. Install:
   - Oil Seal (Driving Shaft)
   - Bearing①

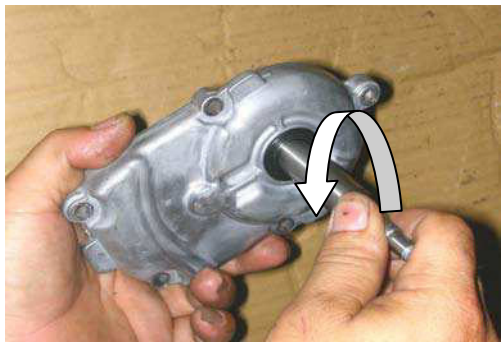
Notes:
Smear the oil seal lip with the lithium soap greases.

2. Install:
   - Driving Shaft①
   - Main Shaft②
   - Plain Washer③

Notes:
Smear the main shaft and driving shaft with the gear oil.

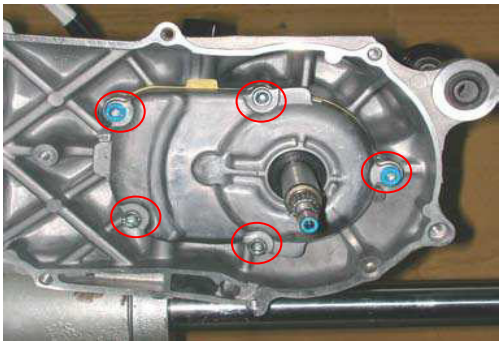
3. Install:
   - Main Driving Gear①
   - Clamp②
   - Oil Seal③

Notes:
Smear the oil seal lip with the lithium soap greases.



4. Inspect:

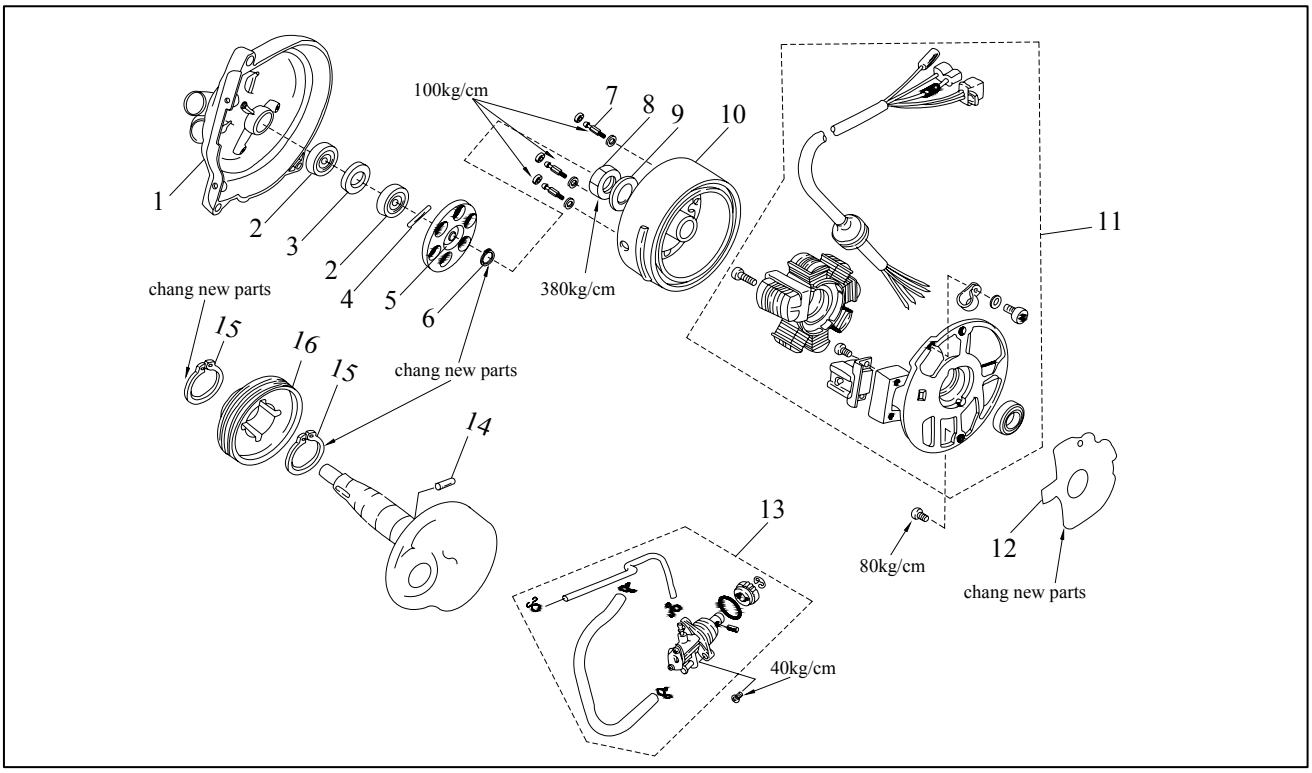
● Movement (Main Driving Gear)
Repair it in case of unsuccessful movement.



Assembly and Adjustment of the Engine

Lubrication Pump and CDI Generator

1. Water Pump Assembly
2. Bearing
3. Spacer Tube
4. Anchor Pin
5. Pump Actuator Disc
6. External Clamp
7. Pump Actuator Bolt
8. Nut
9. Plain Washer
10. Fly Wheel
11. Magneto Assembly
12. A.C.G Gasket
13. Oil Pump Assembly
14. Anchor Pin
15. External Clamp
16. Drive,Gear, Oil-Pump



Assembly and Adjustment of the Engine

Lubrication Pump

1. Install:

● Clamping Ring①

● Anchor Pin②

2. Install:

● Driving Gear①

3. Smear:

● the O-type Oil Ring① with the lithium soap greases.

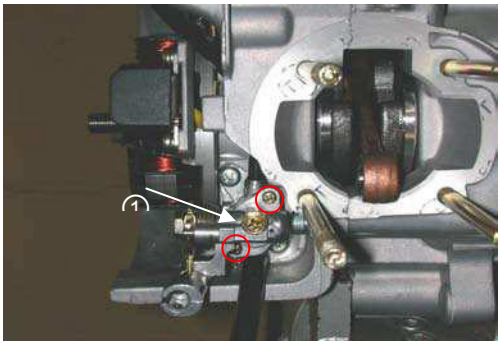
4. Smear additionally:

● the lubrication pump gear 15cc with the lithium soap greases.

5. Install:

● Lubrication Pump①

Screws (Lubrication Pump):
40Kg/cm



Assembly and Adjustment of the Engine

CDI Generator

1. Install:

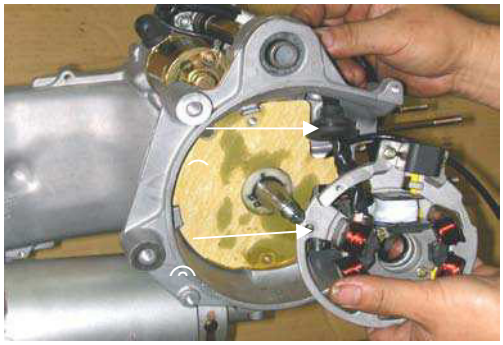
● Gasket①

● Semicircular Key②

Warnings:

New gaskets are required.

2. Install:



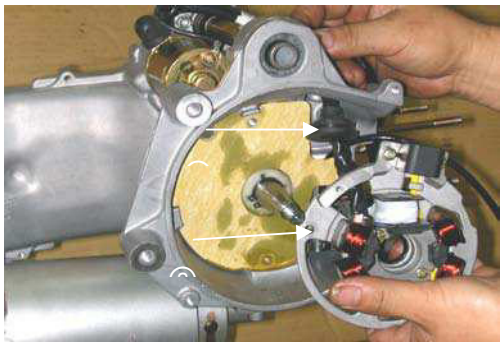
● Oil Seal

Notes:

● Smear the oil seal lip with the lithium soap greases.

● Inspect the oil seal and replace it in case of any damage.

3. Install:



● Grommet①

● Armature Assembly②

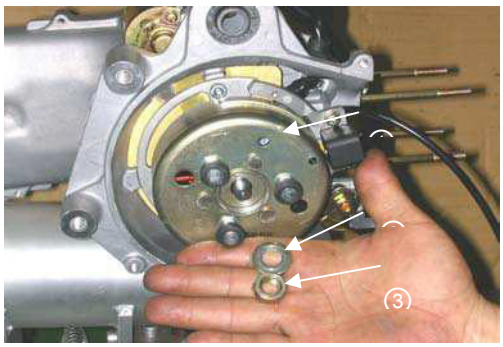
Screws (Armature Assembly): 80kg/cm

Notes:

● Put CDI generator wires unit through the crankcase hole.

● Install the grommet as shown in the picture.

4. Install:



● Rotor①

● Plain Washer②

● Nut③

Notes:

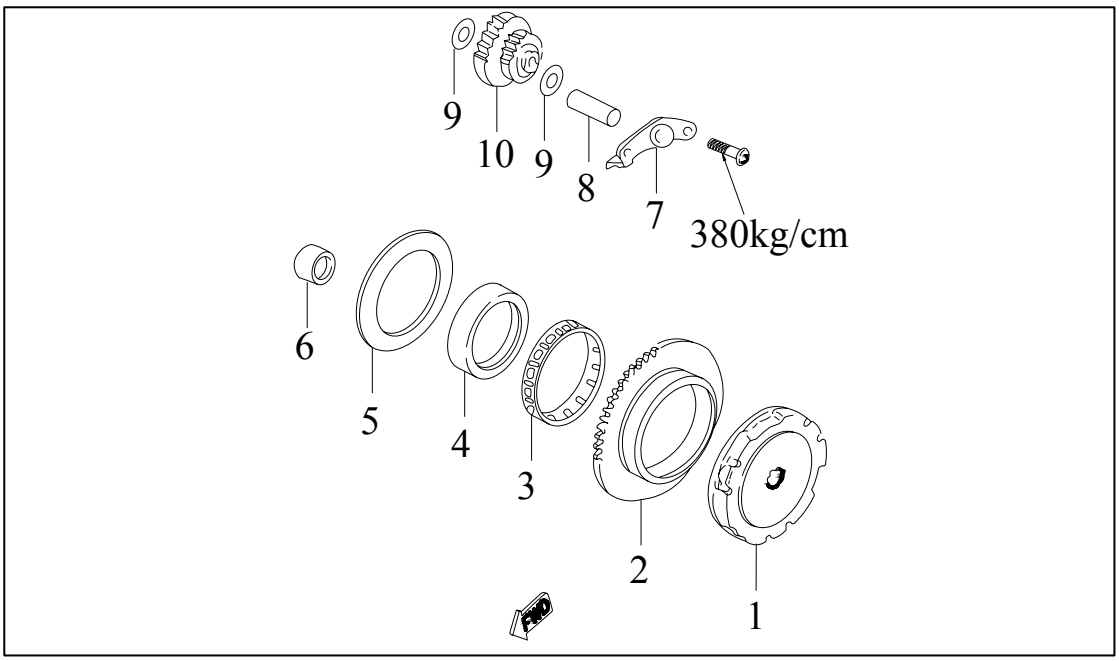
● Clean the conical parts of the crack shaft and the rotor.

● Insert completely the semicircular key into the groove of the crank key when installing the rotor.
Screws (Rotor): 380Kg/cm

Assembly and Adjustment of the Engine

Starting Clutch

1. Starting Clutch
2. Electric Starting Clutch Gear
3. Needle Bearing
4. Gear Drum
5. Plain Washer



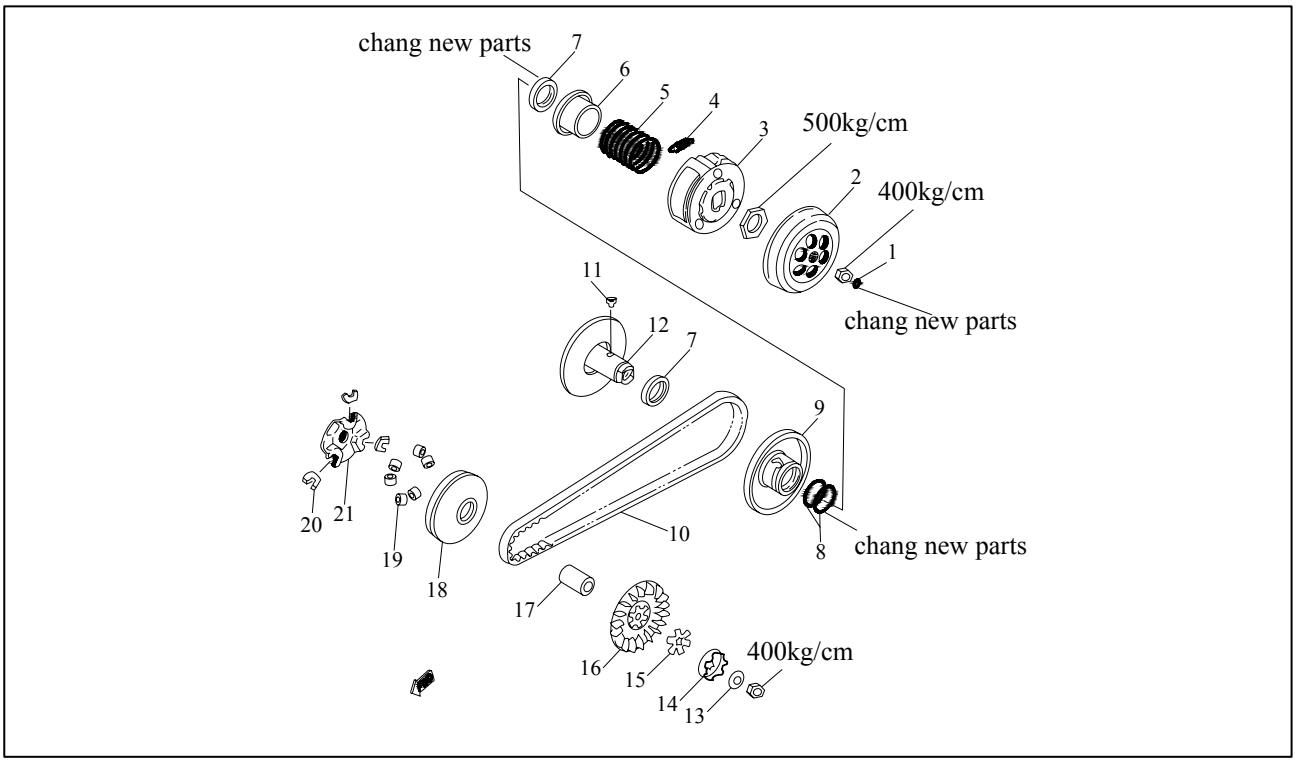
6. Spacer Pipe
7. Gear Idle Plate
8. Gear Idle Shaft
9. Plain Washer
10. Gear Idle

Assembly and Adjustment of the Engine

V-Belt and Main and Counter Grooved Wheels

1. Oil Ring
2. Clutch Cover
3. Clutch Twister
4. Return Spring for Clutch
5. Pressure Spring
6. Spring Seat
7. Oil Ring
8. Counter Grooved Wheel
9. V-Belt
10. Guide Pin
11. Guide Pin
12. Counter Grooved Wheel
13. Conical Spring Gasket
14. One Way Clutch
15. Pliers Gasket
16. Main Fixing Grooved Wheel
17. Axle Collar of Clutch
18. Main Sliding Grooved Wheel
19. Heavy Roller
20. Cam Plate
21. Sliding Key of the Plate Cam

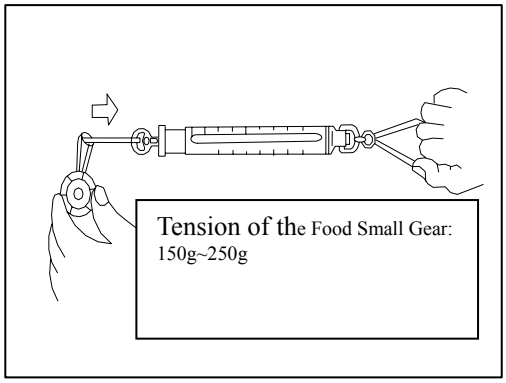
A	Abrasion Limit of Clutch Cover: 112.3mm
B	Abrasion Limit of Clutch Shoe: 1mm
C	Abrasion Limit of V-Belt: 14.6mm
D	Return Spring Length of Clutch: 29.9mm

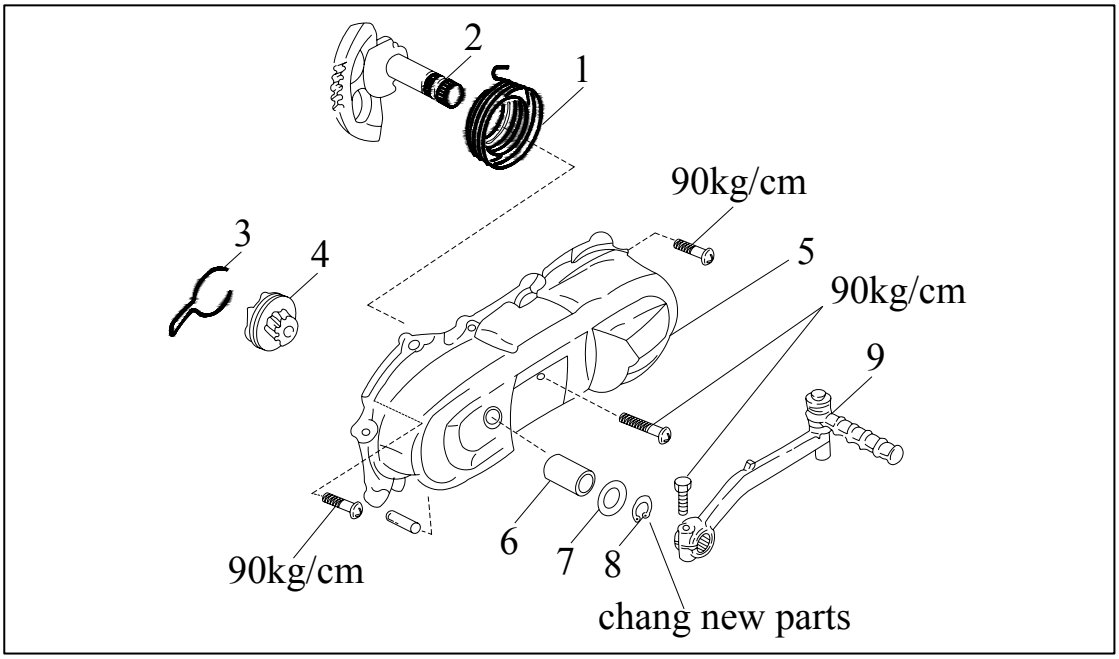

chang new parts
7
6
5
4
3
500kg/cm
2
400kg/cm
1
chang new parts
11
12
7
9
20
21
19
18
10
8
chang new parts
17
16
15
14
13
400kg/cm

Assembly and Adjustment of the Engine

Foot Shaft

1. Starting Return Spring
2. Starting Shaft Gear
3. Spring of Foot Small Gear
4. Foot Small Gear
5. Left Crankcase Cover
6. Starting Shaft Sleeves
7. Plain Washer for Starting Shaft
8. Foot Starting Rod





Assembly and Adjustment of the Engine

Starting Clutch

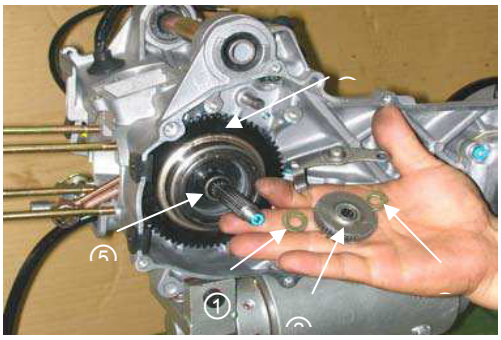
1. Install:

- Gasket①
- Bearing②

Notes:

Lay the MOS2 engine oil on the gear casing.

2. Install:



- Gasket①
- Gear Idle②
- Gasket③
- Starting Wheel④
- Axle Collar⑤

3. Install:

- Starting Clutch①
- Gear Idle Plate②

Notes:

- Lay the greases on the gear idle.

- Lay the MOS2 engine oil on the inside

  roller of the clutch.

  Screws (Gear Idle Plate): 90kg/cm

V-Belt, Main and Counter Grooved Wheels and Foot Shaft

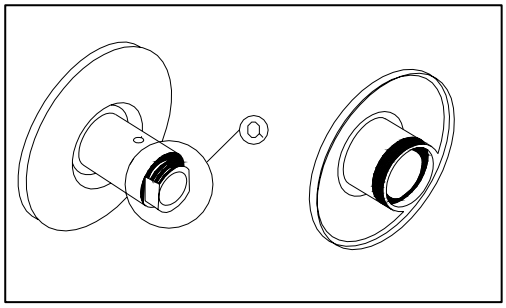
1. Clean:

   - Sliding Surface (Counter Grooved Wheel)

2. Lay:

   - the lithium soap greases on the sliding

     surface of the sliding grooved wheel.



3. Install:

   - Sliding Grooved Wheel into the Sliding

     Grooved Wheel

Notes:

Wrap with adhesive tapes the part marked ⓐ of the fixing grooved wheel and flat the pointed part in order to prevent the oil seal from being damaged as the sliding grooved wheel moves. No rotation of the oil seal lip is permitted during the assembly process.

4. Install:

- Guide Pin①
- O-type Oil Ring②

Warnings:

An unused O-type oil ring is required.

5. Lay:

- the lithium soap greases on the torque cam groove ① and O-type oil ring②

6. Inspect:

- Operation of the Sliding Grooved Wheel

  Repair it in case of bad performance.

7. Install:

- Spring Seat①

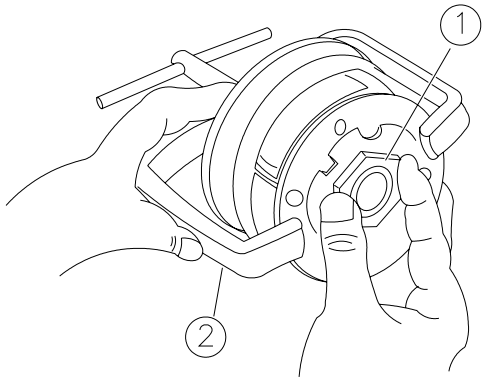
- Counter Grooved Wheel
- Pressure Spring
- Clutch Twister

Notes:

Get rid of the overmuch grease.

8. Clean:

- Contact surface between the nut and the clutch twister.



9. Install:

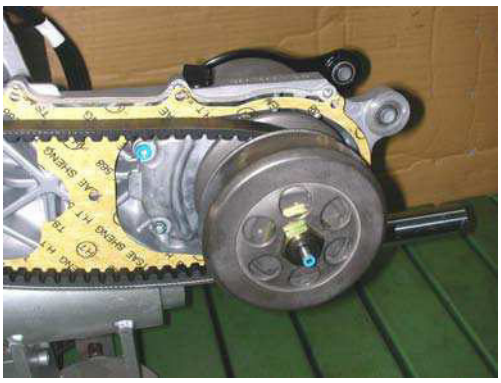
- Nut (Clutch Twister)

Notes:

Compress and fix the counter grooved wheel with a clutch twister in order to install the nut.

10. Lock:

- Nut (Clutch Twister)



Notes:

Install the counter grooved wheel onto the main driving shaft and lock it with a pneumatic tool.

11. Clean:

- Sliding Surface (Balance Weight)

12. Install:

- Balance Weight① to the sliding groove②

13. Install:

- Cam (Main Grooved Wheel)
- Slip Fitting (Main Grooved Wheel)

14. Inspect:

- Operation of the Cam(Main Grooved Wheel)

  Repair it in case of bad performance.

15. Install:

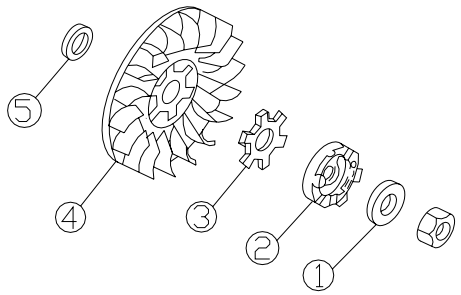
- Axle Collar①
- Set of the Main Sliding Grooved Wheel②

Notes:

Hold the cam and sliding grooved wheel by hands in order to prevent the balance weight from falling.

Assembly and Adjustment of the Engine

16. Install:

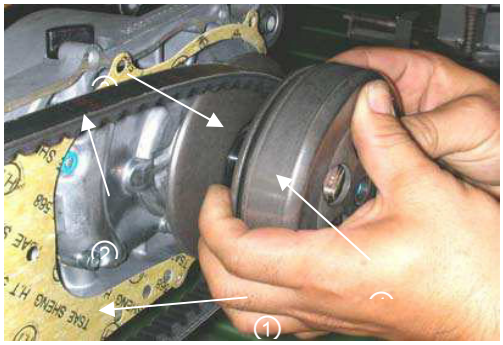


- Plain Washer①
- One Way Clutch②
- Gasket③
- Main Fixing Grooved Wheel④
- Plain Washer⑤
- Nut⑥

Notes:

Lock them with a pneumatic tool.

17. Install:



- Gasket①
- V-Belt②
- Counter Grooved Wheel Assembly③
- Clutch Casing④

Wind the V-belt onto the grooved wheels and press the spring of the counter grooved wheel in order to make the belt into the wheel.

Notes:

- Make the arrow sign on the belt forward.
- Get rid of the remained grease or lubricant from the contact surface between the main and counter grooved wheel and the belt before installing the belt.

18. Install:

- Nut
- O-type Oil Ring

Notes:

Lock them with a pneumatic tool.

Warnings:

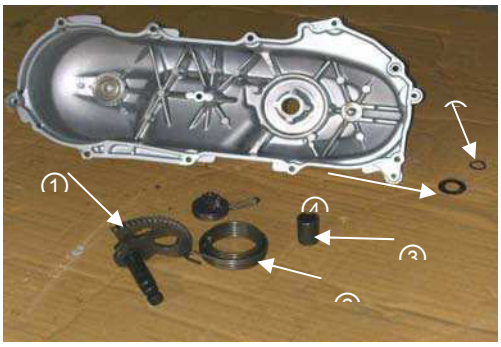
An unused O-type oil ring is required.

19. Install:

- Generator's Housing

20. Install:

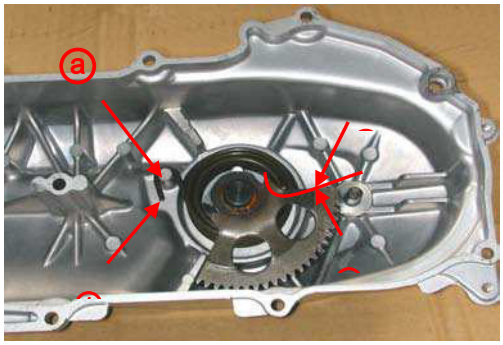
- Foot Shaft Assembly①
- Return Spring②
- Sleeves③
- Plain Washer④
- Clamp Ring⑤



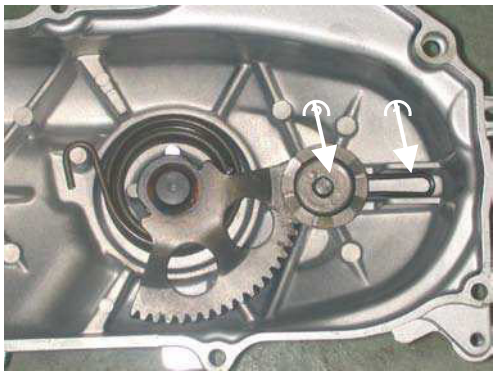
21. Hook:

- Return Spring

Notes:



Hook the end of the spring ① to the convex part ⓐ and hook another end ②to the groove of the foot shaft as showed in the right picture ⓑ.



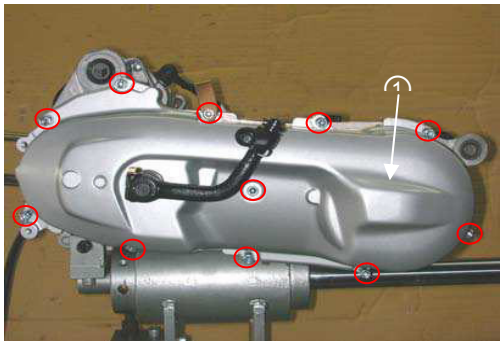
22. Install:

- Stop Clamp①
- Foot Small Gear②

Notes:

Install the stop clamp as shown in the right picture.

23. Install:



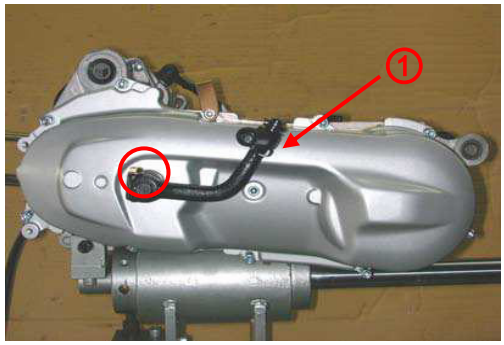
- Anchor Pin
- Left Crankcase Cover①

  Screws (Left Crankcase Cover):

  90kg/cm

Notes:

Lock them across.



24. Install:

- Food Lever①

Notes:

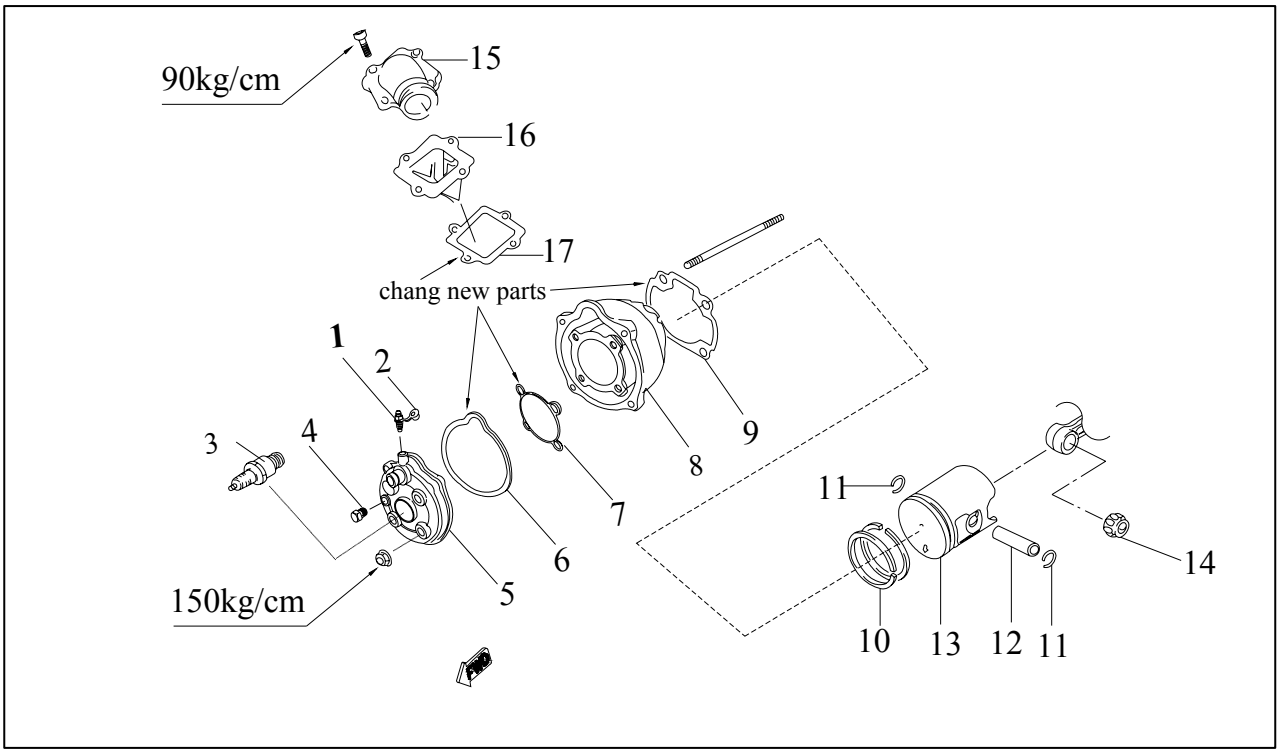
Parallel the arm to the edge of the crankcase.

Assembly and Adjustment of the Engine

Cylinder Head, Cylinder and Piston

1. Gassing Bolt
2. Gassing Bolt Cover
3. Spark Plug
4. Temperature Switch
5. Cylinder Head
6. Head Waterproof Oil Ring
7. Head Oil Ring
8. Cylinder
9. Cylinder Gasket
10. Piston Ring
11. Piston Clamp Ring
12. Piston
13. Piston
14. Small Roller Bearing
15. Intake Manifold
16. Check Valve Assembly
17. Check Valve Gasket

A	Clearance between Piston and Cylinder: 0.035~0.040mm
B	Warpage Limit of Cylinder Head: 0.03mm
C	Piston Side Clearance: 0.03~0.05mm
D	Tip Clearance of Piston Ring: 0.15~0.35mm
E	Spark Plug: BP8HSA-R (NGK) Clearance: 0.9~1.0mm

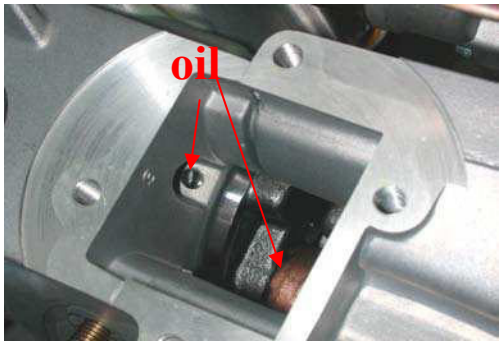

90kg/cm
15
16
17
chang new parts
1
2
3
4
5
6
7
8
9
11
14
10
13
12
11
150kg/cm

Assembly and Adjustment of the Engine

Cylinder Head, Cylinder and Piston

1. Install:

- Piston (Top and Second Ring)



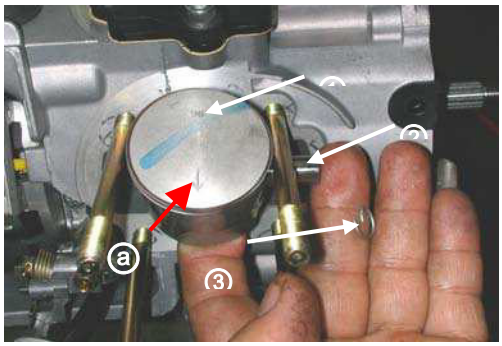
Notes:

Have the signed face of the piston ring upward.

2. Lay:

- Two-stroke lubricant on the bearing, crankshaft and the piston groove, the pin and the skirt.

3. Install:

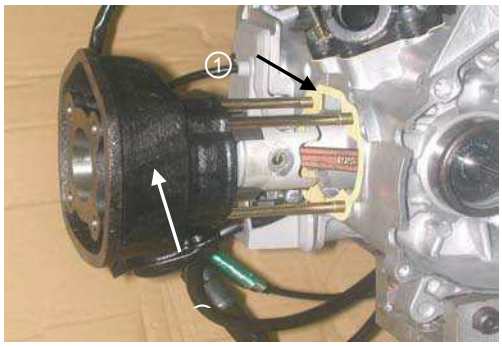


- Bearing of the Small End
- Piston①
- Piston Pin②
- Piston Pin Clamp③

Notes:

- Have the piston top with the arrowⓐ downwards.

- Block the opening of the crankcase with a clean textile in order to prevent the clamp ③ from slipping into the crankcase.



Notes: An unused clamp is required.

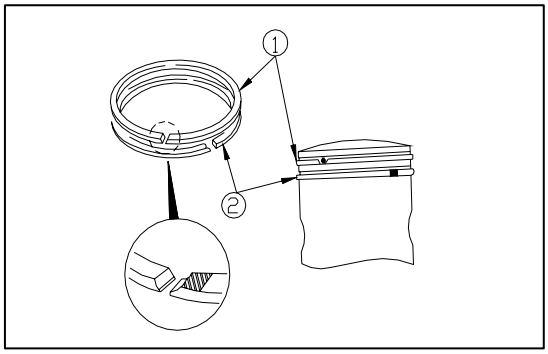
4. Install:

- Gasket (Cylinder)①
- Cylinder②

Notes:

Unused gaskets are required.

Notes:

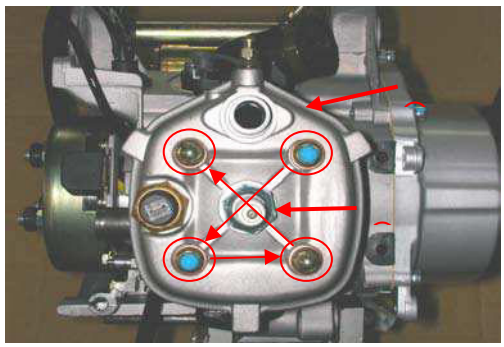


- Install the piston ring as shown in the right picture before the installation of the cylinder.
- Hold the cylinder body with one hand and press the piston ring with another hand.

① Top Ring

② Second Ring

5. Install:



- Gasket (Cylinder)
- Cylinder①
- Spark Plug②

Notes:

- Use an unused gasket.
- Have the convex face of the gasket

  toward the cylinder head.

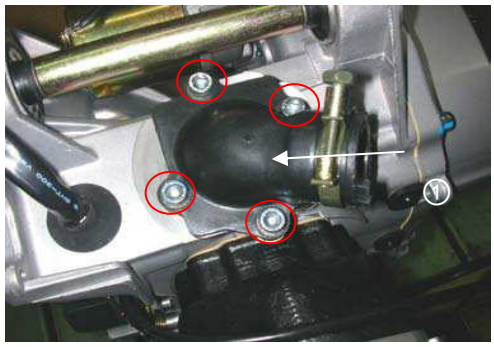
Notes:

Lock the nuts across.

Nuts (Cylinder Head): 140kg/cm

Spark Plug: 180kg/cm

6. Install:



- Gasket
- Leaf Valve
- Intake Manifold①

Notes:

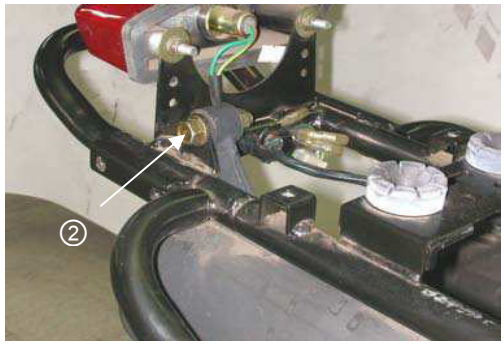
An unused gasket is required.

7. Install:

- Gasket (Exhaust Pipe)
- Exhaust Pipe Assemble

Bolt (Exhaust Pipe) ①:110Kg/cm

Bolt(Silencer) ②:260Kg/cm



Assembly and Adjustment of the Engine

Installation of the Engine

Notes:

Pay attention to the following items in addition to install the engine as a converse order as the dismantlement.

1. Install:

- Bolt (Stand)①
- Bolt (Engine Body)②

2. Install:

- Carburetor

Notes:

Insert the convex part of the carburetor into the groove of the manifold.

3. Install:

- Air Filter

Notes:

Insert the concave part of the carburetor into the connecting groove of the air filter.

4. Add:

- Gear Oil

5. Discharge:

- Air in the lubrication pump

6. Adjust:

- Wire rope of the lubrication pump

7. Adjust:

- Engine Idle

  Idle Speed: ~1800~1900r/min

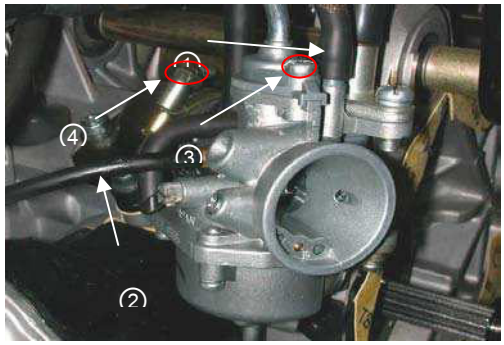
Assembly and Adjustment of the Engine

Carburetor Disassembly

1. Dismantle:

- Air Filter①

2. Dismantle:



- Carburetor①
- Lubricating Pipe②
- Carburetor Cover③
- Screws (Carburetor Body)④

Notes:

Block the opening of the lubricating pipe 2 in order

to prevent the lubricant from leaking.

3. Dismantle:

- Choke Wire Unit①

4. Dismantle:

- Carburetor Assemble①

Notes:

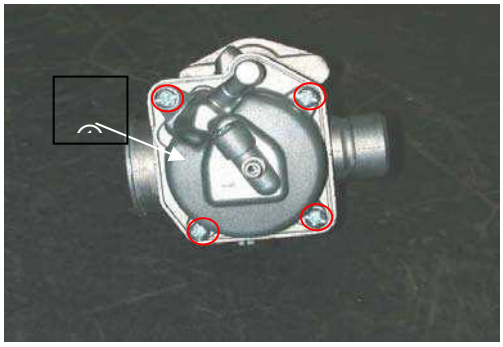
Unlock the screws② before dismantling the carburetor in order to discharge the gasoline in the carburetor.

Assembly and Adjustment of the Engine

Disassembly:

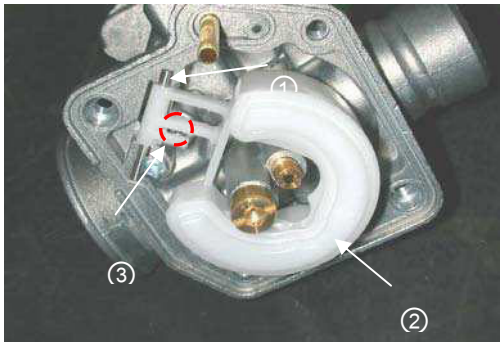
1. Dismantle:

- Float Chamber Cover①
- Sealing Oil Ring



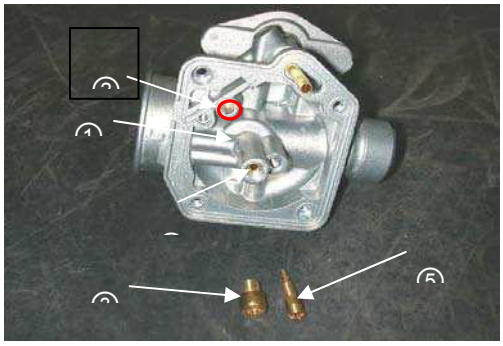
2. Dismantle:

- Float Chamber Pin①
- Float Chamber
- Needle Valve③



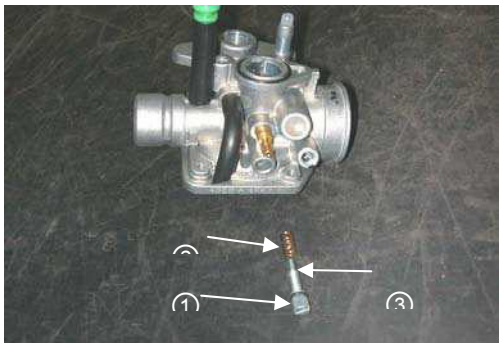
3. Dismantle:

- Fixing Seat①
- Needle Valve Seat②
- Main Oil Jet③
- Main Oil Jet Tube④
- Guide Oil Nozzle⑤



4. Dismantle:

- Throttle Set Screw①
- Spring②
- O-type Oil Ring③



5. Dismantle:

- Guide Screw①
- Spring②

Notes:

Count the number of circles as dismantling the guide screw.

Assembly and Adjustment of the Engine

Inspection

1. Inspect:

- Carburetor Body

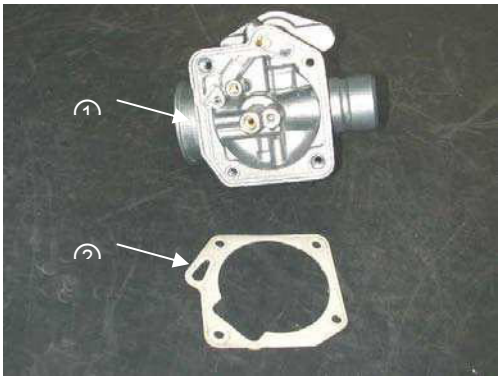
  Clean it in case of block.

Notes:

Clean it with paraffinic solvents and blow all oil nozzles

with compressed air.

2. Inspect:



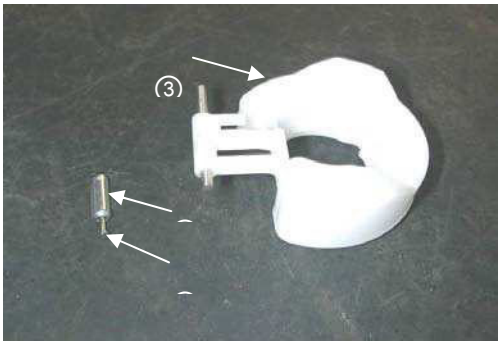
- Float Chamber Cover①

  Replace it in case of any damage.

- Sealing Gasket②

  Replace it in case of any damage.

3. Inspect:



- Needle Valve①
- Needle Valve Seat②

- Float Chamber③

  Replace if in case of any damage.

4. Inspect:

- Throttle Valve①

  Replace it in case of any abrasion or damage.

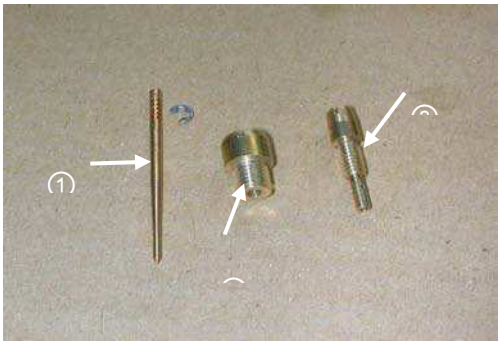
5. Inspect:

- Movement

  Replace in case of bad performance.

Insert the throttle valve into the carburetor body to test the movement status.

6. Inspect:



- Needle Valve①

  Replace it in case of any bend or abrasion.

- Main Oil Jet②
- Guide Oil Nozzle③

  Replace them in case of block.

7. Inspect:

- Throttle Set Screw
- Guide Screw

  Replace them in case of any abrasion or damage.

8. Inspect:

- O-type Oil Ring

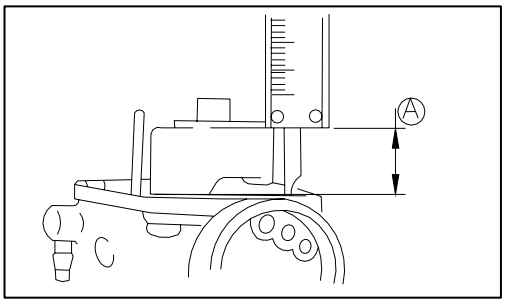
Replace it in case of any damage.

9. Inspect:

- Chocker Piston

Replace it in case of any abrasion or damage.

10. Measure:



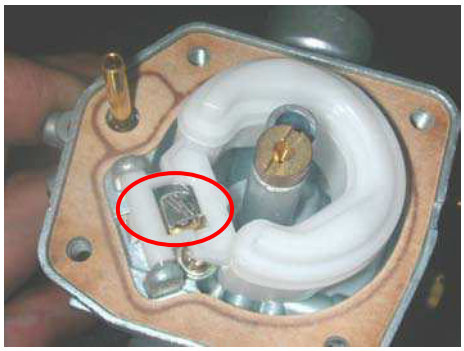
- Height of the Float Chamber ⓐ

Check the needle valve, float chamber and needle valve seat in case of any inconformity.

Height of Float Chamber:~18.5mm

Assembly and Adjustment of the Engine

Steps for Measuring the Height of the Float Chamber:



- Install the needle valve, float chamber and float pin into the carburetor body.
- Turn the carburetor upside down as shown in the picture.
- Measure the clearance between the chamber top to the contact surface of the float chamber that has its sealing oil ring dismantled.

Notes:

Make the chamber arm just contact the needle valve only.

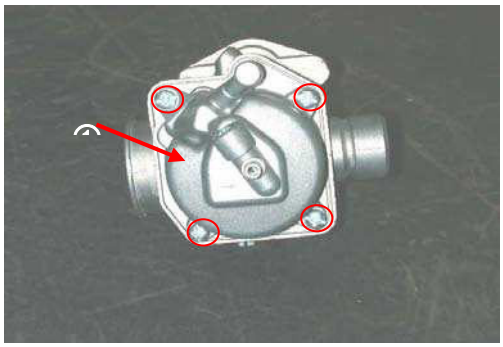
- Check the needle valve, its seat and the float chamber in case of inconsistent height of the float chamber.
- Replace it in case of any abrasion.

Assembly

Pay attention to the following items in addition to make an assembly as a converse order as the dismantlement:

Notes:

- Clean all parts with unused gasoline before assembly.
- All O-type oil rings and sealing oil rings to be installed into the carburetor must be unused.



1. Install:

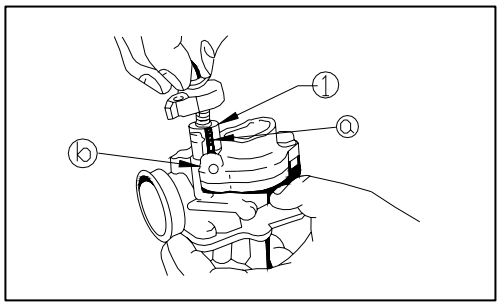
- Float Chamber Cover①

2. Install:

- Throttle Valve①

Notes:

Insert the groove ⓐ of the throttle valve into the convex part of the carburetor completely.



Assembly and Adjustment of the Engine

Assembly

Pay attention to the following items in addition to make an assembly as a converse order as the dismantlement:

1. Install:

- Carburetor Body

Notes:

Insert the convex part ⓐ of the carburetor into the concave part ⓑ of the intake manifold completely.

2. Adjust:

- Guide Screw
- Throttle Set Screw

Circles of Unlocking the Guide Screw:¾±¼ Circle

Engine Idle Speed: ~1800~1900r/min

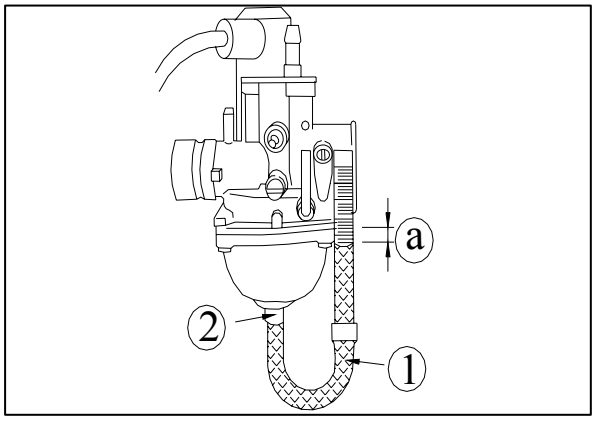
Adjustment

1. Measure:

- Height of the Oil Level ⓐ

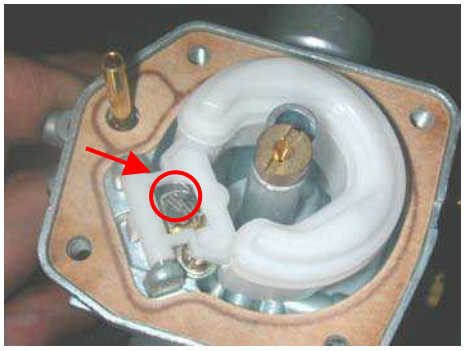
Adjust in case of any inconformity.

Height of Oil Level: ~3.3~4.3mm



Steps for Measuring and Adjusting the Oil Level:

- Place the engine on a flat surface.
- Support the engine from its bottom in order to keep the carburetor vertical.
- Connect the gasoline gauge① to the discharge pipe② as shown in the picture.
- Unlock the discharge screws and heat the engine for several minutes.



- Measure the height of the oil level ⓐ with a gasoline gauge.
- Check if the needle vale, its seat and the float chamber are worn or torn or not. Replace them in case of any abrasion. (the needle valve and its seat must be replaced together.)
- Adjust the chamber tongue if they are in good situation.
- Install the carburetor.
- Re-measure the height of the oil level.

Assembly and Adjustment of the Engine

Manual Choke

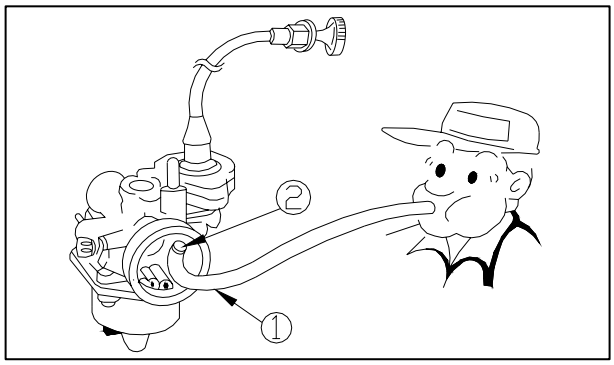
Inspection

1. Dismantle:

- Front and Rear Covers

2. Inspect:

- Operation of the Manual Choker



Steps:

Step1:

- Connect an proper tube① to the starting air inlet②.
- Blow the air into the tube to check if the tube is through or not.

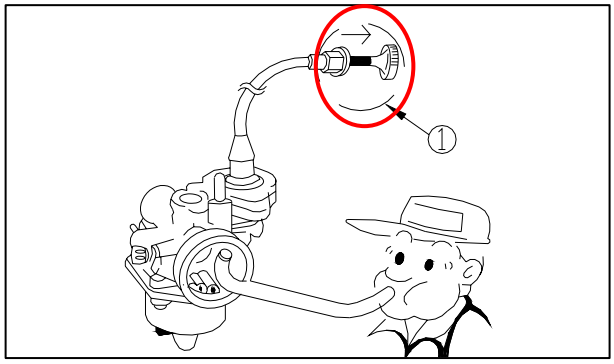
  Through→ operation of the starting piston is normal.

  Not → operation of the starting piston is abnormal.

- Replace the manual choker assembly in case of abnormality.

Step 2:

- Pull upward the manual choker wire ① to the utmost.



- Blow the air into the tube to check if the tube is through or not.

  Through→ operation of the starting piston is normal.

  Not → operation of the starting piston is abnormal.

- Replace the manual choker assembly in case of abnormality.

Step 3:

- Push back the choker seat and repeat step1.

Assembly and Adjustment of the Engine

Leaf Valve

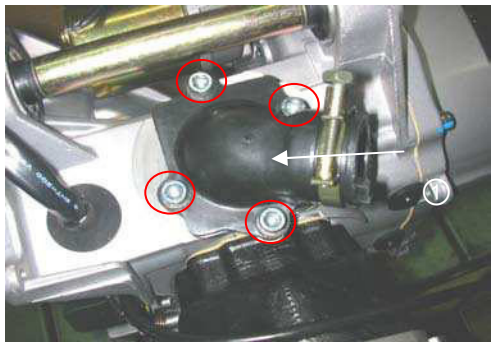
Dismantlement

1. Dismantle:

- Carburetor

2. Dismantle:

- Intake Manifold①
- Leaf Valve
- Gasket



Inspection

1. Inspect:

- Intake Manifold

  Replace it in case of any damage or crack.

- Leaf Valve

  Replace if it looses the springiness or is

  crack.

Steps:

- Check the leaf valve by eyes.

Notes:

The leaf should contact the valve seat closely or

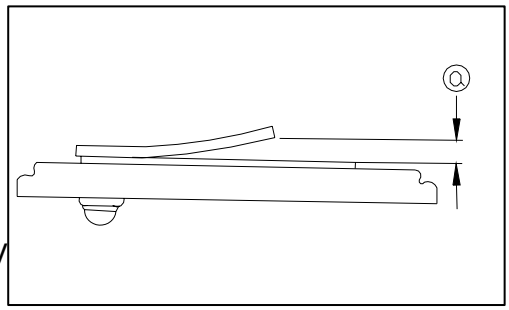
slightly under a normal situation.

- Suck the leaf in order to test the tightness

  (beside the carburetor).

- The leakage should be stable and unsharp.

2. Measure:



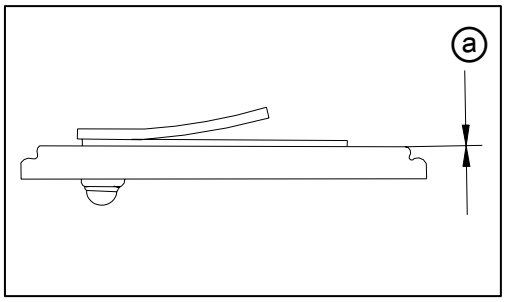
- Height ⓐ of the leaf valve stopper

  Replace it in case of any inconformity

  Height of Leaf Valve Stopper:

  ~6.0~6.4mm

3. Measure:



- Bend Limit of the Leaf Valveⓐ

  Replace it in case of any inconformity.

  Bend Limit of Leaf Valve: 1.0mm

Installation

Pay attention to the following items in addition to make

an assembly as a converse order as the

dismantlement:

1. Install:

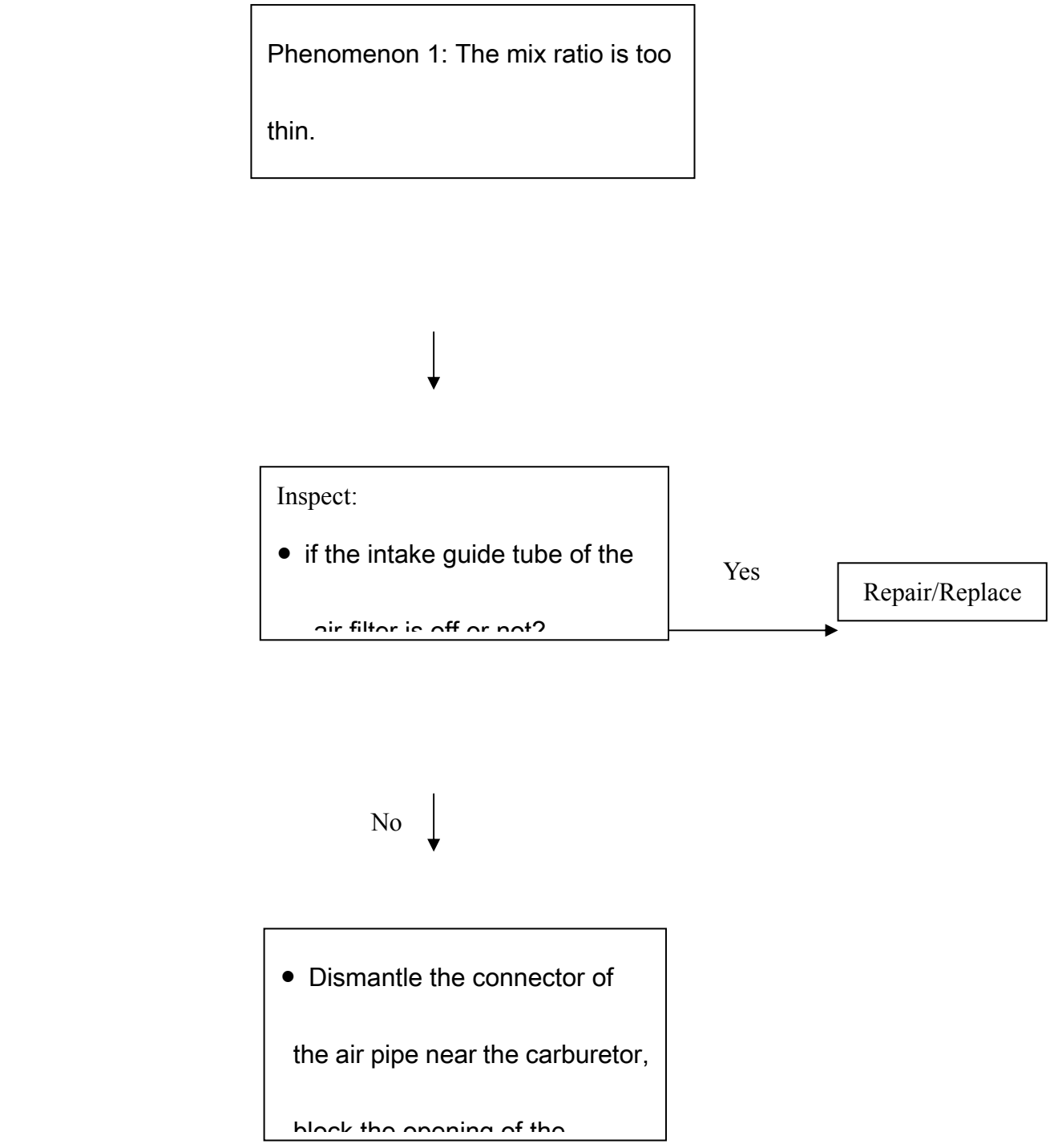
- Gasket
- Leaf Valve
- Intake Manifold①

Notes:

Unused gaskets are required.

Assembly and Adjustment of the Engine

Removal of Troubles in Carburetor



- Check the operation of the throttle wire rope.

NG ↓

Repair, Clean or Replace

Removal of Troubles in Carburetor

Phenomenon 2: The mix ratio is too thick.

- The engine idle speed is unstable or blow out

↓

Check:

- If the filter pulp of the air filter is blocked by dirt or not?

Yes → Clean/Replace

No ↓

- Dismantle the connector of the air pipe near the carburetor, block the opening of the connector and

NG ↓

- Check the operation of the throttle wire rope.

NG ↓

Repair, Clean or Replace

VEHICLE BODY

. FRONT WHEEL, SUPENSION AND STEERING

1. **PARTS DRAWING**

2. **TROUBLESHOOTING**

3. **HANDLEBAR**

4. **THROTTLE HOUSING**

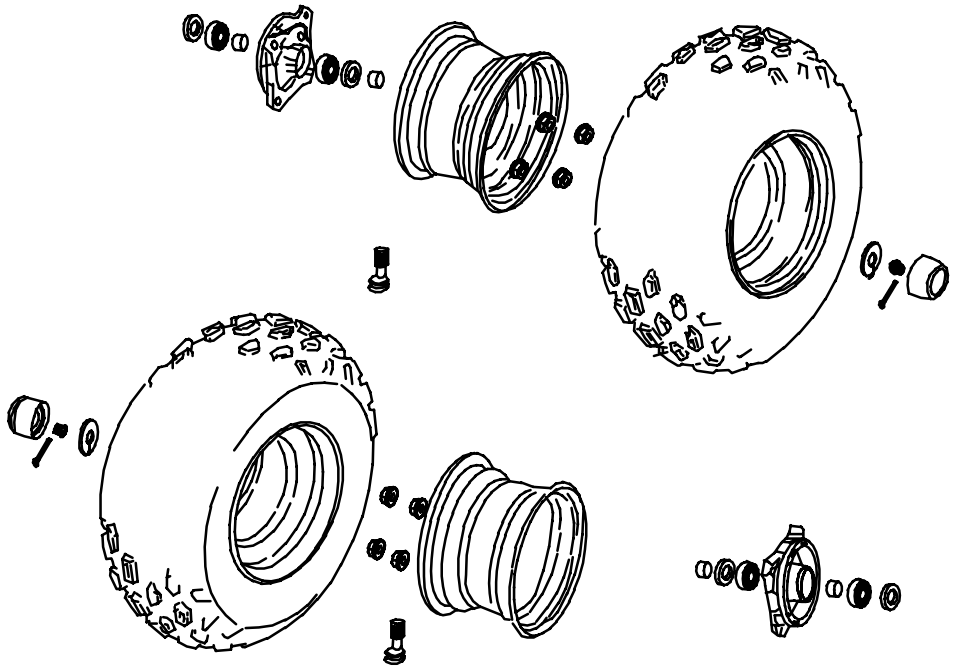
5. **FRONT WHEEL**

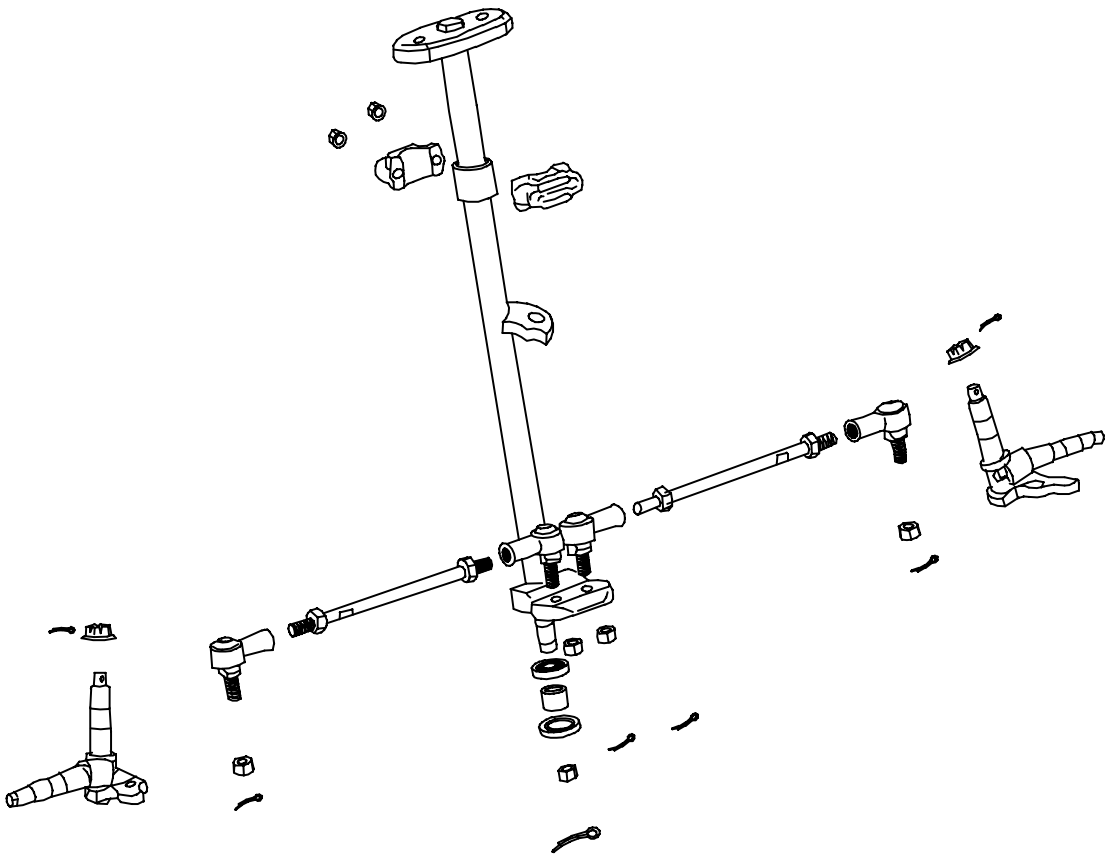
6. **FRONT BRAKES**

7. **STEERING SYSTEM**

8. **FRONT SUSPENSION**

1. PARTS DRAWING





VEHICLE BODY

2. TROUBLESHOOTING

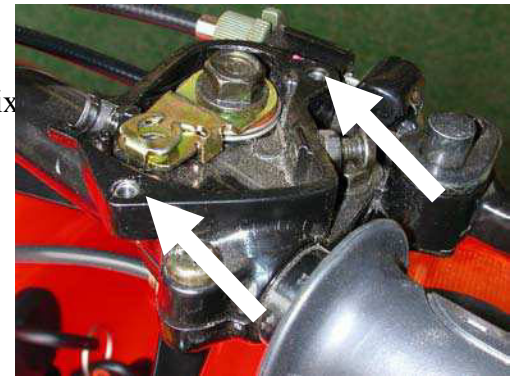
HARD STEERING	Faulty tire Steering shaft holder too tight Insufficient tire pressure Faulty steering shaft bushing Damaged steering shaft bushing
FRONT WHEEL WOBBLING	Faulty tire Worn front brake drum bearing Bent rim Axle nut not tightened properly
BRAKE DRAG	Incorrect brake adjustment Sticking brake cable
STEERS TO ONE SIDE	Bent tie rods Wheel installed incorrectly Unequal tire pressure Bent frame Worn swing arm pivot bushing Incorrect wheel alignment
POOR BRAKE PERFORMANCE	Brake shoes worn Worn brake drum Brake lining oily, greasy or dirty Improper brake adjustment
FRONT SUSPENSION	Loose front suspension fastener Binding suspension link
HARD SUSPENSION	Faulty front swing arm bushing Improperly installed front swing arms Bent front shock absorber swing rod
SOFT SUSPENSION	Wear front shock absorber springs Worn or damage front swing arm bushing

VEHICLE BODY

3. HANDLEBAR SYSTEM

Removal

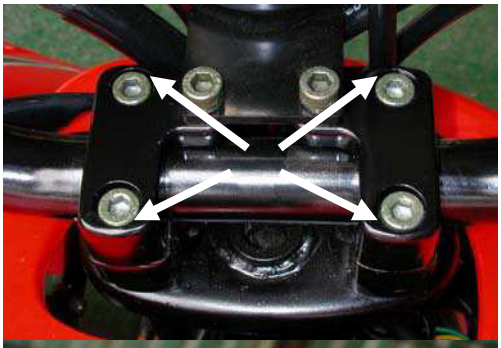
Remove the handlebar cover by unscrew two fix



Remove the throttle lever housing on the right handlebar. Remove brake lever bracket assembly.

Remove the handlebar switch on the left handle bar. Remove rear brake lever bracket ass'y.

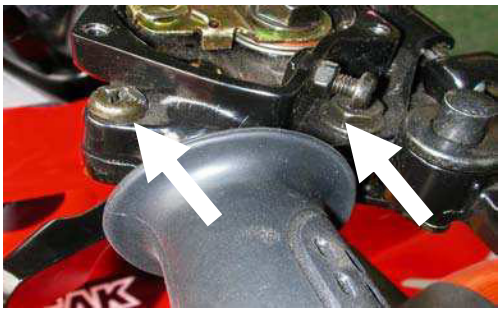
Remove the bolts attaching the handlebar upper holder. Remove the handlebar.



Installation

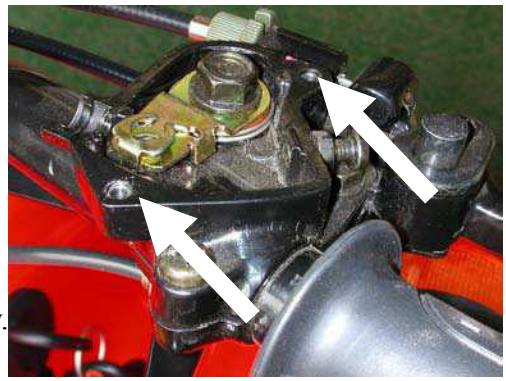
Install the switch housing. Tighten two screws securely.

Install the throttle lever housing, and brake lever [illegible] ass'y.



VEHICLE BODY

4. THROTTLE HOUSING



Disassembly

Unscrew the screws on the throttle housing cover.

Remove throttle housing cover and gasket.

Disconnect throttle cable from the throttle arm and remove from the throttle housing.

Assembly is in the reverse order of disassembly.

5. FRONT WHEEL

Remove

Raise the front wheels off the ground by placing

a jack or other support under the frame.

Remove the front wheel nuts, washer and wheels.

Installation

Install and tighten the four-wheel nuts torque: 60 N.m (44 lbs.ft) Remember put a cotter pin in the castle nut.

6. FRONT BRAKES

Front brake inspection

Remove the front wheel

Remove the brake drum.

Measure the brake lining thickness. The minimum limit: 1.5 mm

If they are thinner than the minimum limit, replace the brake lining.

Measure the brake drum inner diameter.
The maximum limit: 111 mm.

Turn the inner race of each bearing with fingers.
The bearings should turn smoothly and quietly.
If the race does not turn smoothly or quietly, remove and discard the bearings.

Brake panel removal

Disconnect the brake cable from the brake arm.
Remove the brake panel from the knuckle.

Remove brake arm and cam.
Remove return spring.
Remove indicator plate and felt seal.

Install Brake panel

Apply grease to the brake cam and anchor pin and install the cam in the brake panel.
Soak the felt seal in the engine oil and install the seal on the brake cam.

Install the brake arm on the cam by aligning the punch mark and the groove on the cam.
Tighten the brake arm bolt and nut.
Torque : 4-7 N.m

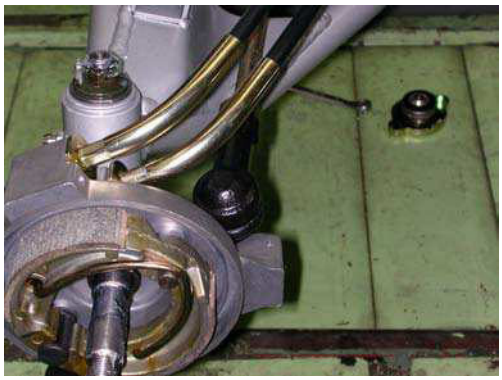
Install the return spring.

Install the brake panel on the knuckle.
Connect the brake cable to the brake arm.

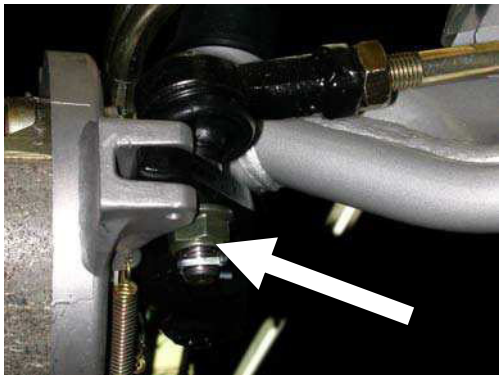
Install the brake arm cover
Tighten the screws securely
Position the brake shoes in their original locations and install the brake shoe spring.
Install the brake drum and front wheel.
Install the castle nut and cotter pin.

7. STEERING SYSTEM

Remove the kingpin and Tie-rod
Remove the front wheels and brakes plates.
Remove the four self-lock nuts from the tie-rod
ball joints and take off the two tie-rods.

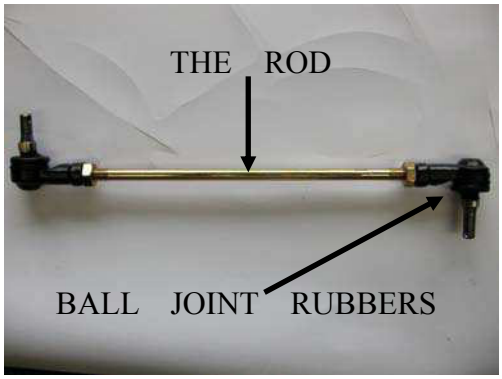


Remove the cotter pin on the kingpin.
Unscrew the bolt and remove the kingpin.



Tie-rod inspection

Inspect the tie rod for damage or bending.
Inspect the ball joint rubbers for damage, wear
or deterioration. Turn the ball joints with fingers.
The ball joints should turn smoothly and quietly.



Kingpin inspection

Inspect the kingpin for damage or cracks.

VEHICLE BODY

Steering shaft removal

Remove the handle bar cover and handle bar.
(see page 58)
Remove the front fender. (see page 72)
Remove handlebar lower holder.
Unscrew steering shaft holder bolt, remove steering shaft holder.
Take off the cotter pin below steering shaft.
Unscrew the steering shaft fix out below shaft.
Pull steering shaft carefully.

Steering shaft holder inspection

Remove the steering shaft.
Remove the bushing from the shaft.
Inspect the bushing for damage or wear, replace
if necessary.

Measure the bushing inner diameter.
Maximum limit: Ø39.5 mm

Steering shaft inspection

Inspect the steering shaft for damage or cracks.

Installation of steering shaft

Apply grease to the holder. Install the holder and oil seal tighten with the nuts.
Torque : 250kg/cm

VEHICLE BODY

7. STEERING SYSTEM

Installation of steering shaft

Install the steering shaft nut and tighten it.
This nut is under this steering shaft.
Torque :900~1000kg/cm

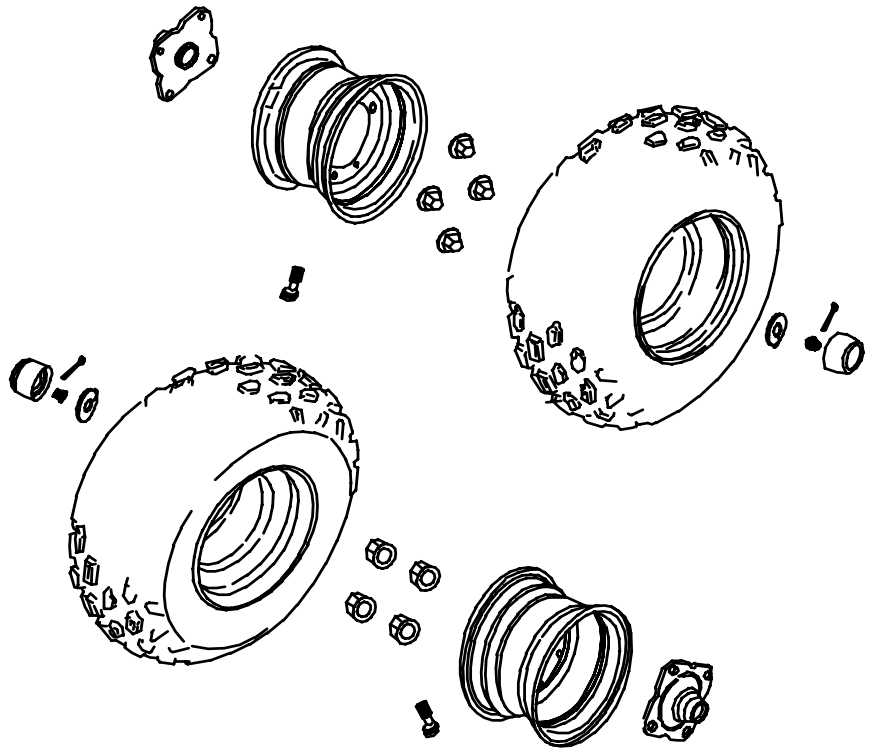
Installation of Tie-rod

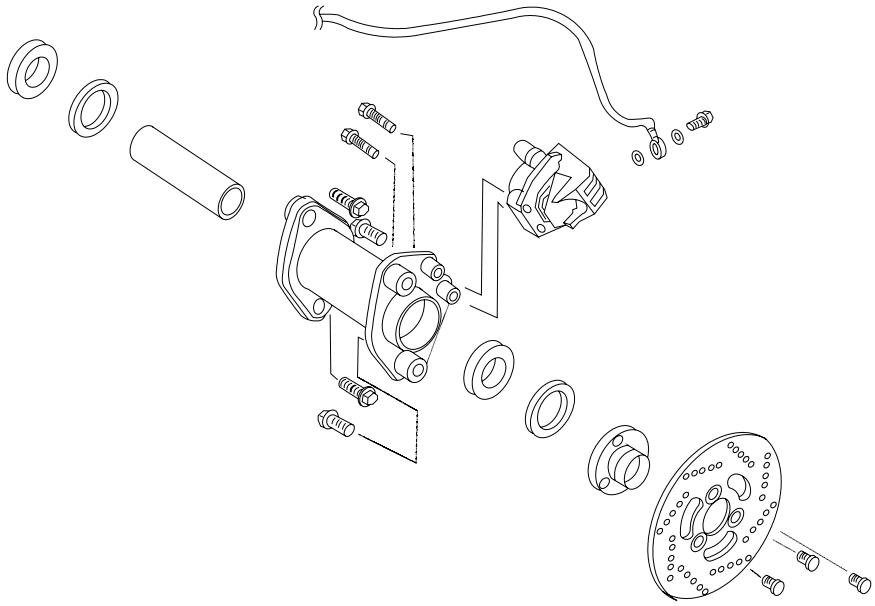
Install the tie-rod on the wheel side.
Installation is in the reverse order of removal.

VEHICLE BODY

. REAR WHEEL SYSTEM

1. Parts Drawings





2. <u>Troubleshooting</u>

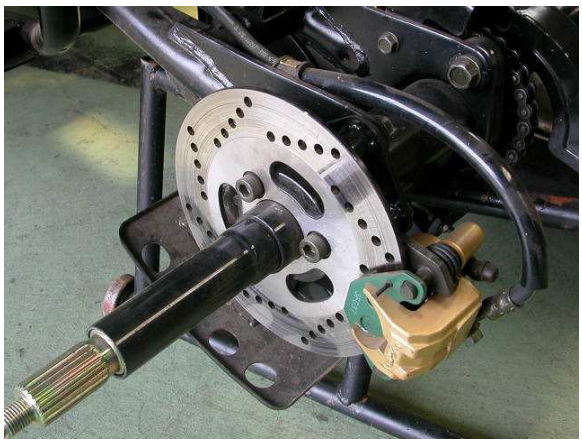
Bad Brake Performance	Brake shoes are worn Bad brake adjustment Brake lining are oily, greasy or dirty Brake drums are worn Brake arm setting is improperly engage
Vibration or wobble	Axle is not tightened well Bent rim Axle bearings are worn Faulty tires Rear axle bearing holder is faulty
Brake Drag	Incorrect brake adjustment Sticking brake cam Sticking brake cable
Hard Suspension	Bent damper rod Faulty swing arm pivot bushing
Soft Suspension	Wear shock absorber damper Wear shock absorber spring

3. REMOVE REAR WHEEL & REAR BRAKE

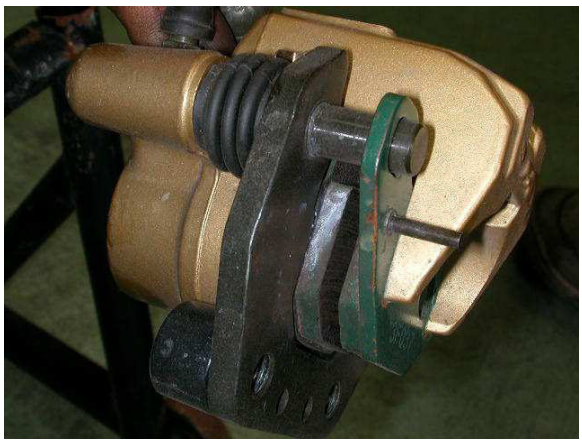
Loosen the cotter pin, and wheel nuts, raise the rear wheel off the ground by placing a support under the frame.

Release the wheel and wheel hub.

Remove the brake drum cover.



heck the brake lining thickness
The minimum limit is 2.0 mm



CAUTION

Do not get grease or oil on the brake lining surface and brake drum.

Otherwise stopping power will be reduced.

Check the brake drum for damage.
Replace if necessary.
Check the brake drum inner diameter
The maximum limit is 131 mm

VEHICLE BODY

4. DRIVE MECHNISM

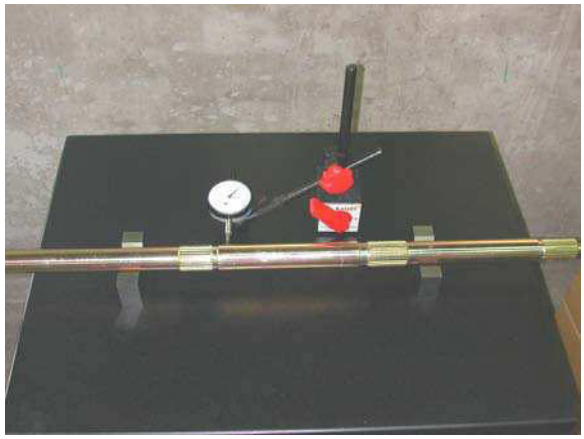
Removal and inspection.
Remove the rear wheel and the rear brake.
Remove the skid plate under swing arm.
Remove the drive chain cover.

Disassemble the chain retaining clips and mas-ter link. Remove the chain.

Disassemble the driven sprocket, axle and sprocket collar.

Check the driven sprocket for damage or wear.
Replace if necessary.

Let the rear axle lie in V-blocks and check the runout.



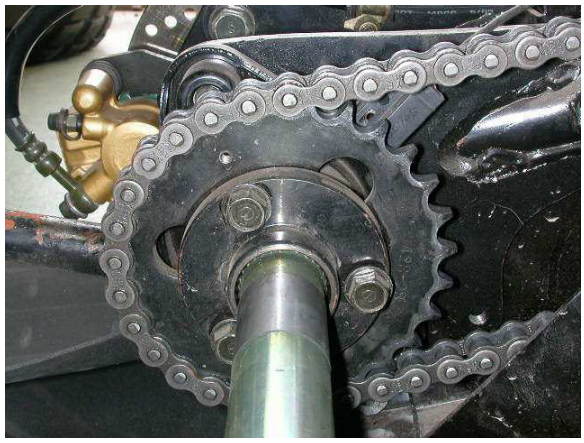
The runout limit is 0.5 mm.

Check the turning of inner race of bearing with fingers. The bearings should turn smoothly and quietly. Replace if necessary. Also check that the bearing outer race fits tightly in the axle holder. Replace if necessary.

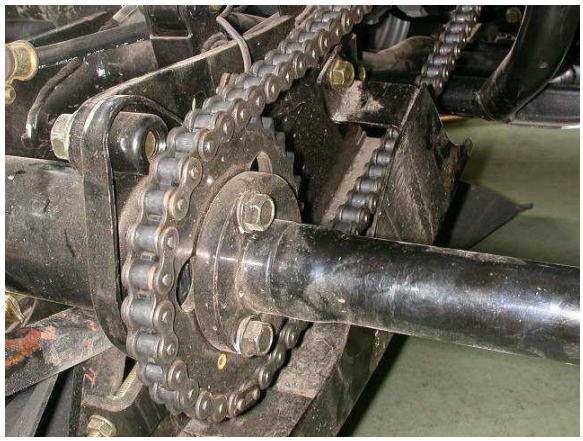
NOTE: Replace the bearings in pairs.

Installation

Add grease to the dust seal lips and install dust
seals. Assemble the rear axle and the driven sprocket.



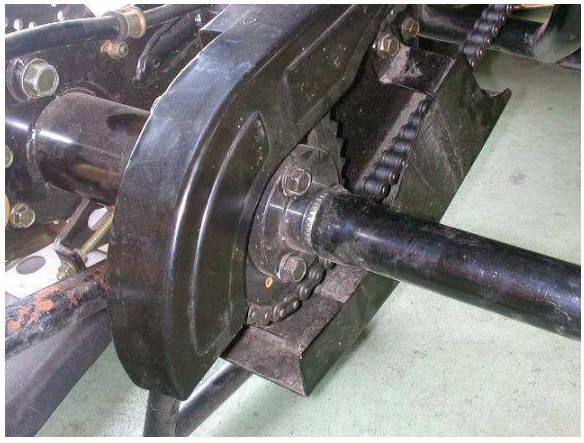
Assemble the drive chains on the driven sprock-et. Assemble the master link and retaining clip.



NOTE: The retaining clip direction.

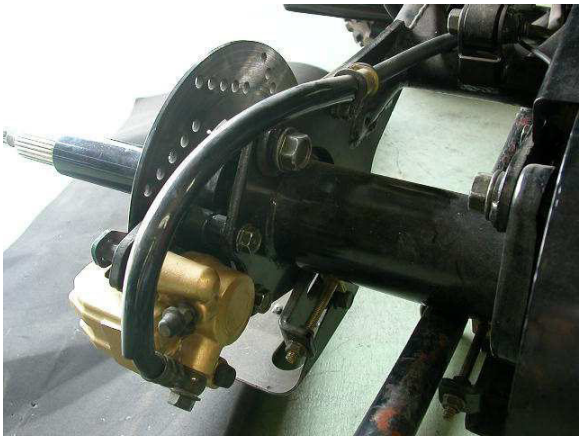
Install the drive chain cover.
Assemble the chain under cover.

Install the skid plate.
Install the drive chain cover.



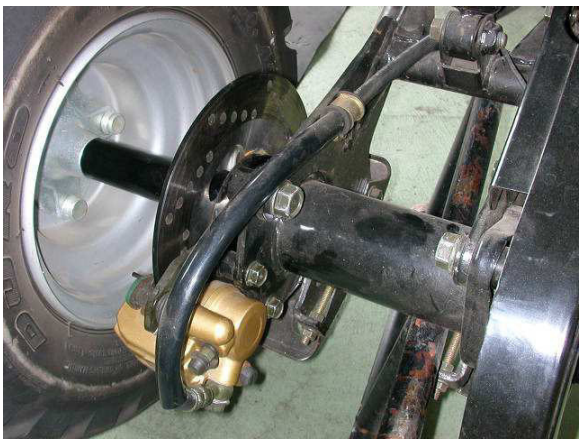
5. REAR BRAKE &WHEEL INSTALLATION

Install the wear indicator plate aligning the tab on the axle holder with the slit on the cam.
Install the brake arm spring and felt seal.



Install the brake arm. Tighten the brake arm bolt and nut with **100Kg/cm** torque.
Install the adjusters.

NOTE: Make sure the rear brake lever and pedal have the proper amount of free plays.



Assemble the wheel.
Tighten the rear axle nut with **600-800kg/cm**.
Install a new cotter pin.
Adjust rear brake lever free play.
Adjust drive chain slack.

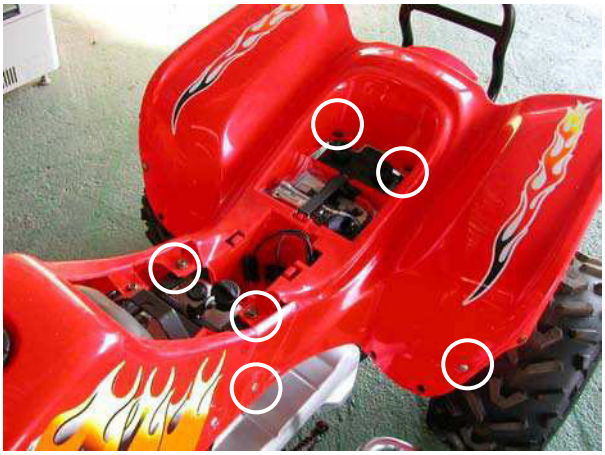
VEHICLE BODY

FENDER AND EXHAUST PIPE

1. REAR FENDER REMOVAL

Pull the “Seat Release Bar” to take off the seat.
This seat release bar is under the right side of the rear fender.

Procedure for rear fender removal:
Remove the rear rack and seat.
Unscrew the four bolts, which connect the front fender and rear fender.
Unscrew the four screws, which connect the rear fender and frame.



Unscrew the six screws, which connect with footrest plate. Pull the rear fender backward so the rear fender can be removed.

2. FRONT FENDER REMOVAL

After remove the rear fender, remove the two front fender mounting bolts from front frame. Remove the fuel tank cap.

Remove the mounting bolts and nuts from the front fender and footrest plate.

3 EXHAUST PIPE REMOVAL

You must wait at least 15 minutes after turn off the engine. You need to remove the seat, rear fender and footrest plate, before you take off the exhaust pipe. Unscrew the two exhaust pipe bolts that fixed with engine.

NOTE: *Do not service the exhaust pipe while they are hot.*

Remove the exhaust pipe bolts mounting on the frame below the rear fender.
Remove the exhaust pipe carefully.

4. EXHAUST PIPE INSTALLATION

Installation is the reverse order of removal.

Torque: Exhaust muffler bolts 300Kg/cm

NOTE: After installation, check entire system to make sure that there are no exhaust leaks.

VEHICLE BODY

ELECTRICAL SYSTEM

1. TROUBLESHOOTING

ENGINE STARTS BUT STOPS	IMPROPER IGNITION TIMING FAULTY SPARK PLUG
NO SPARK AT PLUG	ENGINE STOP SWITCH AT LEFT OR RIGHT POSITION GEARSHIFT BAR IS NOT AT NEUTRAL POSITION FAULTY IGNITION COIL FAULTY GENERATOR FAULTY CDI UNIT POORLY CONNECTED: Between CDI and ignition coil Between alternator and CDI unit Between CDI and engine stop switch Between ignition coil and spark plug Between generator and CDI unit
ENGINE STARTS BUT RUNS POORLY	IGNITION PRIMARY CIRCUIT Faulty generator Faulty CDI unit Faulty alternator Loosen contacted terminals Faulty ignition coil IGNITION SECONDARY CIRCUIT Faulty plug Loosen contacted spark plug wire IMPROPER IGNITION TIMING

	Faulty generator Faulty CDI unit
CHARGING SYSTEM FAILURE	LOOSE, BROKEN OR SHORTED WIRE. FAULTY ALTERNATOR FAULTY IGNITION SWITCH

INTERMITTENT ENGINE POWER	LOOSE BATTERY CONNECTION LOOSE CHARGING SYSTEM CONNECTION
STARTER MOTOR WILL NOT TURN	DEAD BATTERY FAULTY IGNITION SWITCH LOOSE OR DISCONNECTED WIRE
STARTER MOTOR AND ENGINE TURN, BUT ENGINE DOES NOT START	FAULTY IGNITION SYSTEM FAULTY ENGINE STOP SWITCH ENGINE PROBLEMS
HEAD LIGHT DO NOT WORK	THE SWITCH DO NOT PUSH TO THE "ON" POSITION THE LIGHT BULB IS BURN OUT, NEED BE REPLACED

2. IGNITION COIL

Remove the spark plug cap from the spark plug.
Disconnect the ignition coil primary wire.

Measure the primary coil resistance.

STANDARD: 1.1Ω±20%

Measure the secondary coil resistance with the spark plug cap in place.

STANDARD: 6.61 KΩ±20%

3. IGNITION TIMING

The ignition advance is 18◦±1◦/5000rpm

The capacitive discharge ignition(CDI) system is factory pre-set and does not require adjustment.

4. ALTERNATOR EXCITER COIL

Remove the seat/ rear fender and front fender. (see page 72) disconnect the exciter coil wire. Measure the resistance between the yellow or white or green wire and ground.

STANDARD : 467-700Ω

Electrolyte is poisonous. Drink large quantities of water or milk and call a physician if swallowed.

5. BATTERY CAUTION

The battery gives off explosive gases; keep sparks, flames and cigarettes away. Provide adequate ventilation when charging or using the battery in an open area. The battery contains sulfuric acid (electrolyte). Contact with skin or eyes may cause severe burns. Wear protective clothing and a face shield. ***Electrolyte is poisonous. Drink large quantities of water or milk and call a physician if swallowed.***

6. BATTERY VOLTAGE INSPECTION

Battery is under the seat; you can see this battery after removing the seat.
Measure the battery voltage using a voltmeter.
VOLTAGE: Fully charged : 13.1 V
Undercharged : Below 12.0 V

BATTERY REMOVAL

Remove the seat, then you can see the battery. Disconnect the negative cable and then the position cable and remove the battery.

BATTERY INSTALLATION

Install the battery in the reverse order of removal. After installing the battery, terminals with clean grease.

7. CHARGING

Connect the charge positive cable to the attery positive terminal. Connect the charge egative cable to the battery negative terminal. Using 9A charging current about 5 hours. Normal charging) Or using 4A charging current about 1 hour. (Quick charging) Keep flames and spark away from a battery being charged. Quickcharging should be limited to an emergency; normal charging is preferred.

8. ELECTRIC STARTER

Information

A weak battery may be unable run the starter motor quickly enough.

If the battery voltage is enough while the engine is not cranking, the starter motor may be damaged.

Troubleshooting

Starter motor turns slowly

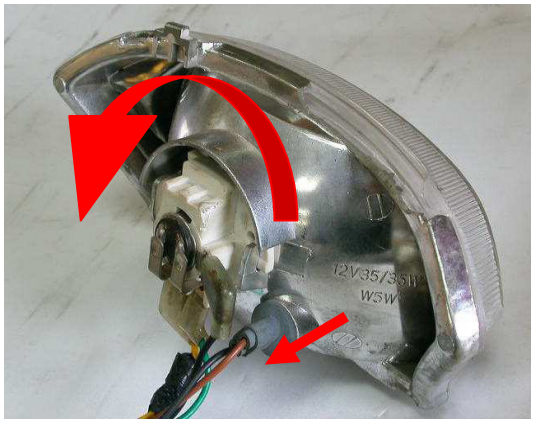
Weak battery.
Poorly connected starter motor cable.
Faulty starter motor.
Poorly connected battery ground cable.

Starter motor will not turn

Engine stop switch at left or right position.
Gearshift bar is not at neutral position.
Check for a blown fuse near battery.
Make sure that the battery is fully charged and in good condition.

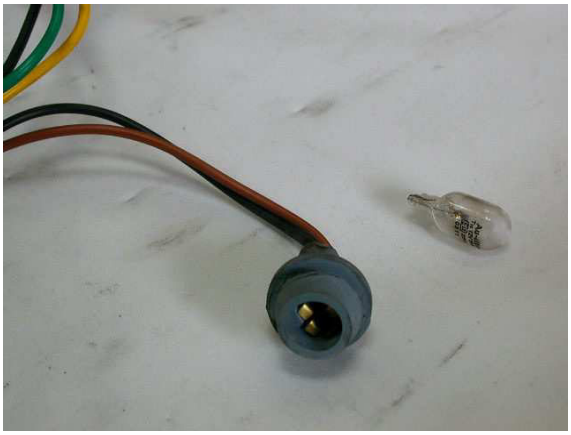
9. LIGHT BULBS REPLACEMENT

Remove the headlight bulb and position light.



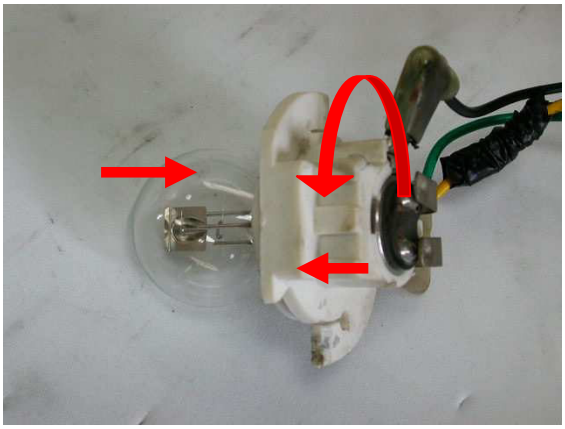
Remove the position light bulb.

Change the new one and install to the seat.

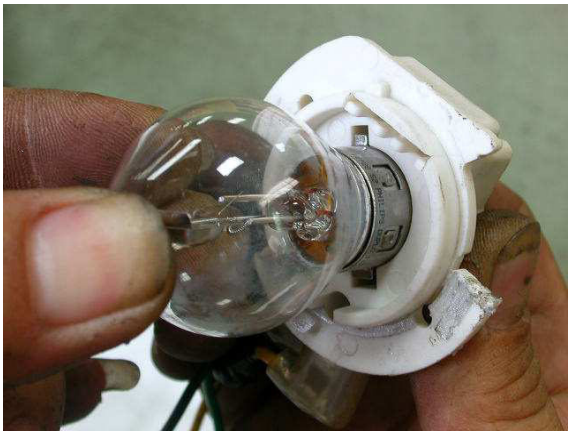


headlight

Press and turn left to remove the bulb.



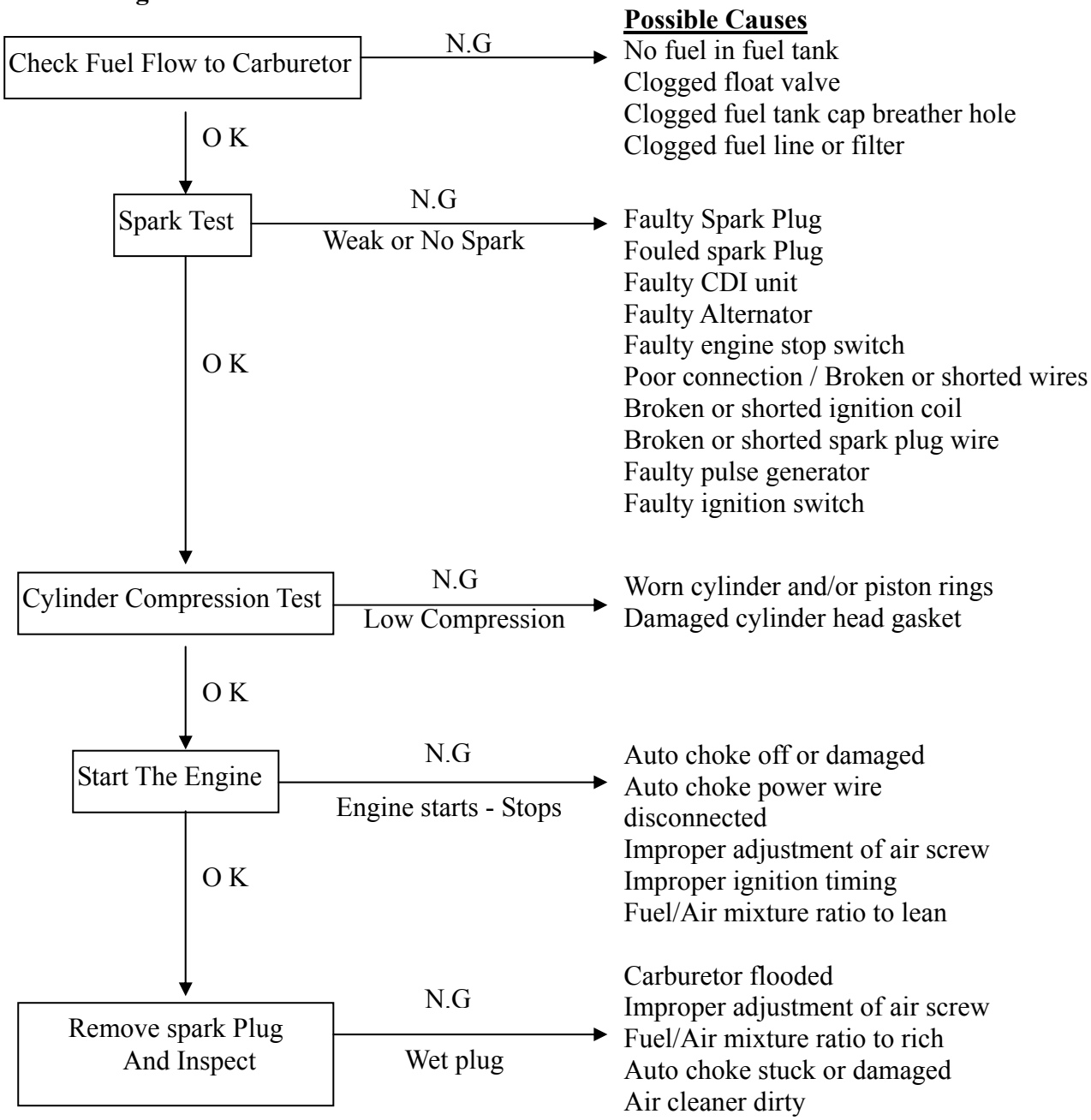
Change a new bulb and reinstall.



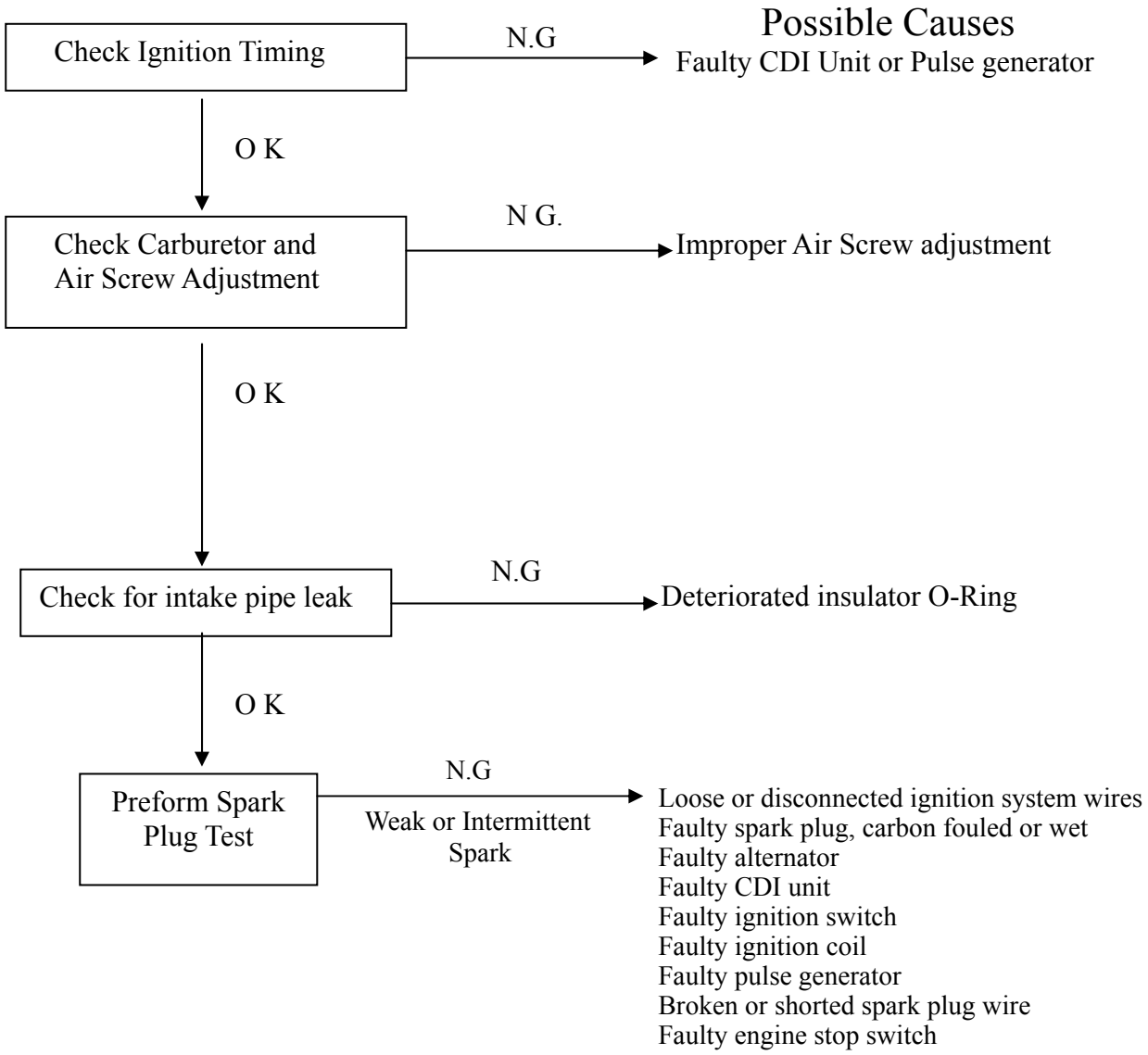
11.TROUBLE SHOOTING

1. Engine does not start
2. Poor Performance at low and idle speed
3. Poor Performance at high speed
4. Loss of power
5. Poor handling

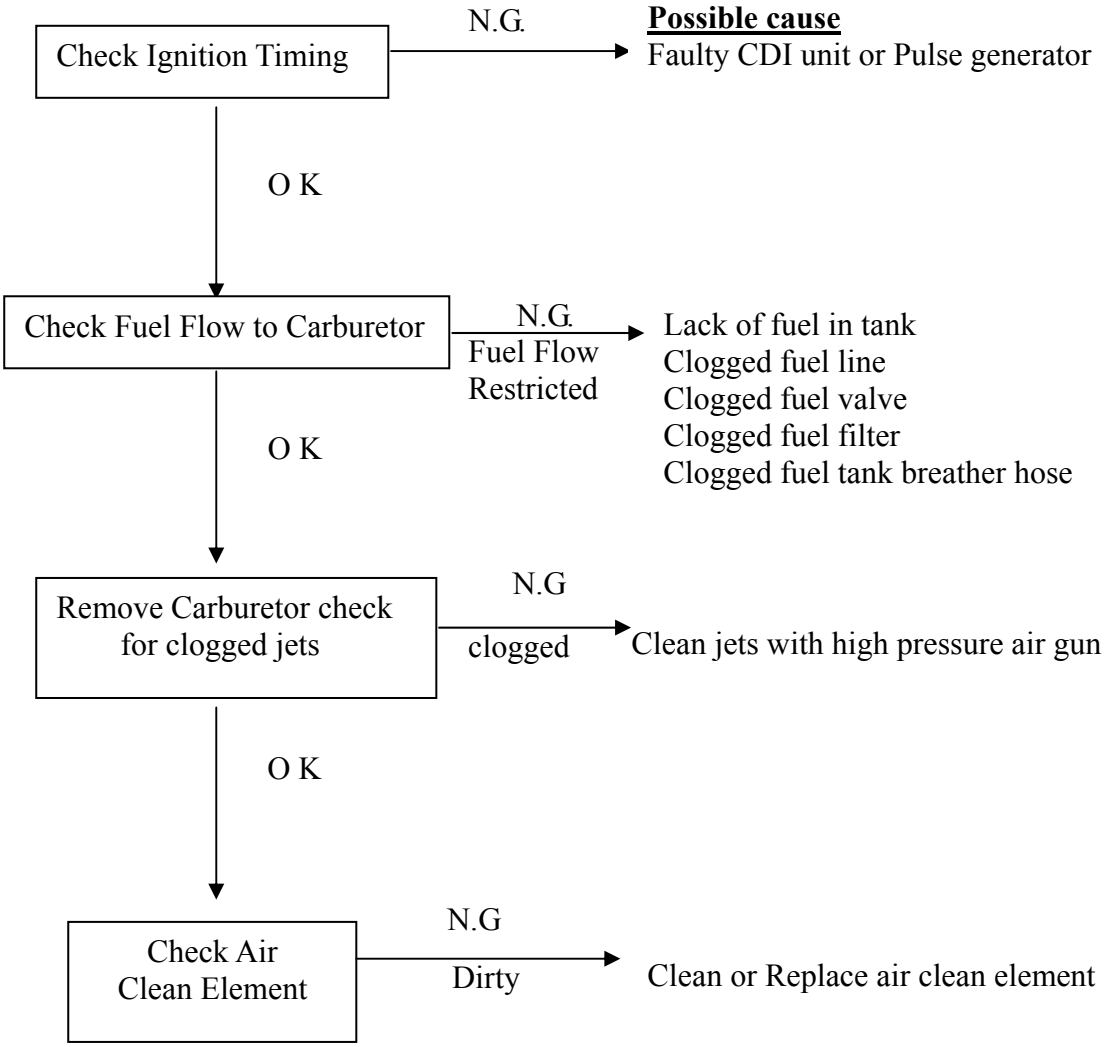
11-1.Engine does not start



11-2 Poor Performance at Low / Idle Speed

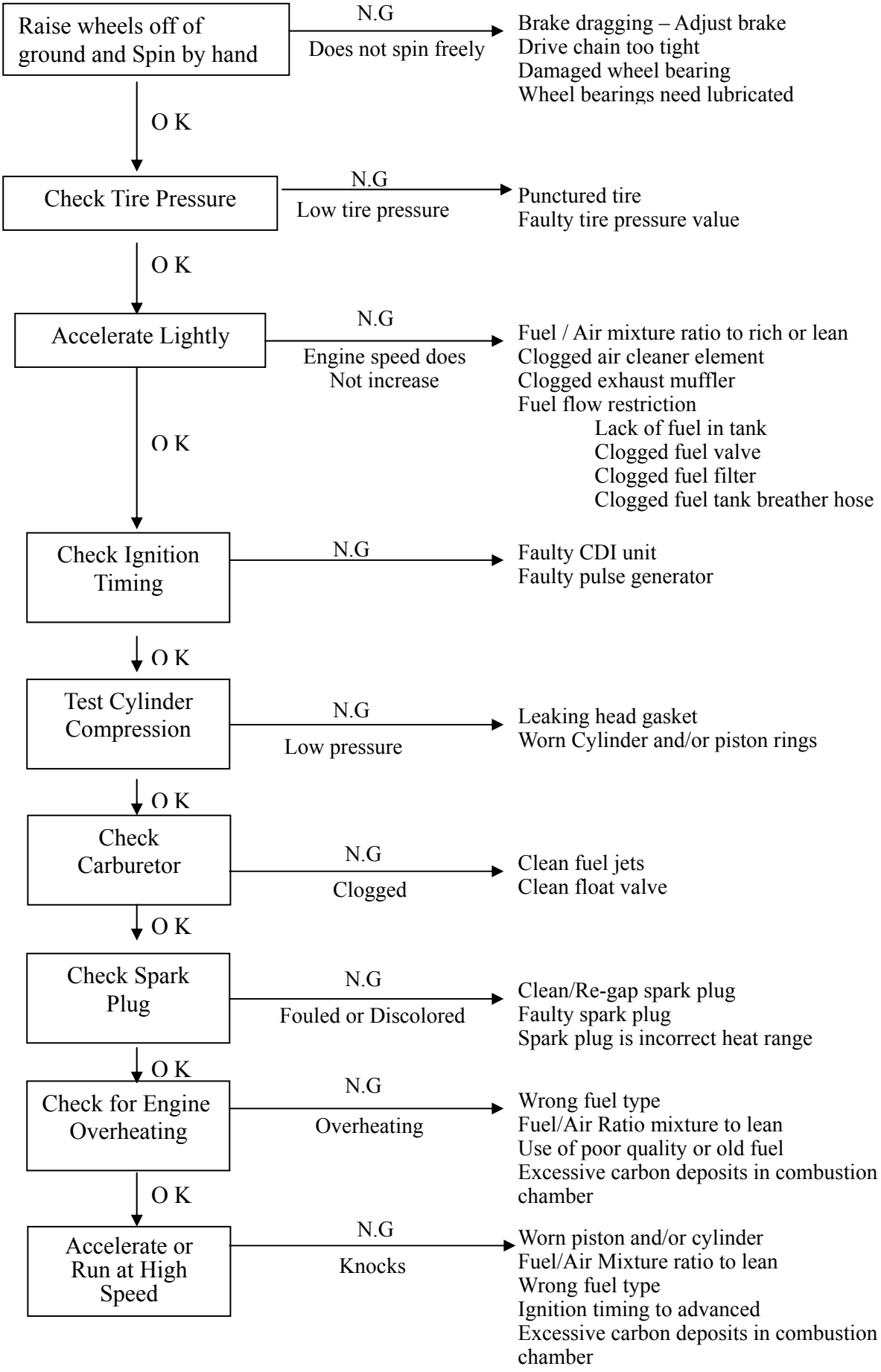


11-3 Poor performance at high speed

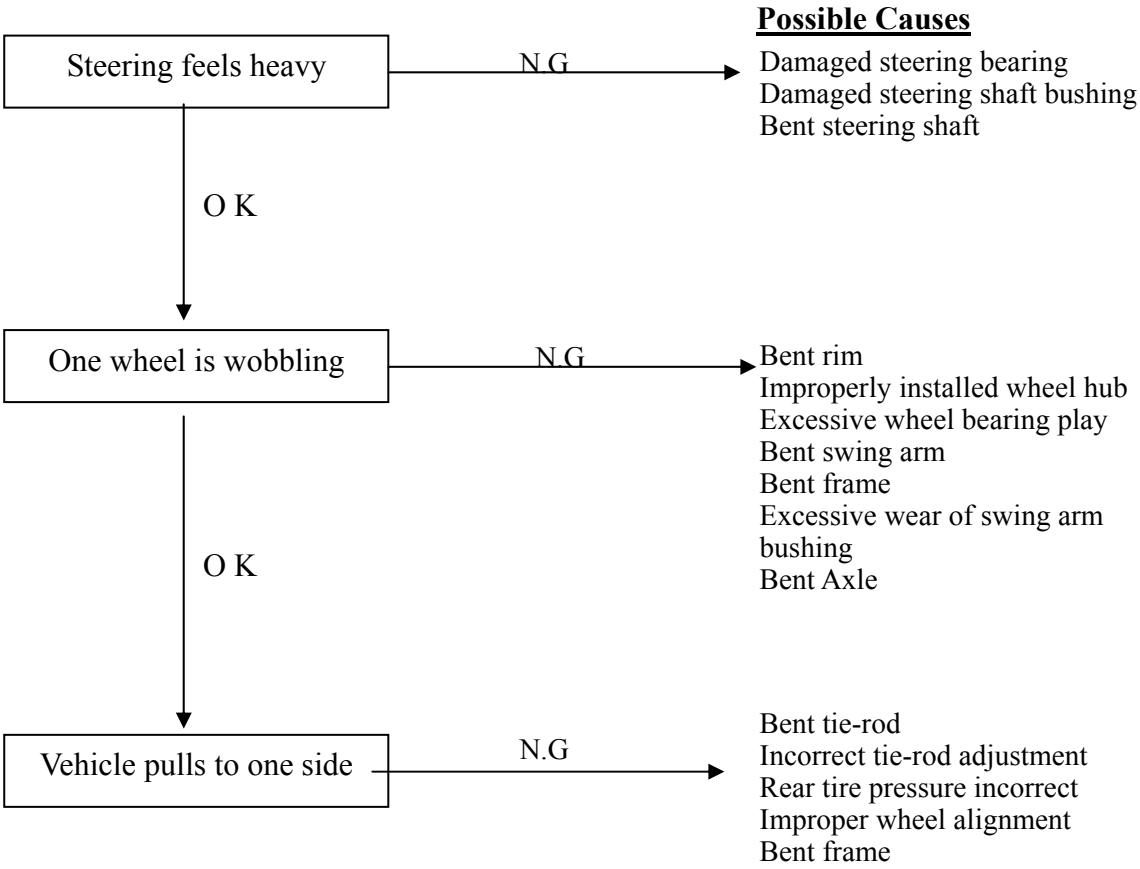


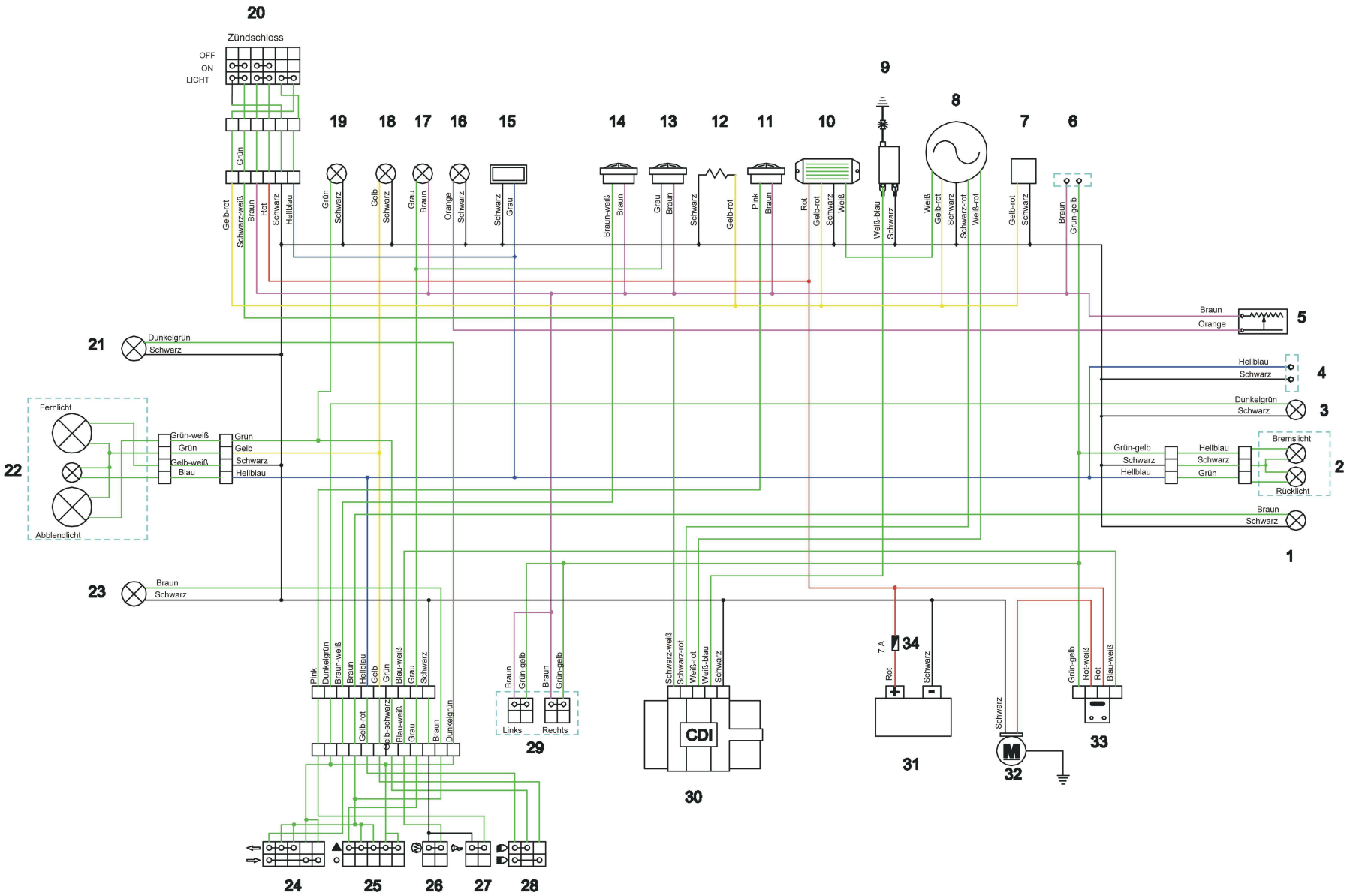
VEHICLE BODY

11-4 Loose of power



11-5 Poor Handing





1.) Blinkleuchte hinten links
2.) Rücklicht / Bremslicht
3.) Blinkleuchte hinten rechts
4.) Kennzeichenleuchte (nur COBRA 100)
5.) Ölstandgeber
6.) Bremslichtschalter (nur COBRA 100)
7.) Chokeventil
8.) Generator
9.) Zündspule
10.) Spannungsregler / Gleichrichter
11.) Hupe
12.) Widerstand
13.) Warnblinkgeber
14.) Blinkgeber
15.) Tachometer
16.) Ölkontrolleuchte
17.) Warnblinkkontrolleuchte
18.) Fernlichtkontrolleuchte
19.) Abblendlichtkontrolleuchte
20.) Zündschloß
21.) Blinkleuchte vorne rechts
22.) Scheinwerfer
23.) Blinkleuchte vorne links
24.) Blinkerschalter
25.) Warnblinkschalter
26.) Anlasserschalter
27.) Hupenknopf
28.) Auf- Abblendschalter
29.) Bremslichtschalter vorne (li. u. Re.)
30.) C.D.I. (Zündsteuergerät)
31.) Batterie
32.) Anlassermotor
33.) Anlasserrelais
34.) Sicherung

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Reparaturanleitung

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