

**By KWANG YANG Motor Co., Ltd.
1st Edition, ,Jun. 2012
All rights reserved. Any reproduction or
unauthorized use without the written
permission of KWANG YANG Motor Co., Ltd.
is expressly prohibited.
T300-LKD8-A1**

PREFACE

This Service Manual describes the technical features and servicing procedures for the KYMCO **G-DINK 50**.

Section 1 contains the precautions for all operations stated in this manual. Read them carefully before any operation is started.

Section 2 is the removal/installation procedures for the frame covers which are subject to removal/installation frequency during maintenance and servicing operations.

Section 3 describes the inspection/adjustment procedures, safety rules and service information for each part, starting from periodic maintenance.

Sections 5 to 11 give instructions for disassembly, assembly and adjustment of engine parts.

Section 12 to 13 is the removal/installation of chassis. Section 14 to 17 states the testing and measuring methods of electrical equipment.

Most sections start with an assembly or system illustration and troubleshooting for the section. The subsequent pages give detailed procedures for the section.

The information and contents included in this manual may be different from the motorcycle in case specifications are changed.

KWANG YANG MOTOR CO., LTD.
QUALITY TECHNOLOGY DEPT.
EDUCATION SECTION

TABLE OF CONTENTS

ENGINE	GENERAL INFORMATION	1
	EXHAUST MUFFLER/FRAME COVERS	2
	INSPECTION/ADJUSTMENT	3
	LUBRICATION SYSTEM	4
	ENGINE REMOVAL/INSTALLATION	5
	CYLINDER HEAD/CYLINDER/PISTON	6
	A.C. GENERATOR/STARTER CLUTCH	7
	KICK STARTER/DRIVE PULLEY/CLUTCH/DRIVEN PULLEY	8
	FINAL REDUCTION	9
	CRANKCASE/CRANKSHAFT	10
	CARBURETOR	11
CHASSIS	STEERING HANDLEBAR/FRONT WHEEL/FRONT BRAKE/FRONT SHOCK ABSORBER/FRONT FORK	12
	REAR BRAKE/REAR FORK/REAR WHEEL/REAR SHOCK ABSORBER`	13
ELECTRICAL EQUIPMENT	BATTERY/CHARGING SYSTEM	14
	IGNITION SYSTEM	15
	STARTING SYSTEM	16
	LIGHTS/METERS/SWITCHES	17

1. GENERAL INFORMATION

1

GENERAL INFORMATION

SERIAL NUMBER ----- 1-1

SPECIFICATION ----- 1-2

SERVICE PRECAUTIONS ----- 1-3

TORQUE VALUES ----- 1-8

SPECIAL TOOLS ----- 1-10

LUBRICATION POINTS ----- 1-11

CABLE & HARNESS ROUTING ----- 1-12

TROUBLESHOOTING ----- 1-23

1. GENERAL INFORMATION

Identification Numbers Record

Identification Numbers Record



1. VEHICLE IDENTIFICATION NUMBER (VIN)

2. ENGINE SERIAL NUMBER (ESN)

3. FRAME SERIAL NUMBER (VIN)

Record the Vehicle Identification Number ①, Engine Serial Number ② and Frame Serial Number ③ in the boxes above for future reference (to assist you in ordering parts from your authorized KYMCO dealer or for reference in case the vehicle is stolen).

1. GENERAL INFORMATION

SPECIFICATIONS

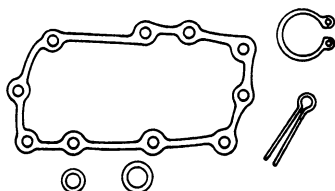
Oil tank capacity		1.1 liter
Fuel system		
Fuel capacity		9.5 liters
Carburetor type		VE
Throttle Body		Butterfly type
Venturi diameter (mm)		17
Electrical system		
Ignition type		CDI
Spark plug		NGK CR7HSA
Spark plug gap		0.6~0.7mm
Battery Capacity		12V4AH
Transmission system		
Clutch type		Dry multi-disc
Transmission type		CVT
Operation type		Auto centrifugal
Reduction gear type		Two-stage reduction
Reduction ratio	1 st	0.75-2.47
	2nd	13.61
Moving device		
Tire type		Tubeless
Tire spec.	Front wheel	120/70-13
	Rear wheel	130/70-12
Tire pressure (kg/cm ²)	Front wheel	2.0
	Rear wheel	2.25
Wheel material		Aluminium
Turning angle	Left	45°
	Right	45°
Brake type	Front	Disk brake
	Rear	Drum
Damping Device		
Suspension type	Front	Telescope
	Rear	Swing arm
Shock absorber stroke	Front	110 mm
	Rear	100 mm

Name		G-DINK 50
Model No.		SF10RA
Overall length		2110 mm
Overall width		765 mm
Overall height		1270 mm
Wheel base		1470 mm
Engine type		2 stroke O.H.C.
Displacement		49.5 cc
Fuel Used		92# nonleaded gasoline above
Curb weight (kg)	Front wheel	54
	Rear wheel	74
	Total	128
Max. weight capacity (kg)	Front wheel	87
	Rear wheel	115
	Total	205
Ground clearance (mm)		135
Braking distance (m)		7.9m / 40 km/hr
Min. turning radius (mm)		2250
Engine part		
Starting system		Starting motor & Kick start
Cylinder arrangement		Single cylinder
Combustion chamber type		Semi-sphere
Bore x stroke (mm)		φ 39 *41.4
Compression ratio		11:1
Compression pressure (kg/cm ²)		18
Max. output (kw/rpm)		3.5 /7500
Max. torque (N-m/rpm)		3.5 / 7000
Idle speed (rpm)		1700±100 rpm
Cooling Type		Forced Air
Lubrication type		Separate type

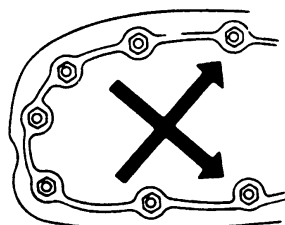
1. GENERAL INFORMATION

SERVICE PRECAUTIONS

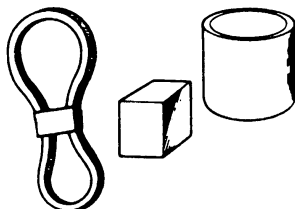
- Make sure to install new gaskets, O-rings, circlips, cotter pins, etc. when reassembling.



- When tightening bolts or nuts, begin with larger-diameter to smaller ones at several times, and tighten to the specified torque diagonally.



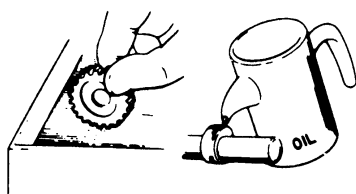
- Use genuine parts and lubricants.



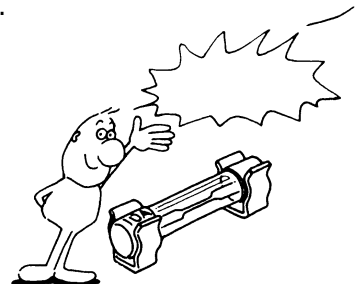
- When servicing the motorcycle, be sure to use special tools for removal and installation.



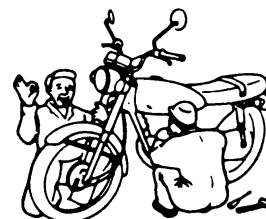
- After disassembly, clean removed parts. Lubricate sliding surfaces with engine oil before reassembly.



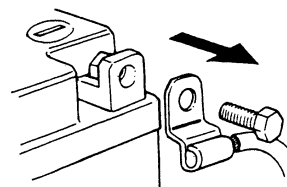
- Apply or add designated greases and lubricants to the specified lubrication points.



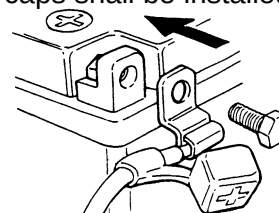
- When two persons work together, pay attention to the mutual working safety.



- Disconnect the battery negative (-) terminal before operation.
- When using a spanner or other tools, make sure not to damage the motorcycle surface.



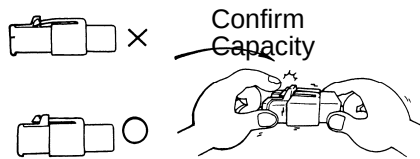
- After operation, check all connecting points, fasteners, and lines for proper connection and installation.
- When connecting the battery, the positive (+) terminal must be connected first.
- After connection, apply grease to the battery terminals.
- Terminal caps shall be installed securely.



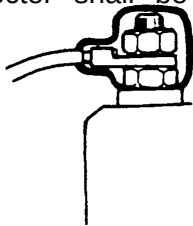
- If the fuse is burned out, find the cause and repair it. Replace it with a new one according to the specified capacity.

1. GENERAL INFORMATION

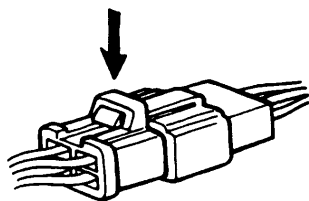
- After operation, terminal caps shall be installed securely.



- When taking out the connector, the lock on the connector shall be released before operation.



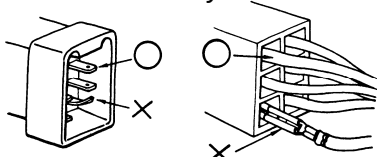
- Hold the connector body when connecting or disconnecting it.
- Do not pull the connector wire.



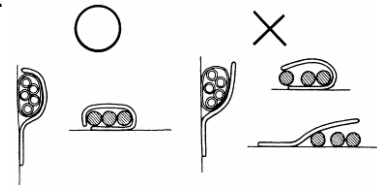
- Check if any connector terminal is bending, protruding or loose.



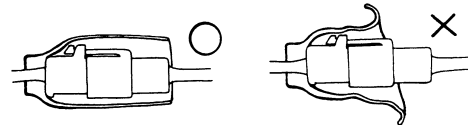
- The connector shall be inserted completely.
- If the double connector has a lock, lock it at the correct position.
- Check if there is any loose wire.



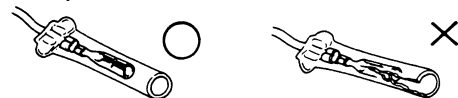
- Before connecting a terminal, check for damaged terminal cover or loose negative terminal.



- Check the double connector cover for proper coverage and installation.



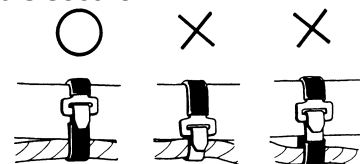
- Insert the terminal completely.
- Check the terminal cover for proper coverage.
- Do not make the terminal cover opening face up.



- Secure wire harnesses to the frame with their respective wire bands at the designated locations. Tighten the bands so that only the insulated surfaces contact the wire harnesses.

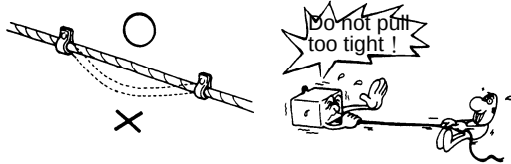


- After clamping, check each wire to make sure it is secure.



1. GENERAL INFORMATION

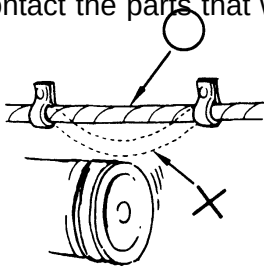
- Do not squeeze wires against the weld or its clamp.



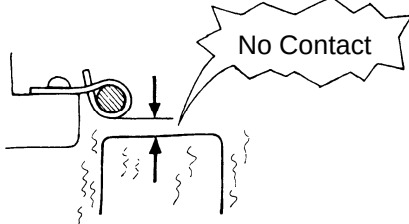
- After clamping, check each harness to make sure that it is not interfering with any moving or sliding parts.



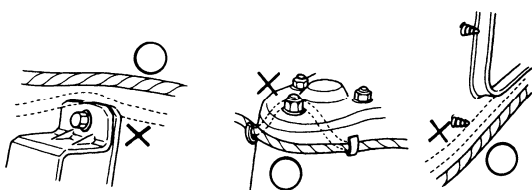
- When fixing the wire harnesses, do not make it contact the parts that will generate high heat.



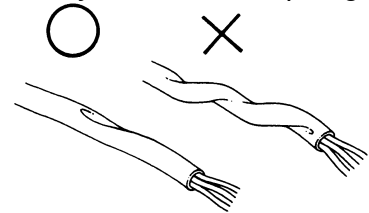
- Route wire harnesses to avoid sharp edges or corners. Avoid the projected ends of bolts and screws.
- Route wire harnesses passing through the side of bolts and screws. Avoid the projected ends of bolts and screws.



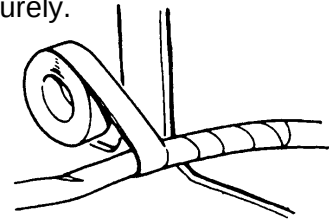
- Route harnesses so they are neither pulled tight nor have excessive slack.



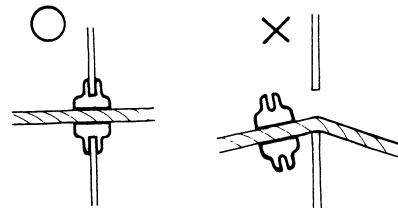
- Protect wires and harnesses with electrical tape or tube if they contact a sharp edge or corner.



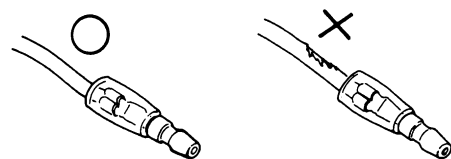
- When rubber protector cover is used to protect the wire harnesses, it shall be installed securely.



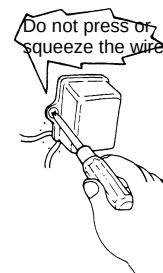
- Do not break the sheath of wire.
- If a wire or harness is with a broken sheath, repair by wrapping it with protective tape or replace it.



- When installing other parts, do not press or squeeze the wires.

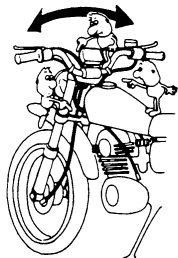


- After routing, check that the wire harnesses are not twisted or kinked.

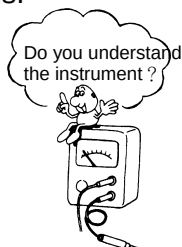


1. GENERAL INFORMATION

- Wire harnesses routed along with handlebar should not be pulled tight, have excessive slack or interfere with adjacent or surrounding parts in all steering positions.



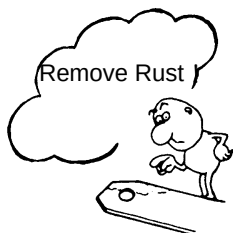
- When a testing device is used, make sure to understand the operating methods thoroughly and operate according to the operating instructions.



- Be careful not to drop any parts.



- When rust is found on a terminal, remove the rust with sand paper or equivalent before connecting.



1. GENERAL INFORMATION

■ Symbols:

The following symbols represent the servicing methods and cautions included in this service manual.



: Apply engine oil to the specified points. (Use designated engine oil for lubrication.)



: Apply grease for lubrication.



: Transmission Gear Oil (90#)



: Use special tool.



: Caution



: Warning

1. GENERAL INFORMATION

TORQUE VALUES

STANDARD TORQUE VALUES

Item	Torque (kgf-m)	Item	Torque (kgf-m)
5mm bolt, nut	0.45~0.6	5mm screw	0.45~0.6
6mm bolt, nut	0.8~1.2	6mm screw, SH bolt	0.7~1.1
8mm bolt, nut	1.8~2.5	6mm flange bolt, nut	1.0~1.4
10mm bolt, nut	3.0~4.0	8mm flange bolt, nut	2.4~3.0
12mm bolt, nut	5.0~6.0	10mm flange bolt, nut	3.0~4.5

ENGINE

Item	Thread dia. (mm)	Torque (kg-m)	Remarks
Cylinder head bolt	BF7x115	1.5~1.7	(cold)
Clutch drive plate nut	10	3.5~4.0	
Clutch outer nut	NH10	3.5~4.5	
Drive face nut	NH12	5.0~6.0	
Oil check bolt	10	1.0~1.5	
Engine mounting bolt	BF10x95	4.5~5.5	
Engine hanger bracket bolt	BF10x50	3.5~4.5	
Exhaust muffler joint lock nut	NC6mm	1.0~1.4	
Exhaust muffler lock bolt	BF8x35	3.0~3.6	
Spark plug		1.1~1.7	(cold)

1. GENERAL INFORMATION

TORQUE VALUES FRAME

No.	ITEM	THREAD SIZE AND TYPE	TORQUE		PR値 Kg f-m	REMARK	THREAD DWG NO.
			Kg f-m	N-m			
1	STEERING						
	HANDLE POST	M10x1.25	6.0~7.0	60~70	6.5	U NUT	90106-GEN5-9000
	BRIDGE BOLT	M8x1.25	2.4~3.0	24~30	2.7	—	95801-08040-08
	STEM LOCK	BC1	6.0~6.5	60~65	6.3	—	50306-1F96-0010
	RACE NUT(HEAD)	BC1	1.8~2.2	18~22	2.0	—	53220-LBA2-E000
2	WHEEL						
	FR.AXLE	M14x1.5	1.5~2.5	15~25	2.0	—	44301-LLJ3-E000
	RR.AXLE NUT	M16x1.5	11~13	110~130	12	U NUT	90305-KFW6-9120-M1
3	SUSPENSION						
	FR FORK BOLT	M8x1.25	2.0~2.6	20~26	2.3	—	96600-08025-06
	RR. CUSH. UP	M10x1.25	3.5~4.5	35~45	4.0	U NUT	90304-GHE8-0040
	RR. CUSH. LWR	M8x1.25	2.4~3.0	24~30	2.7	—	95801-08042-06
4	BRAKE						
	FR CALIPER R	M10x1.25	3.0~4.0	30~40	3.5	—	90122-LEA7-E000
	BRK OIL BOLT	M10x1.25	3.0~4.0	30~40	3.5	—	90145-MS9-6120-M1
	M/C HOLDER	M6x1.0	1.0~1.4	10~14	1.2	—	96001-06028-06
	M/C CAP SCREW	M4x0.7	0.12~0.2	1.2~2.0	0.16	—	96000-04012-1A
	C/P BLEEDER	M8x1.25	0.4~0.7	4.0~7.0	0.55	—	43352-5H68-0040
	DISK BOLT	M8x1.25	3.2~3.8	32~38	3.5	—	90105-KCR3-0010
	C/P PIN BOLT	M12x1.25	3.4~4.6	34~46	4.0	—	45131-LDHI-E000
	REAR BRAKE ARM BOLT	M6x1.0	1.0~1.4	10~14	1.2	—	95701-06032-08
	HANDLE HOLDER	M6x1.0	1.0~1.4	10~14	1.2	—	96001-06028-06
5	ENGINE HANGER						
	FRAME SIDE	M14x1.5	6.0~7.0	60~70	6.5	U NUT	90305-LBD4-9000
	ENGINE SIDE (L)	M10x1.25	3.3~4.3	33~43	3.8	—	95701-10070-06
	ENGINE SIDE (R)	M10x1.25	3.3~4.3	33~43	3.8	—	95801-10100-06
6	MUFFLER						
	EXH. PIPE	M6x1.0	1.0~1.4	10~14	1.2	—	92700-06028-18
	MUFFLER BRKT.	M8x1.25	3.0~3.6	30~36	3.3	—	95801-KGB5-E000
	MUFFLER BRKT.	M8x1.25	3.0~3.6	30~36	3.3	—	95801-08075-06

1. GENERAL INFORMATION

SPECIAL TOOLS

Tool No.		Description	Drawing	Specs
A120	E00001	FLYWHEEL PULLER		M24X1
A120	E00014	OIL SEAL & BEARING DRIVER		General size
A120	E00017	UNIVERSAL HOLDER		
A120	E00019	BUSHING ABSORBER REMOVER		O.D. 26
A120	E00025	39mm HEX NUT WRENCH		
A120	E00029	THREAD PROTECTOR		10mm, 12 mm
A120	E00030	CRANKSHAFT BEARING PULLER		
A120	E00032	BUSHING ENGINE HANGER REMOVER		O.D. 30
A120	E00034	CLUTCH SPRING COMPRESSOR		
A120	E00037	BEARING PULLER		General size

1. GENERAL INFORMATION

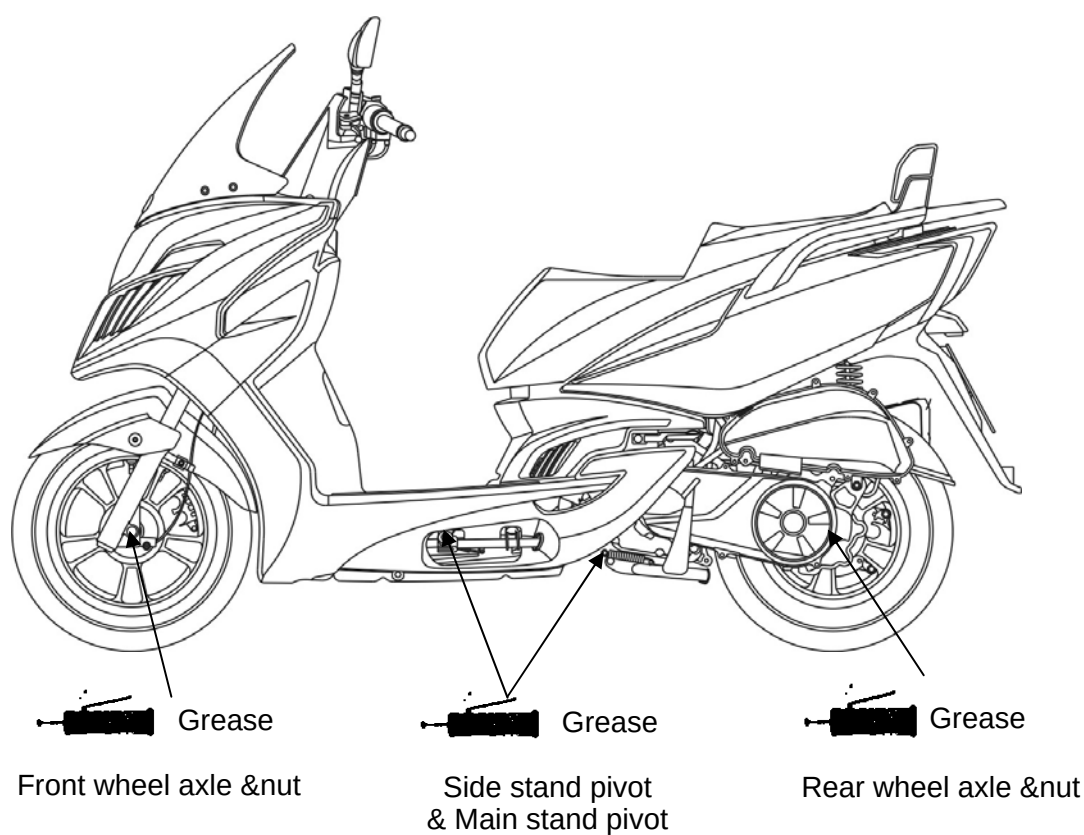
LUBRICATION POINTS

FRAME

The following is the lubrication points for the frame.

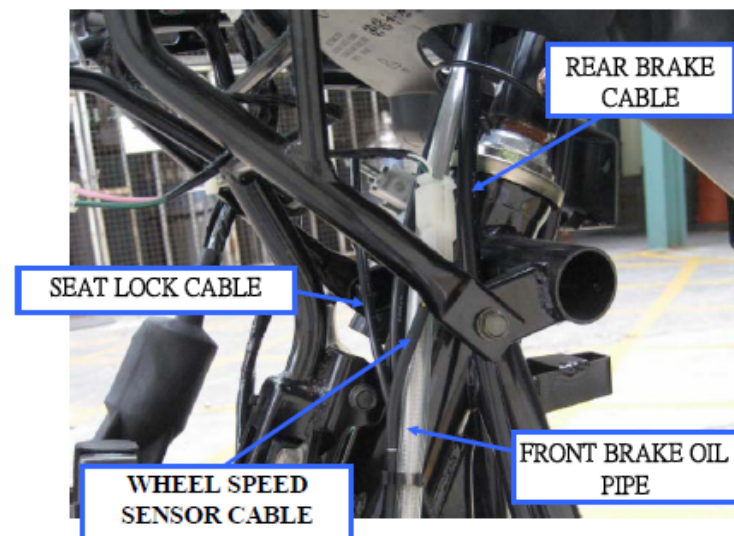
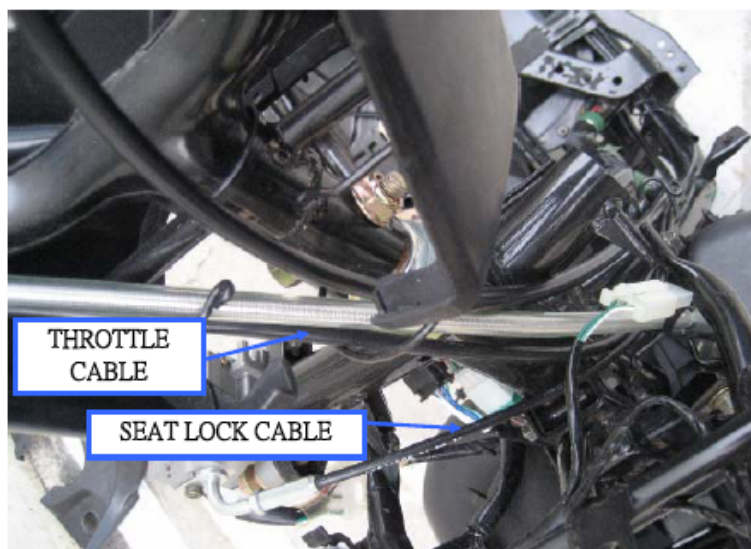
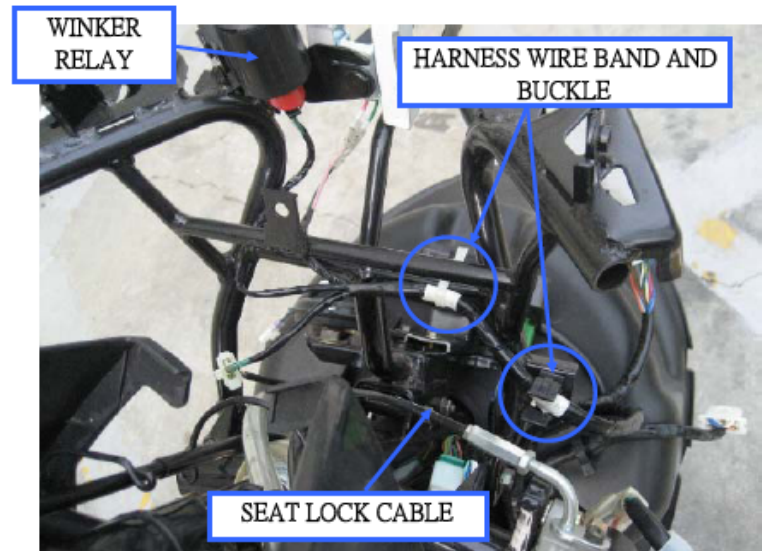
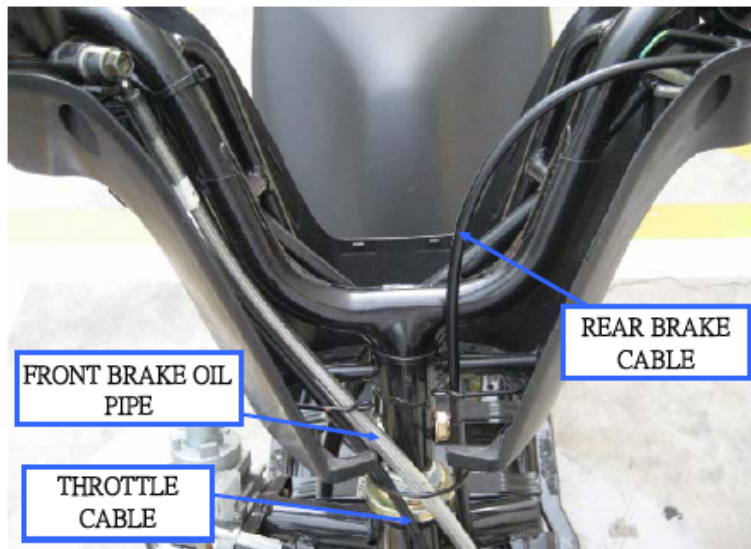
Use grease for parts not listed.

Apply engine oil or grease to cables and movable parts not specified. It will avoid abnormal noise and damage the durability of the motorcycle.



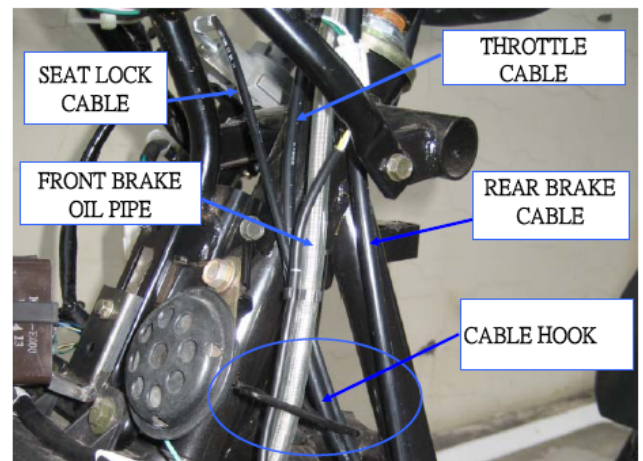
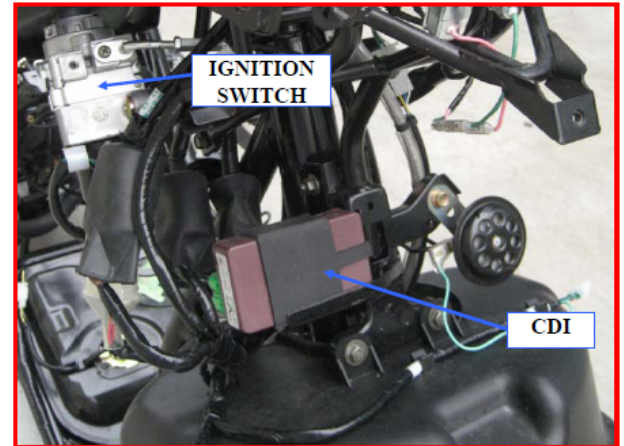
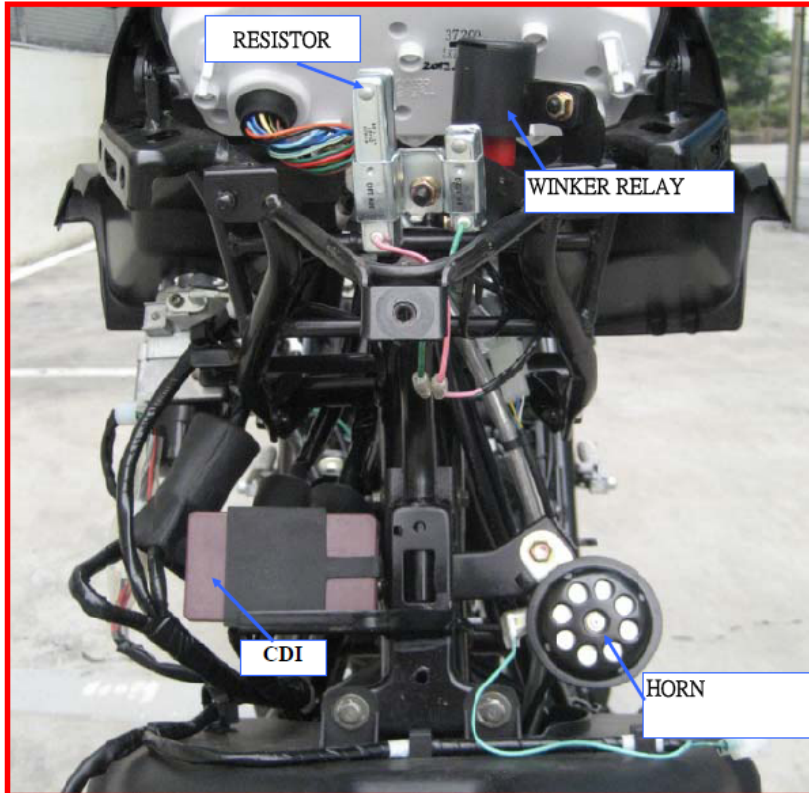
1. GENERAL INFORMATION

CABLE & HARNESS ROUTING



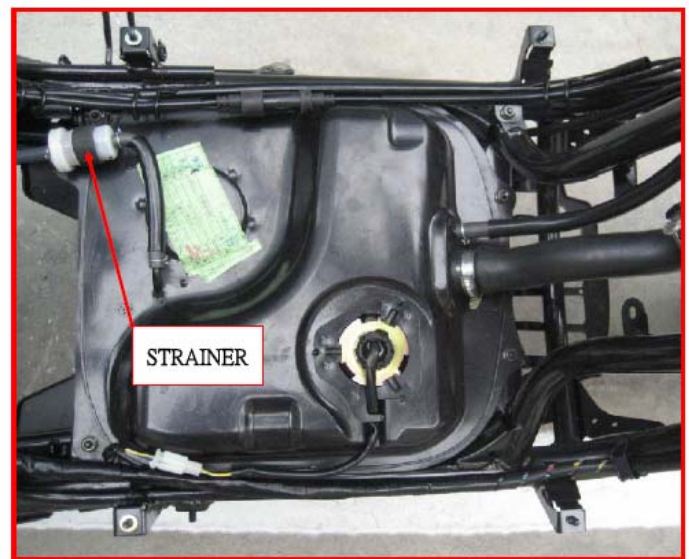
1. GENERAL INFORMATION

CABLE & HARNESS ROUTING



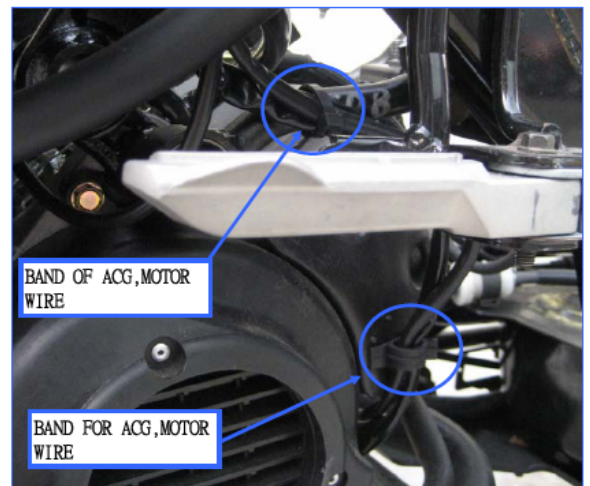
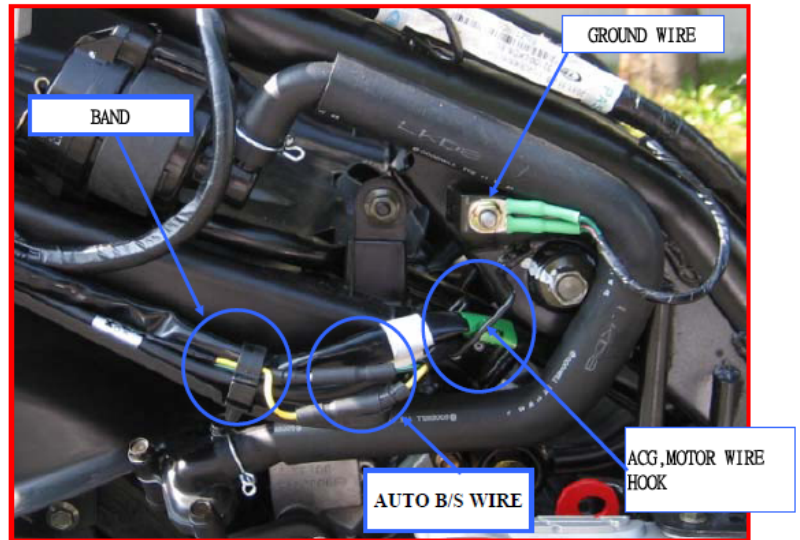
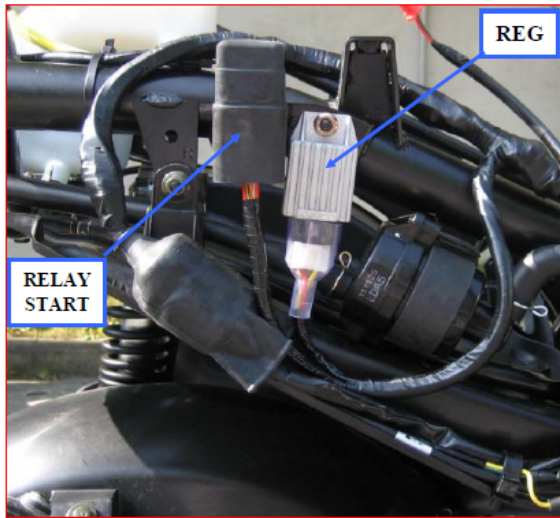
1. GENERAL INFORMATION

CABLE & HARNESS ROUTING



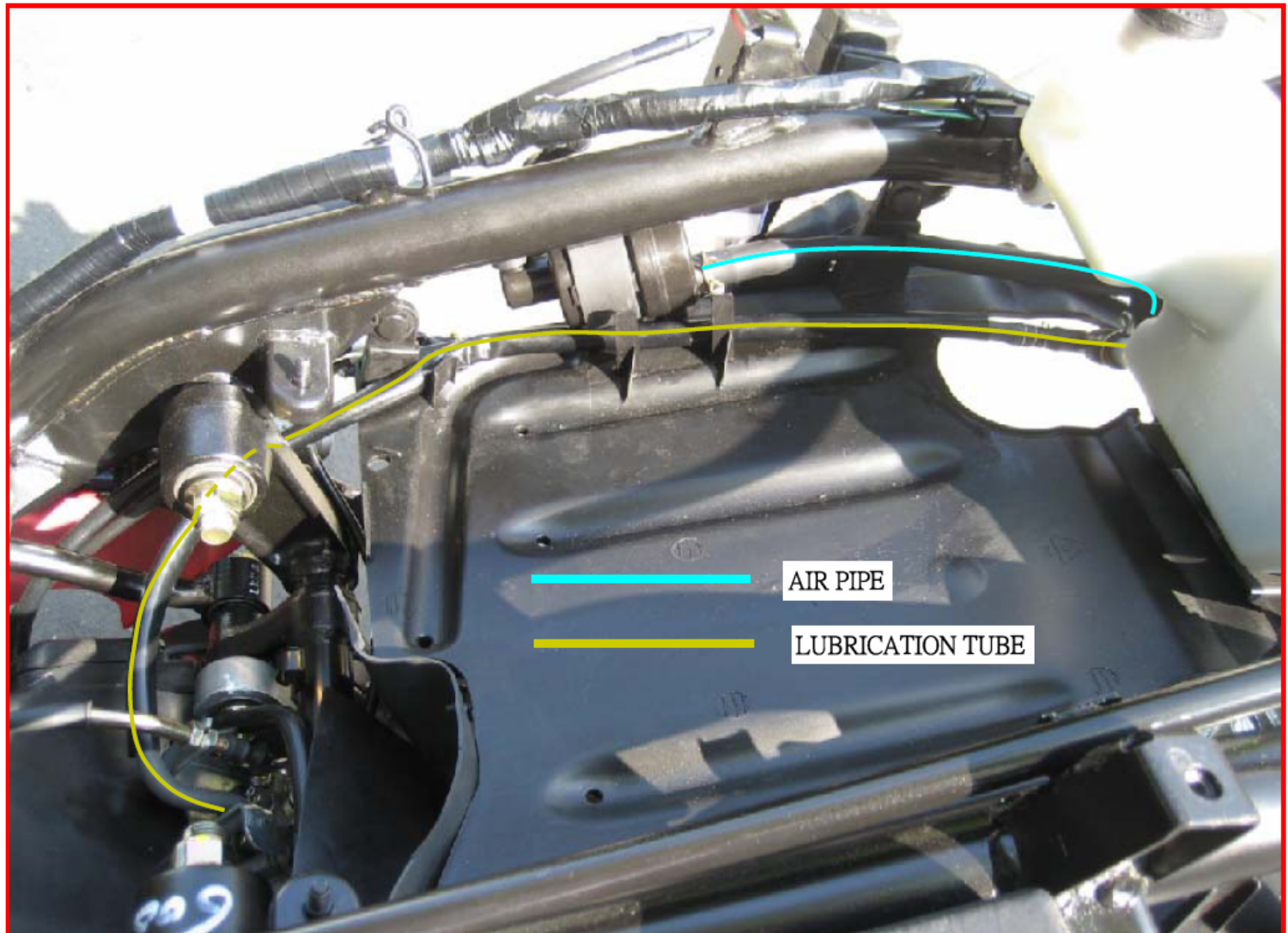
1. GENERAL INFORMATION

CABLE & HARNESS ROUTING



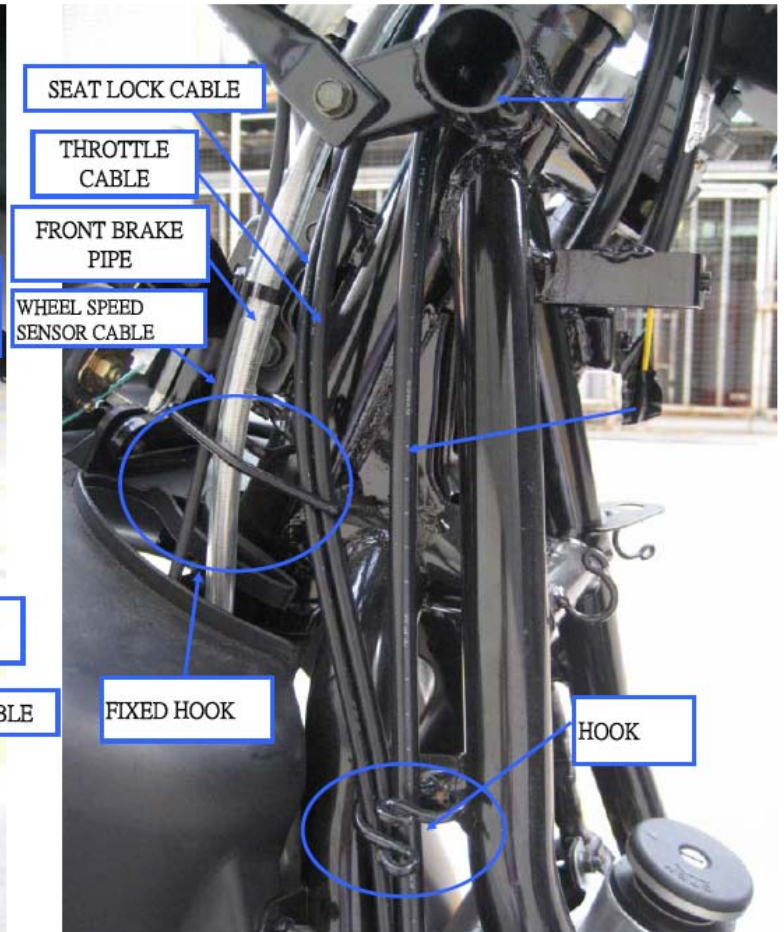
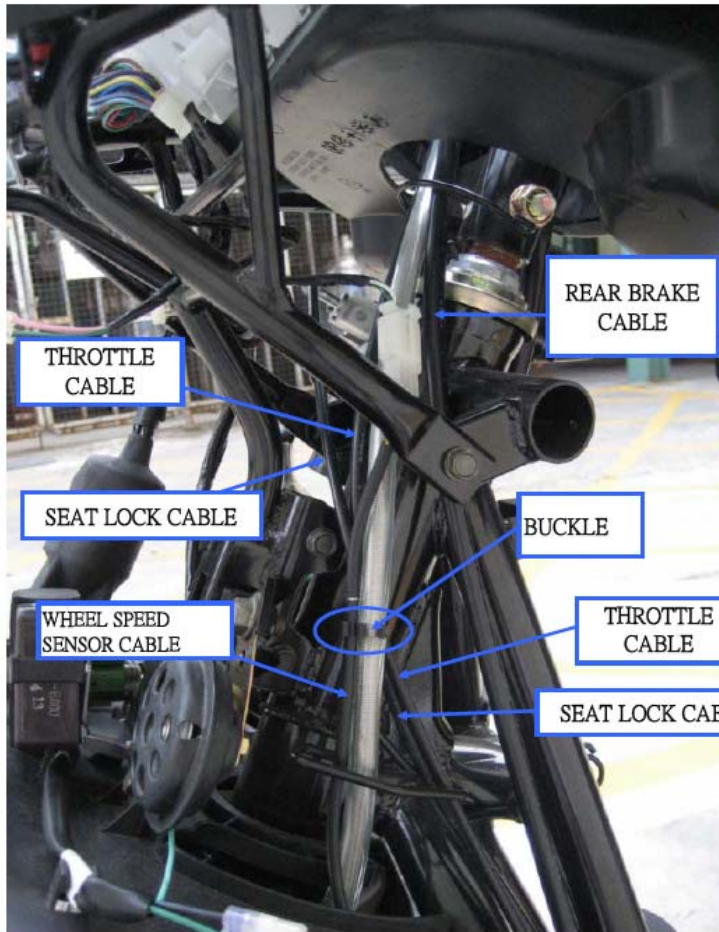
1. GENERAL INFORMATION

CABLE & HARNESS ROUTING



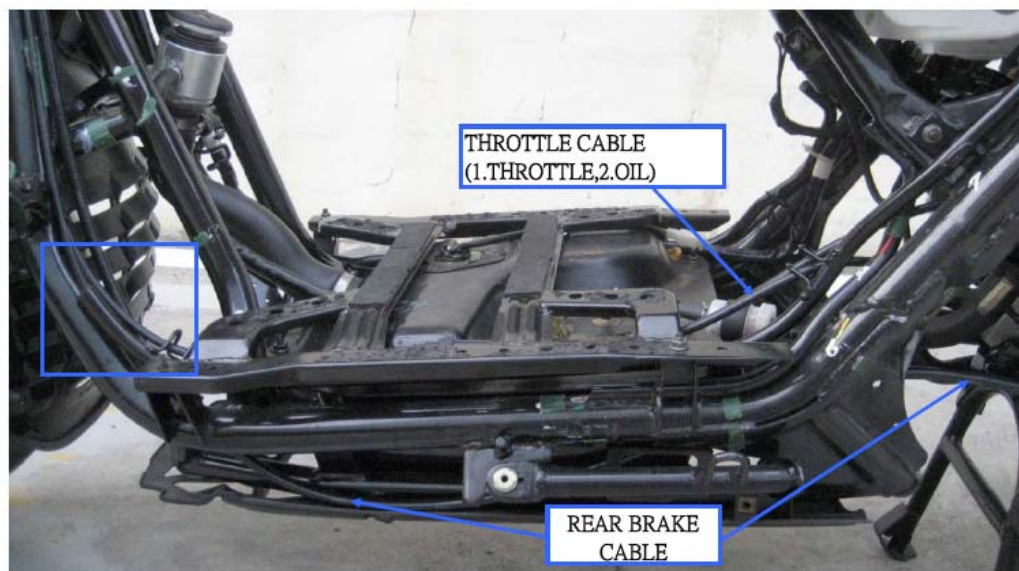
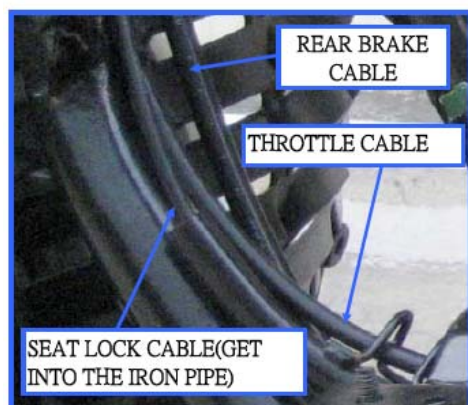
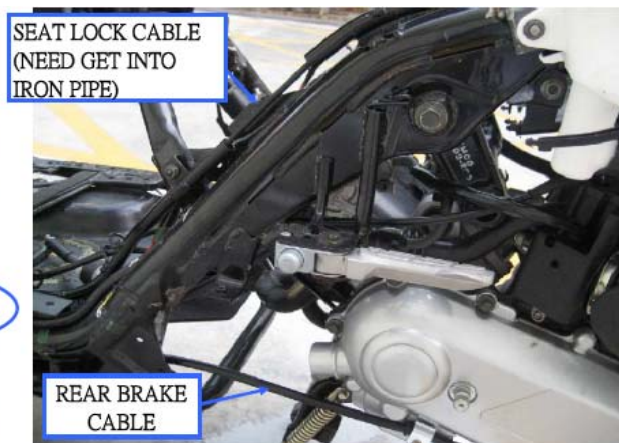
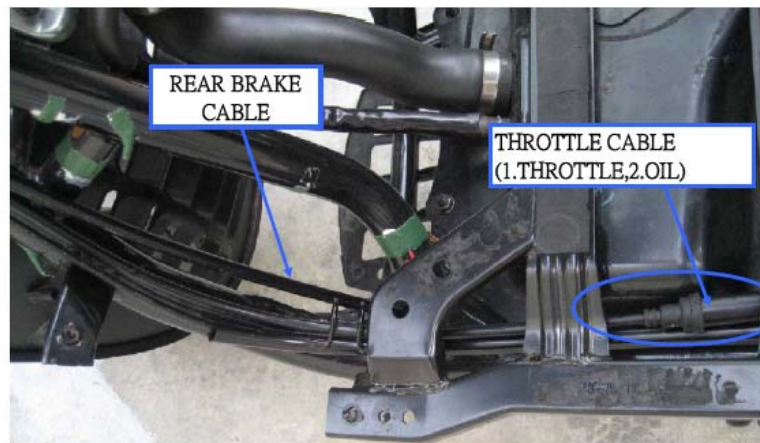
1. GENERAL INFORMATION

CABLE & HARNESS ROUTING



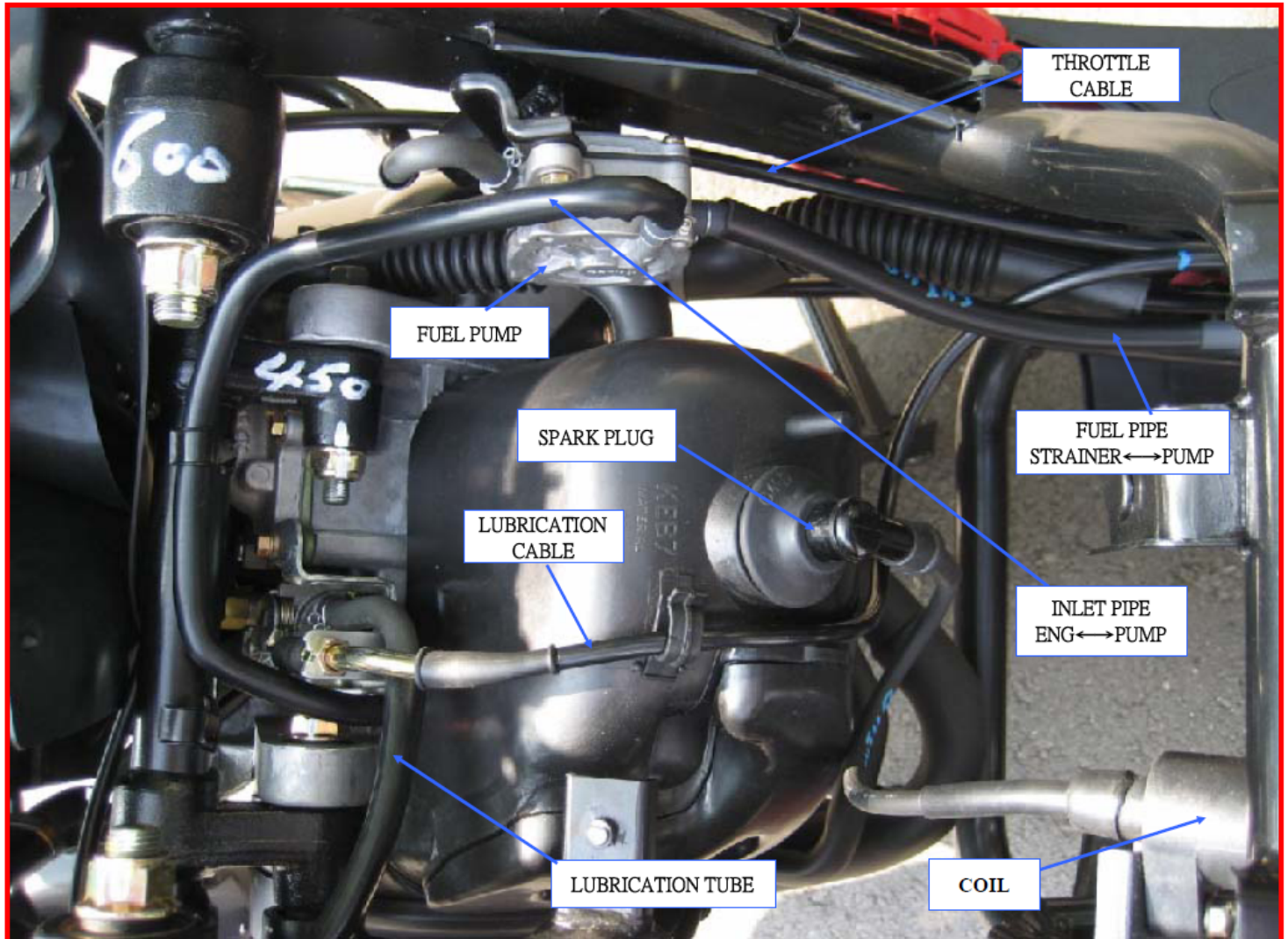
1. GENERAL INFORMATION

CABLE & HARNESS ROUTING



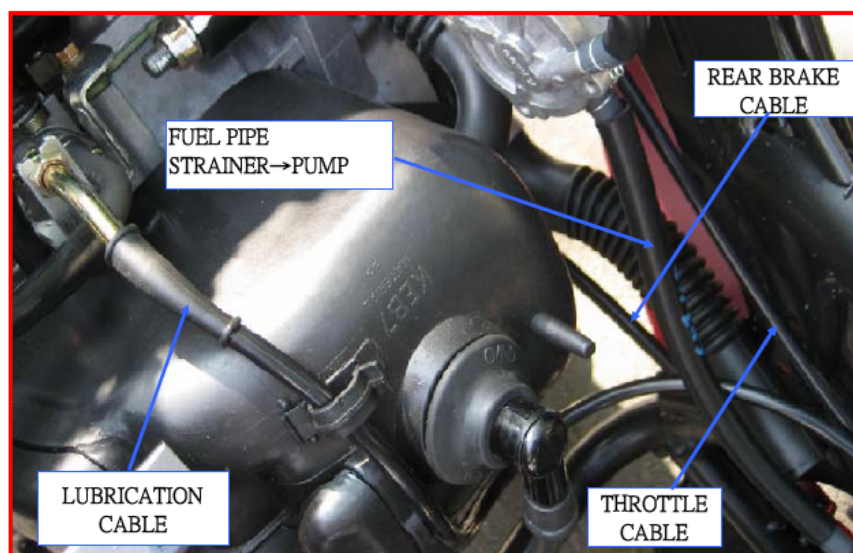
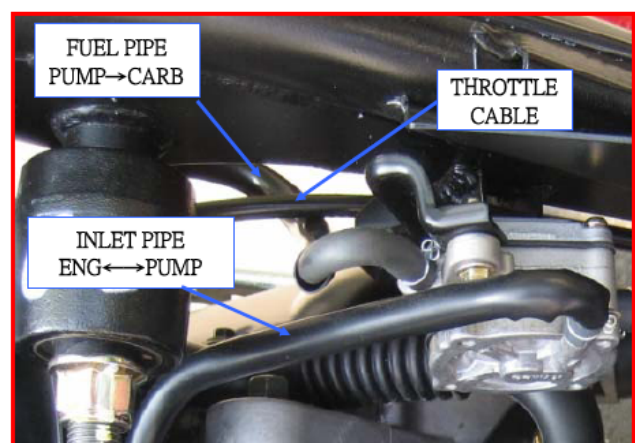
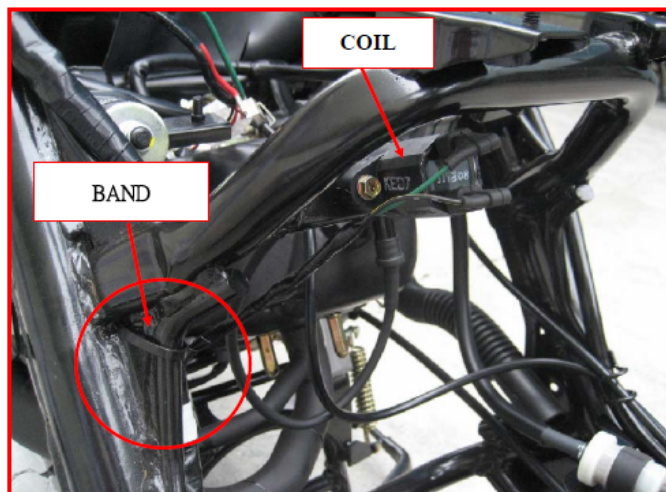
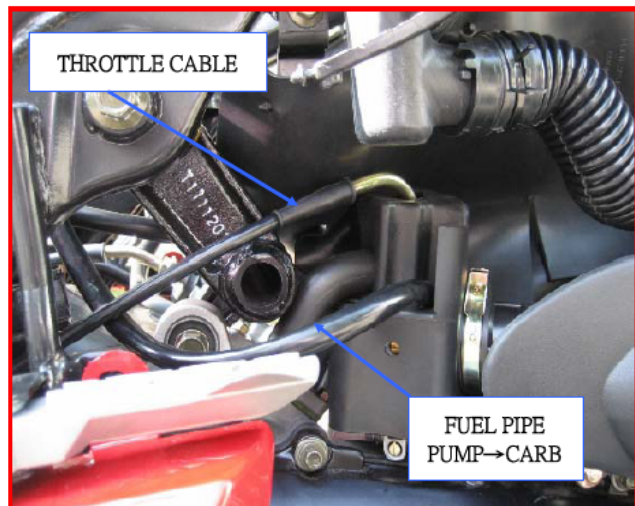
G-DINK 50

CABLE & HARNESS ROUTING



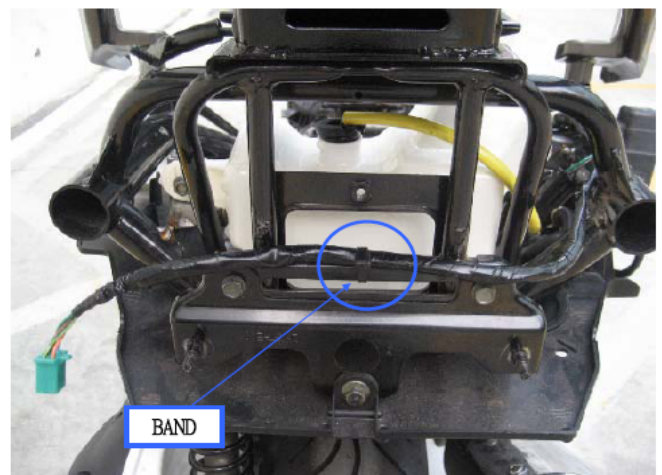
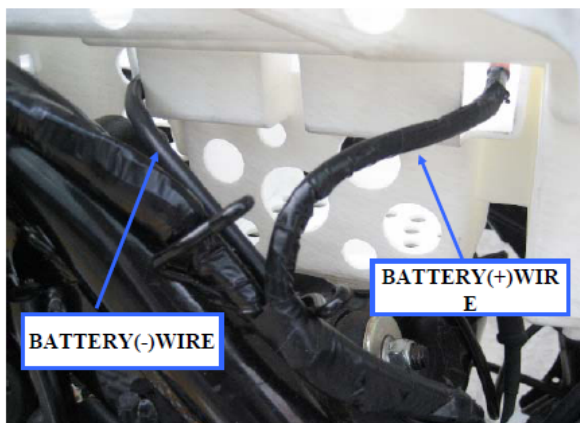
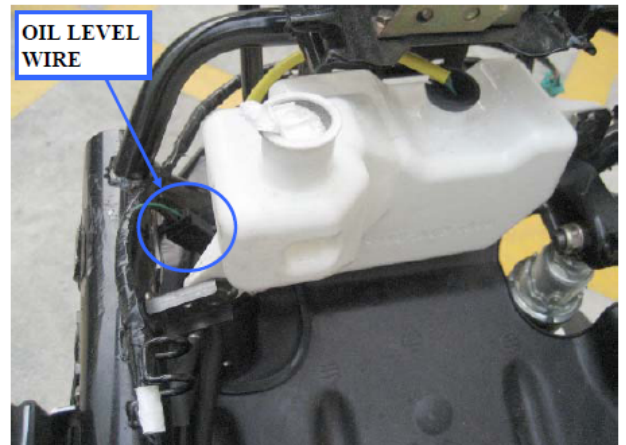
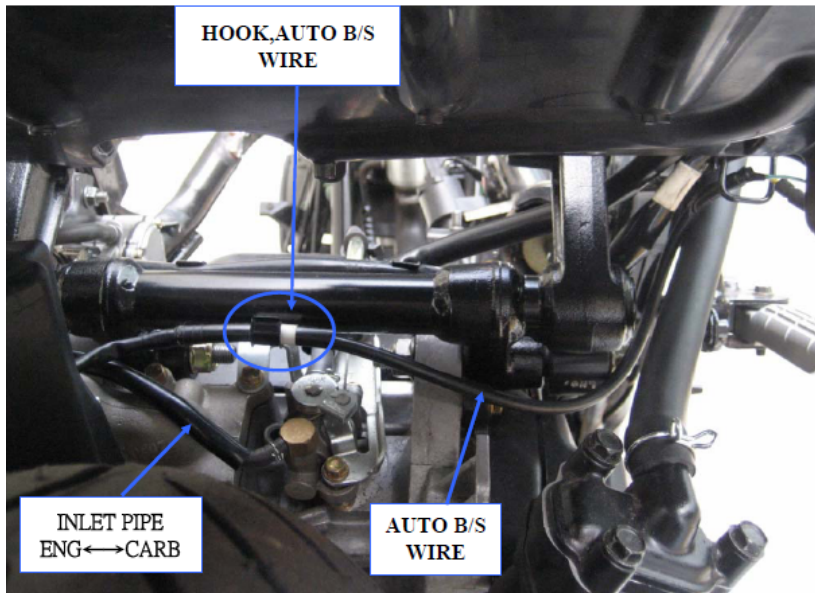
1. GENERAL INFORMATION

CABLE & HARNESS ROUTING



1. GENERAL INFORMATION

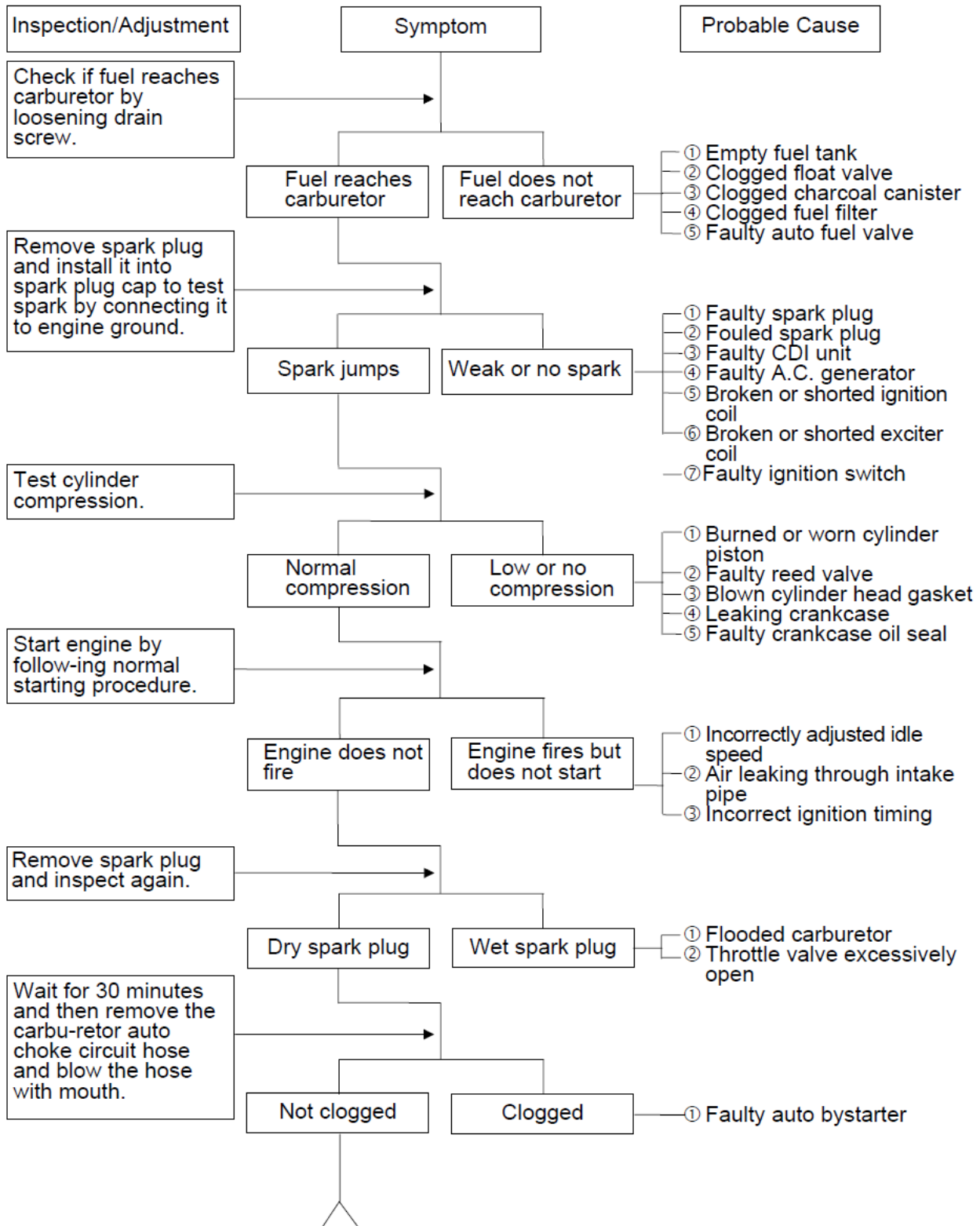
CABLE & HARNESS ROUTING



1. GENERAL INFORMATION

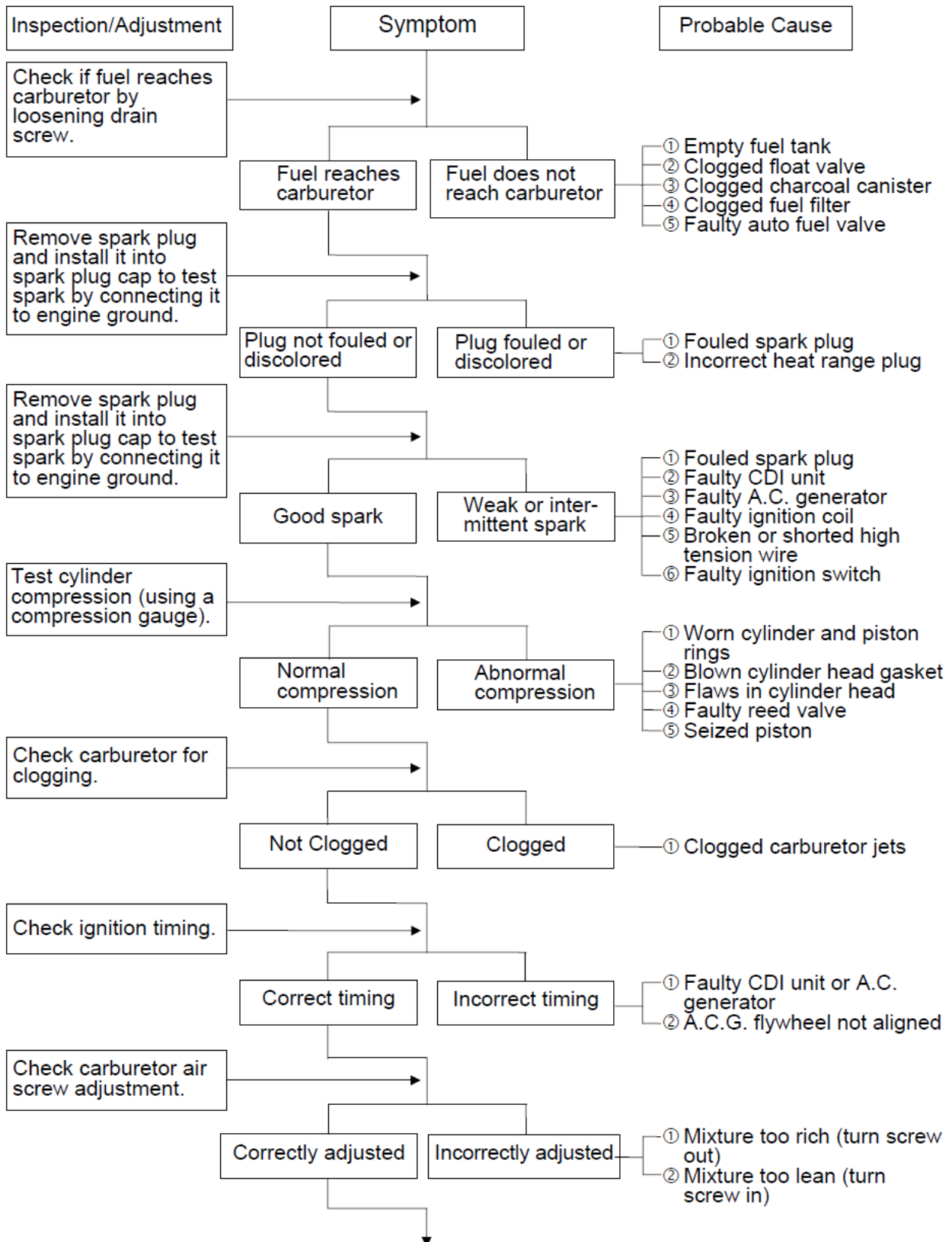
TROUBLESHOOTING

ENGINE WILL NOT START OR IS HARD TO START

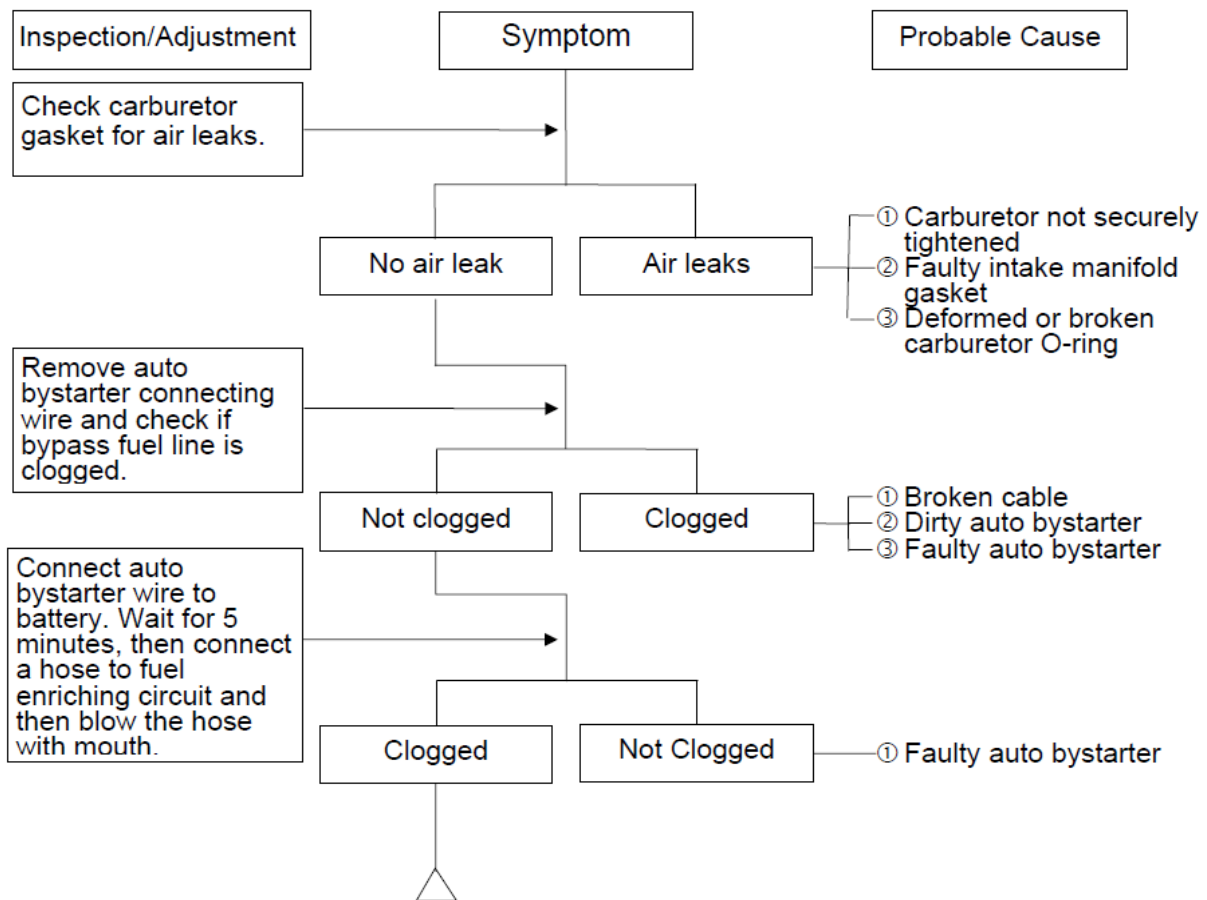


1. GENERAL INFORMATION

ENGINE STOPS IMMEDIATELY AFTER IT STARTS

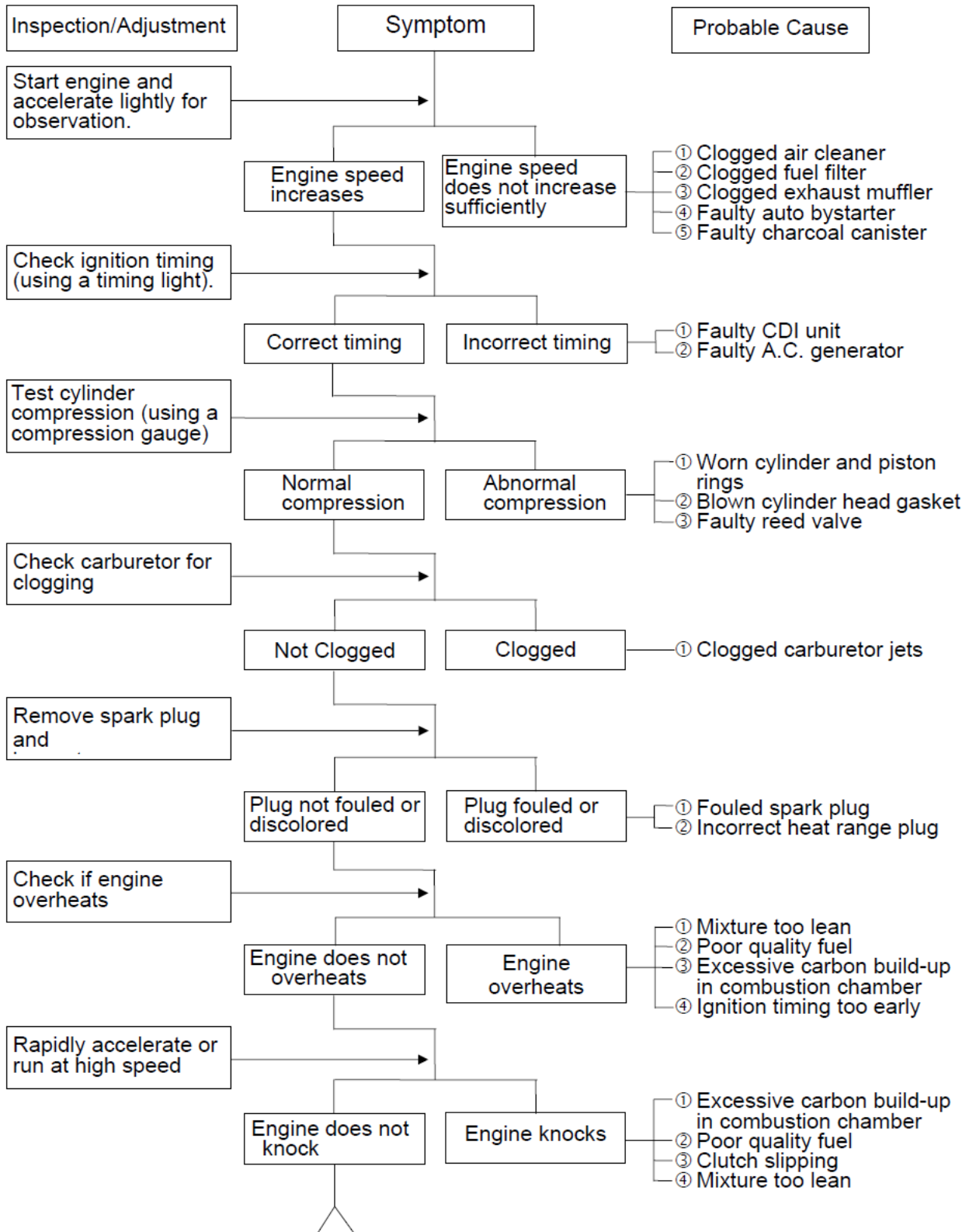


1. GENERAL INFORMATION



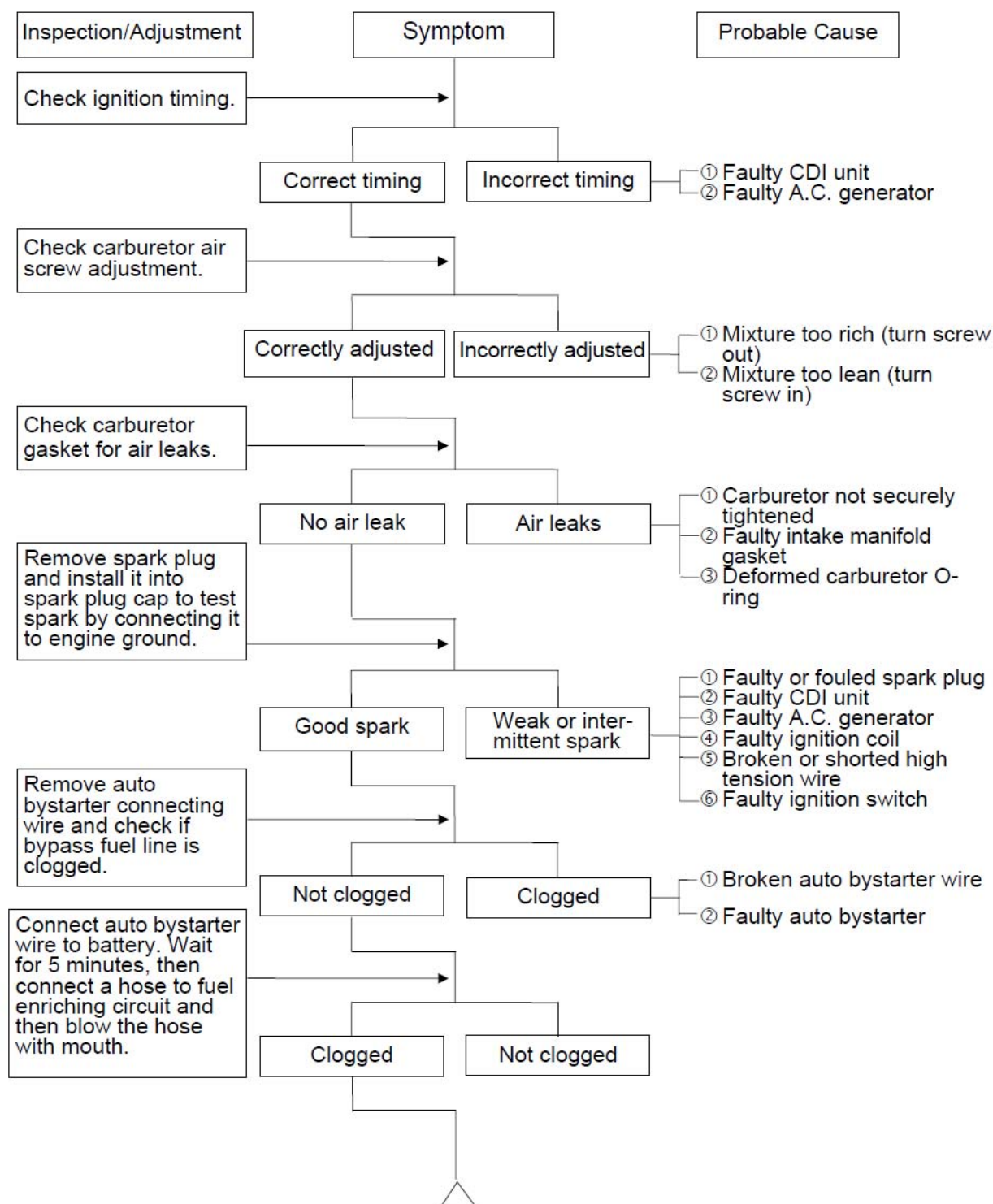
1. GENERAL INFORMATION

ENGINE LACKS POWER



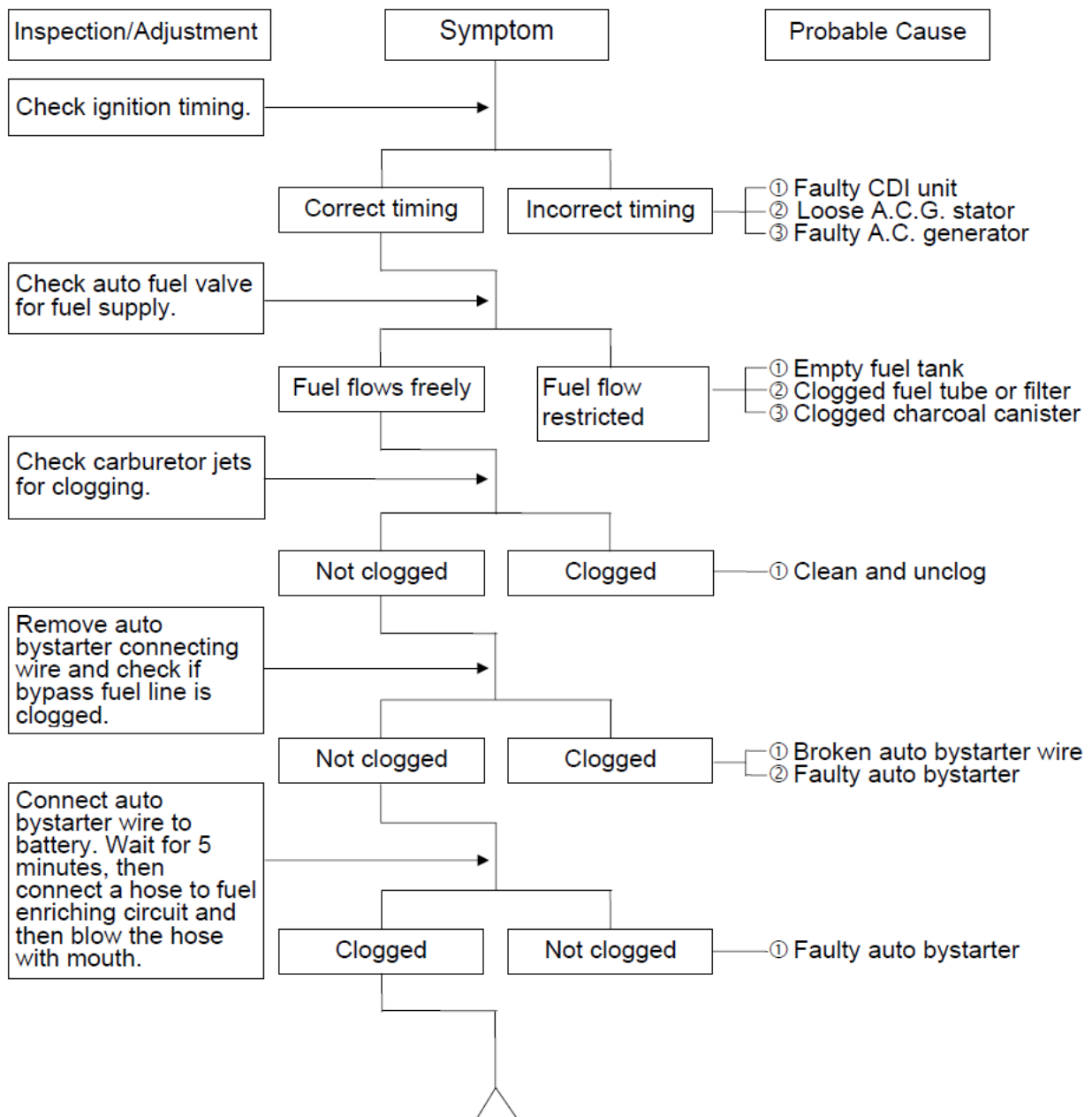
1. GENERAL INFORMATION

POOR PERFORMANCE (ESPECIALLY AT IDLE AND LOW SPEEDS)



1. GENERAL INFORMATION

POOR PERFORMANCE (AT HIGH SPEED)



1. GENERAL INFORMATION

CLUTCH, DRIVE AND DRIVEN PULLEYS

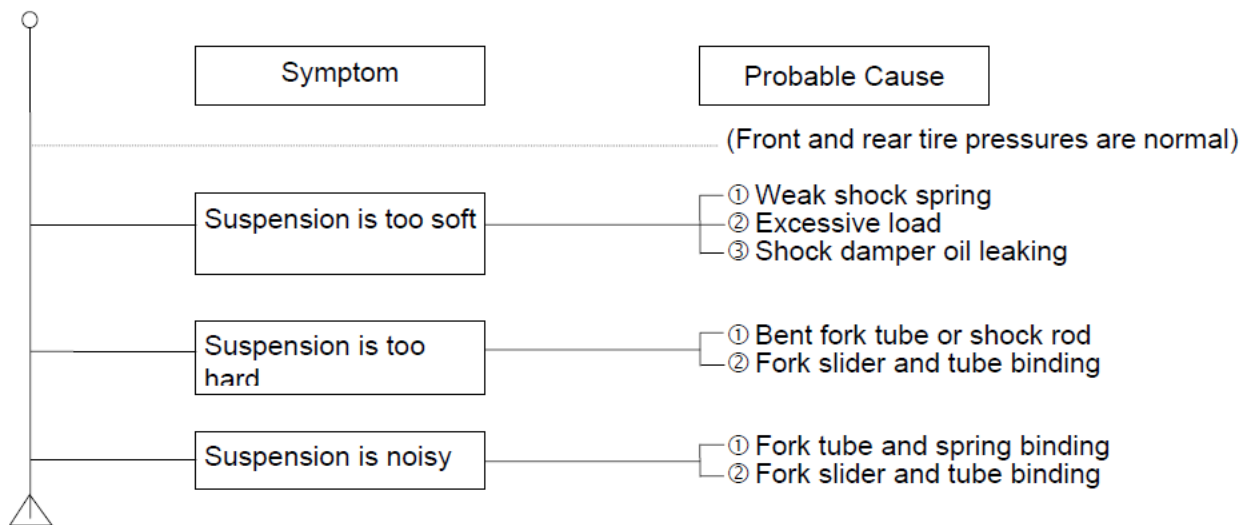
Symptom	Probable Cause
Engine starts but motor-cycle does not move	① Worn or slipping drive belt ② Broken ramp plate ③ Broken driven face spring ④ Separated clutch lining ⑤ Damaged driven pulley shaft splines ⑥ Damaged final gear ⑦ Seized final gear
Motorcycle creeps or engine starts but soon stops or seems to rush out (Rear wheel rotates when engine idles)	① Broken shoe spring ② Clutch outer and clutch weight stuck ③ Seized pivot
Engine lacks power at start of a grade (poor slope performance)	① Worn or slipping drive belt ② Worn weight rollers ③ Seized drive pulley bearings ④ Weak driven face spring ⑤ Worn or seized driven pulley bearings
Engine lacks power at high speed	① Worn or slipping drive belt ② Worn weight rollers ③ Worn or seized driven pulley bearings
There is abnormal noise or smell while running	① Oil or grease fouled drive belt ② Worn drive belt ③ Weak driven face spring ④ Worn or seized driven pulley bearings

STEERING HANDLEBAR DOES NOT TRACK STRAIGHT

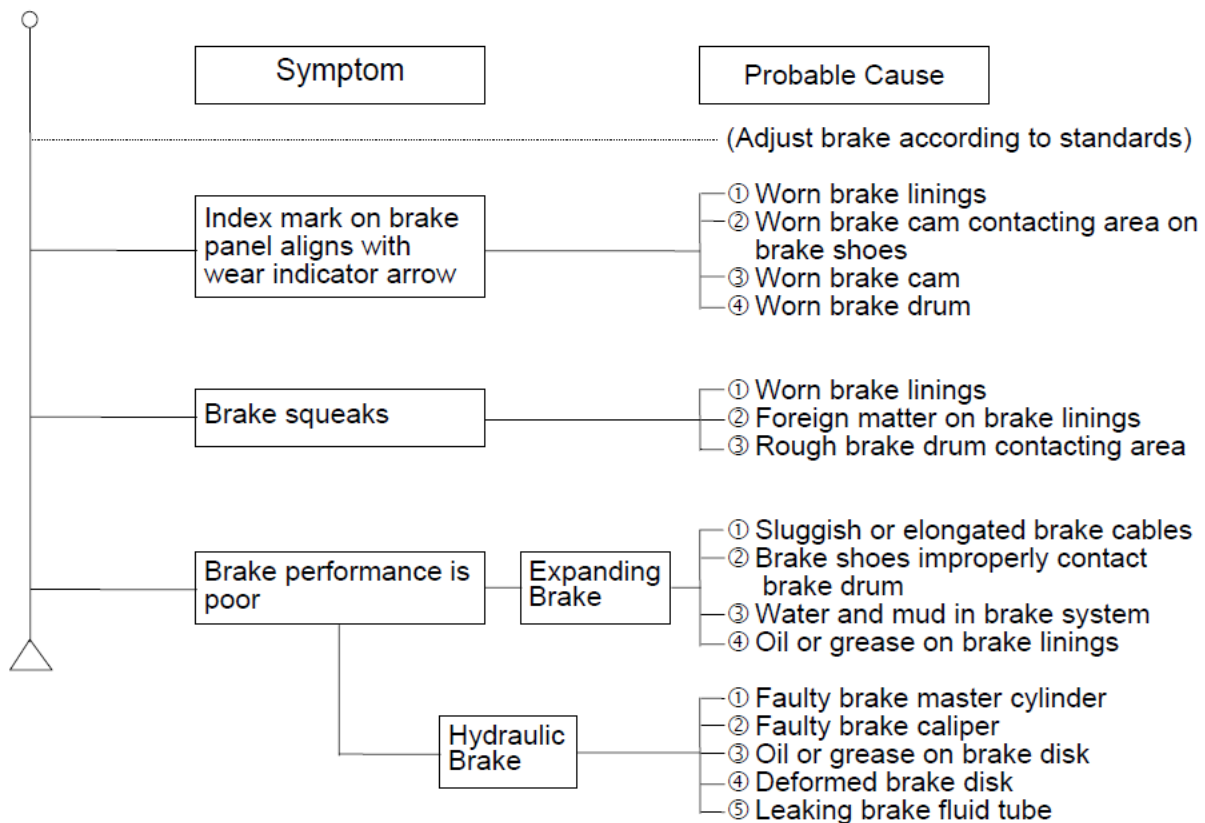
Symptom	Probable Cause
	(Front and rear tire pressures are normal)
Steering is heavy	① Steering stem nut too tight ② Broken steering steel balls
Front or rear wheel is wobbling	① Excessive wheel bearing play ② Bent rim ③ Loose axle nut
Steering handlebar pulls to one side	① Misaligned front and rear wheels ② Bent front fork

1. GENERAL INFORMATION

POOR SUSPENSION PERFORMANCE



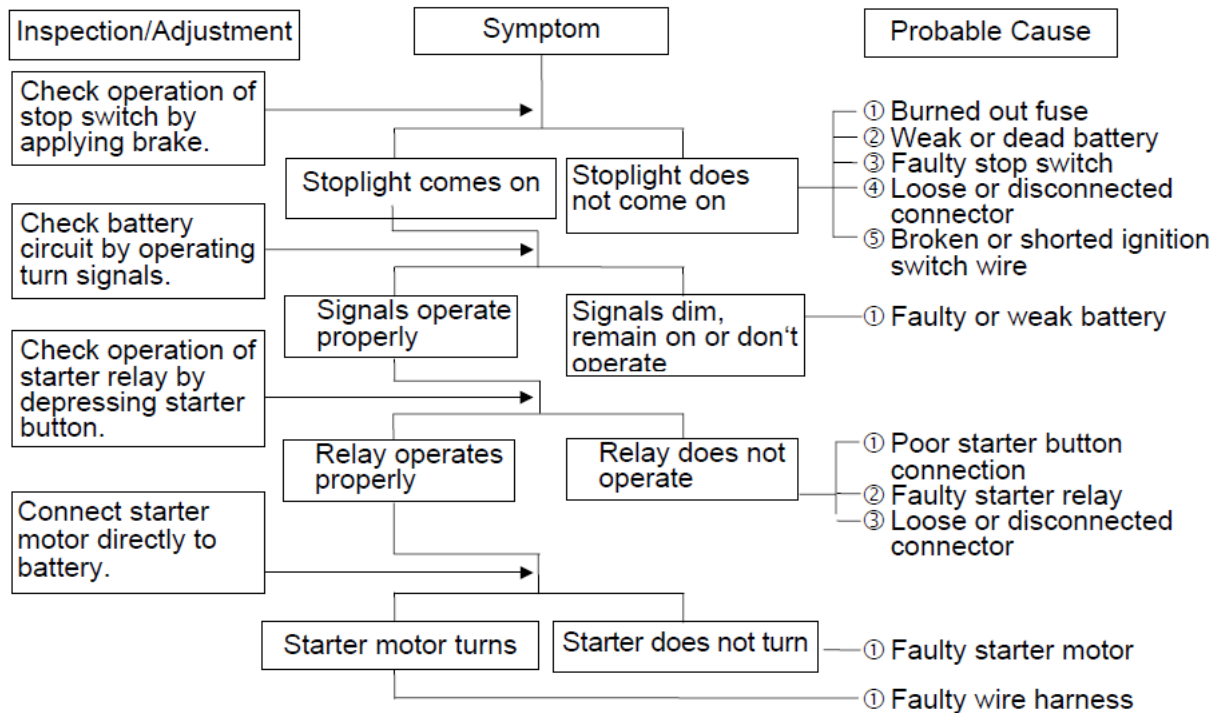
POOR BRAKE PERFORMANCE



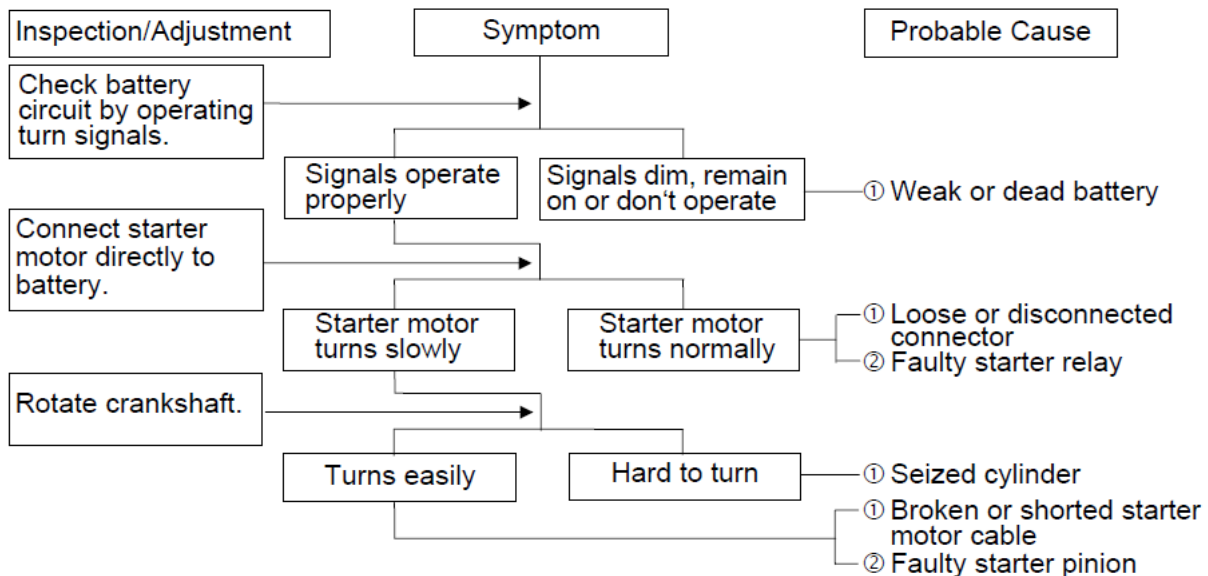
1. GENERAL INFORMATION

STARTER MOTOR

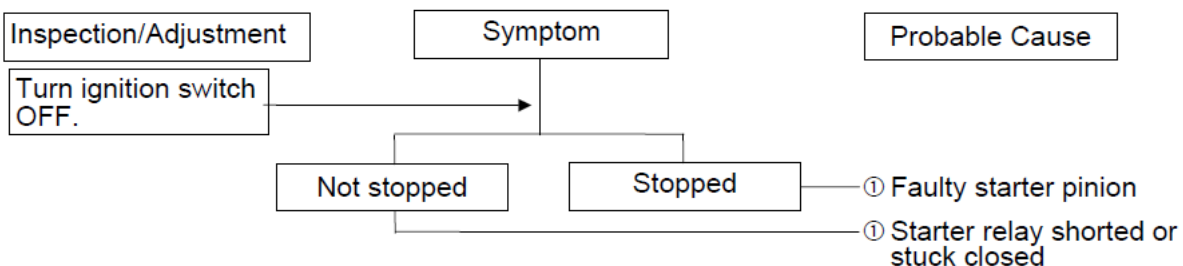
1. Starter motor won't turn



2. Starter motor turns slowly or idles



3. Starter motor does not stop turning



2. EXHAUST MUFFLER/FRAME COVERS

2

EXHAUST MUFFLER/FRAME COVERS

SERVICE INFORMATION-----	2- 1
TROUBLESHOOTING-----	2- 1
FASTENER REMOVAL AND REINSTALLATION-----	2- 2
FRAME COVERS REMOVAL/INSTALLATION-----	2- 3
EXHAUST MUFFLER -----	2-14

2. EXHAUST MUFFLER/FRAME COVERS

SERVICE INFORMATION

GENERAL INSTRUCTIONS

- When removing frame covers, use care not to pull them by force because the cover joint claws may be damaged.
- Make sure to route cables and harnesses according to the Cable & Harness Routing.

TORQUE VALUES

Exhaust muffler pipe nuts	1.0~1.4 kgf-m
Exhaust muffler brake	3.0~3.6 kgf-m

TROUBLESHOOTING

Noisy exhaust muffler

- Damaged exhaust muffler
- Exhaust muffler joint air leaks

Lack of power

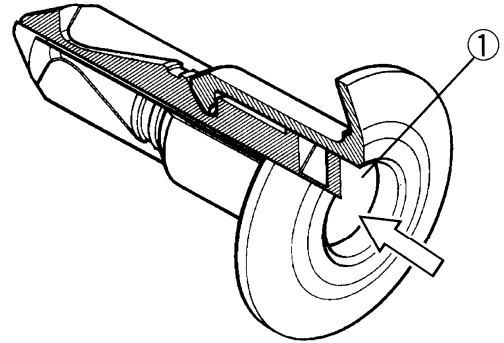
- Caved exhaust muffler
- Clogged exhaust muffler
- Exhaust muffler air leaks

2. EXHAUST MUFFLER/FRAME COVERS

FASTENER REMOVAL AND REINSTALLATION

REMOVAL

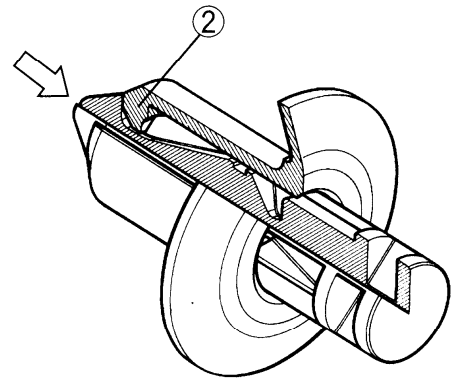
Depress the head of fastener center piece ①.
Pull out the fastener.



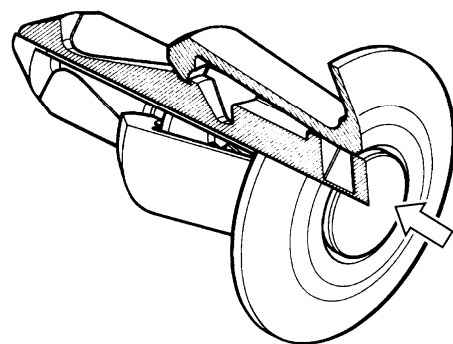
INSTALLATION

Let the center piece stick out toward the head
so that the pawls ② close.
Insert the fastener into the installation hole.

* To prevent the pawl ② from damage,
insert the fastener all the way into the
installation hole



Push in the head of center piece until it
becomes flush with the fastener outside face.



2. EXHAUST MUFFLER/FRAME COVERS

FRAME COVERS REMOVAL/ INSTALLATION

LUGGAGE BOX

Unlock the seat with the ignition key.
Open the seat.

Remove the battery cover and battery.

Remove 2 bolts, 2 screws and 4 nuts on the
luggage box.

Remove the luggage box.



Battery Cover



SEAT

Unlock the seat with the ignition key.
Open the seat.

Remove the two nuts and the seat.

Nuts



2. EXHAUST MUFFLER/FRAME COVERS

Center Cover

CENTER COVER

Remove the luggage box and seat.

Remove the center cover.

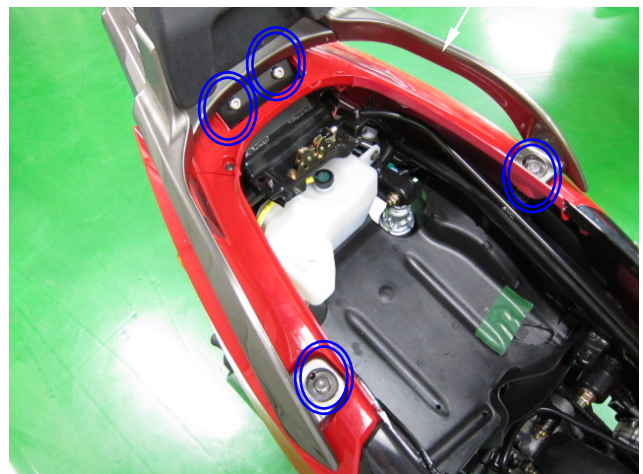
* During removal, do not pull the joint claws forcibly to avoid damage.

Installation is in the reverse order of removal.



Bolts

Rear carrier

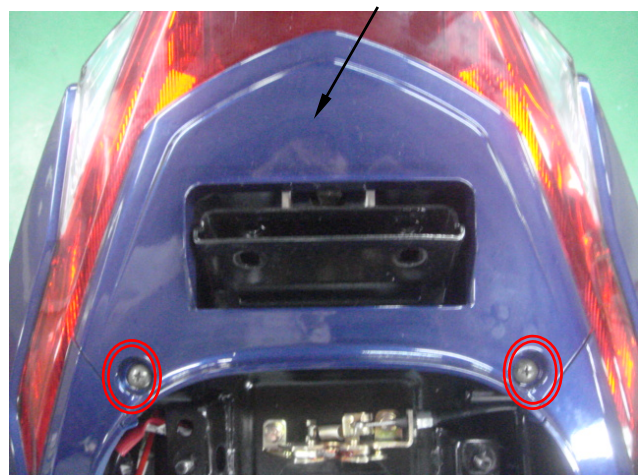


REAR CENTER COVER

Remove two screws to remove the rear center cover.

Screws

Rear center cover

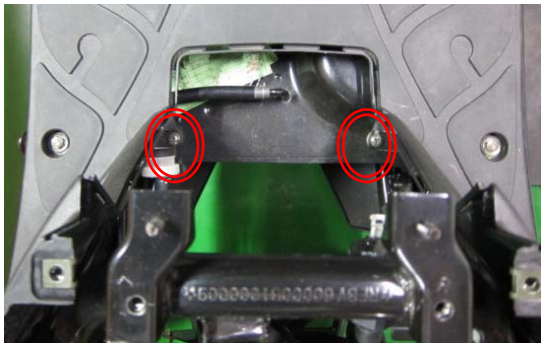


2. EXHAUST MUFFLER/FRAME COVERS

BODY COVER SET

Remove the screws, bolts, nuts and connector to remove the body cover set.

Screws



Bolt



Screw



Body cover set

Nuts



Screw



Dismantle
Direction

Connector



2. EXHAUST MUFFLER/FRAME COVERS

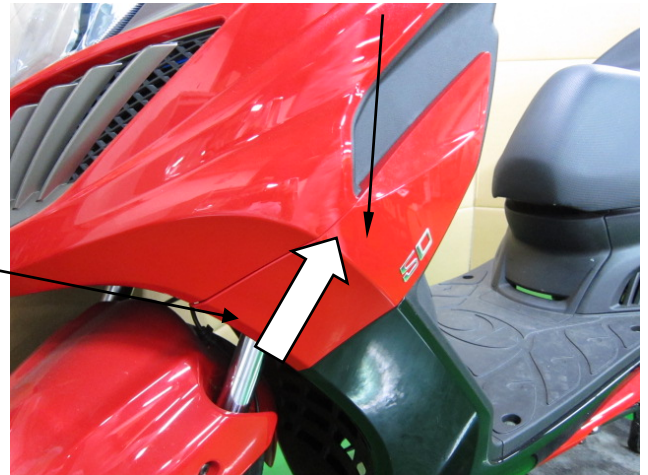
FRONT SIDE MOLD

Remove the fasteners to remove the right and left of front side molds.

Fastener



Front side mold



Remove the mat leg shield.



Mat leg shield

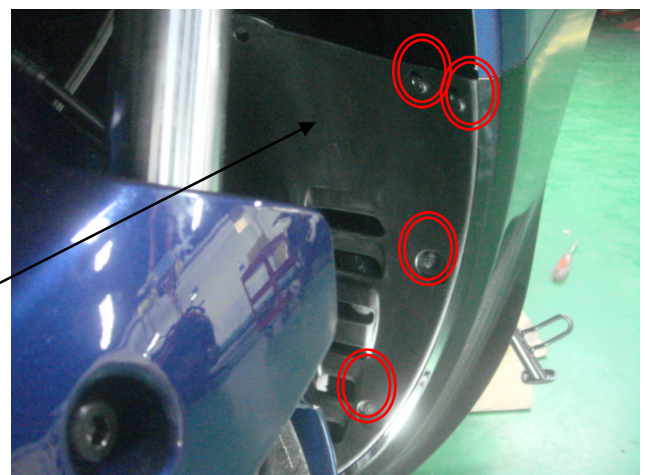


Fasteners

UNDER COWL

Remove the fasteners and under cowl.

Under cowl



2. EXHAUST MUFFLER/FRAME COVERS

SKIRT SET

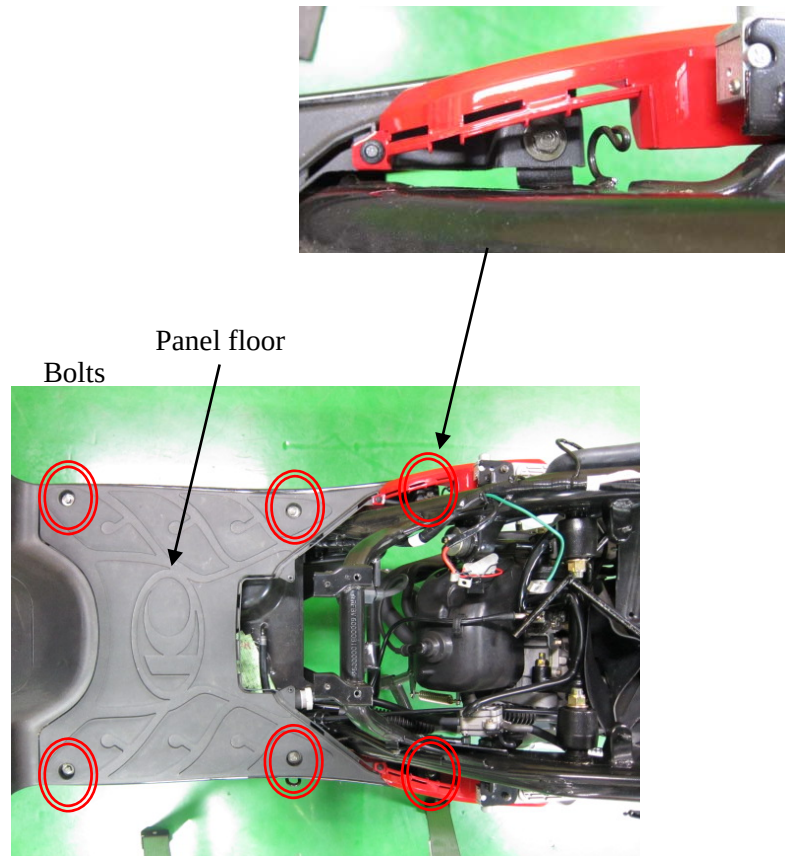
Remove the screws and fasteners to remove the right and left skirt sets.



2. EXHAUST MUFFLER/FRAME COVERS

PANEL FLOOR

Remove the bolts and panel floor.

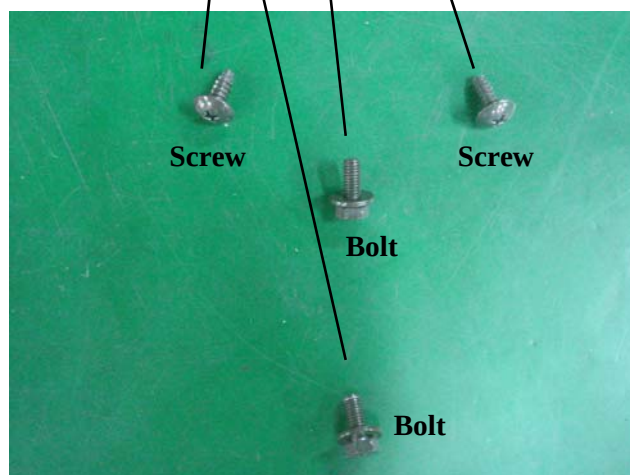
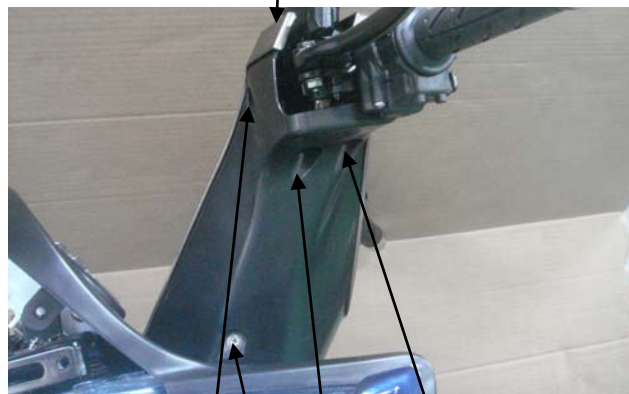


2. EXHAUST MUFFLER/FRAME COVERS

HANDLE UP COVER

Remove screws and bolts to remove the handle up cover.

Handle up cover



HANDLE LOW COVER

Remove throttle cables to remove the handle low cover.

Handle low cover



2. EXHAUST MUFFLER/FRAME COVERS

WINDSHIELD

Remove five bolts and windshield.

Handle up cover



FRONT METER COVER SET

Remove the front meter cover.



Front meter cover set.

2. EXHAUST MUFFLER/FRAME COVERS

FRONT COVER SET

Remove the screws, nuts, fasteners and connector to remove the front cover set.

Screws



Nuts



Front cover set



Fastener

Connector



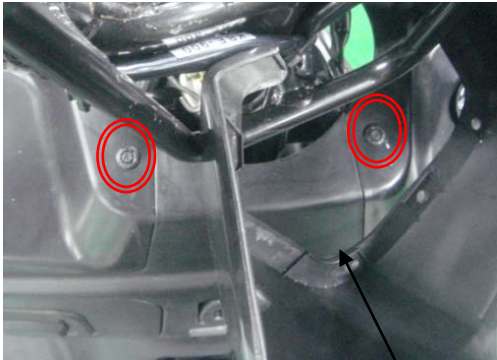
Dismantle
Direction

2. EXHAUST MUFFLER/FRAME COVERS

REAR METER COVER SET

Remove the fasteners, main switch lid, bolts and connectors to remove the rear meter cover set.

Fasteners



Rear meter cover set

Main switch lid

Bolts

Connectors



2. EXHAUST MUFFLER/FRAME COVERS

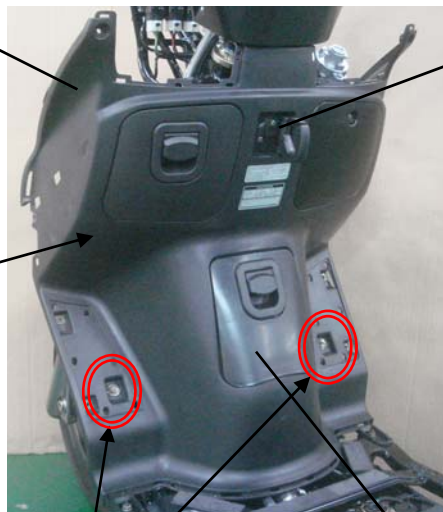
LEG SHIELD SET

Remove the screws, bolt, center clip, connector and fuel filler cap to remove the leg shield.

Connector

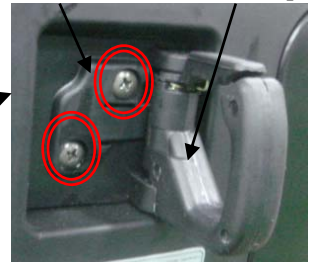


Leg shield set

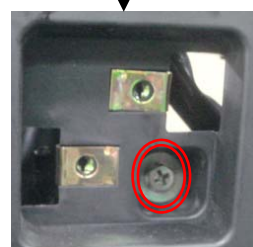


Bolts

Screws Center clip



Bolt



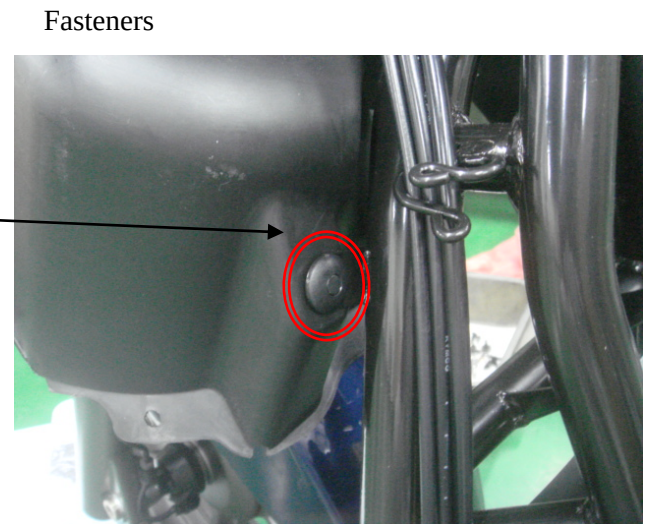
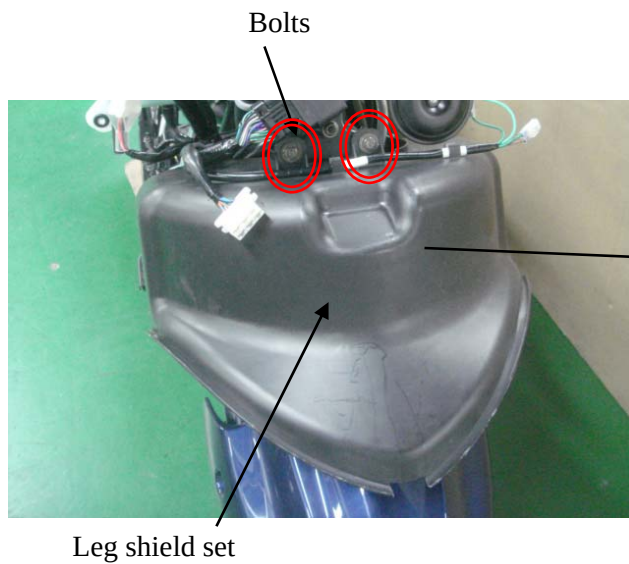
Fuel filler cap



2. EXHAUST MUFFLER/FRAME COVERS

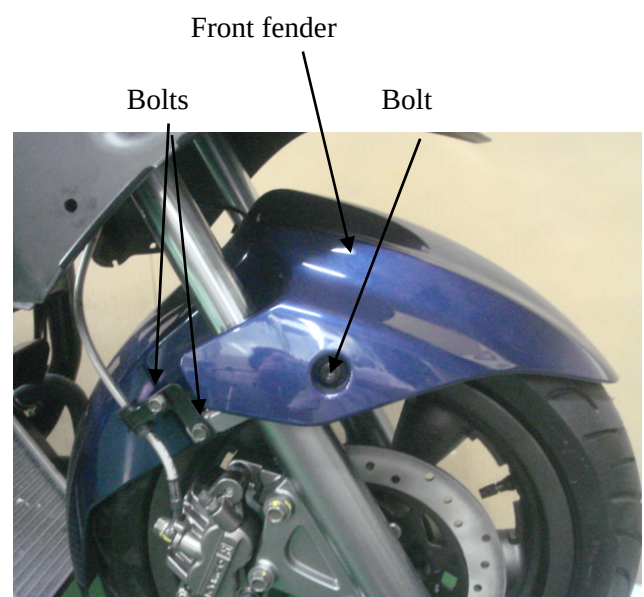
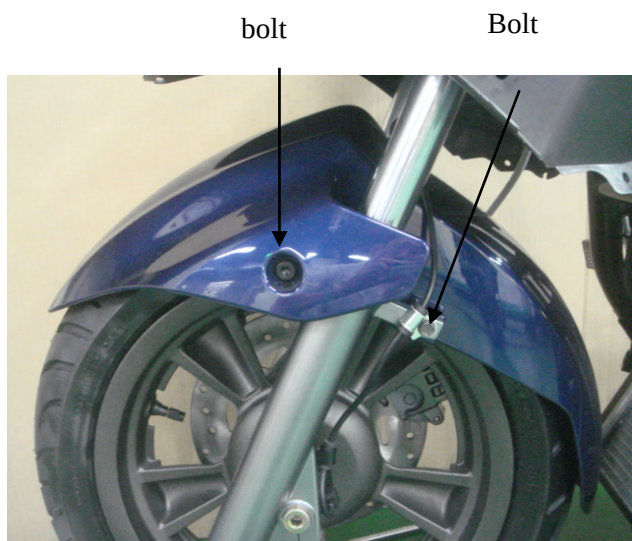
FRONT INNER FENDER

Remove the bolts, fasteners to remove the front inner fender.



FRONT FENDER

Remove the bolts to remove the front fender.



2. EXHAUST MUFFLER/FRAME COVERS

EXHAUST MUFFLER

REMOVAL

Remove the bolts to remove the muffler.



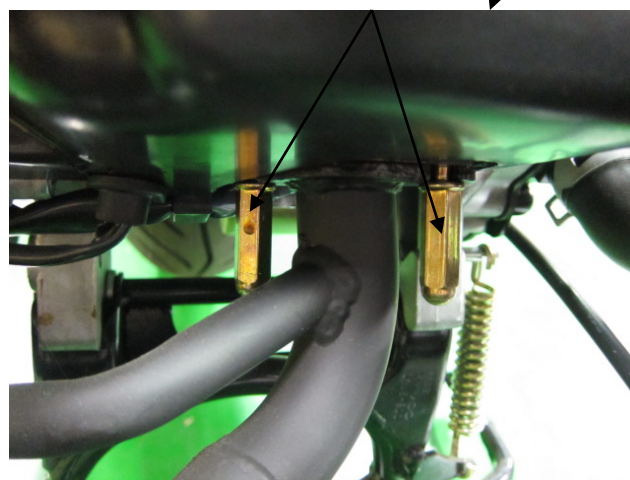
Bolts

Muffler



Installation is in the reverse order of removal.

Nuts



3. INSPECTION/ADJUSTMENT

3

INSPECTION / ADJUSTMENT

SERVICE INFORMATION-----	3- 1
MAINTENANCE SCHEDULE-----	3- 2
BRAKE SYSTEM -----	3- 3
CLUTCH SHOE WEAR -----	3- 5
SUSPENSION-----	3- 5
NUTS/BOLTS/FASTENERS-----	3- 6
WHEELS/TIRES -----	3- 6
STEERING HANDLEBAR -----	3- 6
ELECTRICAL EQUIPMENT -----	3- 7
AIR CLEANER -----	3- 8
OIL PUMP CONDITION-----	3-10

3. INSPECTION/ADJUSTMENT

SERVICE INFORMATION

GENERAL

WARNING

- Before running the engine, make sure that the working area is well ventilated. Never run the engine in a closed area. The exhaust contains poisonous carbon monoxide gas, which may cause death to people.
- Gasoline is extremely flammable and is explosive under some conditions. The working area must be well ventilated and do not smoke or allow flames or sparks near the working area or fuel storage area.

SPECIFICATIONS

ENGINE

Throttle grip free play : 2~6 mm
 Spark plug : NGK CR7HSA
 Spark plug gap : 0.6 mm ~ 0.7 mm
 Valve clearance : IN: 0.10 mm EX: 0.10 mm
 Idle speed : 1700±100 rpm

Engine oil capacity:

Cylinder compression: 18±2 kg/cm²

Gear oil capacity :

At disassembly : 0.23 Liter
 At change : 0.18 Liter

TIRE

	1 Rider	2 Riders
Front	1.75 kg/cm ²	1.75 kg/cm ²
Rear	2.0 kg/cm ²	2.25 kg/cm ²

TIRE SPECIFICATION

Front : 120/70-13
 Rear : 140/70-12

TORQUE VALUES

Front axle nut : 2 kg-m
 Rear axle nut : 12 kg-m

SPECIAL TOOL

Tappet Adjuster E012

3. INSPECTION/ADJUSTMENT

MAINTENANCE SCHEDULE

Maintenance schedule

Perform the pre-ride inspection Page. 18 at each scheduled maintenance period. This interval should be judged by odometer reading or months, whichever comes first.

Maintenance schedule legend

I: INSPECT AND CLEAN, ADJUST, LUBRICATE OR REPLACE IF NECESSARY

C: CLEAN R: REPLACE A: ADJUST L: LUBRICATE T: TIGHTEN

The maintenance schedule on page 25 specifies the maintenance required to keep your Super 8 scooter in peak operating condition. Maintenance work should be performed in accordance with KYMCO standards and specifications by properly trained and equipped technicians. Your KYMCO dealer meets all of these requirements.

* Should be serviced by your KYMCO dealer, unless you have the proper tools, service data and are technically qualified.

** In the interest of safety, we recommend these items be serviced only by your KYMCO dealer. KYMCO USA recommends that your KYMCO dealer road test your scooter after each periodic maintenance service is completed.

Maintenance schedule notes

1. At higher odometer readings, repeat at the frequency interval listed here.
2. Service more frequently if the scooter is ridden in unusually wet or dusty areas.
3. Service more frequently when riding in rain or at full throttle.
4. "PRI" indicates that the item should be checked as part of the Pre-ride Inspection
5. "See page" indicates on which page of the Owner's Manual you will find information about the required maintenance.
6. "Dealer" indicates maintenance or service procedure that should be performed by your KYMCO dealer.

ITEM	MILEAGE							Pre-ride inspection
	200 mi 300 km	600 mi 1000 km	1850 mi 3000 km	3100 mi 5000 km	4300 mi 7000 km	5500 mi 9000 km	7000 mi 11000 km	
Engine oil *	Refill whenever the low oil level indicator is illuminated							PRI
Gear oil *	R	-	R	-	R	-	R	-
Spark plug *	C	I	C	R	C	I	R	-
Carburetor **	I	-	I	-	I	-	I	-
Drive belt **	-	-	-	-	I	-	-	-
Air cleaner *	C	I	C	I	C	I	C	-
Battery *	I	I	I	I	I	I	I	PRI
Fuel filter **	-	-	-	-	R	-	-	-
Brake system **	I	I	I	I	I	I	I	PRI
Tires **	I	I	I	I	I	I	I	PRI
Bolts & nuts *	T	I	I	T	I	I	T	PRI

I: INSPECT AND CLEAN, ADJUST, LUBRICATE OR REPLACE IF NECESSARY

C: CLEAN R: REPLACE A: ADJUST L: LUBRICATE T: TIGHTEN

3. INSPECTION/ADJUSTMENT

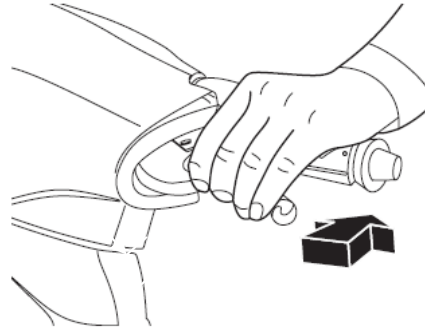
BRAKE SYSTEM

BRAKE LEVER

Measure the front and rear brake lever free plays.

Free Play: Rear: 10~20mm

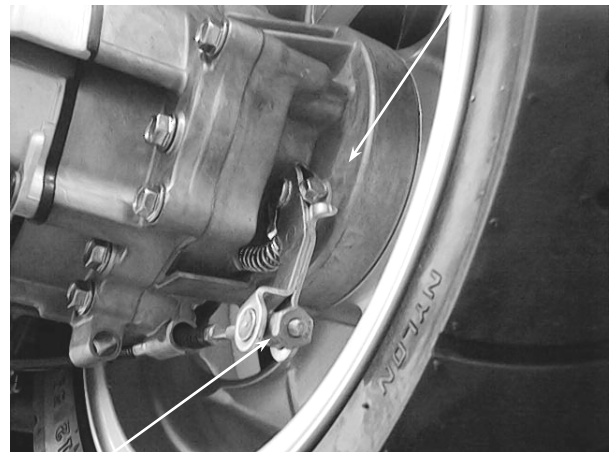
Rear 10~20mm



If the free plays do not fall within the limits, turn the right and left adjusting nuts for adjustment.

<Rear>

“△” Marks



Adjusting Nuts

3. INSPECTION/ADJUSTMENT

BRAKE DRUM/SHOE

《Brake Shoe Wear》

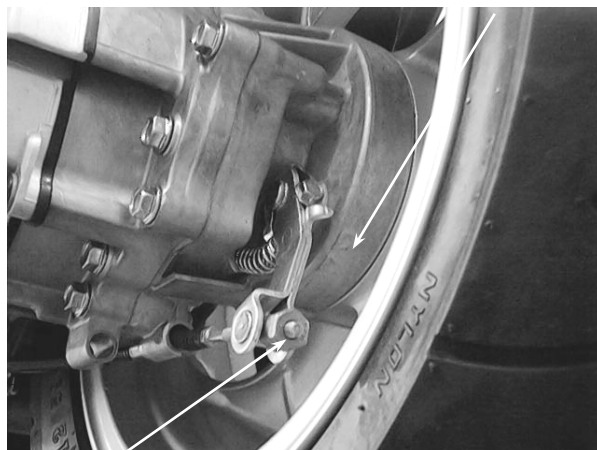
Replace the brake shoes if the arrow on the brake arm aligns with reference mark“△” on the brake panel when the brake is fully applied.

《Brake Drum Wear/Damage》

Check the brake drum appearance for damage. Check if the brake lining wear is within the specified service limit. Check the brake operation for abnormal noise and brake drum inside for wear or damage.

<Rear>

“△” Marks



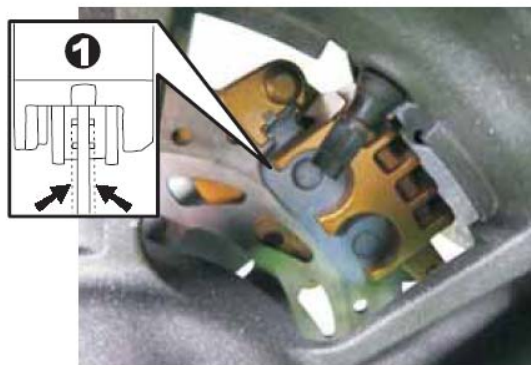
Adjusting Nuts

BRAKE DISK/BRAKE PAD

Check the brake disk surface for scratches, unevenness or abnormal wear.

Check if the brake disk runout is within the specified service limit.

Check if the brake pad wear exceeds the wear indicator line.



*

Keep grease or oil off the brake disk to avoid brake failure.

BRAKE FLUID

Turn the steering handlebar upright and check if both brake fluid levels is at the upper limit. If the brake fluid is insufficient, fill to the upper limit.

Specified Brake Fluid: DOT-4



*

The brake fluid level will decrease if the brake pads are worn.

3. INSPECTION/ADJUSTMENT

CLUTCH SHOE WEAR

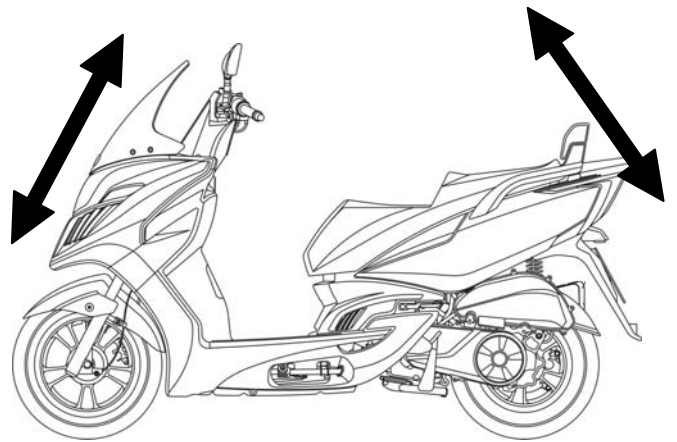
Start engine and check the clutch operation by increasing the engine speed gradually. If the motorcycle tends to creep or the engine stop, check the clutch shoes for wear and replace if necessary.

SUSPENSION

FRONT

Check the action of the front shock absorbers by compressing them several times.

Check the entire shock absorber assembly for oil leaks, looseness or damage.

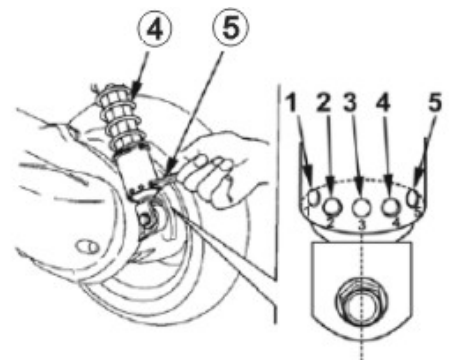


REAR

Each shock absorber(4) on your scooter has 5 spring preload adjustment positions for different load or riding conditions.

Use a pin spanner(5) to adjust the rear shock spring preload. Position 1 is for light loads and smooth road conditions. Position 3 to 5 increase spring preload for a stiffer rear suspension and can be used when the scooter is heavily loaded.

Be certain to adjust both shock absorbers to the same spring preload positions.



3. INSPECTION/ADJUSTMENT

NUTS/BOLTS/FASTENERS

Check all important chassis nuts and bolts for looseness.

Tighten them to their specified torque values if any looseness is found.

WHEELS/TIRES

Check the tires for cuts, imbedded nails or other damages.

Check the tire pressure.

- * • Tire pressure should be checked when tires are cold.

Tire Pressure

	1 Rider	1 Rider (with passenger)
Front	2 kg/cm ²	2 kg/cm ²
Rear	2.25 kg/cm ²	2.25 kg/cm ²

Tire Size:

Front 120/70-13

Rear 130/70-12

Check the front axle nut for looseness.

Check the rear axle nut for looseness.

If the axle nuts are loose, tighten them to the specified torques.

Torque:

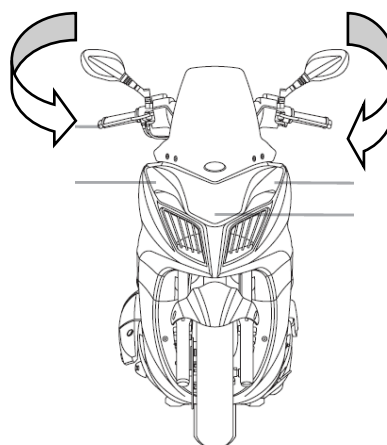
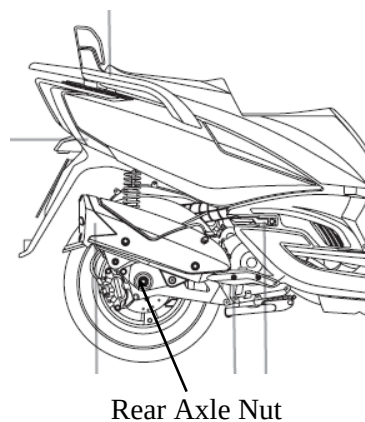
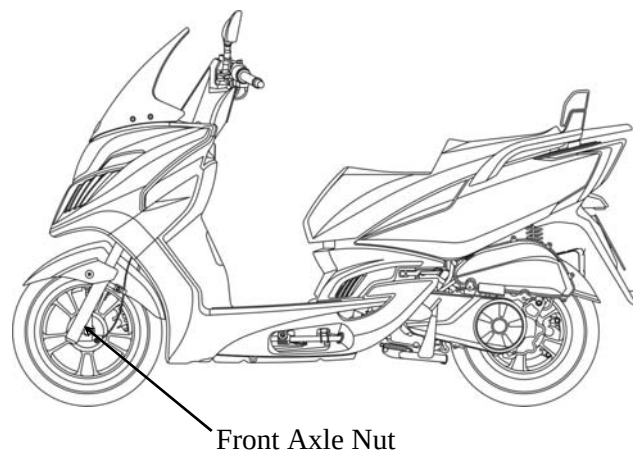
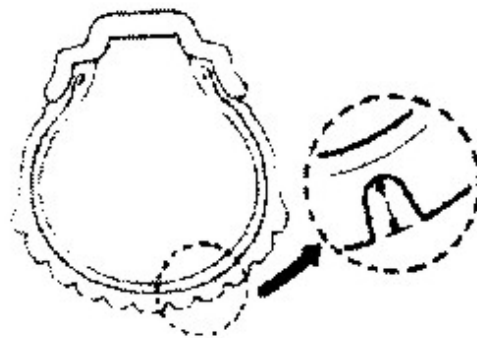
Front axle nut 2 kg-m

Rear axle nut 12 kg-m

STEERING HANDLEBAR

Raise the front wheel off the ground and check that the steering handlebar rotates freely.

If the handlebar moves unevenly, binds, or has vertical movement, adjust the steering head bearing.



3. INSPECTION/ADJUSTMENT

ELECTRICAL EQUIPMENT

IGNITION APPARATUS

《Spark Plug》

Remove the frame center cover.
Remove the spark plug cap and spark plug.
Check the spark plug for wear, fouling and carbon deposits.
Remove the fouling and carbon deposits with a spark plug cleaner or wire brush.

Specified Spark Plug:

NGK
CR7HSA

Spark Plug Gap: 0.6~0.7mm

《Ignition Apparatus》

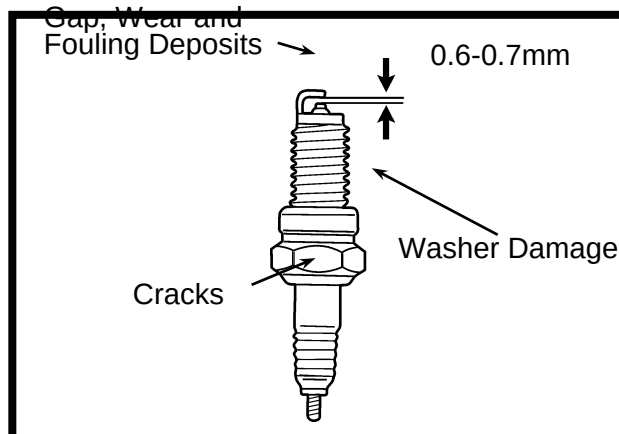
*

The CDI ignition timing is not adjustable. If the timing is incorrect, check the CDI unit, ignition coil and A.C. generator and replace any faulty

Remove the right side rail.
Remove the A.C. generator fan cover.

Remove the three bolts attaching the fan cover and then remove the fan cover.
Warm up the engine and check the ignition timing with a timing light.

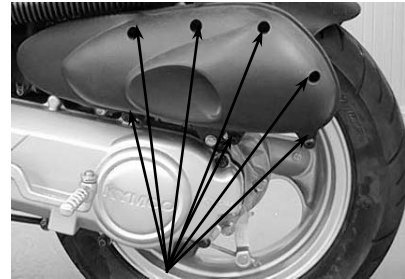
When the engine is running at the specified rpm, the ignition timing is correct if the "F" mark on the flywheel aligns with the index mark on the crankcase within $\pm 1.5^\circ$.



3. INSPECTION/ADJUSTMENT

《Air Cleaner》

Remove the air cleaner cover by removing the seven bolts cleaner cover screws.



Screws

Remove the air cleaner element.



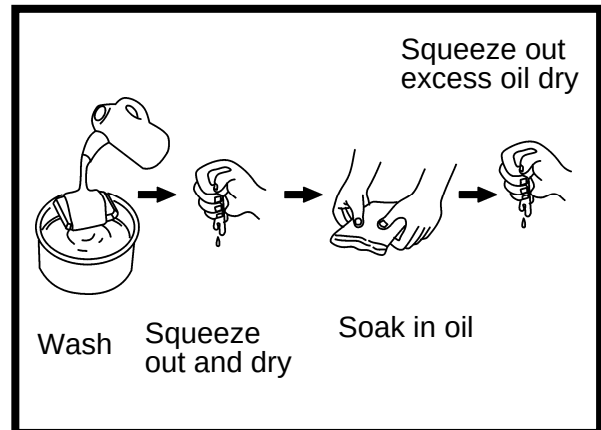
Air Cleaner

3. INSPECTION/ADJUSTMENT

Wash the air cleaner element in detergent oil, squeeze out and allow to dry.

- * Never use gasoline or organic vaporable oil with acid or alkali for washing.

After washing, soak the element in clean engine oil SAE 15W-40# and squeeze out excess oil. Reinstall the element.



《Cylinder Compression》

- * Warm up the engine before compression test.

Remove the spark plug and insert a compression gauge. Open the throttle valve fully and push the starter button for 7~8 seconds to test the compression.

Compression:

11.8kg/cm²

If the compression is low, check for the following:

- Leaking cylinder head gasket
- Worn piston/cylinder

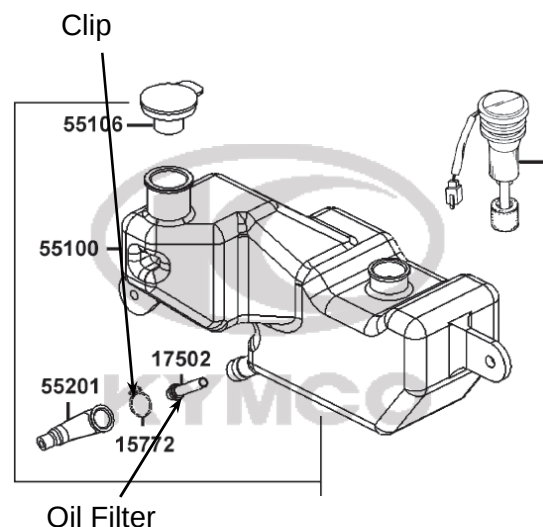
If the compression is high, it indicates that carbon deposits have accumulated on the combustion chamber and the piston head.



LUBRICATION SYSTEM

《Oil Filter Cleaning》

Disconnect the oil tube at the oil pump side and allow oil to drain into a clean container. Remove the tube clip at the oil tank side and disconnect the oil tube. Remove the oil filter.



3. INSPECTION/ADJUSTMENT

Clean the oil filter screen with compressed air.

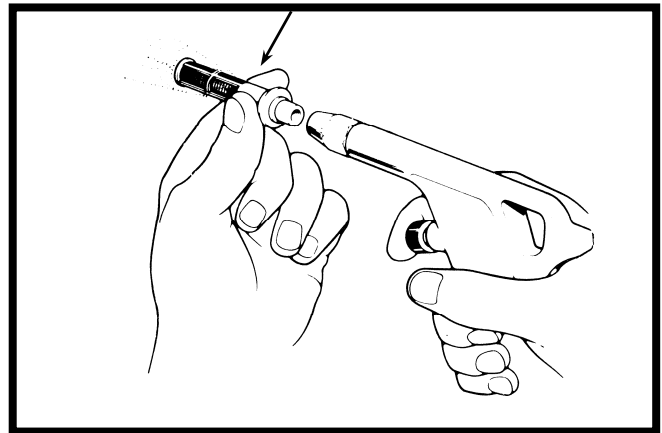
Install the oil filter in the reverse order of removal and fill the oil tank with specified oil up to the proper level.

Bleed air from the oil pump and oil lines.

*

- Connect the oil tubes securely.
- Install the tube clip at the oil tank side and also install the clip to the lower oil tube that goes to the oil pump.
- Check for oil leaks.

Filter Screen



《Oil Pump Condition》

*

Adjust oil pump control cable after the throttle grip free play is adjusted.

Open the throttle valve fully and check that the index mark on the pump body aligns with the aligning mark on the oil pump control lever.

Reference tip alignment within 1mm of index mark on open side is acceptable.

Start and idle the engine, then slowly open the throttle to increase engine rpm and check the operation of the oil pump control lever.

If adjustment is necessary, adjust the oil pump control cable by loosening the control cable lock nut and turning the adjusting nut. After adjustment, tighten the lock nut.

*

Reference tip alignment within 1mm of index mark on open side is acceptable. However, the aligning mark on the control lever must never be on the closed side of the index mark, otherwise engine damage will occur because of insufficient lubrication.

Lock Nut

Control Lever Aligning Mark



Adjusting Nut

Pump Body Index Mark

If the oil pump is not synchronized properly, the following will occur:

- Excessive white smoke or hard starting due to pump control lever excessively open
- Seized piston due to pump control lever insufficiently open

LUBRICATION SYSTEM

SERVICE INFORMATION 4-2

TROUBLESHOOTING 4-2

OIL PUMP REMOVAL 4-3

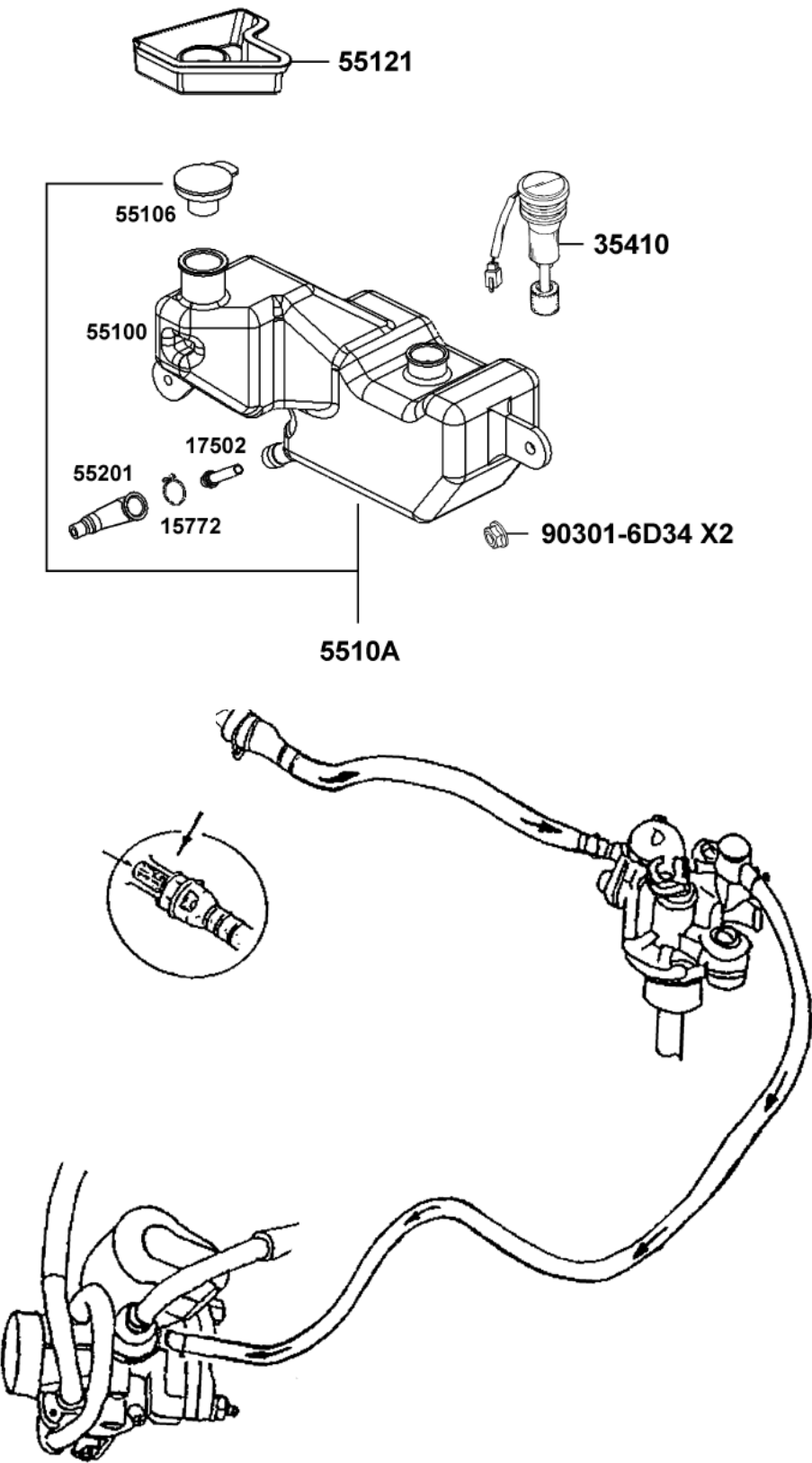
OIL PUMP INSPECTION 4-3

OIL PUMP INSTALLATION 4-4

OIL PUMP BLEEDING..... 4-5

OIL TANK 4-6

LUBRICATION SYSTEM



SERVICE INFORMATION

GENERAL INSTRUCTIONS

- Use care when removing and installing the oil pump not to allow dust and dirt to enter the engine and oil line.
- Do not attempt to disassemble the oil pump.
- Bleed air from the oil pump if there is air between the oil pump and oil line.
- If the oil is disconnected, refill the oil line with motor oil before connecting it.

SPECIFICATIONS

- Recommended Motor Oil: 2-stroke Motor Oil
- Oil Capacity : 1.1 liter

TROUBLESHOOTING

Excessive white smoke or carbon deposits on spark plug

- Oil pump not properly synchronized (excessive oil)
- Poor quality oil

Engine overheating

- Oil pump not properly adjusted (insufficient oiling)
- Poor quality oil

Seized piston

- No oil in tank or clogged oil line
- Oil pump not properly adjusted (insufficient oiling)
- Air in oil line
- Faulty oil pump

Oil not flowing out of tank to engine

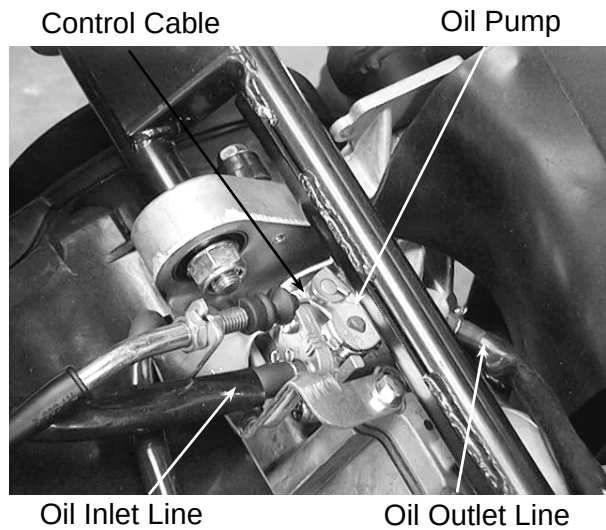
- Clogged oil tank cap breather hole
- Clogged oil filter

OIL PUMP REMOVAL



Do not allow foreign matters to enter the crankcase. Before removing the oil pump, clean the oil pump and crankcase surfaces.

Remove the met-in box.

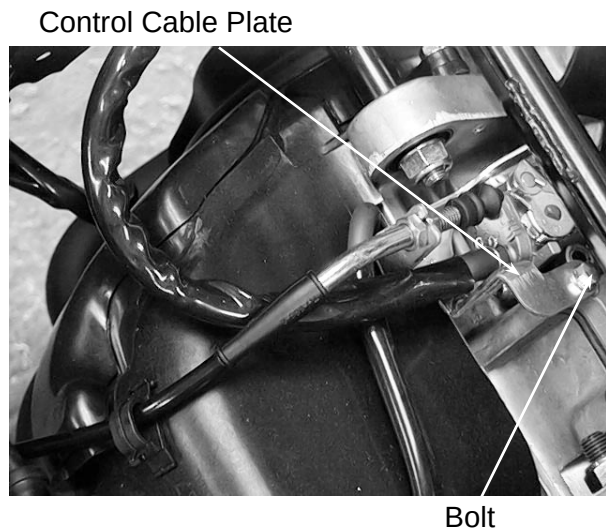


Disconnect the oil pump control cable from the pump body.
Disconnect the oil inlet line from the oil pump.
Then, disconnect the oil outlet line.



Before disconnecting the oil line, clip the oil line to avoid oil flowing out and then plug the oil line after it is disconnected.

Remove the oil pump control cable plate bolt.
Remove the oil pump from the crankcase.



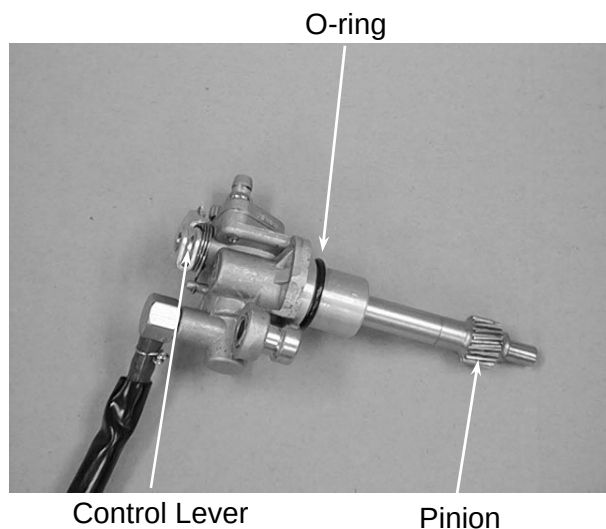
OIL PUMP INSPECTION

Remove the oil pump and inspect the following items:

- Weakened O-ring
- Damage to crankcase mating surface
- Damage to pump body
- Control lever operation
- Oil leaks through oil seals
- Worn or damaged pump pinion



Do not disassemble the oil pump which cannot be used after disassembly.

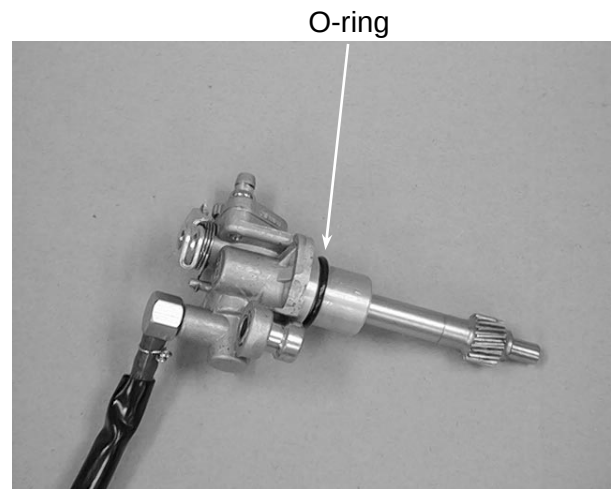


OIL PUMP INSTALLATION

*

- Lubricate the O-ring with grease or engine oil before installation.
- Make sure that the oil pump is inserted into the crankcase.
- Apply molybdenum disulfide or grease to the pump pinion.

Install the oil pump onto the crankcase.



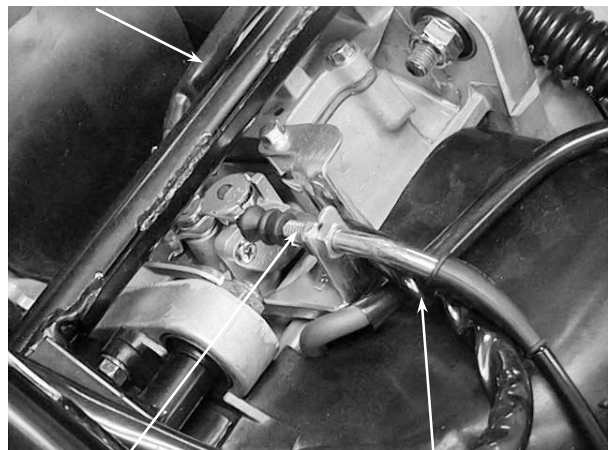
Control Cable Plate



Bolt

Install the oil pump control cable plate.
Connect the oil inlet line and oil outlet line properly.
Connect the oil pump control cable.
Bleed air from the oil pump.

Oil Outlet Line



Control Cable

Oil Inlet Line

OIL PUMP BLEEDING

*

- Air in the oil lines will block oil flow and result in severe engine damage.
- Bleed air from the oil lines and oil pump whenever the oil lines or pump have been removed or there is air in the oil lines.



Oil Pump

OIL INLET LINE/OIL PUMP BLEEDING

Fill the oil tank with recommended oil.
Place a shop towel around the oil pump.
Disconnect the oil inlet line from the oil pump and clip it.
Fill the oil pump with oil by squirting clean oil through the joint. (About 3cc)
Fill the oil line with oil and connect it to the oil pump.

*

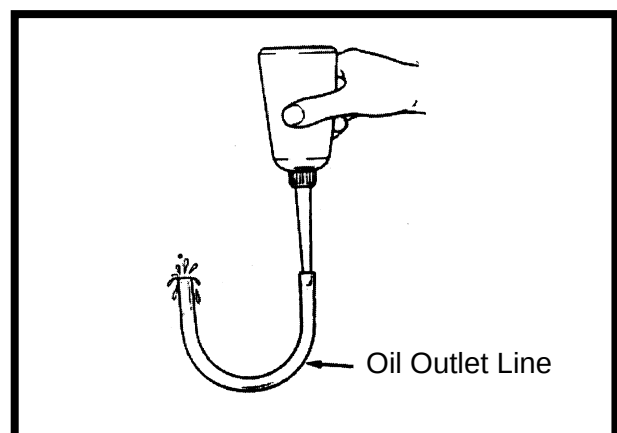
Bleed air from the oil inlet line first, then bleed air from the oil outlet line.

OIL OUTLET LINE BLEEDING

1. Disconnect the oil outlet line and bend it into U shape. Force air out of the tube by filling it with oil.
2. Start the engine and allow it to idle with the oil control lever in the fully open position. Visually check the oil flow.
3. If there is no oil flowing out within 1 minute, bleed air from the oil inlet line and oil pump.

*

- Never run the engine in a closed area.

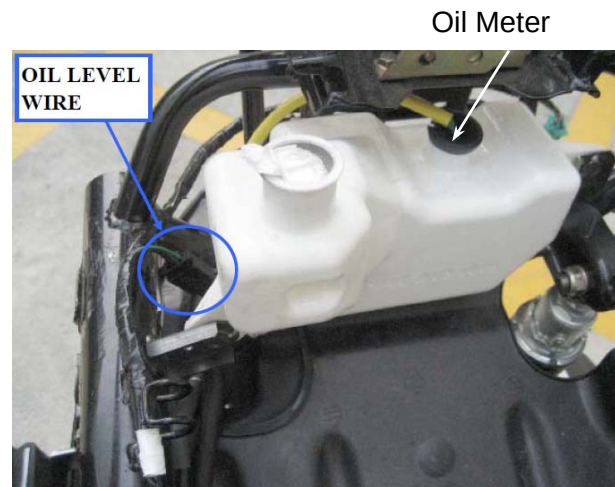


Oil Tube

OIL TANK

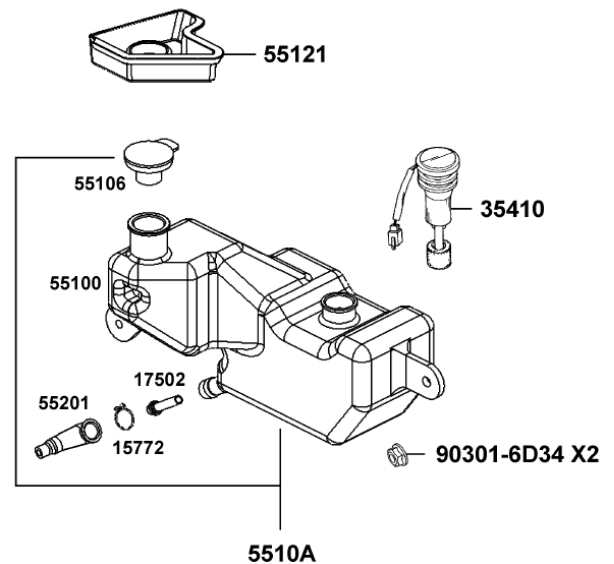
OIL TANK REMOVAL

Remove the met-in box.
Remove the frame body cover.
Remove the rear carrier.
Remove the two bolts, four nuts attaching the stay comp fuel tank.
Remove the oil meter connector.
Remove the two bolts attaching the oil tank.
Disconnect the oil inlet line.
Drain the oil inside the oil tank into a clean container.
Remove the oil tank.
The installation sequence is the reverse of removal.



*

- Connect the oil line properly.
- Bleed air from the oil pump after installation.
- The oil tube clip (at the oil tank side) must be locked from inside of the oil tube joint.



ENGINE REMOVAL/INSTALLATION

SERVICE INFORMATION 5-1

ENGINE REMOVAL..... 5-2

ENGINE INSTALLATION..... 5-4

SERVICE INFORMATION

GENERAL INSTRUCTIONS

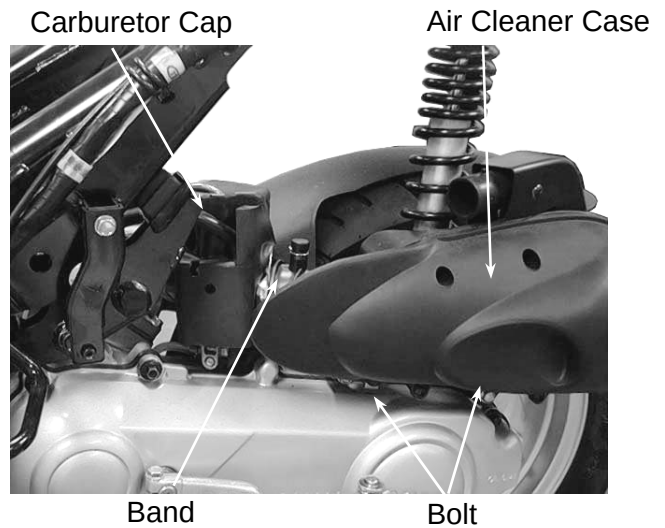
- A floor jack or other adjustable support is required to support and maneuver the engine. Be careful not to damage the motorcycle body, cables and wires during engine removal.
- Use shop towels to protect the motorcycle body during engine removal.
- Parts requiring engine removal for servicing:
 - Crankcase
 - Crankshaft

TORQUE VALUES

Engine hanger frame side nut	6.0~7.0kg-m
Rear shock absorber lower mount bolt	2.4~3.0kg-m
Engine hanger engine side	3.3~4.3kg-m

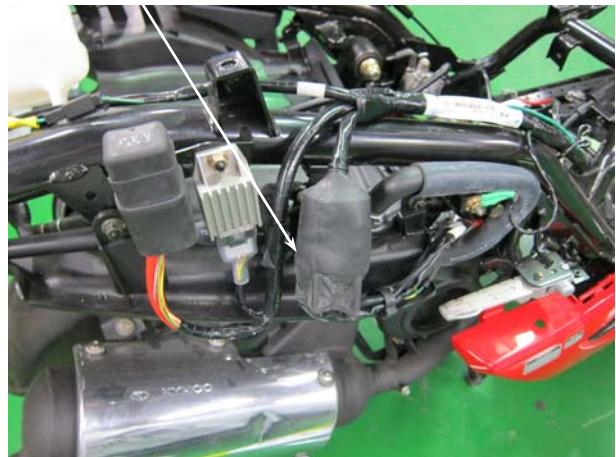
ENGINE REMOVAL

Remove the frame body cover.
Remove the two bolts attaching the air cleaner case.
Loosen the band between the air cleaner and carburetor to remove the air cleaner case.
Remove the carburetor cap.



Disconnect the auto bystarter, A.C. generator and starter motor wire connectors.

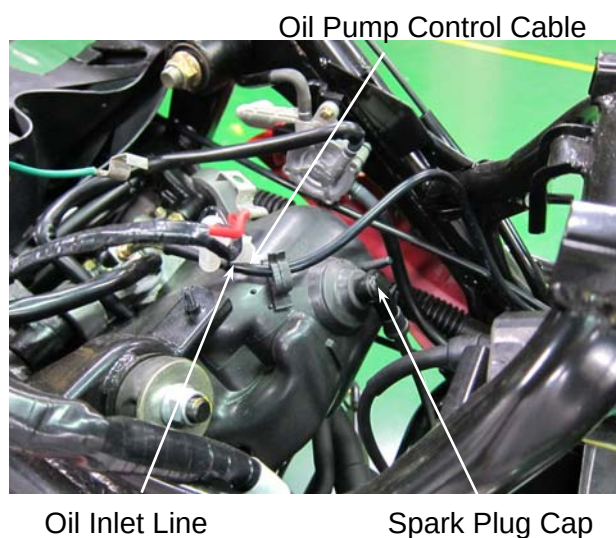
AC Generator Wire Connector



Disconnect the oil pump control cable from the pump body.
Disconnect the oil inlet line from the oil pump.
Remove the spark plug cap.

*

After the oil inlet line is disconnected, plug the oil line opening to prevent oil from flowing out.



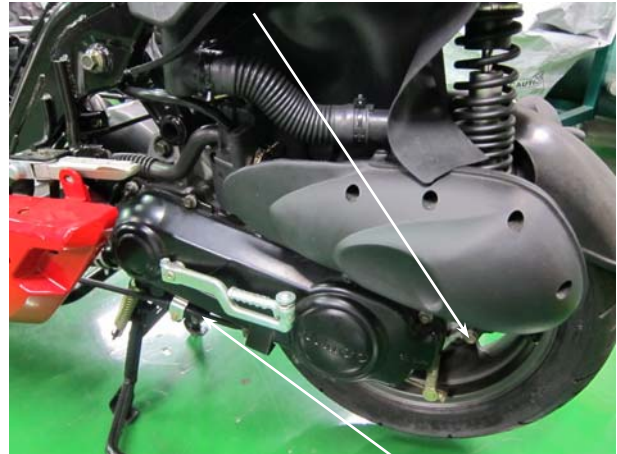
Remove the rear brake adjusting nut and disconnect the brake cable from the crankcase.

Remove the rear brake cable clamp and rear brake cable.

Remove the cooling air tube band on the left crankcase cover and disconnect the cooling air tube.

Remove the rear shock absorber lower mount bolt.

Rear Shock Absorber Lower Mount Bolt

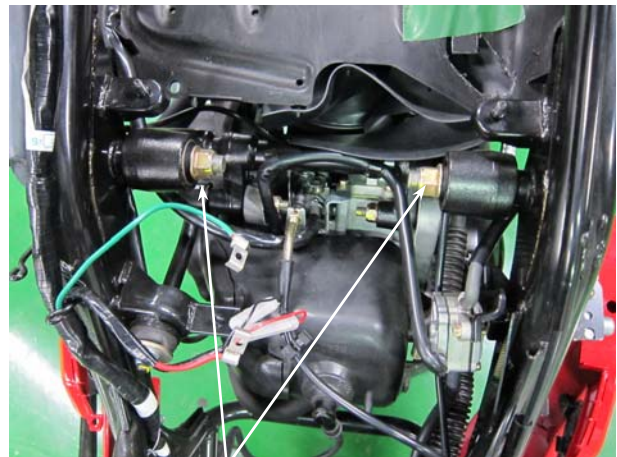


Rear Brake Cable

Remove the right and left engine mounting nuts.

Take out the right and left engine mounting bolts.

Lift the frame upward to separate it from the engine and be careful not to damage the rear fender.



Engine Mounting Nuts

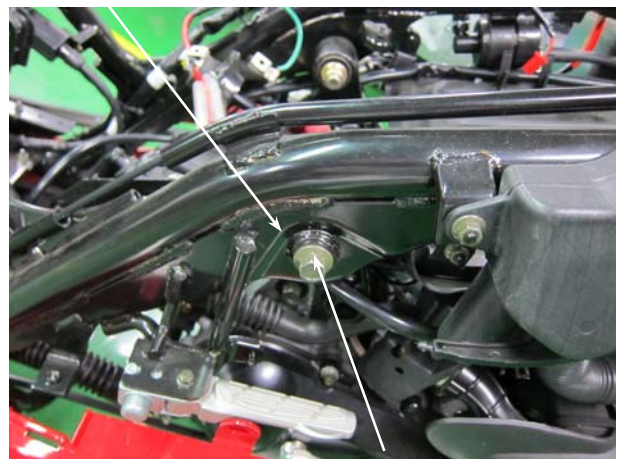
ENGINE HANGER BRACKET REMOVAL

Remove the engine hanger bracket bolt and engine hanger bracket.

The installation sequence is the reverse of removal.

Torque: 3.3~4.3kg-m

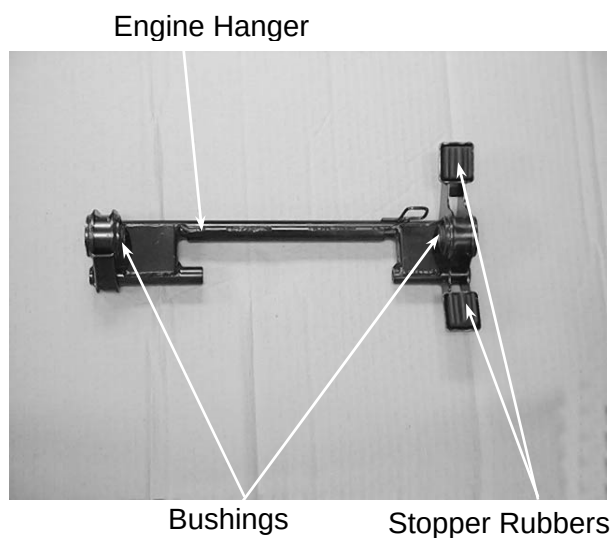
Engine Hanger



Engine Hanger Bracket Bolt

ENGINE HANGER BRACKET INSPECTION

Inspect the stopper rubbers and bushings for damage and replace with new ones if necessary.



ENGINE INSTALLATION

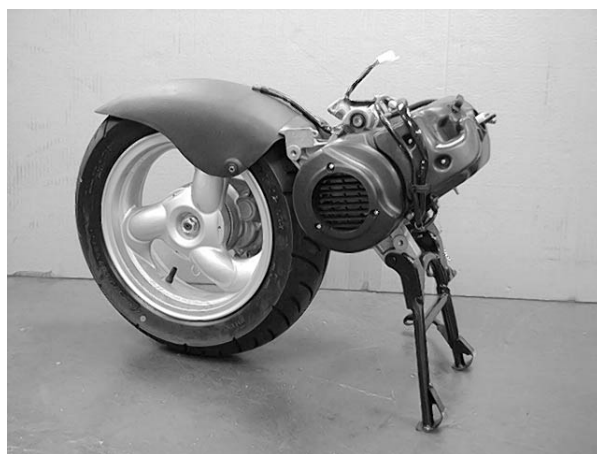
Install the engine in the reverse order of removal.

* Cables and wires should be routed properly.

Torque Values:

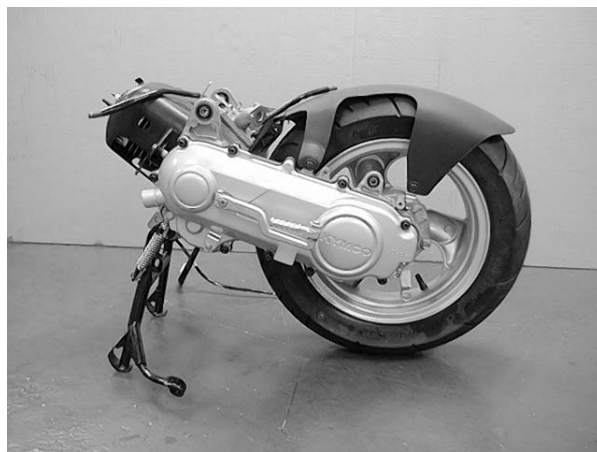
Engine mounting bolt : 6~7kg-m

Rear shock absorber lower mount bolt:
: 2.4~3.0kg-m



Perform the following inspections and adjustments after installation.

- Throttle cable
- Oil pump control cable
- Rear brake cable
- Oil pump bleeding



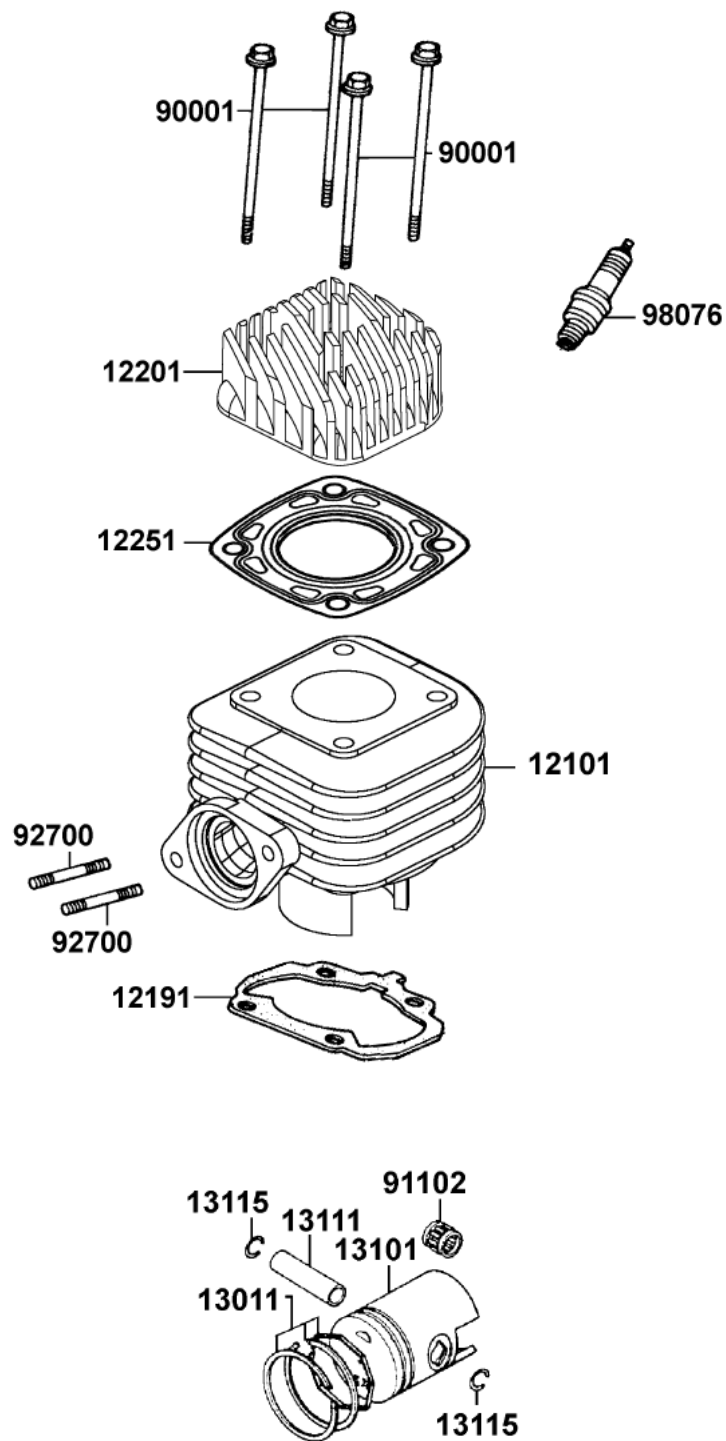
CYLINDER HEAD/CYLINDER/PISTON

SERVICE INFORMATION 6-2

TROUBLESHOOTING 6-2

CYLINDER HEAD 6-3

CYLINDER/PISTON 6-6



SERVICE INFORMATION

GENERAL INSTRUCTIONS

- The cylinder head, cylinder and piston can be serviced with the engine installed in the frame.
- Before disassembly, clean the engine to prevent dust from entering the engine.
- Remove all gasket material from the mating surfaces.
- Do not use a driver to pry between the cylinder and cylinder head, cylinder and crankcase.
- Do not damage the cylinder inside and the piston surface.
- After disassembly, clean the removed parts before inspection. When assembling, apply the specified engine oil to movable parts.

SPECIFICATIONS	Standard (mm)	Service Limit (mm)
Item	G-DINK 50	G-DINK 50
Cylinder head warpage	—	0.10
Piston O.D.(5mm from bottom of piston skirt)	38.970~38.955	38.90
Cylinder-to- piston clearance		0.10
Piston pin hole I.D.	12.002~12.008	12.03
Piston pin O.D.	11.994~12.0	11.98
Piston-to-piston pin clearance	←	←
Piston ring end gap (top/second)	0.10~0.25	0.40
Connecting rod small end I.D.	17.005~17.017	17.03
Cylinder bore	39.0~39.025	39.05

TORQUE VALUES

Cylinder head bolt	1.5~1.7kg-m
Exhaust muffler joint lock nut	1.0~1.4kg-m
Exhaust muffler lock bolt	3.0~3.6kg-m
Spark plug	1.1~1.7kg-m

●TROUBLESHOOTING

Compression too low, hard starting or poor performance at low speed

- Leaking cylinder head gasket
- Loose spark plug
- Worn, stuck or broken piston and piston rings
- Worn or damaged cylinder and piston

Compression too high, overheating or knocking

- Excessive carbon build-up in cylinder head or on piston head

Abnormal noisy piston

- Worn cylinder and piston
- Worn piston pin or piston pin hole
- Worn connecting rod small end bearing

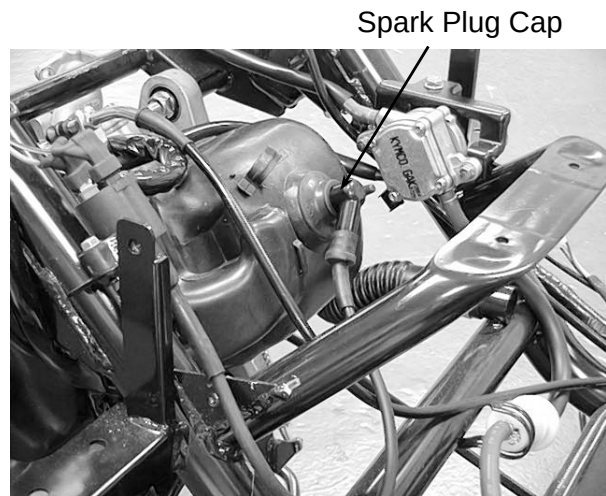
Abnormal noisy piston rings

- Worn, stuck or broken piston rings
- Worn or damaged cylinder

CYLINDER HEAD

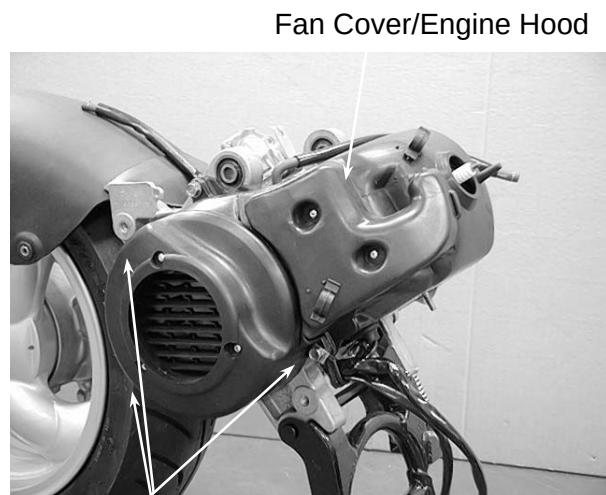
REMOVAL

Remove the rear carrier.
Remove the frame body cover.
Remove the spark plug cap.



Remove the three bolts attaching the fan cover to remove the fan cover.
Remove the two joint lock nuts on the front of the exhaust muffler and then remove the two exhaust muffler lock bolts.
Remove the bolt attaching the engine hood to remove the engine hood.
The installation sequence is the reverse of removal.

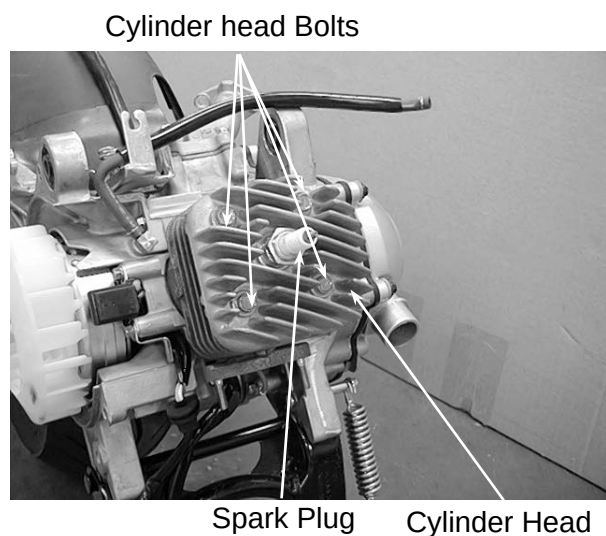
* When installing the exhaust muffler, first tighten the two nuts on the front and then tighten the two bolts.



Remove the spark plug.
Remove the cylinder head bolts and the cylinder head.

* Loosen the bolts diagonally in 2 or 3 times.

Remove the cylinder head gasket.



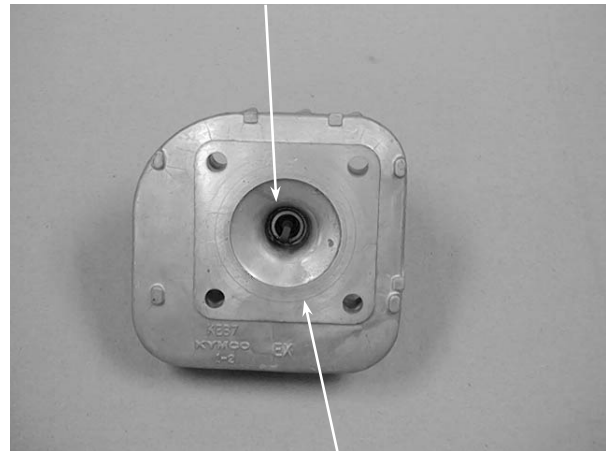
COMBUSTION CHAMBER DECARBONIZING

Remove the carbon deposits from the combustion chamber



Avoid damaging the combustion chamber wall and cylinder mating

Combustion Chamber



Mating Surface

CYLINDER HEAD INSPECTION

Check the cylinder head for warpage with a straight edge and feeler gauge.

Service Limit:

0.10mm replace if over



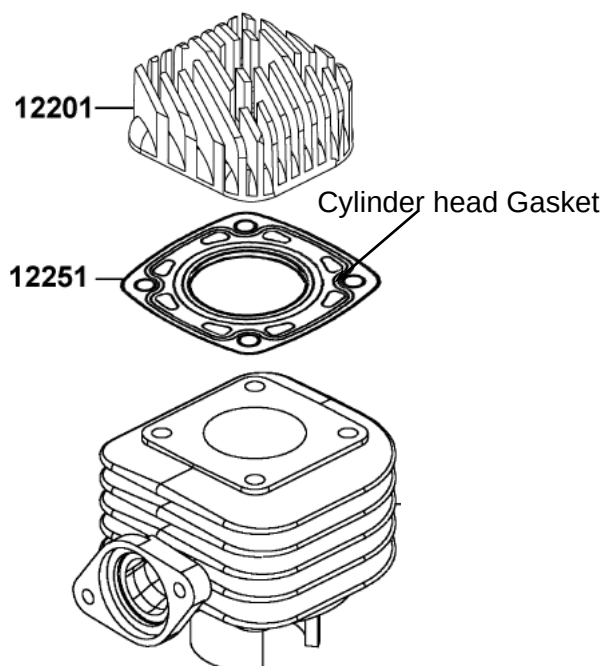
CYLINDER HEAD INSTALLATION

Install the cylinder head on the cylinder properly.



Be careful not to damage the mating surfaces.

Install a new cylinder head gasket onto the cylinder.



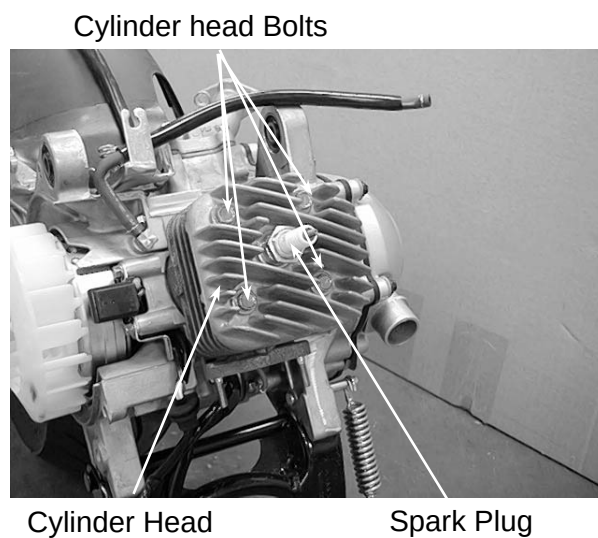
Cylinder Head Bolts Installation

Install and tighten the cylinder head bolts diagonally in 2 or 3 times.

Torque: 1.5~1.7kg-m

Install the spark plug.

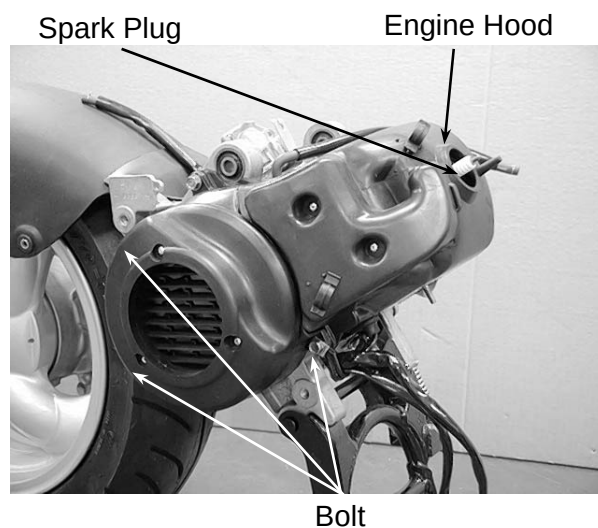
Torque: 1.1~1.7kg-m



Engine Hood Installation

Install the engine hood.

Install the spark plug cap.



Perform the following inspections after installation:

- Compression test
- Abnormal engine noise
- Cylinder air leaks



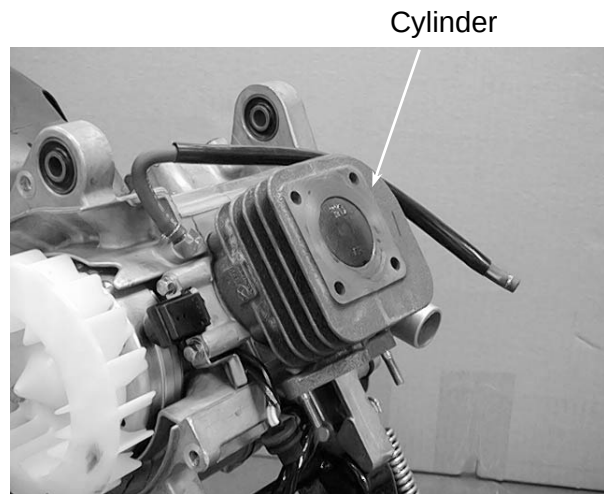
CYLINDER/PISTON

CYLINDER REMOVAL

Remove the met-in box and seat.
Remove the frame body cover.
Remove the cylinder head.
Remove the two exhaust muffler joint lock nuts and two exhaust muffler lock bolts.
Remove the exhaust muffler.
Remove the cylinder.
Remove the cylinder gasket.

*

Do not pry between the cylinder and crankcase or strike the fins.

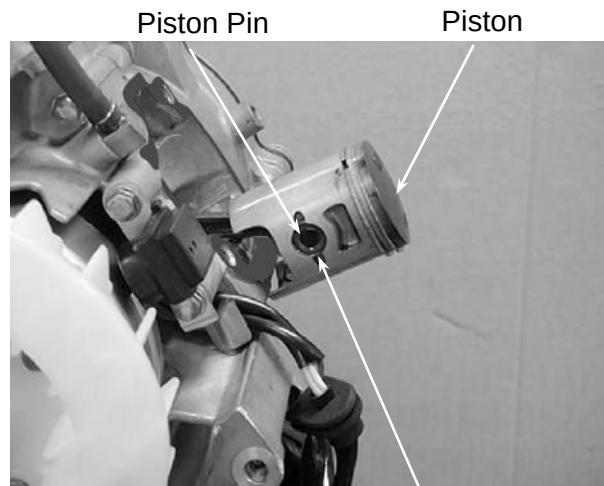


PISTON REMOVAL

Remove the piston pin clip to remove the piston pin and piston.

*

- Do not damage or scratch the piston.
- Do not apply side force to the connecting rod when removing the piston pin.
- Place clean shop towels in the crankcase to keep the piston pin clip from falling into the crankcase.



Piston Pin Clip

Spread each piston ring and remove by lifting it up at a point just opposite the gap.
Remove the expander.



CYLINDER/PISTON INSPECTION

Check the cylinder and piston for wear or damage.

Clean carbon deposits from the exhaust port area.

*

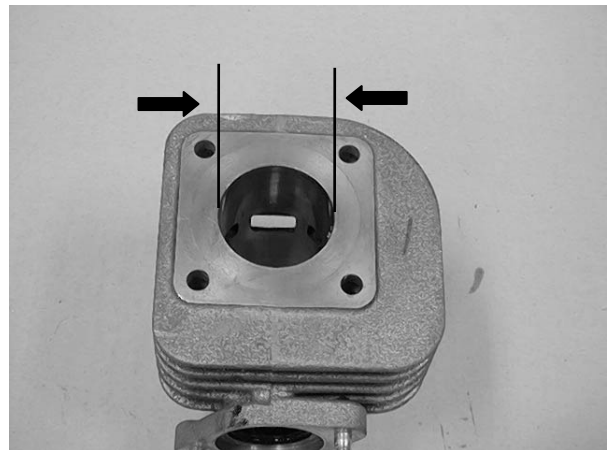
Be careful not to damage the cylinder inside wall.



Measure the cylinder bore at three levels of A, B and C in both X and Y directions. Avoid the port area. Take the maximum figure measured to determine the cylinder bore.

Service Limit:

39.05mm replace if over



Inspect the top of the cylinder for warpage.

Service Limit:

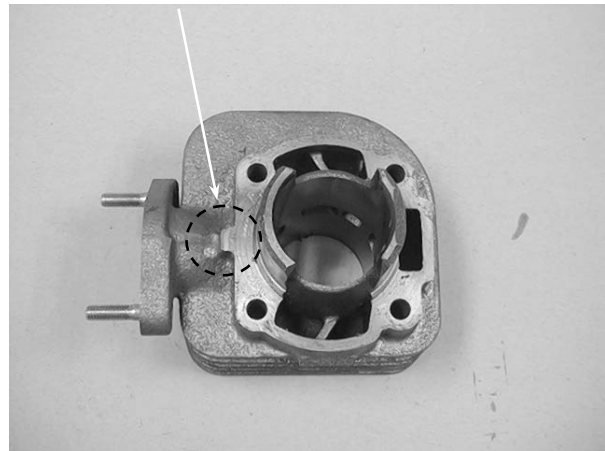
0.10mm replace if over





The cylinder has an 'A' mark or no mark on it. When replacing the cylinder with a new one, use a cylinder having the same mark as the old one.

A Mark



Measure the piston O.D. at a point 5mm from the bottom of the piston skirt.

Service Limit:

38.90mm replace if below

Measure the piston-to-cylinder clearance.

Service Limit:

0.10mm replace if over

Measure the piston pin hole I.D.

Service Limit:

12.03mm replace if over

Measure the piston pin O.D.

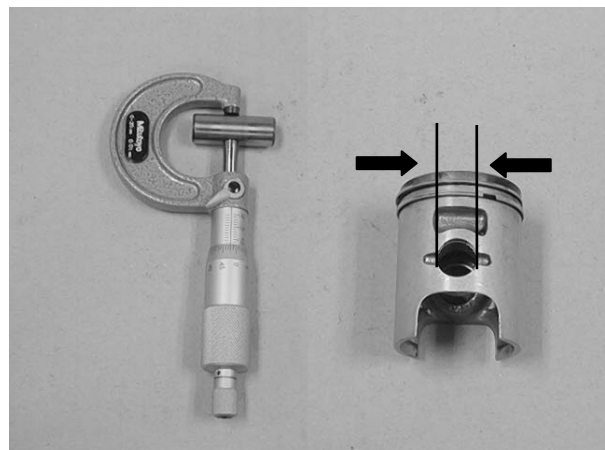
Service Limit:

11.98mm replace if below

Measure the piston-to-piston pin clearance.

Service Limit:

0.03mm replace if over



PISTON RING INSPECTION

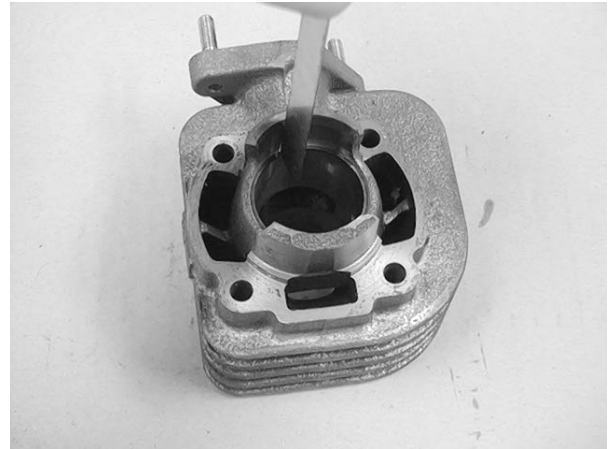
Measure each piston ring end gap.

Service Limits: Top/Second

0.40mm replace if over

*

Set each piston ring squarely into the cylinder using the piston and measure the end gap.



<Small End I.D. Measurement>

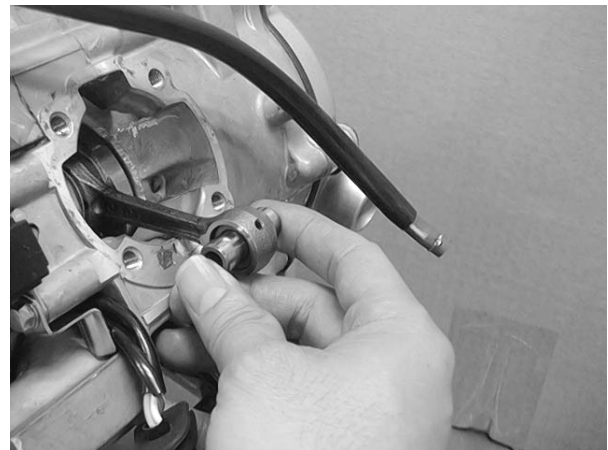
CONNECTING ROD SMALL END INSPECTION

Install the piston pin and bearing in the connecting rod small end and check for excessive play.

Measure the connecting rod small end I.D.

Service Limit:

17.03mm replace if over



PISTON/CYLINDER INSTALLATION

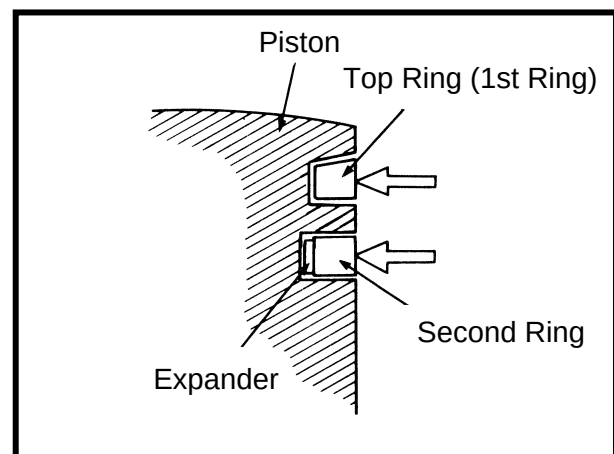
First install the expander in the second ring groove.

Then install the top and second rings in their respective ring grooves.

The piston rings should be pressed into the grooves with even force.

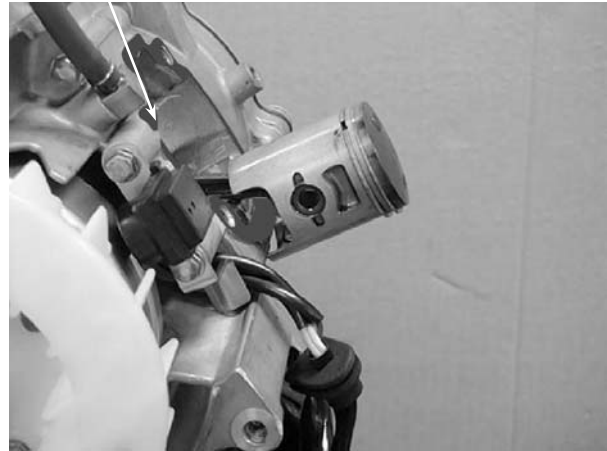
After installation, check and make sure that each ring is flush with the piston at several points around the ring.

A ring that will not compress means that the ring groove has carbon deposits in it and should be cleaned.



Install a new cylinder gasket on the mating surface between the cylinder and crankcase.

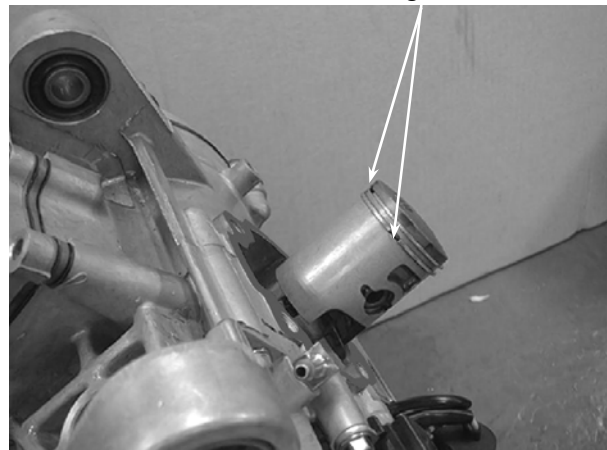
Cylinder Gasket



Make sure that the ring end gaps are aligned with the piston ring pins in the ring grooves.

Lubricate the cylinder inside and piston rings with engine oil and install the piston into the cylinder while compressing the piston rings.

Ring Pins



* Be careful not to damage the piston.

Install the cylinder head.

Torque: 1.5~1.7kg-m

Install the exhaust muffler and tighten the exhaust muffler joint lock nuts.

Torque: 1.0~1.4kg-m

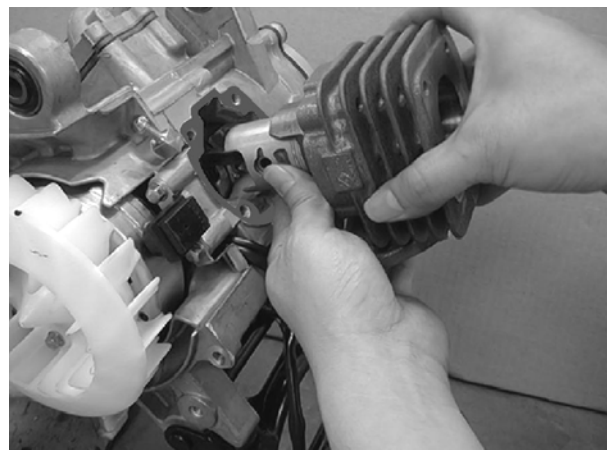
Tighten the exhaust muffler lock bolts.

Torque: 3.0~3.6kg-m

Install the frame covers.

Install the met-in box.

The installation sequence is the reverse of removal .

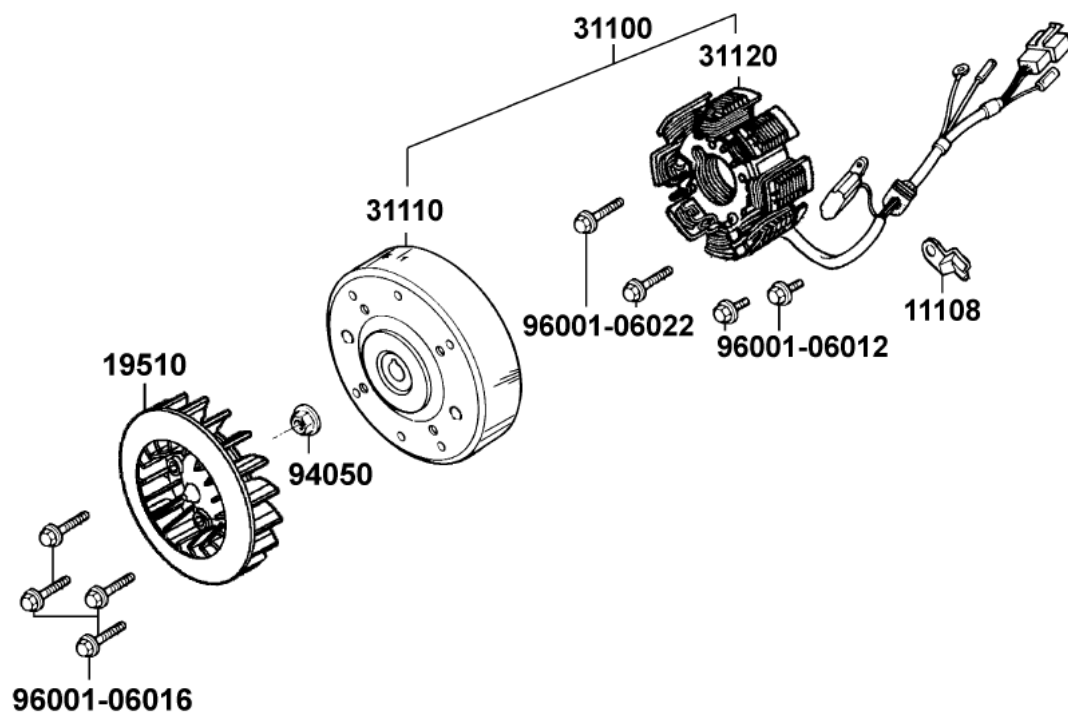


A.C. GENERATOR

SERVICE INFORMATION 7-2

A.C. GENERATOR REMOVAL..... 7-3

A.C. GENERATOR INSTALLATION..... 7-4



SERVICE INFORMATION

GENERAL INSTRUCTIONS

- All A.C. generator maintenance and inspection can be made with the engine installed.
- Refer to Section 15 for A.C. generator inspection.

TORQUE VALUE

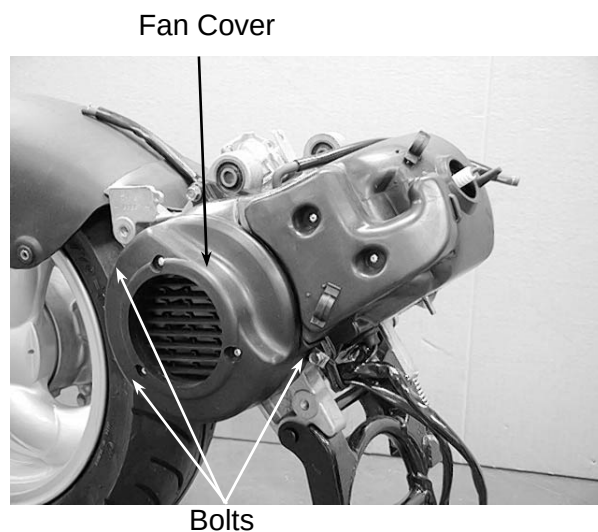
Flywheel nut : 3.5~4.0kg-m

SPECIAL TOOLS

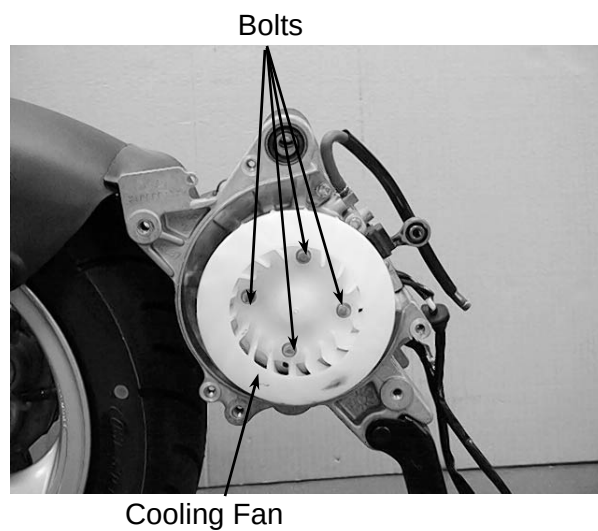
Flywheel puller
Universal holder

A.C. GENERATOR REMOVAL

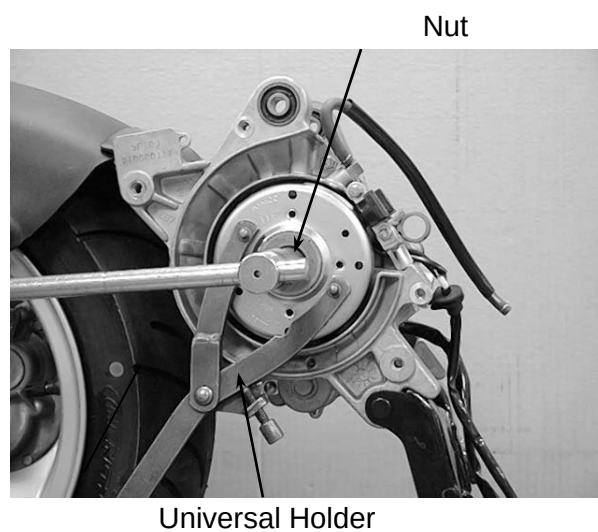
Remove the three bolts attaching the fan cover to remove the fan cover.



Remove the cooling fan by removing the four bolts.

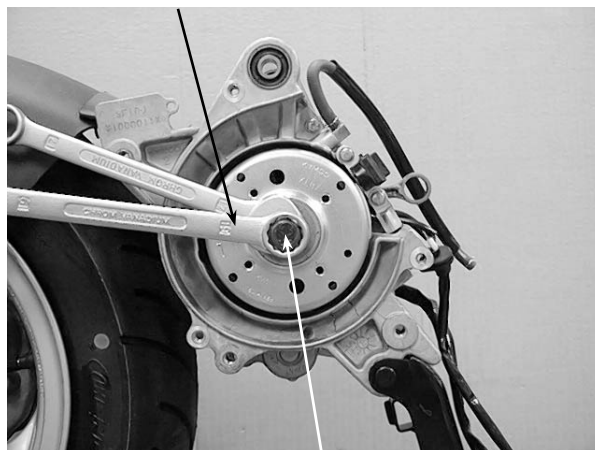


Hold the flywheel with an universal holder and then remove the 10mm flywheel nut.



Remove the A.C. generator flywheel using the flywheel puller.

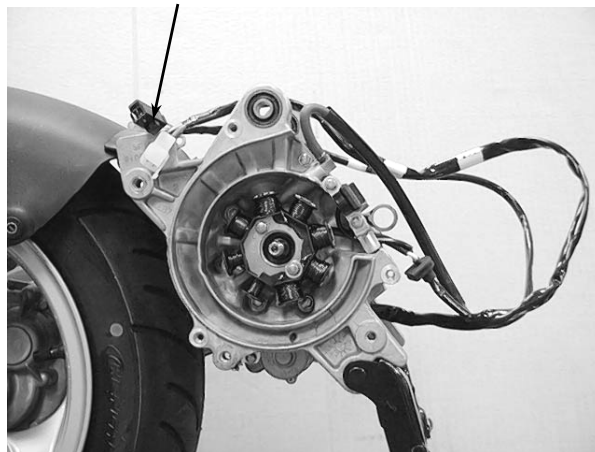
Lock Nut Wrench



Flywheel Puller

Remove the A.C. generator wire connector.

A.C. Generator Wire Connector



Remove the two pulser coil bolts and pulser coil from the right crankcase.
Remove the pulser coil wire clamp from the right crankcase.
Remove the two bolts attaching the A.C. generator stator.

*

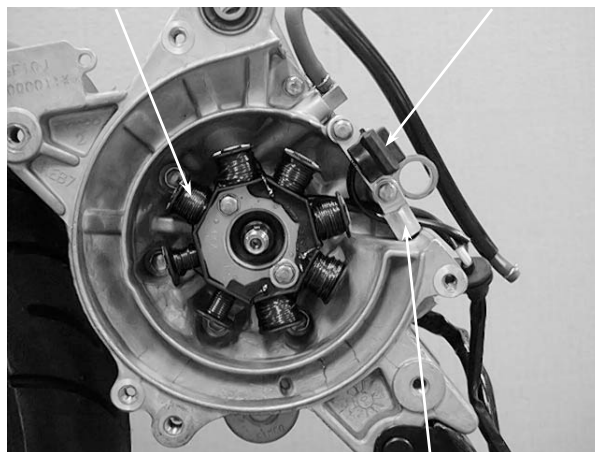
Be careful not to damage the disconnected wire.

A.C. GENERATOR INSTALLATION

Install the A.C. generator stator and pulser coil wire clamp onto the right crankcase, and then install the pulser coil.

Stator

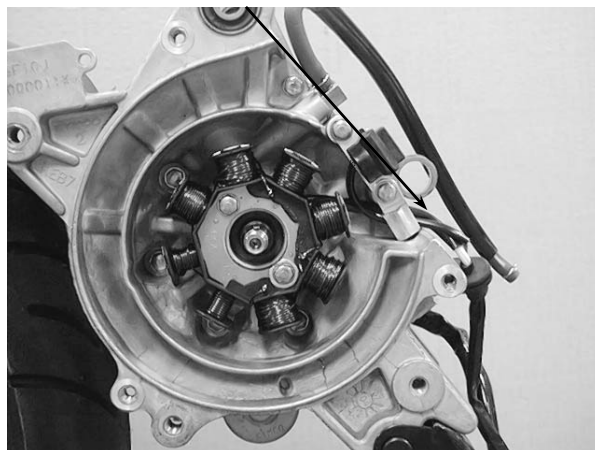
Pulser Coil



Wire Clamp

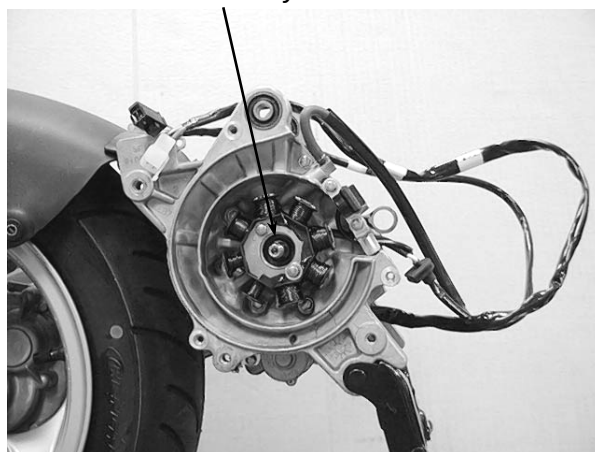
Install the A.C. generator and pulser coil bolts.
Connect the A.C. generator wire connector.

A.C. Generator Wire



Clean the taper hole in the flywheel off any burrs and dirt.
Install the woodruff key in the crankshaft keyway.

Woodruff Key

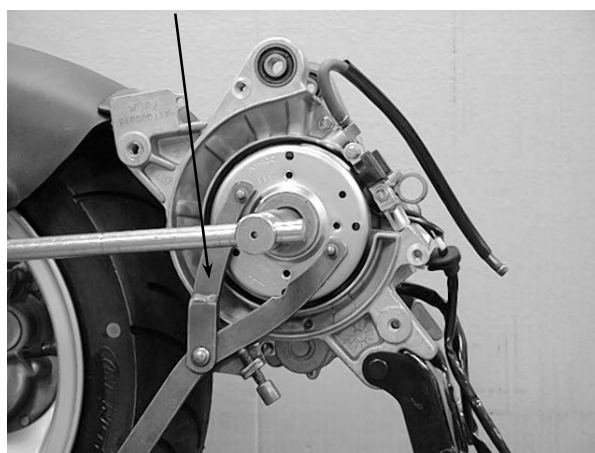


Install the flywheel onto the crankshaft with the flywheel groove aligned with the crankshaft woodruff key.
Hold the flywheel with the universal holder and install the 10mm flywheel flange nut.

Torque: 3.5~4.0kg-m

Start the engine and check the ignition timing.
Install other removed parts in the reserve order of removal.

Universal Holder



KICK STARTER/DRIVE PULLEY/
CLUTCH/DRIVEN PULLEY

8

SERVICE INFORMATION 8- 3

TROUBLESHOOTING 8- 3

KICK STARTER..... 8- 4

DRIVE BELT 8- 8

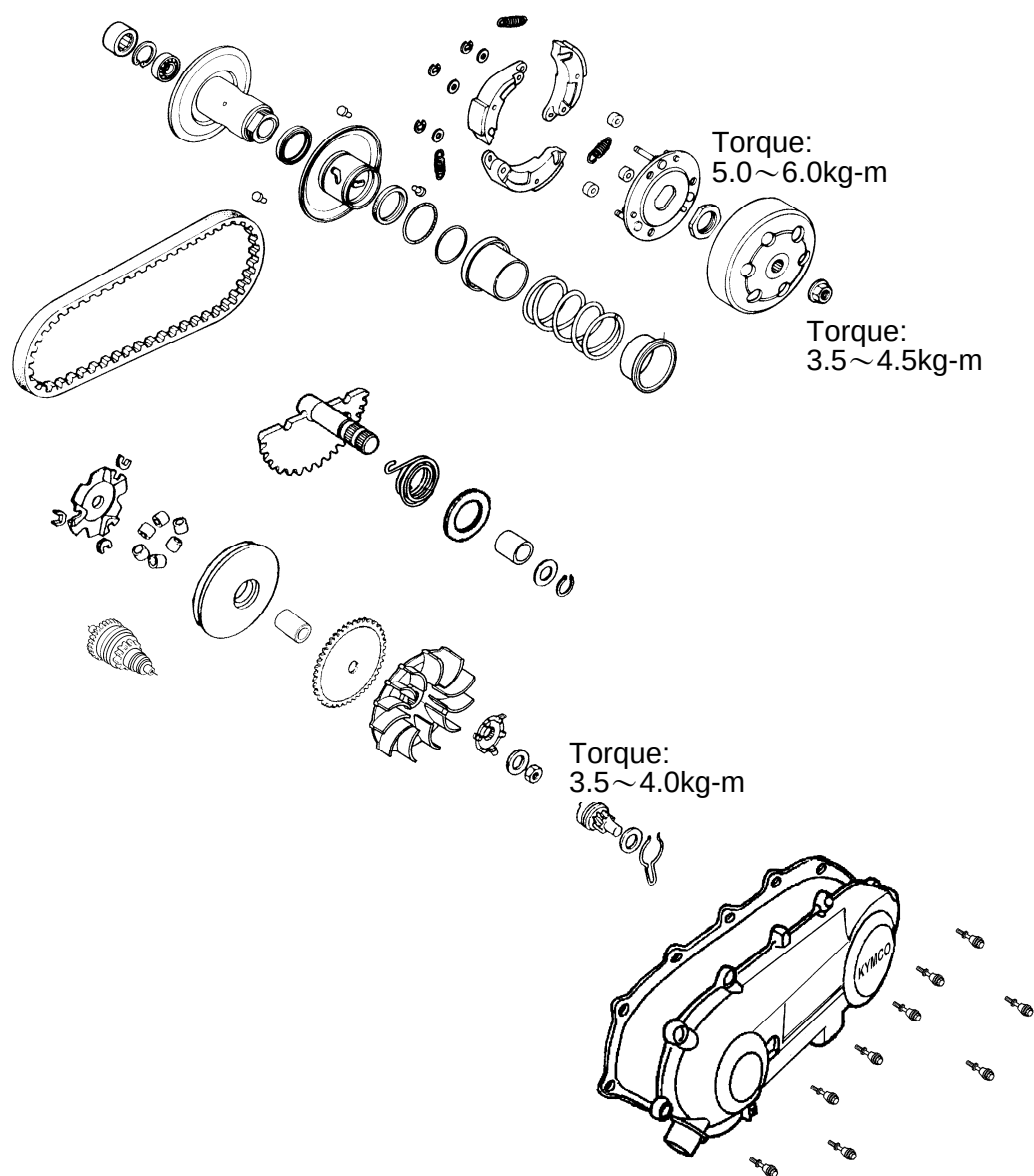
DRIVE PULLEY 8-10

STARTER ONE-WAY CLUTCH DRIVE GEAR 8-12

CLUTCH/DRIVEN PULLEY 8-15

8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50



8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

SERVICE INFORMATION

GENERAL INSTRUCTIONS

- Avoid getting grease and oil on the drive belt and pulley faces.

SPECIFICATIONS	G-DINK 50	
	Standard (mm)	Service Limit (mm)
Drive pulley collar O.D.	20.01~20.025	24.24
Movable drive face I.D.	20.035~20.085	19.97
Weight roller O.D.	13.0	12.4
Clutch outer I.D.	107~107.2	107.5
Driven face spring free length	87.9	82.6
Driven face O.D.	33.965~33.985	33.94
Movable driven face I.D.	34.0~34.25	34.06
Drive belt width	18	17

TORQUE VALUES

Drive face nut	3.5~4.0kg-m
Clutch outer nut	3.5~4.5kg-m
Clutch drive plate nut	5.0~6.0kg-m

SPECIAL TOOLS

Lock nut wrench, 39mm	Universal holder
Clutch spring compressor	Lock nut socket wrench, 32mm
Bearing outer driver 37x40mm	Bearing driver pilot, 17mm
One-way clutch puller	Outer driver, 24x26mm

TROUBLESHOOTING

Engine starts but motorcycle won't move

- Worn drive belt
- Broken ramp plate
- Worn or damaged clutch lining

Engine stalls or motorcycle creeps

- Broken clutch weight spring

Poor performance at high speed or lack of power

- Worn drive belt
- Weak driven face spring
- Worn weight roller
- Faulty driven face

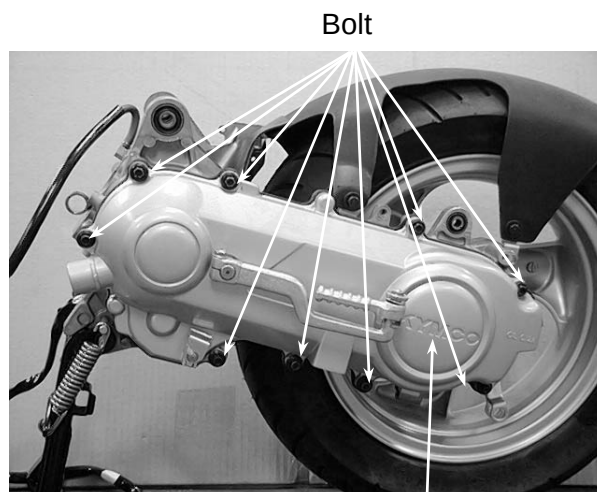
8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

KICK STARTER

LEFT CRANKCASE COVER REMOVAL

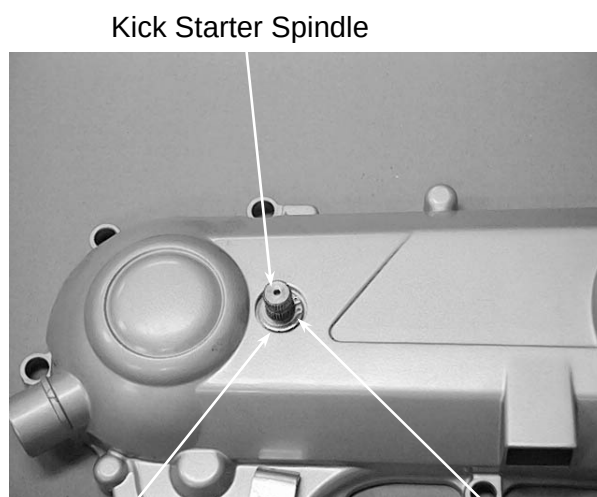
Remove the drive belt cooling air tube connector circlip.
Remove the nine left crankcase cover bolts, left crankcase cover and dowel pins.
Inspect the left crankcase cover seal rubber for damage or deterioration.



Left Crankcase Cover

KICK STARTER SPINDLE REMOVAL

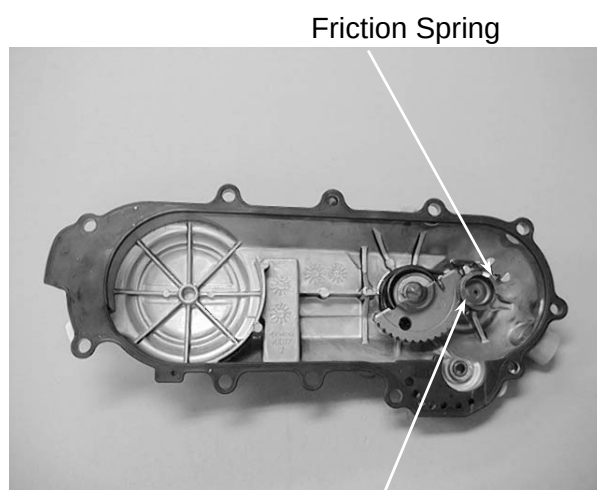
Remove the kick lever from the kick starter spindle.
Remove the circlip and washer from the kick starter spindle.



Washer

Circlip

Slightly rotate the kick starter spindle to remove the kick starter driven gear together with the friction spring.



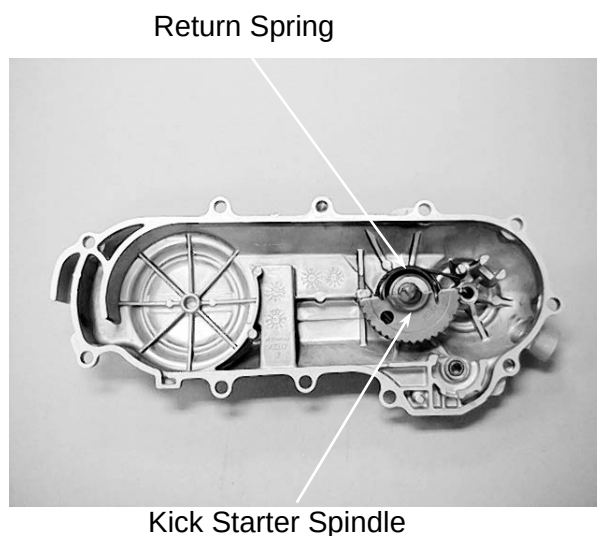
Friction Spring

Kick Starter Driven Gear

8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

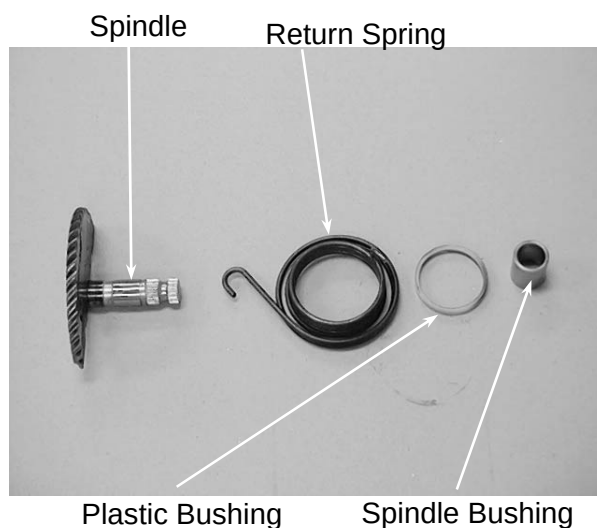
G-DINK 50

Remove the kick starter spindle and return spring from the left crankcase cover.
Remove the kick starter spindle bushing.



KICK STARTER SPINDLE INSPECTION

Inspect the kick starter spindle and gear for wear or damage.
Inspect the return spring for weakness or damage.
Inspect the kick starter spindle bushing for wear or damage.



Check the kick starter driven gear for wear or damage.
Check the friction spring for wear or damage.

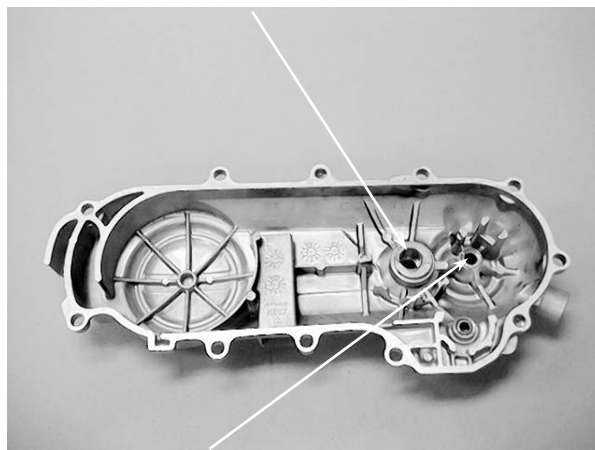


8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

Inspect the kick starter spindle and driven gear forcing parts for wear or damage.

Kick Starter Spindle Forcing Part



Kick Starter Driven Gear Forcing Part

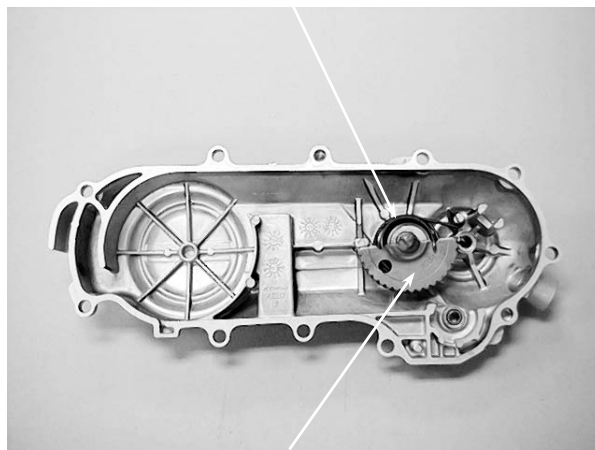
KICK STARTER INSTALLATION

Install the kick starter spindle bushing and return spring onto the left crankcase cover.

*

If the hooks of the return spring can not be installed properly, use a screw driver to press them into their locations respectively.

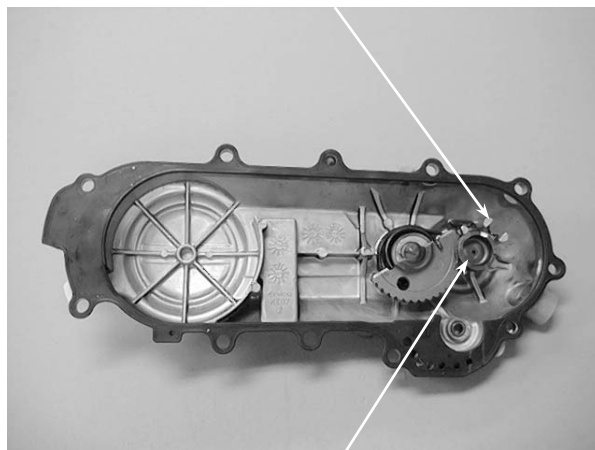
Friction Spring



Kick Starter Spindle

Properly install the kick starter driven gear and friction spring as the figure shown.

Friction Spring

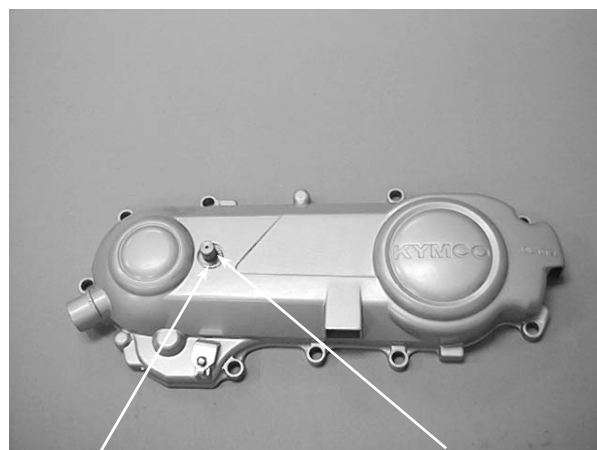


Kick Starter Driven Gear

8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

First install the washer and then the circlip onto the kick starter spindle.
Install the kick lever.

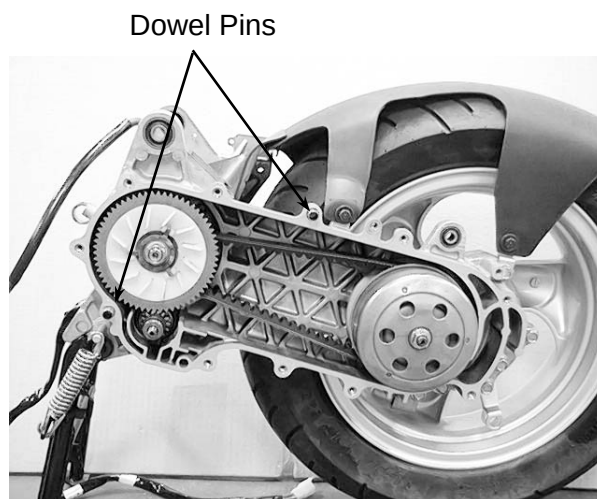


Washer

Circlip

LEFT CRANKCASE COVER INSTALLATION

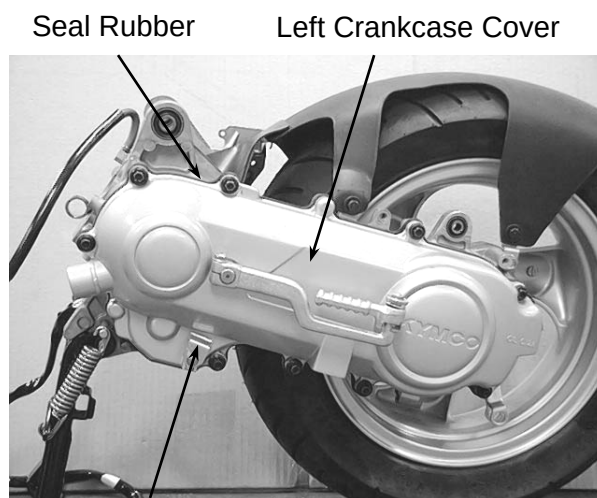
First install the dowel pins and then the seal rubber.



Dowel Pins

Install the left crankcase cover and tighten the ten bolts diagonally.
Connect the drive belt cooling air tube and install the circlip.

* For drum brake, note the location of the brake cable clamp and install the rear brake cable in place with the clamp.



Seal Rubber

Left Crankcase Cover

Rear Brake Cable Clamp

8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

DRIVE BELT

Remove the left crankcase cover.

INSPECTION

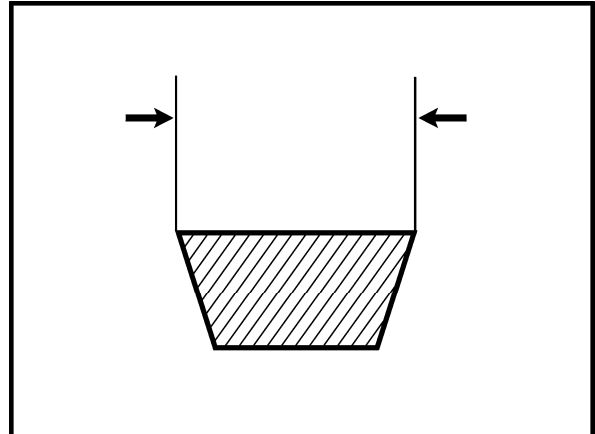
Check the drive belt for cracks, separation or abnormal or excessive wear.
Measure the drive belt width.

Service Limit:

16.5mm replace if below

*

Use specified genuine parts for replacement.

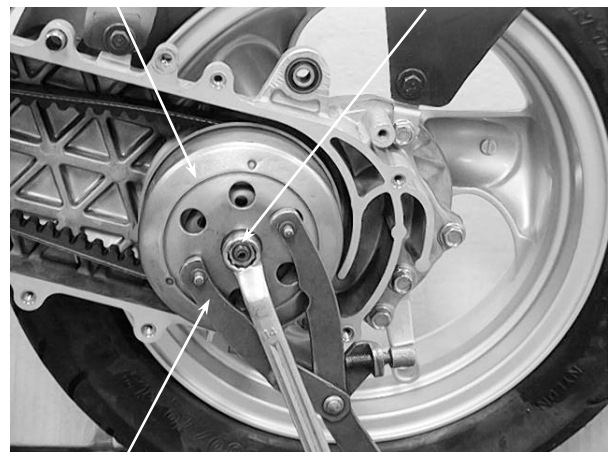


REPLACEMENT

Remove the ten left crankcase cover bolts and left crankcase cover.
Hold the clutch outer with the universal holder and remove the 10mm clutch outer nut and clutch outer.

Clutch Outer

Clutch Outer Nut



Universal Holder

Hold the drive pulley with the holder and remove the 12mm drive face nut.
Remove the starting ratchet.
Remove the drive pulley face.

Ratchet

Drive Face

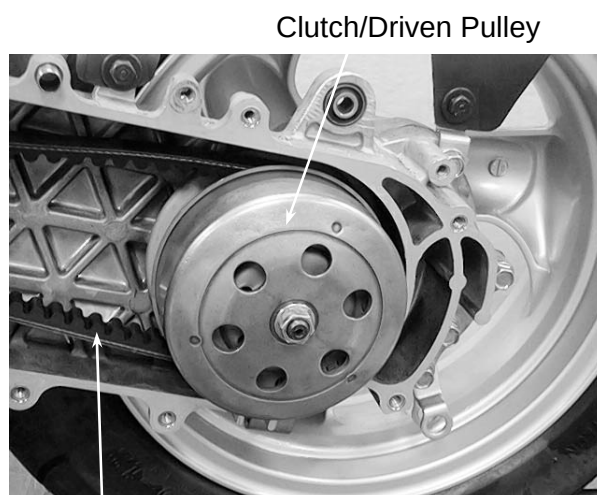


Drive Face Nut

8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

Remove the drive belt from the clutch/
driven pulley.



Drive Belt

DRIVE BELT INSTALLATION

Turn the driven pulley clockwise and lift it
up to expand the drive belt groove and then
install a new drive belt.

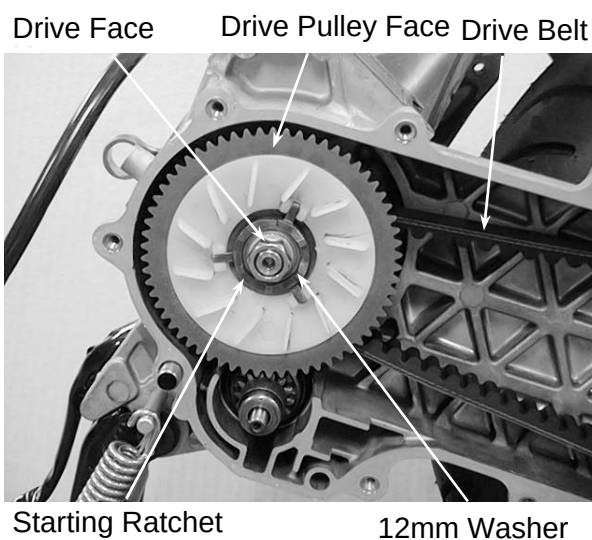
Drive Belt



Set the drive belt on the drive pulley.
Install the drive pulley face, starting ratchet
and 12mm washer, then tighten the drive
face nut.

Torque: 3.5~4.0kg-m

* When installing the drive face nut, make
sure that the tooth spaces of the drive
pulley face and starting ratchet align
with the teeth of the crankshaft.



Starting Ratchet

12mm Washer

8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

DRIVE PULLEY

REMOVAL

Hold the drive pulley with the holder and remove the 12mm drive face nut. Remove the starting ratchet, 12mm washer and drive pulley face.

Drive Pulley Face

Starting Ratchet



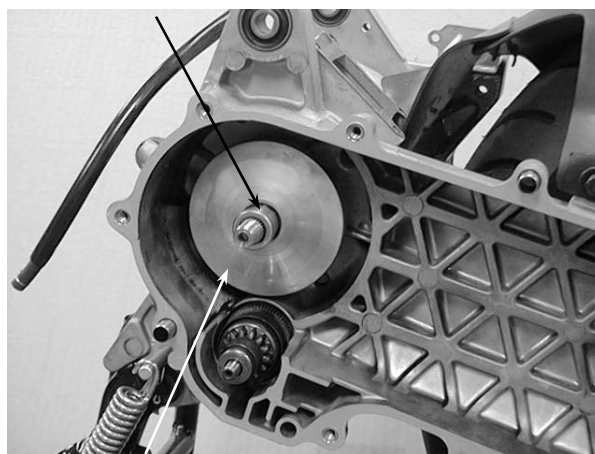
Face Holder

12mm Drive Face Nut

MOVABLE DRIVE FACE DISASSEMBLY

Remove the movable drive face and drive pulley collar from the crankshaft.

Drive Pulley Collar



Movable Drive Face

Remove the ramp plate.

Ramp Plate



8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

MOVABLE DRIVE FACE INSPECTION

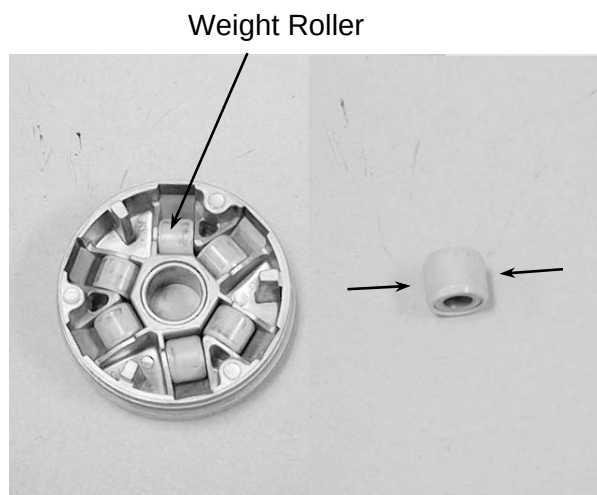
Remove the weight rollers.

Check each weight roller for wear or damage.

Measure each roller O.D.

Service Limit:

12.4mm replace if below



Measure the movable drive face bushing assembly I.D.

Service Limit:

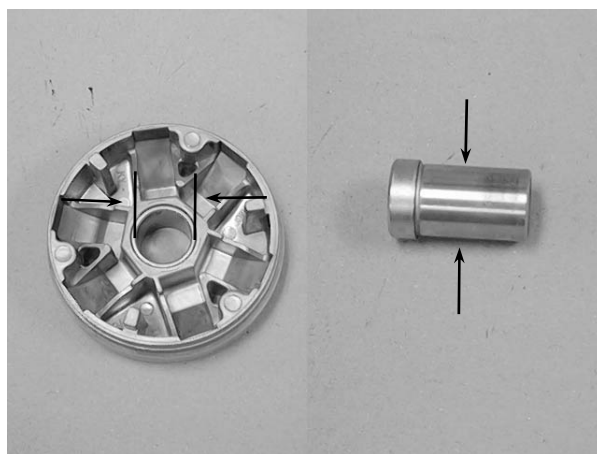
20.3mm replace if over

Check the drive pulley collar for wear or damage.

Measure the O.D. of the drive pulley collar sliding surface.

Service Limit:

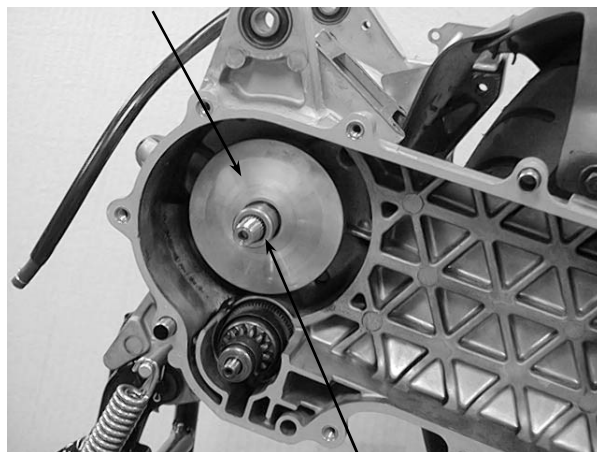
19.9mm replace if below



DRIVE PULLEY INSTALLATION

Install the drive pulley collar and movable drive face onto the crankshaft.

Movable Drive Face



Drive Pulley Collar

8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

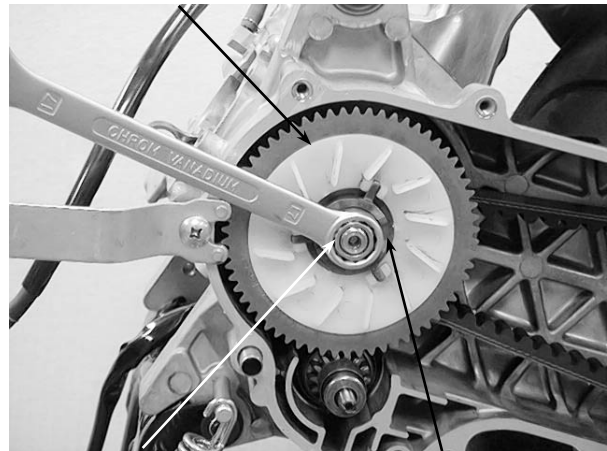
Install the drive belt on the crankshaft.
Install the drive face, starting ratchet and washer, then tighten the 12mm drive face nut.

Torque: 3.5~4.0kg-m



Keep grease or oil off the drive belt and drive pulley faces.

Drive Pulley Face

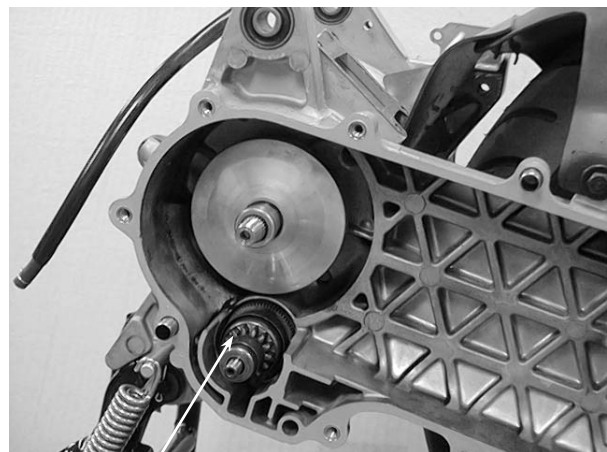


Drive Face Nut

Starting Ratchet

STARTER PINION REMOVAL

Remove the left crankcase cover.
Remove the drive pulley.
Remove the starter pinion.



Starter Pinion

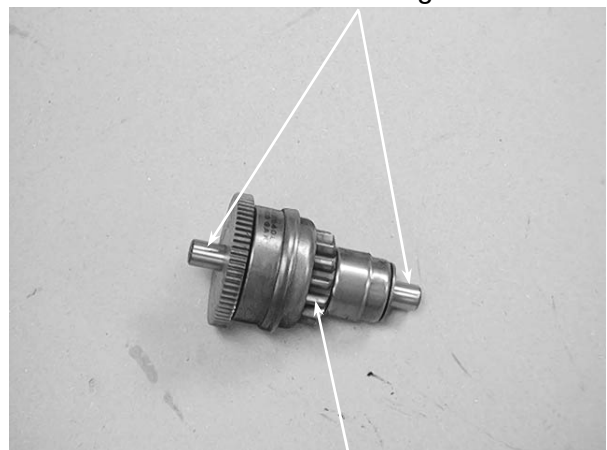
INSPECTION

Inspect the starter pinion seat for wear.
Inspect the starter pinion for smooth operation.
Inspect the starter pinion shaft forcing parts for wear and damage.

INSTALLATION

Apply a small amount of grease to the starter pinion teeth.
Install the starter pinion in the reverse order of removal.

Shaft Forcing Parts



Starter Pinion

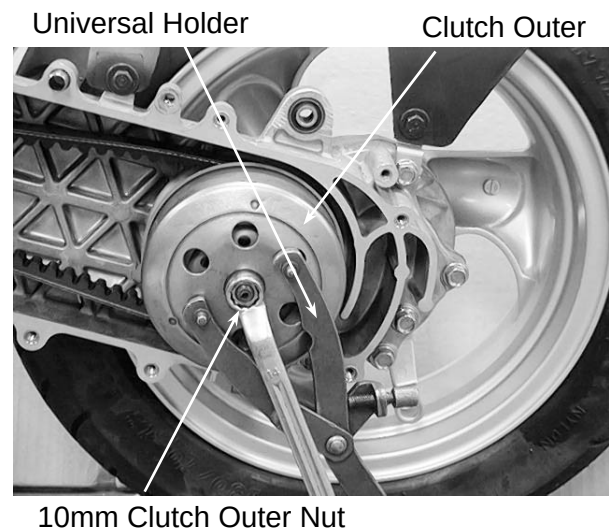
8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

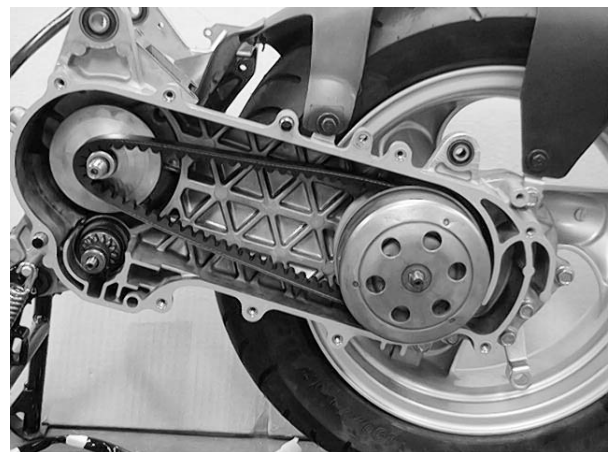
CLUTCH/DRIVEN PULLEY

CLUTCH/DRIVEN PULLEY REMOVAL

Remove the drive pulley.
Hold the clutch outer with the universal holder and remove the 10mm clutch outer nut.
Remove the clutch outer.

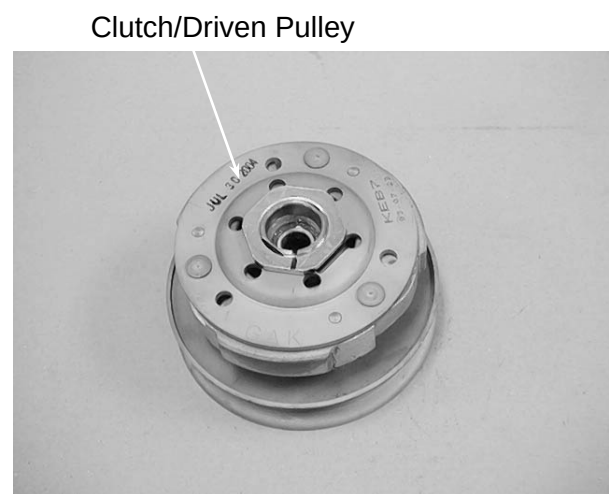


Remove the clutch/driven pulley.
Remove the drive belt from the clutch/driven pulley.



CLUTCH/DRIVEN PULLEY DIS-ASSEMBLY

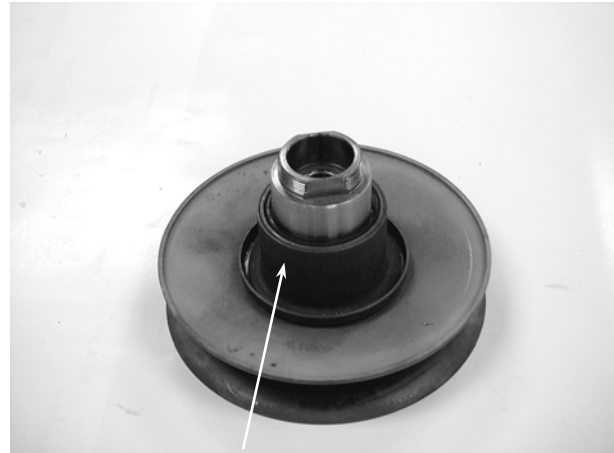
Compress the clutch/driven pulley spring with the clutch spring compressor and remove the 28mm drive plate nut.
Remove the driven face spring.



8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

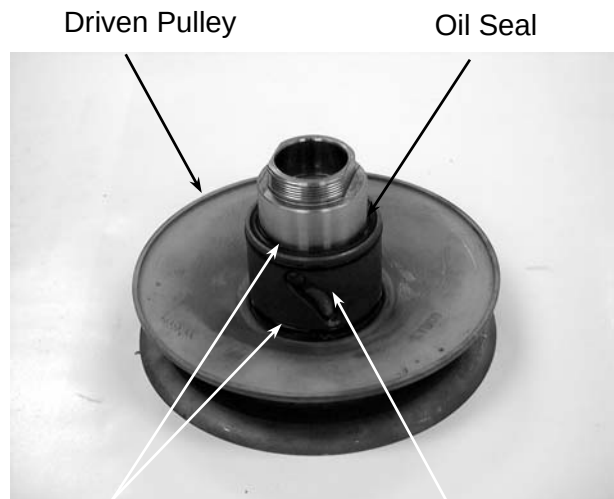
G-DINK 50

Remove the seal collar.



Seal Collar

Pull out the guide roller pins from the driven pulley and then remove the O-rings and oil seal from the driven pulley.



O-rings

Guide Roller Pin

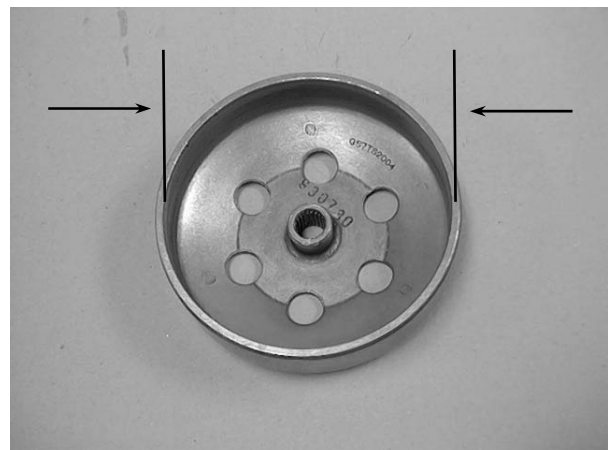
CLUTCH/DRIVEN PULLEY INSPECTION

Inspect the clutch outer for wear or damage.

Measure the clutch outer I.D.

Service Limit:

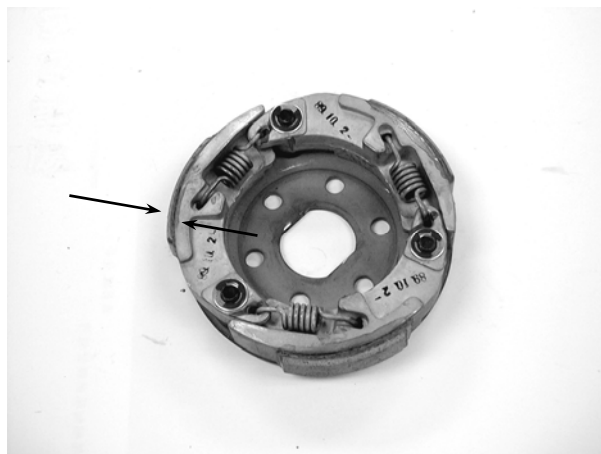
107.5mm replace if below



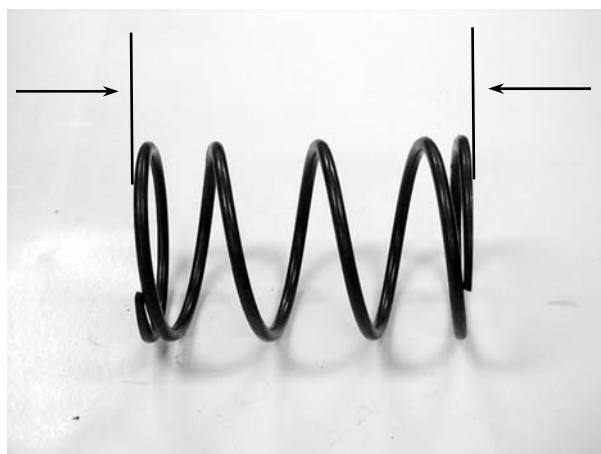
8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

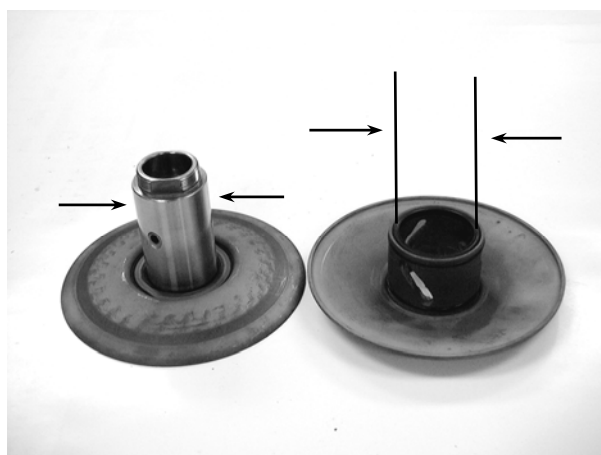
Check the clutch shoes for wear or damage.
Measure the clutch lining thickness.
Service Limit: 2.0mm replace if below



Measure the driven face spring free length.
Service Limit:
82.6mm replace if below



Check the driven face assembly for wear or damage.
Measure the driven face O.D.
Service Limit: 33.94mm replace if below
Check the movable driven face for wear or damage.
Measure the movable driven face I.D.
Service Limit: 34.06mm replace if below
Check the guide roller pins for stepped wear.

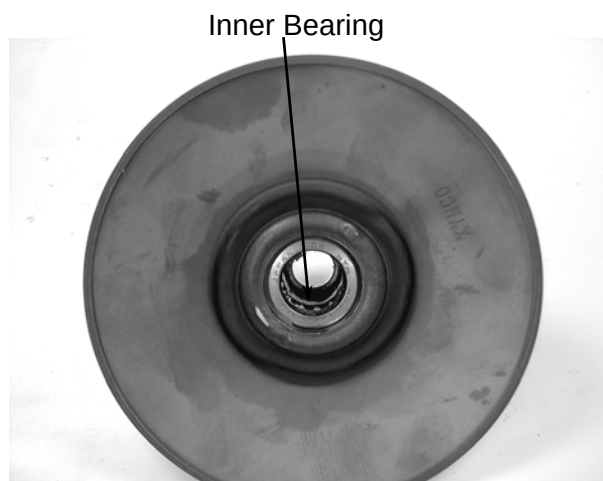


8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

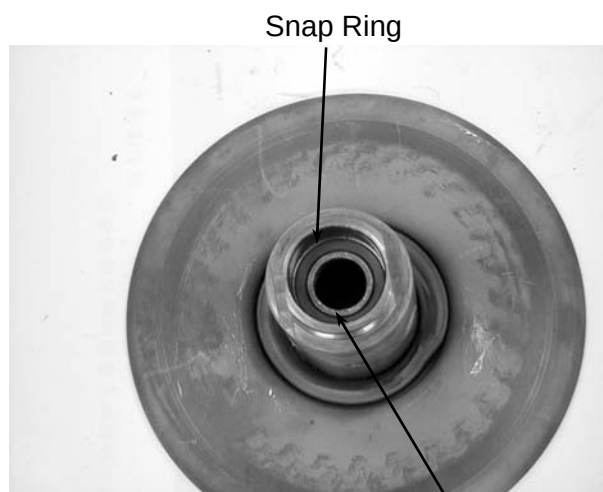
G-DINK 50

DRIVEN PULLEY FACE BEARING REPLACEMENT

Check the needle bearings in the driven face and replace them if they have excessive play, damage or abnormal noise. Drive the inner bearing out of the driven pulley face.



Remove the snap ring and drive the outer bearing out of the driven face.



Outer Bearing

Drive a new outer bearing into the driven face with the sealed end facing up. Seat the snap ring in its groove.

- * Pack all bearing cavities with 5.0~5.6g grease.
Specified grease: 230°C Heat-resistant grease

Bearing Outer Driver, 37x40mm



8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

Drive in a new needle bearing into the driven face with the mark facing up.

Bearing Driver Pilot



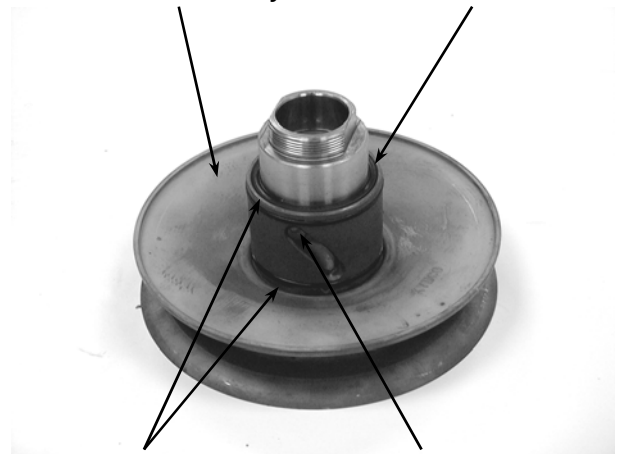
Outer Driver, 24x26mm

CLUTCH/DRIVEN PULLEY ASSEMBLY

First install the movable driven face onto the driven face. Then, install the guide roller pins, O-rings and a new oil seal.

Driven Pulley

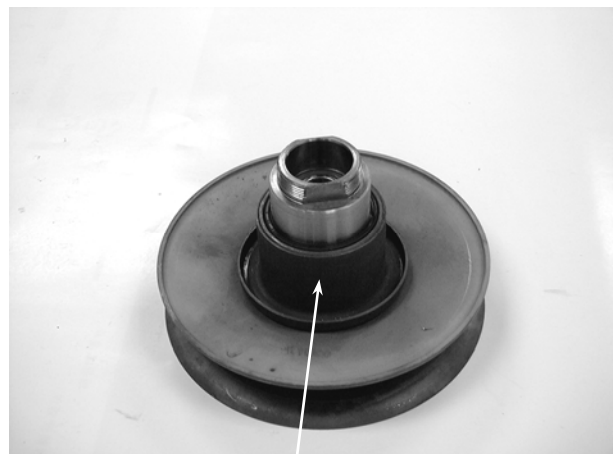
Oil Seal



O-rings

Guide Roller Pin

Install the seal collar.



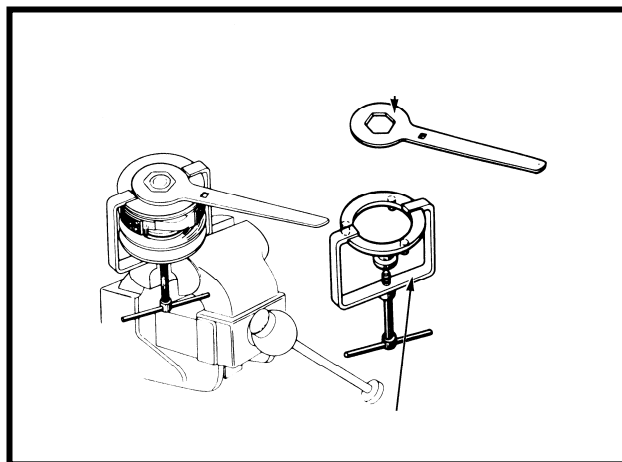
Seal Collar

8. KICK STARTER/DRIVE PULLEY/ CLUTCH/DRIVEN PULLEY

G-DINK 50

Set the driven pulley, driven face spring and clutch assembly onto the clutch spring compressor. Compress the tool and install the 28mm drive plate nut. Tighten the 28mm nut to the specified torque.

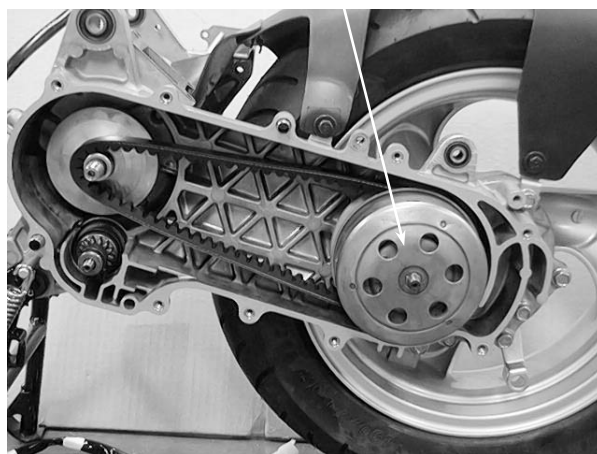
Torque: 5.0~6.0kg-m



CLUTCH/DRIVEN PULLEY INSTALLATION

Install the drive belt on the clutch/driven pulley and then install the clutch/driven pulley onto the drive shaft.

Clutch/Driven Outer

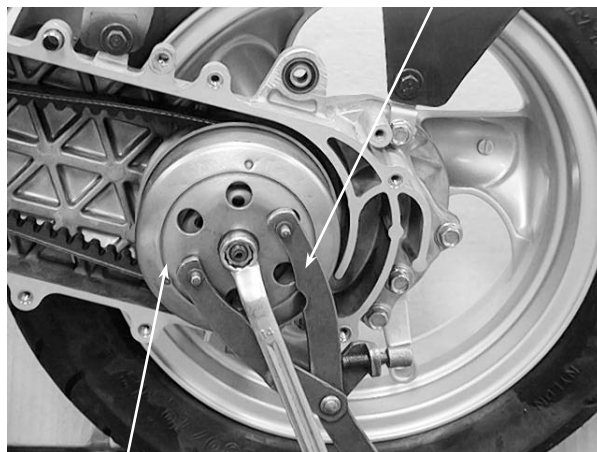


Install the clutch outer.
Hold the clutch outer with the universal holder.
Install and tighten the 10mm clutch outer nut.

Torque: 3.5~4.5kg-m

Install the left crankcase cover.

Universal Holder



Clutch Outer

FINAL REDUCTION

SERVICE INFORMATION 9-2

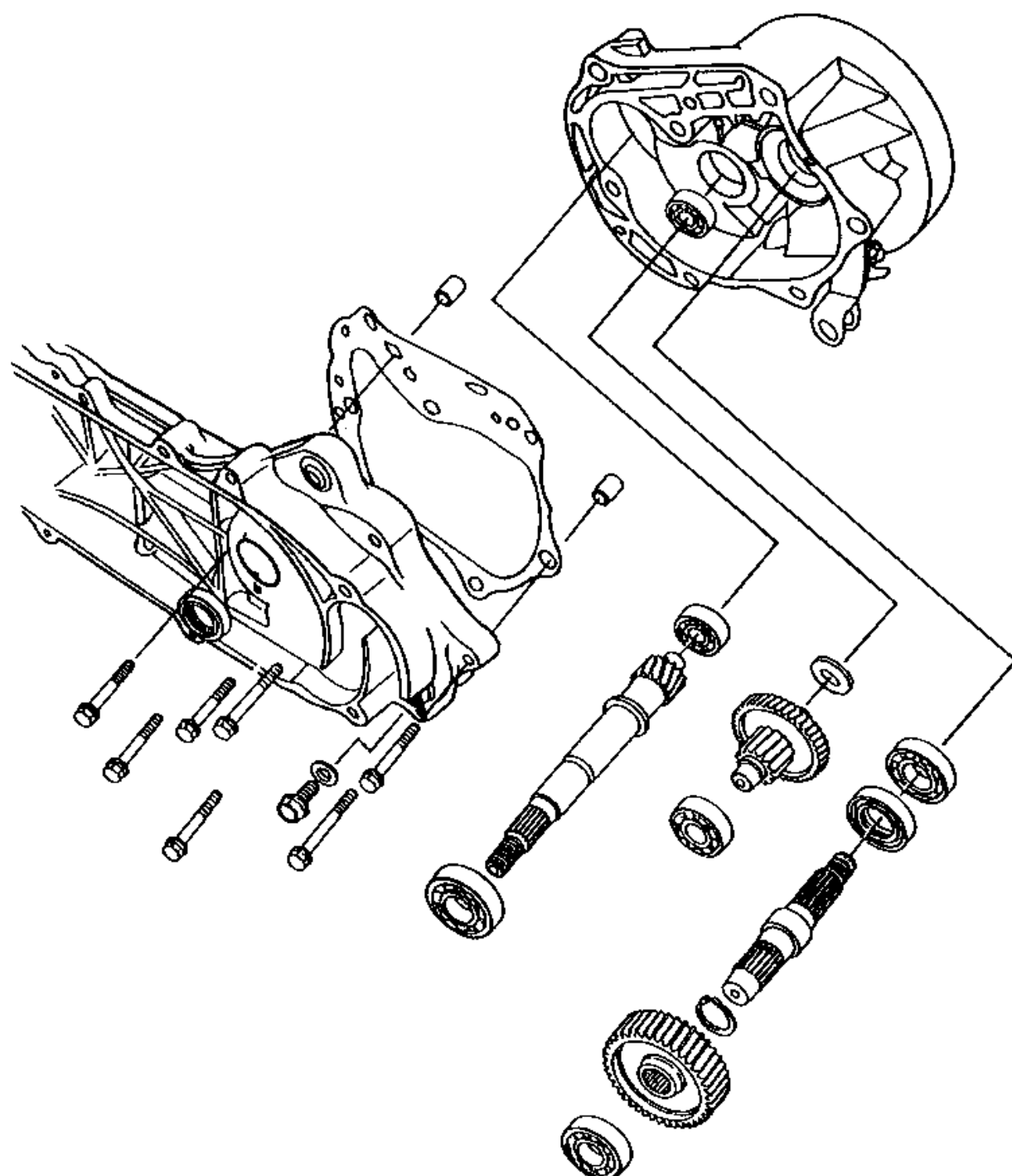
TROUBLESHOOTING 9-2

FINAL REDUCTION DISASSEMBLY 9-3

FINAL REDUCTION INSPECTION 9-3

FINAL REDUCTION ASSEMBLY 9-6





SERVICE INFORMATION

Specified Oil: SAE90#

At disassembly: 0.23 liter

At change: 0.18 liter

SPECIAL TOOLS

Bearing remover set, 12mm

Bearing remover set, 15mm

Crankcase assembly collar

Crankcase assembly shaft

Bearing outer driver, 37x40mm

Bearing outer driver, 32x35mm

Bearing driver pilot, 17mm

Bearing driver pilot, 15mm

Bearing driver pilot, 12mm

Bearing outer driver handle A

TROUBLESHOOTING

Engine starts but motorcycle won't move

- Damaged transmission
- Seized or burnt transmission

Abnormal noise

- Worn, seized or chipped gears
- Worn bearing

Oil leaks

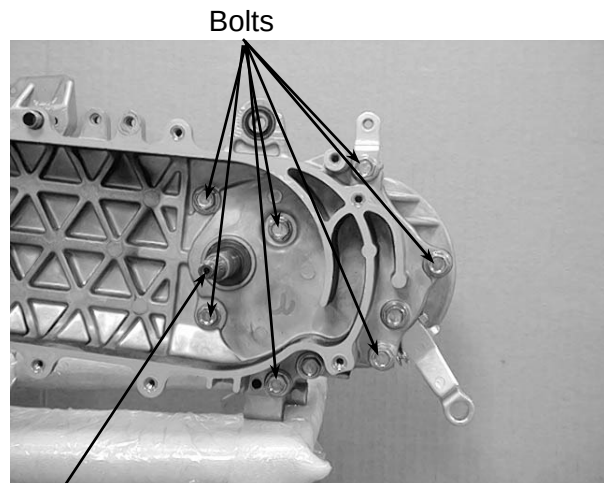
- Oil level too high
- Worn or damaged oil seal

9. FINAL REDUCTION

G-DINK 50

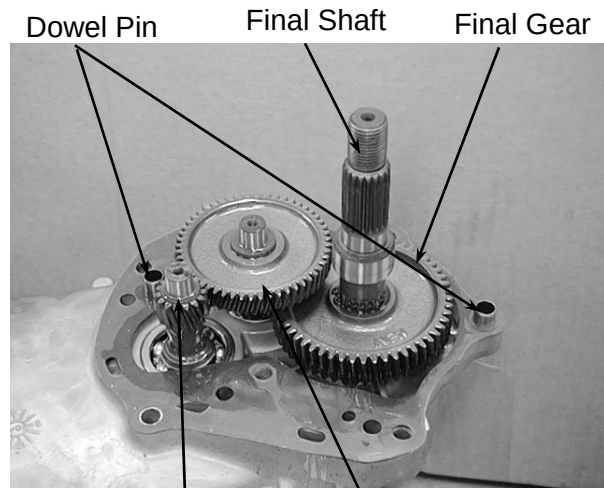
FINAL REDUCTION DISASSEMBLY

Remove the rear wheel.
Remove the left crankcase cover.
Remove the clutch/driven pulley.
Drain the transmission gear oil into a clean container.
Remove the transmission case cover attaching bolts.
Remove the transmission case cover.
Remove the gasket and dowel pins.



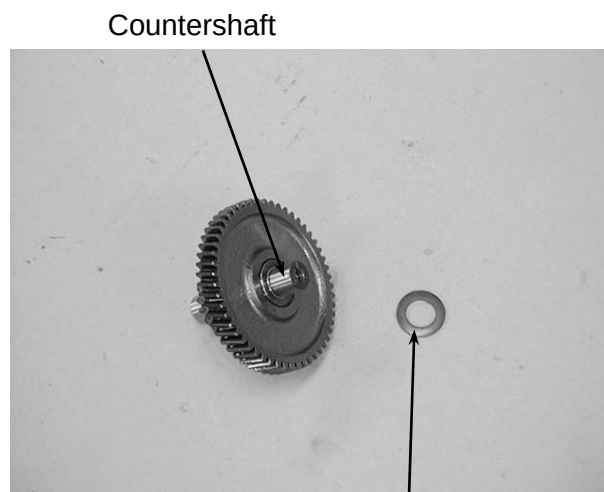
Driver shift

Remove the final gear and countershaft.



FINAL REDUCTION INSPECTION

Inspect the countershaft and gear for wear or damage.



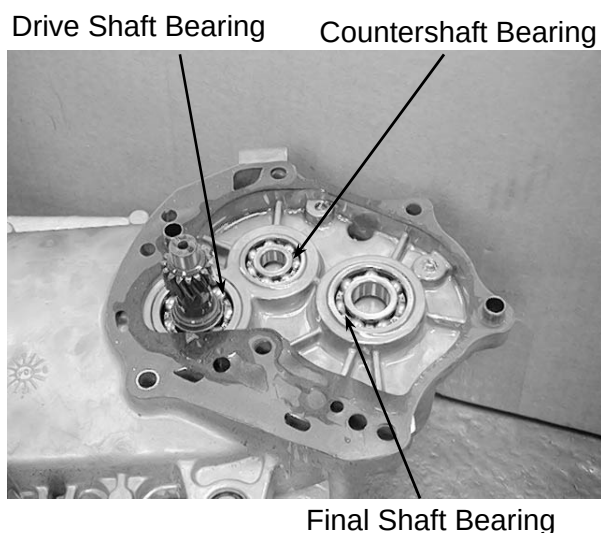
9. FINAL REDUCTION

G-DINK 50

Inspect the final gear and final shaft for wear, damage or seizure.



Check the left crankcase bearings for excessive play and inspect the oil seal for wear or damage.



Inspect the drive shaft and gear for wear or damage.
Check the transmission case cover bearings for excessive play and inspect the final shaft bearing oil seal for wear or damage.

*

Do not remove the transmission case cover except for necessary part replacement. When replacing the drive shaft, also replace the bearing and oil seal.



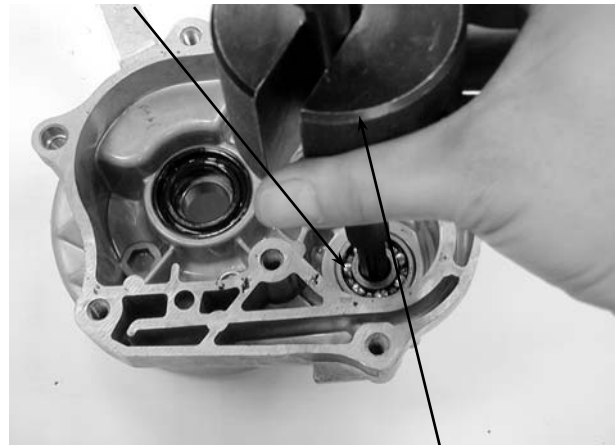
Drive Shaft Bearing

Oil Seal

BEARING REPLACEMENT (Transmission Case Cover)

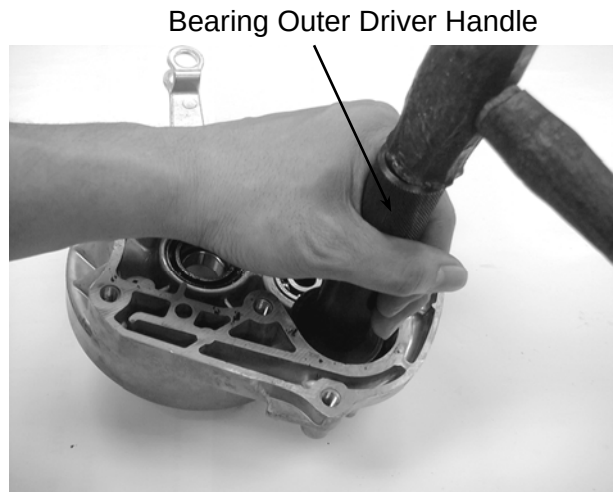
Remove the transmission case cover bearings using the bearing remover.
Remove the final shaft oil seal.

Drive Shaft Bearing



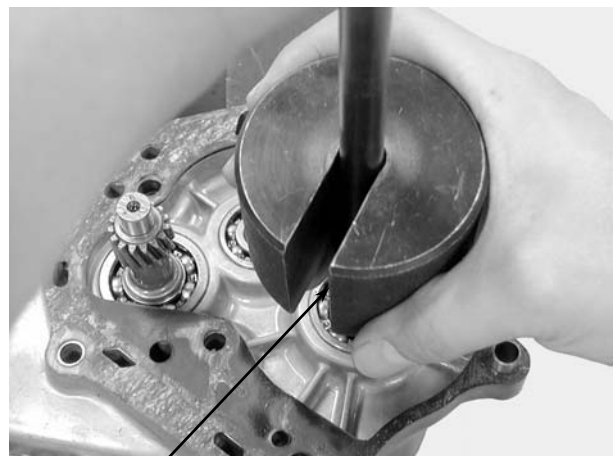
Bearing Remover Set

Drive new bearings into the transmission case cover.



BEARING REPLACEMENT (Left Crankcase Cover)

Remove the drive shaft.
Remove the drive shaft oil seal.
Remove the left crankcase bearings using the bearing remover.

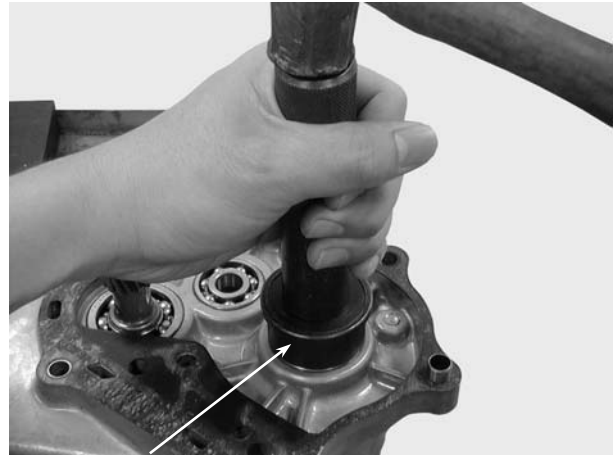


Bearing Remover Set, 12mm

9. FINAL REDUCTION

G-DINK 50

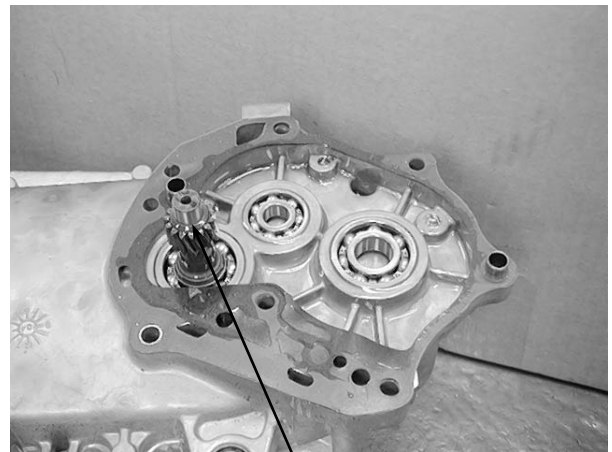
Drive new bearings into the left crankcase.
Install a new drive shaft oil seal.



Bearing Outer Driver

FINAL REDUCTION ASSEMBLY

Install the drive shaft into the left crankcase.



Drive Shaft

Install the final gear and final shaft into the left crankcase.

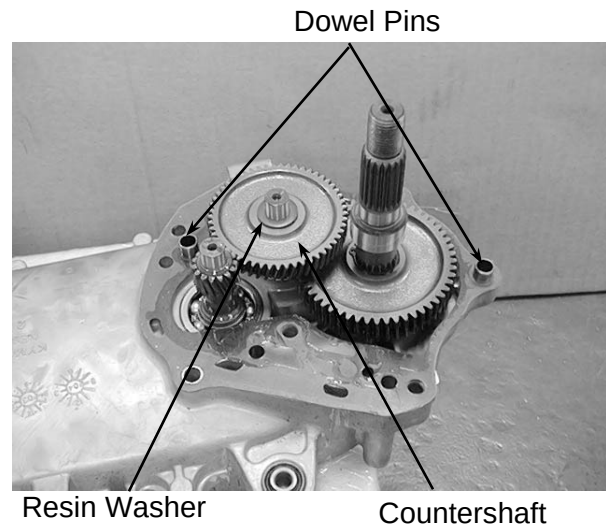


Final Shaft

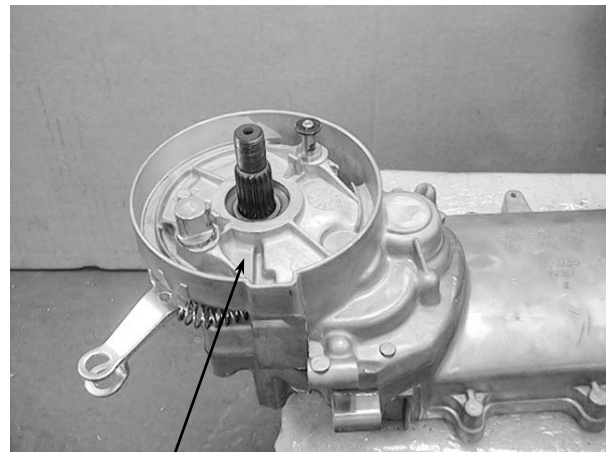
9. FINAL REDUCTION

G-DINK 50

Install the countershaft and gear into the left crankcase.
Install the resin washer onto the counter-shaft.
Install the dowel pins and a new gasket.

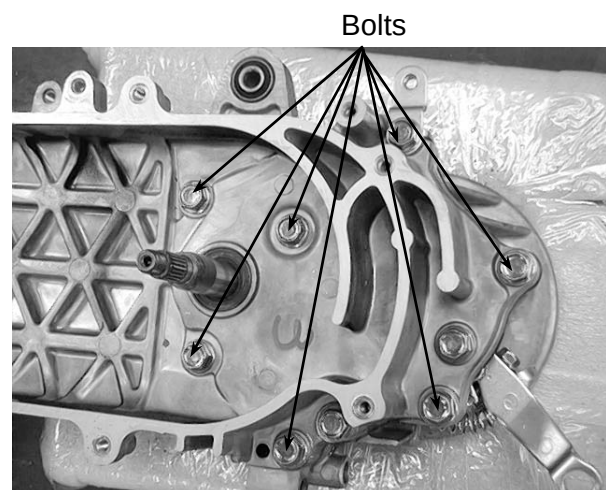


Install the transmission case cover.



Transmission Case Cover

Install and tighten the transmission case cover bolts.
Install the clutch/driven pulley.
Install other removed parts in the reverse order of removal.



After installation, fill the transmission case with the specified oil.

*

- Place the motorcycle on its main stand on level ground.
- Check the sealing washer for wear or damage.

Specified Gear Oil: SAE90#

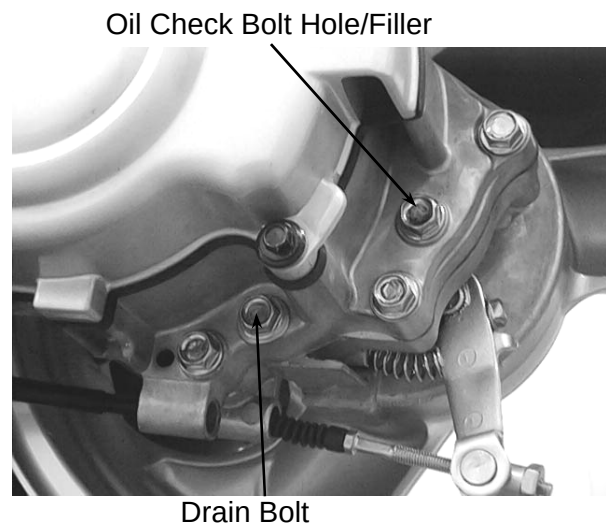
Oil Capacity: at disassembly: 0.23 liter

at change: 0.18 liter

Install and tighten the oil check bolt.

Torque: 1.0~1.5kg-m

Start the engine and check for oil leaks.
Check the oil level from the oil check bolt hole and add the specified oil to the proper level if the oil level is low.



CRANKCASE/CRANKSHAFT

SERVICE INFORMATION 10-2

TROUBLESHOOTING 10-2

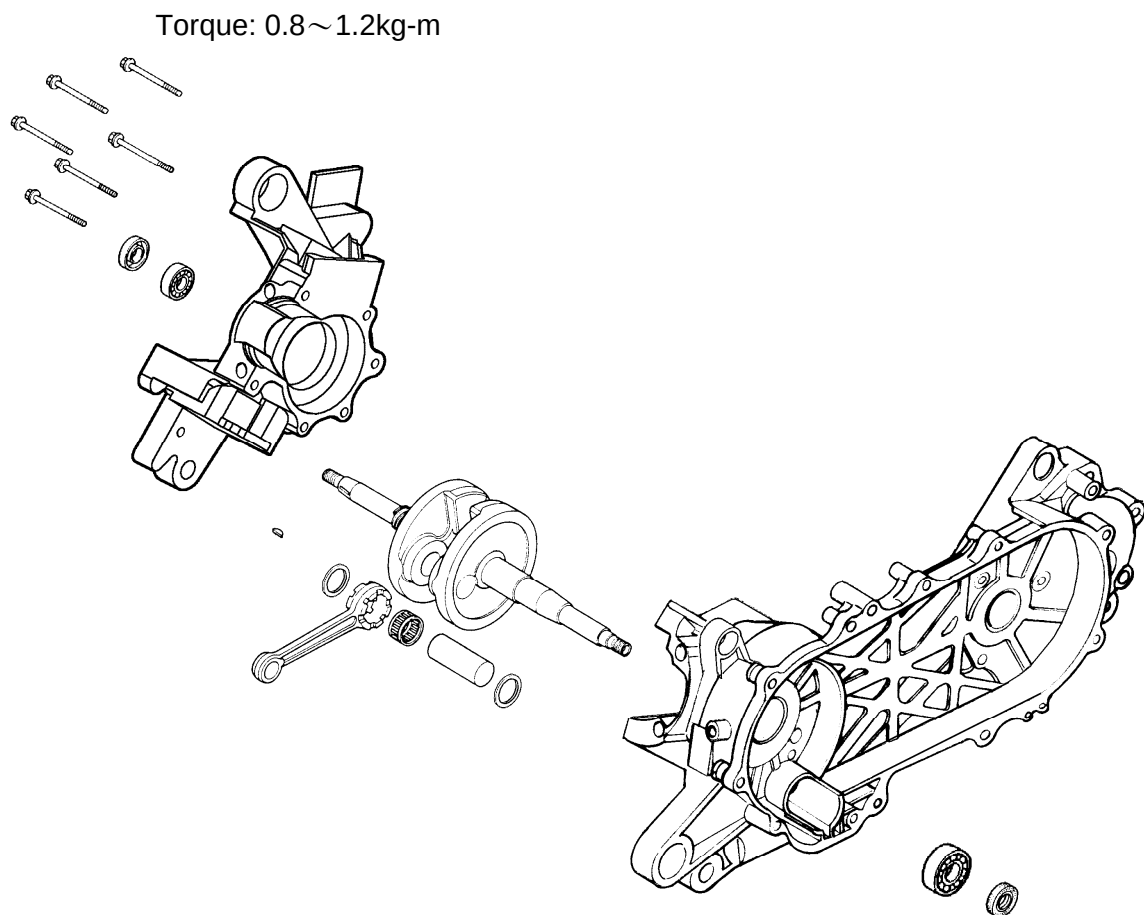
CRANKCASE SEPARATION 10-3

CRANKSHAFT REMOVAL 10-3

CRANKSHAFT INSPECTION..... 10-4

CRANKSHAFT INSTALLATION 10-5

CRANKCASE ASSEMBLY 10-7



SERVICE INFORMATION

GENERAL INSTRUCTIONS

- This section covers crankcase separation to service the crankshaft.
- The following parts must be removed before separating the crankcase.

Engine	Driven pulley
Carburetor	A.C. generator
Oil pump	Cylinder head/cylinder
Reed valve	
- When the left crankcase must be replaced, remove the following part in addition to the above.
Final reduction removal
- Special tools must be used for crankshaft and crankcase assembly. When separating the crankcase, the bearing will remain in the crankcase and it should be removed. When assembling, drive a new bearing into the crankcase and install a new oil seal.

SPECIFICATIONS

Item	G-DINK 50	
	Standard (mm)	Service Limit (mm)
Connecting rod big end side clearance	—	0.60
Connecting rod big end radial clearance	—	0.04
Crankshaft runout A/B	—	0.15/0.10

SPECIAL TOOLS

Crankcase puller	Bearing outer driver handle A
Universal bearing puller	Bearing outer driver, 42x47mm
Crankcase assembly collar	Bearing driver pilot, 20mm
Crankcase assembly tool	Bearing outer driver, 37x40mm
	Bearing driver pilot, 17mm

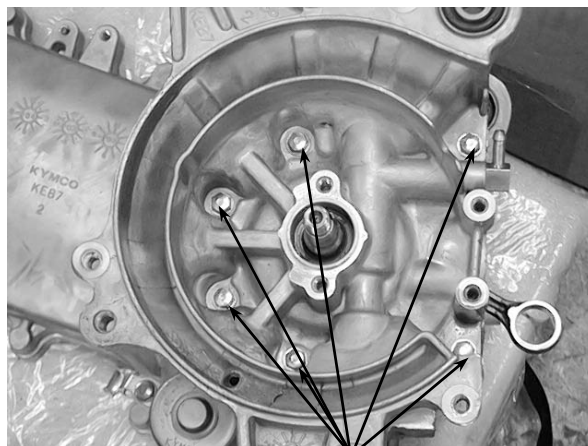
TROUBLESHOOTING

Abnormal engine noise

- Excessive crank journal bearing play
- Excessive crankpin bearing play
- Excessive transmission bearing play

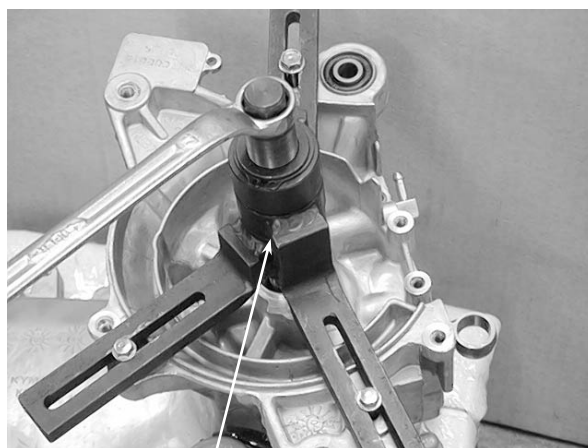
CRANKCASE SEPARATION

Remove the crankcase attaching bolts.



Bolts

Attach the crankcase puller on the right crankcase and remove the right crankcase from the left crankcase.



Crankcase Puller

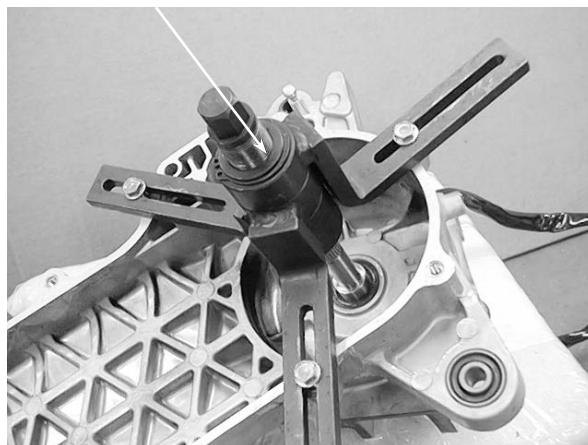
CRANKSHAFT REMOVAL

Attach the crankcase puller on the left crankcase and remove the crankshaft from the left crankcase.

*

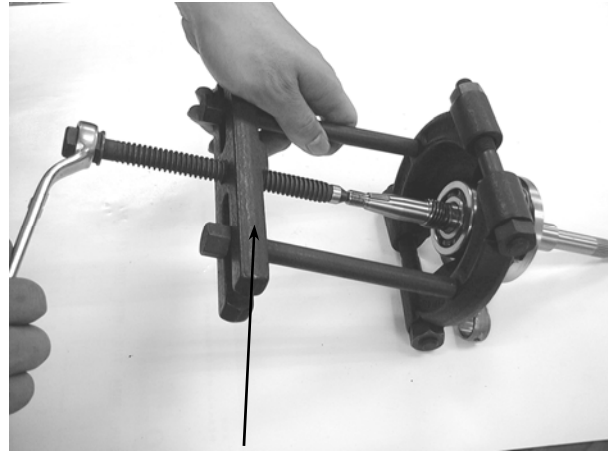
When removing the crankshaft, do it slowly and gently.

Crankcase Puller



Remove the remaining bearing on the crankshaft side using the universal bearing puller.

* When separating the crankcase, the oil seals must be removed. Replace the oil seals with new ones.

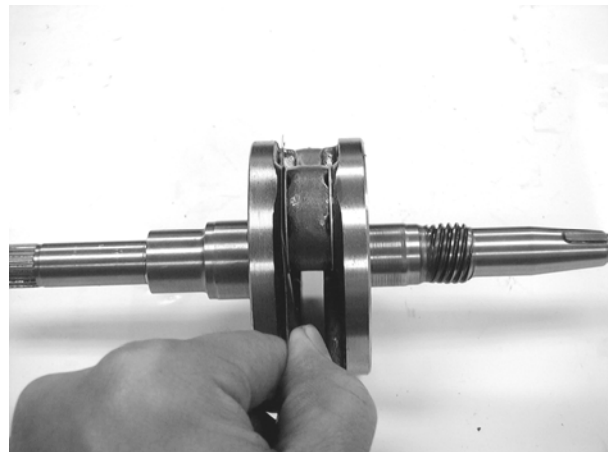


Universal Bearing Puller

CRANKSHAFT INSPECTION

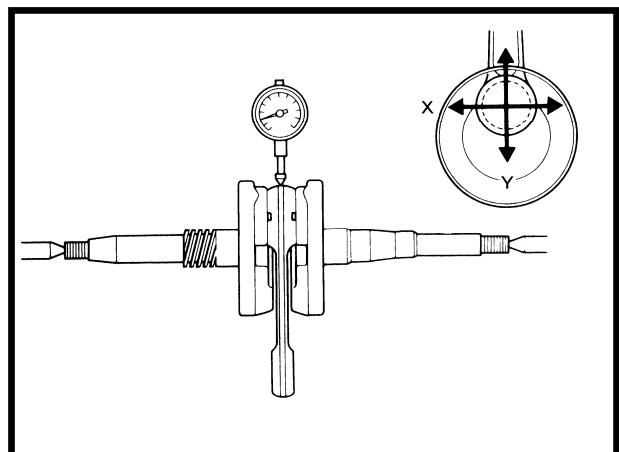
Measure the connecting rod big end side clearance.

Service Limit: 0.6mm replace if over



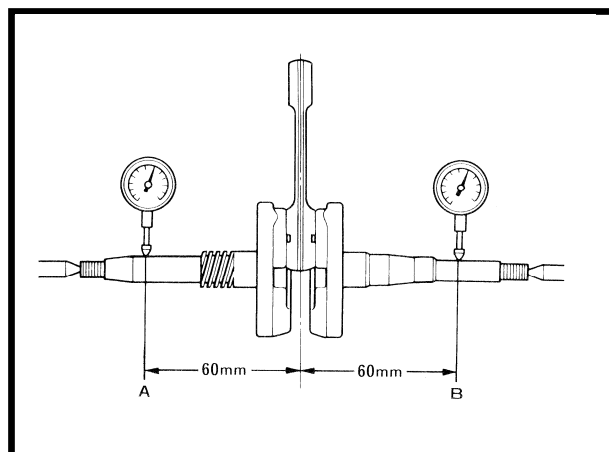
Measure the connecting rod big end radial clearance at two points in the X and Y directions.

Service Limit: 0.04mm replace if over

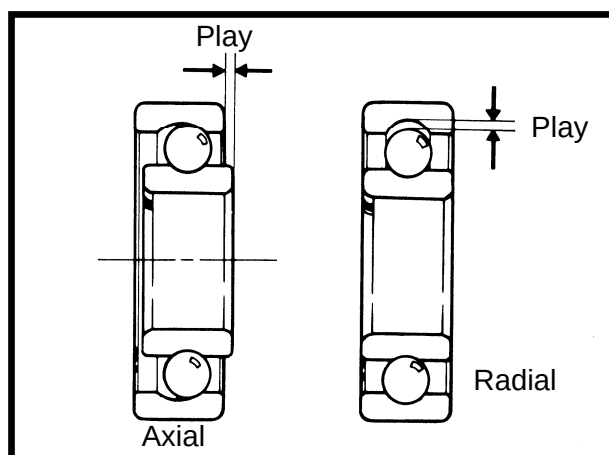


Measure the crankshaft runout.

Service Limit	
A	B
0.150mm replace if over	0.100mm replace if over



Check the crankshaft bearings for excessive play. The bearings must be replaced if they are noisy or have excessive play.



CRANKSHAFT INSTALLATION

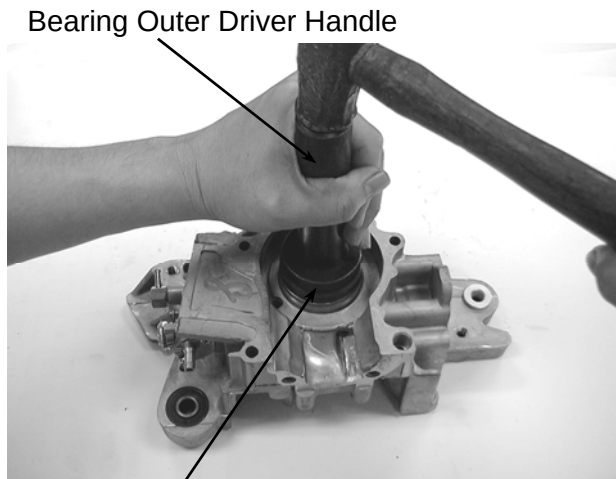
Wash the crankshaft in cleaning solvent and then check for cracks or other faults.

*

- After check, apply clean engine oil to all moving and sliding parts.
- Remove all gasket material from the crankcase mating surfaces. Dress any roughness or irregularities with an oil stone.



Drive a new crankshaft bearing into the right crankcase.



Bearing Outer Driver, 37x40mm
Bearing Driver Pilot, 17mm

Drive a new crankshaft bearing into the left crankcase.



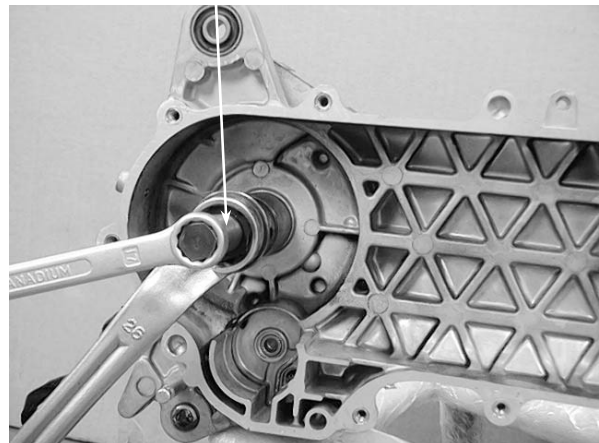
Bearing Outer Driver, 42x47mm
Pilot, 20mm

Install the crankshaft into the left crankcase.

*

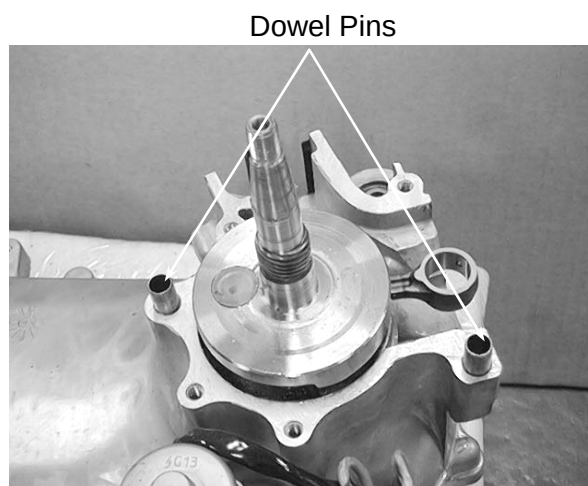
- Apply KYMCO ULTRA motor oil or molybdenum disulfide to the crank-shaft bearings and connecting rod big end.
- Apply grease to the lip of the oil seal and then install it.

Crankcase Assembly Tool



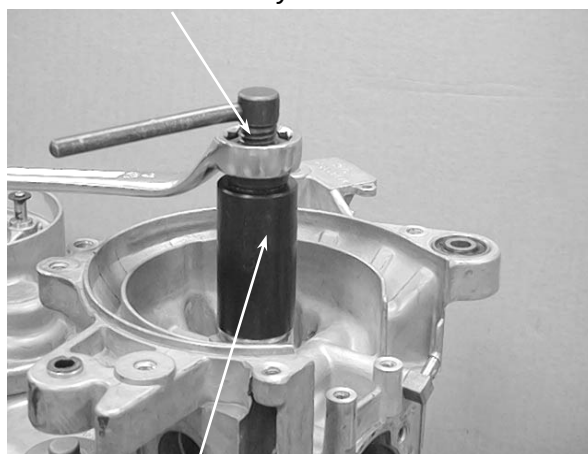
CRANKCASE ASSEMBLY

Install the dowel pins and a new gasket to the crankcase mating surface.



Assemble the crankcase halves.

Crankcase Assembly Tool



The distance between the right crankcase oil seal and crankcase surface is about 12.5 ± 0.5 mm.

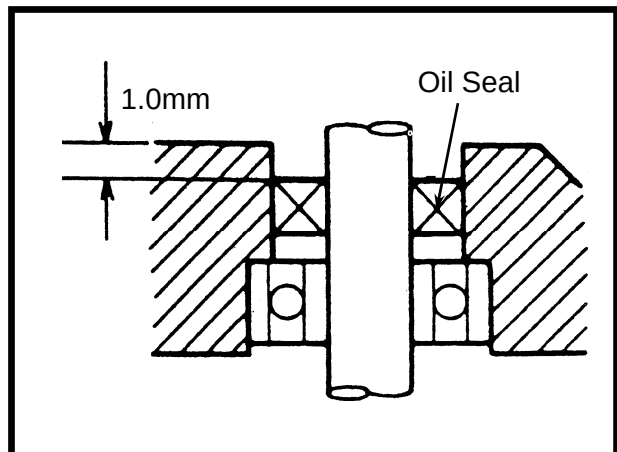
*

When installing the oil seal, be careful to press it with even force.

Oil Seal

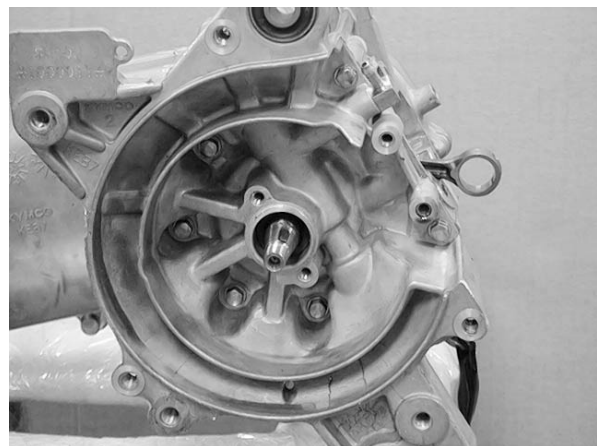


The distance between the left crankcase oil seal and crankcase surface is about 1.0mm.



Install and tighten the crankcase attaching bolts.

* After assembly, check the crankshaft for smooth operation.



CARBURETOR

SERVICE INFORMATION 11- 2

TROUBLESHOOTING..... 11- 2

THROTTLE VALVE DISASSEMBLY 11- 3

THROTTLE VALVE INSTALLATION..... 11- 4

CARBURETOR REMOVAL 11- 5

AUTO BYSTARTER 11- 6

FLOAT CHAMBER 11- 8

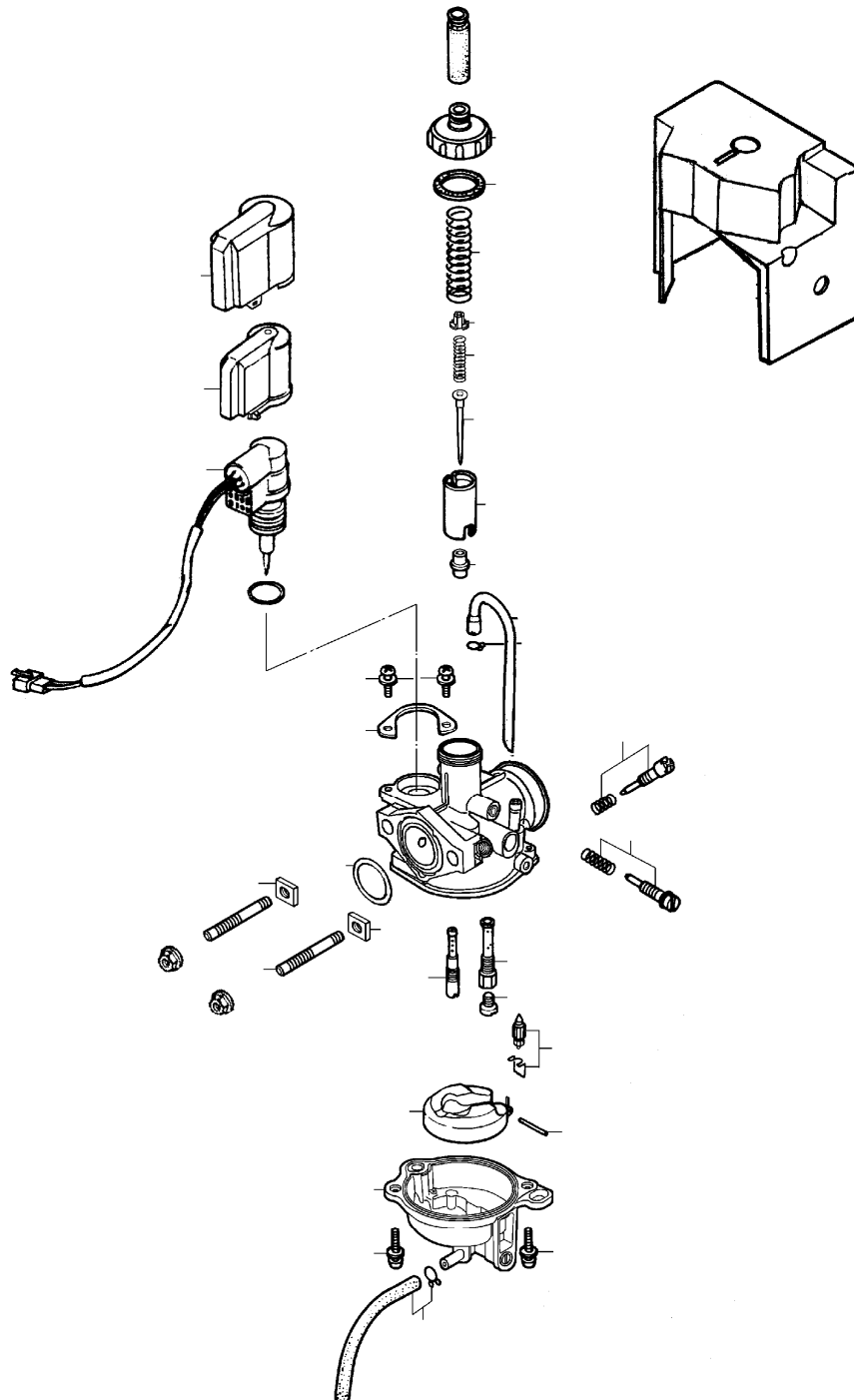
FLOAT LEVEL INSPECTION 11-10

CARBURETOR INSTALLATION 11-11

AIR SCREW ADJUSTMENT 11-11

REED VALVE 11-12

FUEL TANK 11-13



SERVICE INFORMATION

GENERAL INSTRUCTIONS

- When working with gasoline, keep away from sparks and flames..
- Note the locations of O-rings when disassembling and replace them with new ones during assembly.
- All cables, fuel lines and wires must be routed and secured at correct locations.
- Bleed air from the oil lines whenever they are disconnected.

SPECIFICATIONS

	G-DINK 50
Venturi dia.	14mm
Identification number	PB
Float level	8.6mm
Main jet	#75
Slow jet	#35
Air screw opening	1¼ ± ½
Throttle grip free play	2 ~ 6mm

SPECIAL TOOL

Float level gauge

TROUBLESHOOTING

Engine does not start

- No fuel in tank
- Too much fuel getting to cylinder
- Clogged fuel filter
- Clogged air cleaner

Lean mixture

- Clogged fuel jets
- Clogged fuel cap vent
- Clogged fuel filter
- Bent, kinked or restricted fuel line

- Faulty float valve
- Float level too low
- Clogged air cleaner

Engine idles roughly, stalls or runs poorly

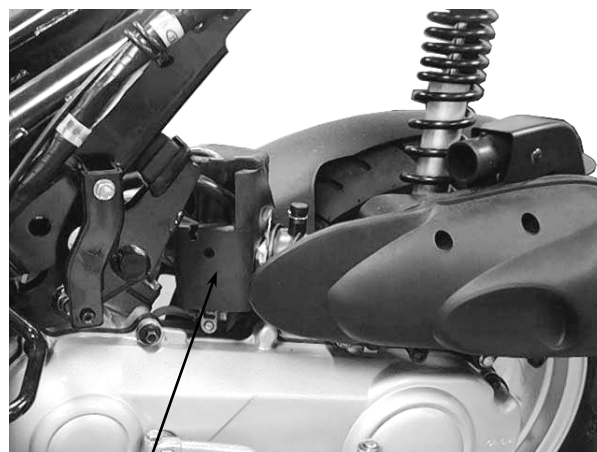
- Incorrect idle speed
- Ignition malfunction
- Compression too low
- Incorrectly adjusted air screw
- Incorrect float level
- Clogged air cleaner
- Intake air leaks
- Fuel contaminated
- Faulty reed valve
- Clogged fuel jets

Rich mixture

- Faulty float valve
- Float level too high
- Clogged air jets

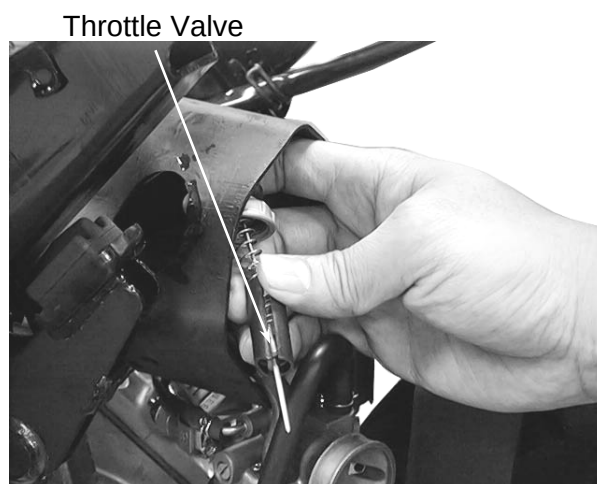
THROTTLE VALVE DIS-ASSEMBLY

Remove the rear carrier.
Remove the met-in box.
Remove the rubber cover.
Loosen carburetor cap and the throttle valve.



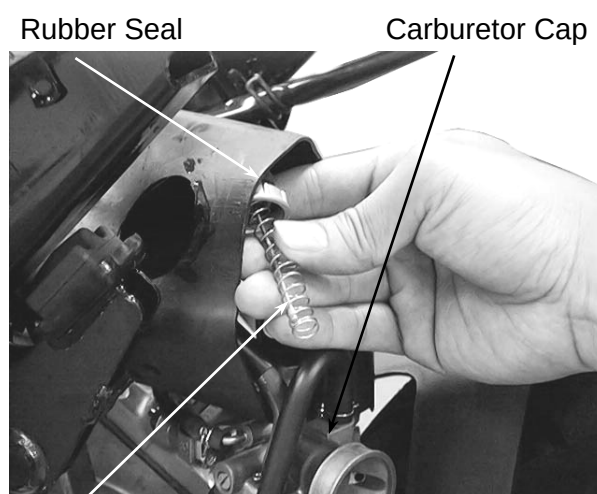
Rubber Cover

Disconnect the throttle cable from the throttle valve.



Throttle Valve

Remove the throttle valve spring, carburetor cap and rubber seal.

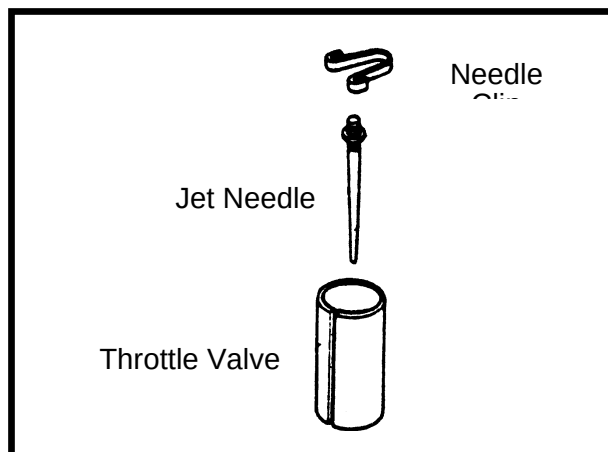


Rubber Seal

Carburetor Cap

Spring

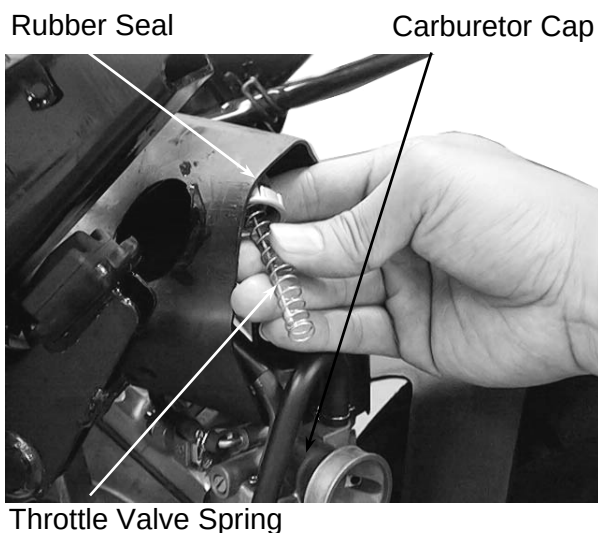
Remove the jet needle by removing the needle clip.
Check the jet needle and throttle valve for wear or damage.



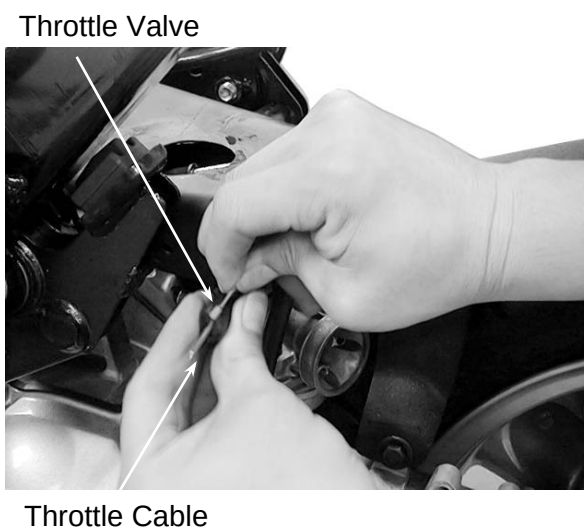
THROTTLE VALVE INSTALLA-TION

Install the jet needle on the throttle valve and secure with the needle clip.

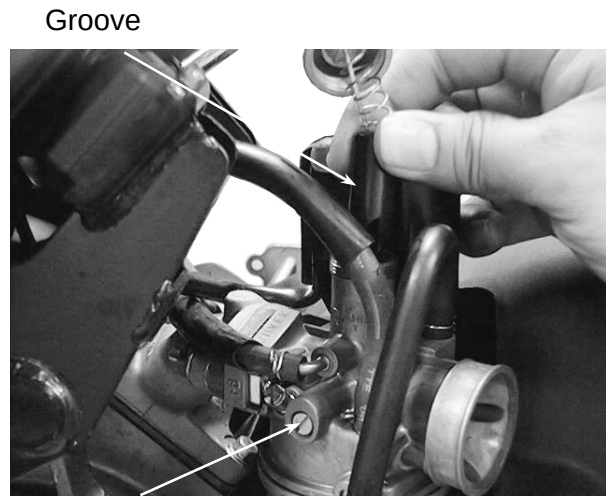
Install the rubber seal on the throttle cable and then install the carburetor cap and throttle valve spring.



Connect the throttle cable to the throttle valve.



Install the throttle valve by aligning the groove in the throttle valve with the throttle stop screw.

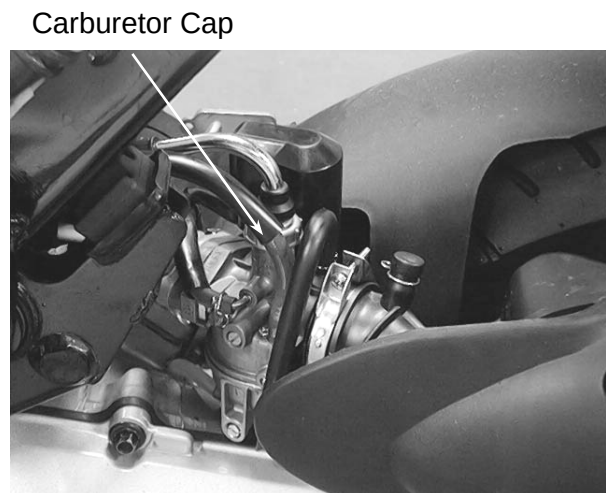


Throttle Stop Screw

Tighten the carburetor cap.
After installation, perform the following adjustments and inspections.

- Throttle cable free play
- Idle speed adjustment

Install the met-in box.



Carburetor Cap

CARBURETOR REMOVAL

Remove the met-in box.
Remove the air cleaner by removing the air cleaner band screw and attaching bolts.
Disconnect the fuel tube.
Loosen the drain bolt to drain fuel from the carburetor.
Disconnect the auto bystarter wire connector.
Remove the two carburetor lock nuts.

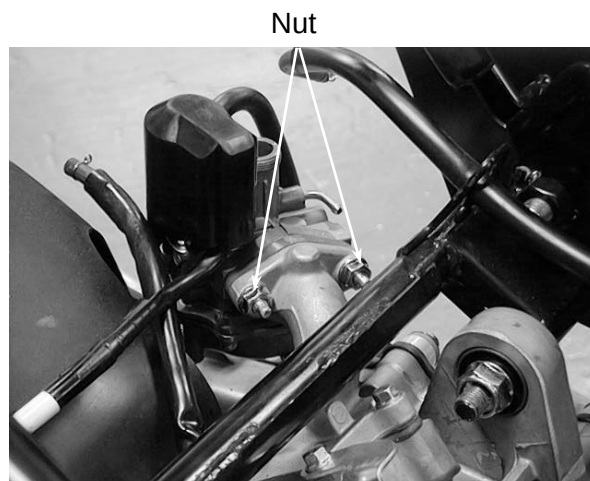
Throttle Cable Auto Bystarter Fuel Tube



Drain Bolt

Band

Remove the carburetor.



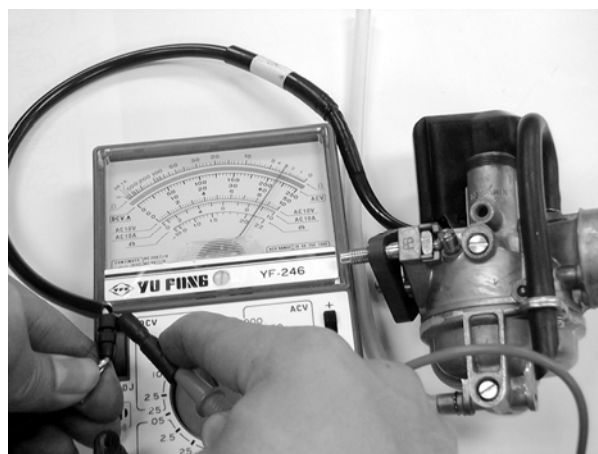
AUTO BYSTARTER

AUTO BYSTARTER INSPECTION

Measure the resistance between the auto bystarter wire terminals.

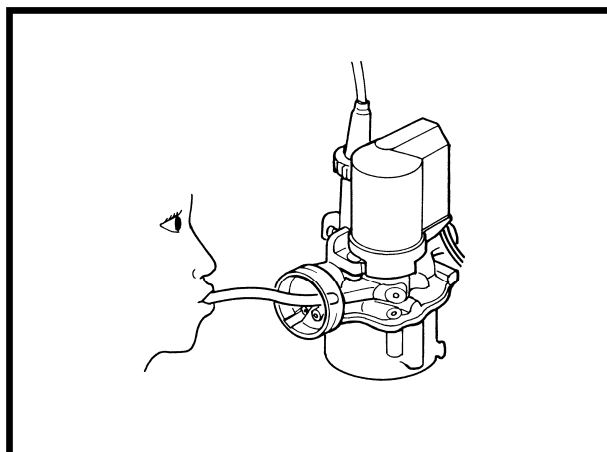
Resistance: 5Ω (10 minutes minimum after stopping the engine)

If the resistance exceeds 5Ω , replace the auto bystarter with a new one.



After the engine stops for 30 minutes, connect a hose to the fuel enriching circuit and blow the hose with mouth.

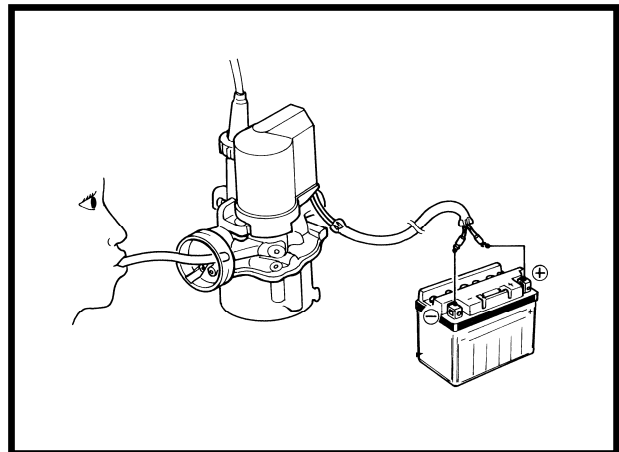
If air cannot be blown into the hose (clogged), the auto bystarter is faulty. Replace it with a new one.



Connect the auto bystarter yellow wire to the battery positive (+) terminal and green/black wire to the battery negative (-) terminal and wait 5 minutes.

Connect a hose to the fuel enriching circuit and blow the hose with mouth.

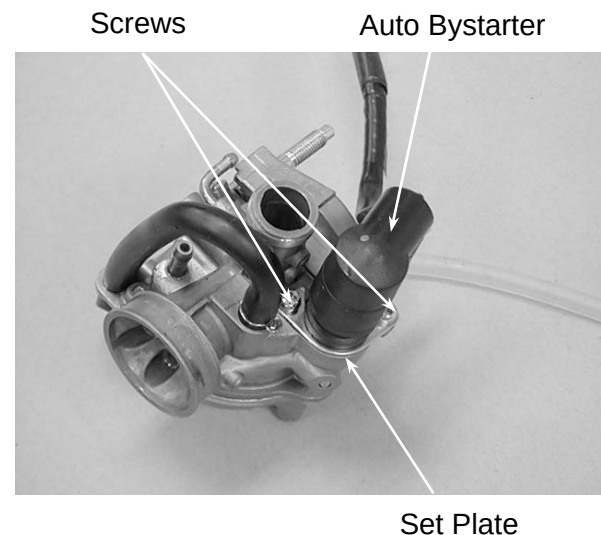
If air can be blown into the hose, the auto bystarter is faulty and replace it with a new one.



AUTO BYSTARTER REMOVAL

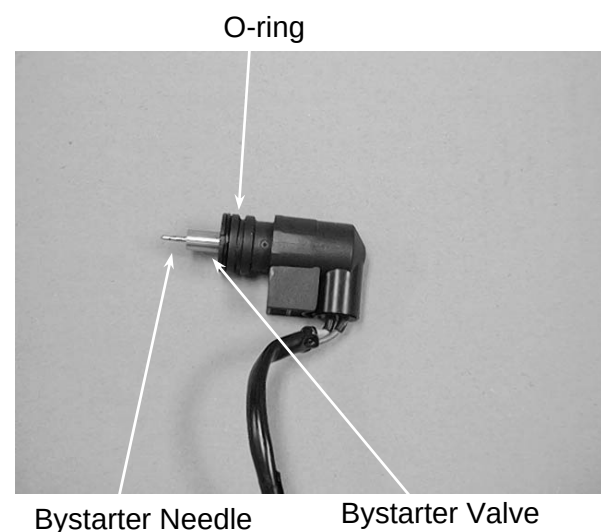
Remove the auto bystarter cover.

Remove the two auto bystarter set plate screws to remove the auto bystarter.



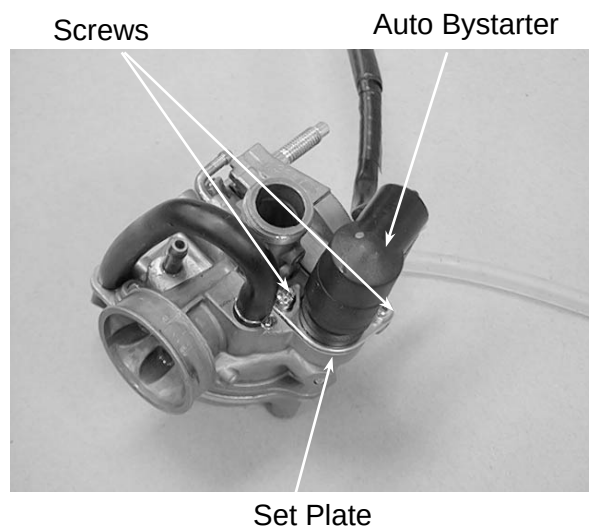
Check the auto bystarter valve and needle for wear or damage.

Check the O-ring for wear or damage.



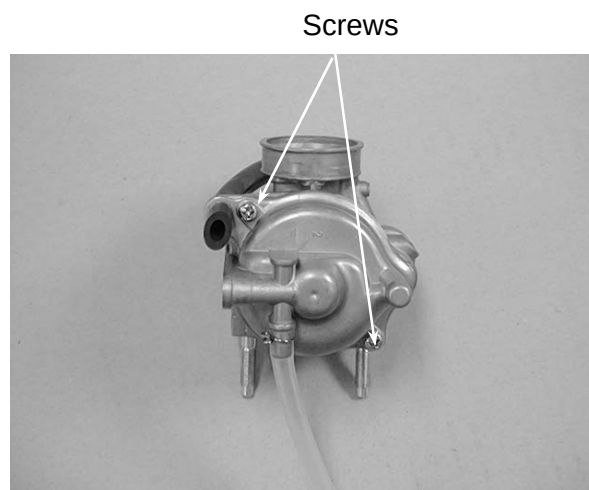
AUTO BYSTARTER INSTALLATION

Install the auto bystarter into the carburetor body until it bottoms..
Install the set plate and then tighten the two screws.

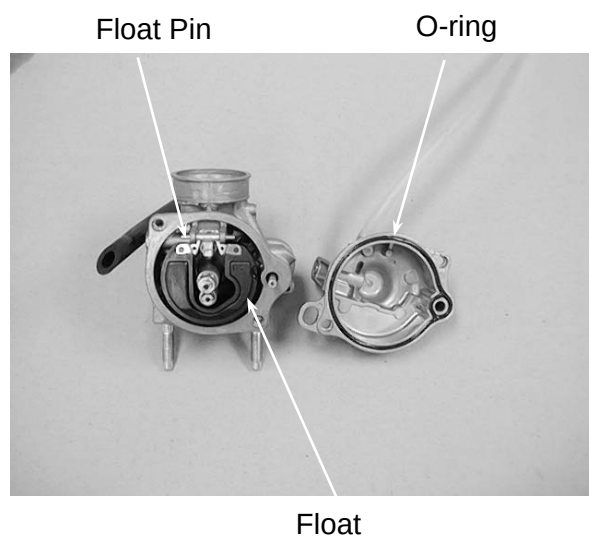


FLOAT CHAMBER

Remove the two float chamber screws and the float chamber.



Remove the screw and O-ring.
Remove the float pin, float and float valve.

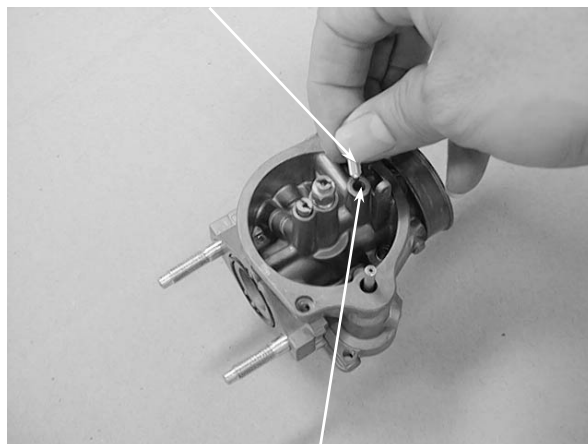


FLOAT/FLOAT VALVE INSPECTION

Inspect the float for damage or fuel inside the float.

Check the float valve seat for wear or damage.

Float Valve



Float Seat

JETS/SCREWS REMOVAL

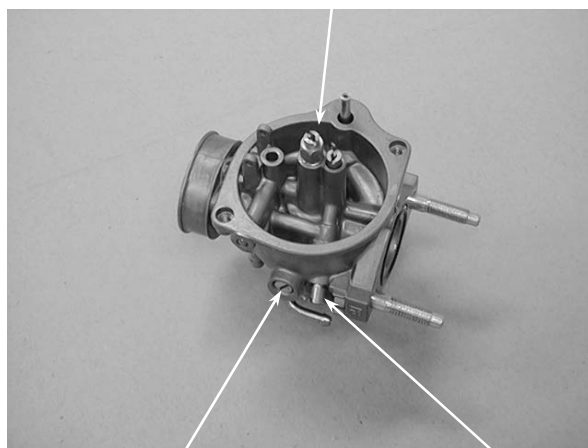
Before removing the throttle stop screw or air screw, record the number of rotations until it seats lightly. Then, remove them.

*

Do not force the air screw against its seat to prevent damage.

Remove the main jet and needle jet holder.

Main Jet

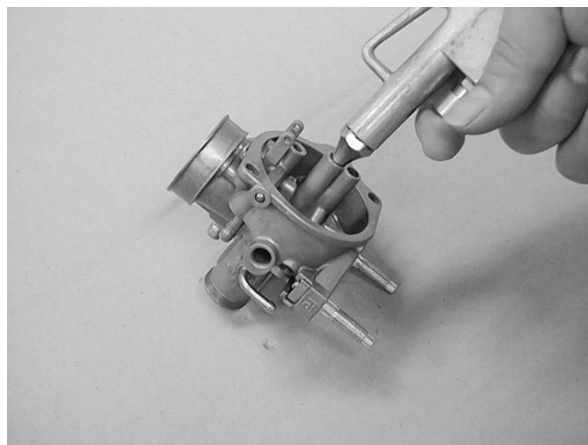


Throttle Stop Screw

Air Screw

CARBURETOR PASSAGES CLEANING

Blow compressed air through all passages of the carburetor body with an air gun.

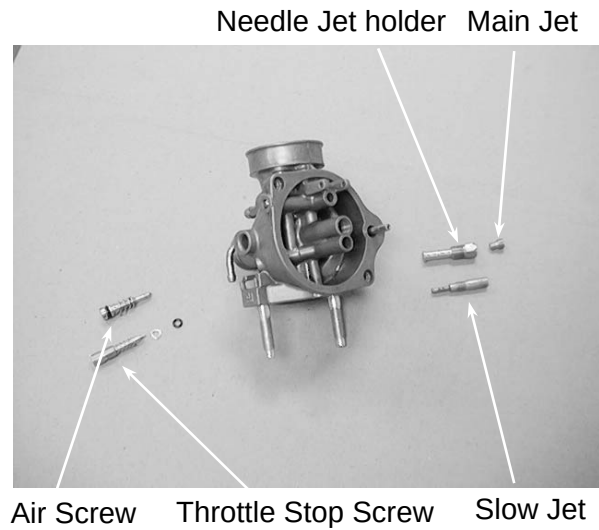


FLOAT CHAMBER ASSEMBLY

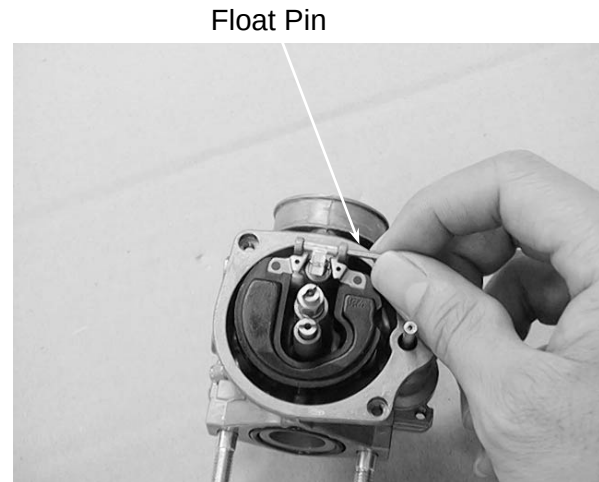
Install the main jet and needle jet holder.
Install the air screw and throttle stop screw according to the rotations recorded.



If the air screw must be replaced, be sure to perform the air screw adjustment again.



Install the float valve, float and float pin.
Tighten the float screw securely.



FLOAT LEVEL INSPECTION

Slightly tilt the carburetor and measure the float level with the float valve just connecting the float arm.

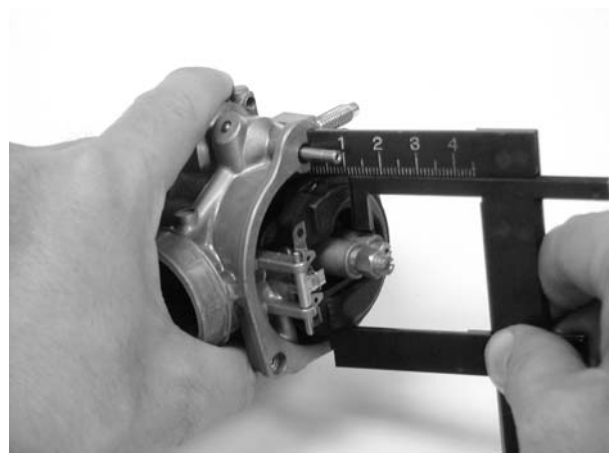
Float Level: 8.6mm

Replace the float if the level is out of the specified level range.

Install the O-ring.

Check the operation of the float and install the float chamber.

Tighten the screws.



CARBURETOR INSTALLATION

- * When installation, do not allow foreign particles to enter the carburetor.

Check the carburetor insulator and O-ring for wear or damage.
Install the carburetor and insulator onto the intake manifold and tighten the two lock nuts.
Connect the fuel tube and auto bystarter wire connector.

- * Route the auto bystarter wire correctly and properly.

Install the carburetor cap.
Install the air cleaner onto the carburetor and tighten the band screw.
Install the met-in box.

AIR SCREW ADJUSTMENT

Remove the met-in box.

- * Warm up the engine before air screw adjustment.

Turn the air screw clockwise until it seats lightly and back it to the specification given.

Air Screw Opening:

: $1\frac{1}{4} \pm \frac{1}{2}$ turns

Start the engine and turn the air screw in or out slowly to obtain the highest engine speed.

- * Do not force the air screw against its seat to prevent damage.

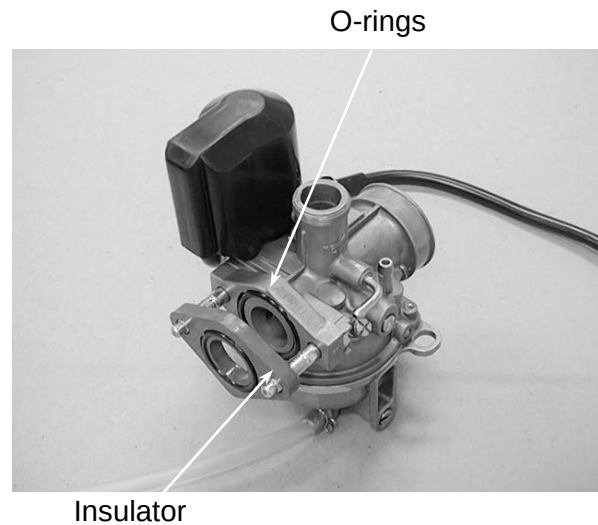
Turn the throttle stop screw to obtain the specified idle speed.

Idle Speed:

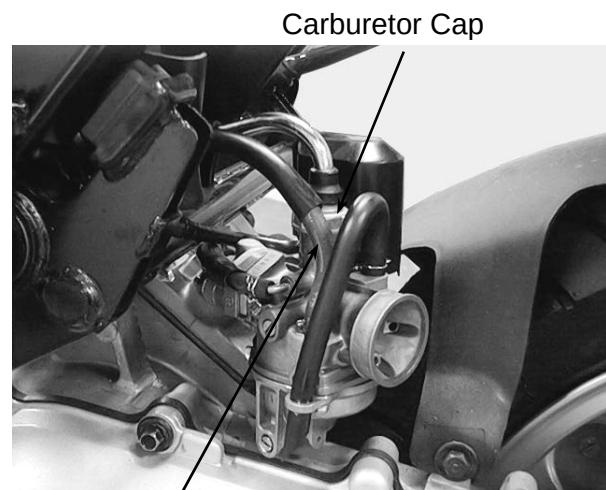
: 1700 ± 100 rpm

Slightly increase the engine speed and make sure that the engine does not miss or run erratic.

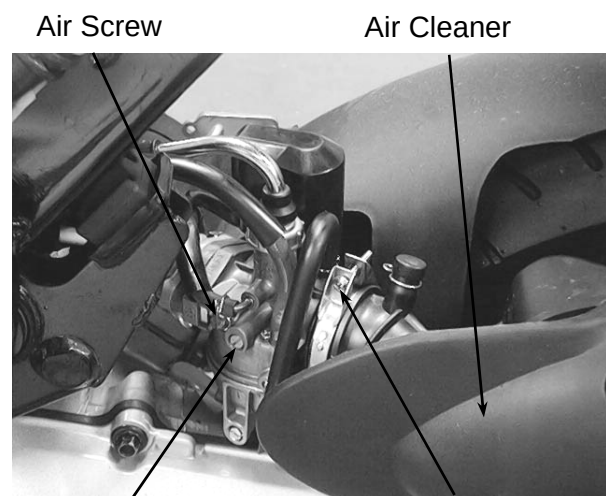
If the adjustment of the air screw within the range of $\pm \frac{1}{2}$ turn makes no difference to the engine performance, check other related items.



Insulator



Fuel Tube



Air Screw

Air Cleaner

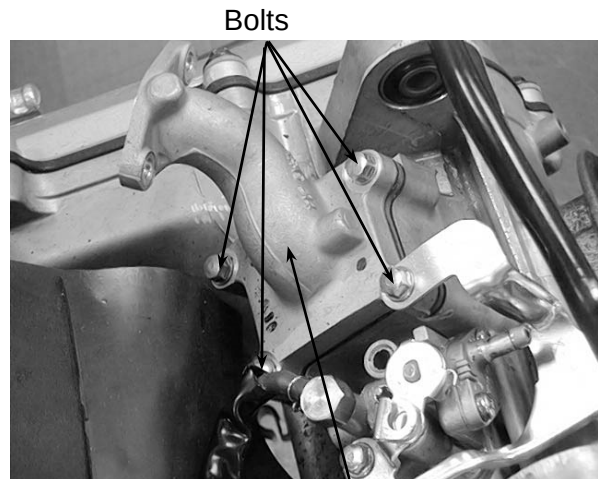
Throttle Stop Screw

Band

REED VALVE

REMOVAL

Remove the rear carrier.
Remove the frame body cover.
Remove the four intake manifold bolts and gasket.
Remove the reed valve and gasket.

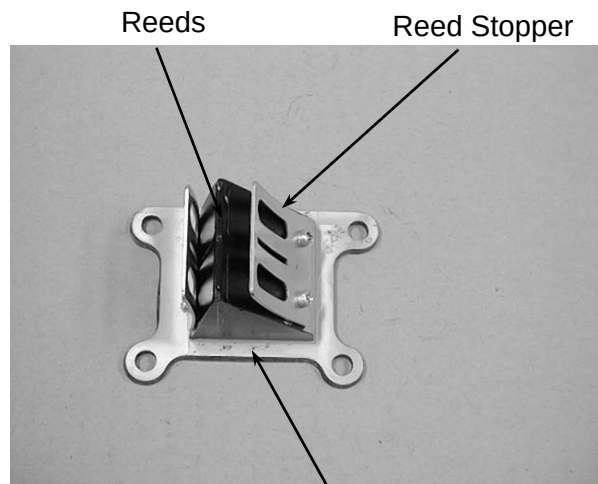


Intake Manifold

INSPECTION

Check the reed valve for damaged or weak reeds.
Check the reed valve seat for cracks, damage or clearance between the seat and reed.
Replace the valve if necessary.

- * Do not disassemble or bend the reed stopper. To do so can cause loss of engine power and engine damage. If any of the stopper, reed or valve seat is faulty, replace them as a unit.



Reed Valve Seat

INSTALLATION

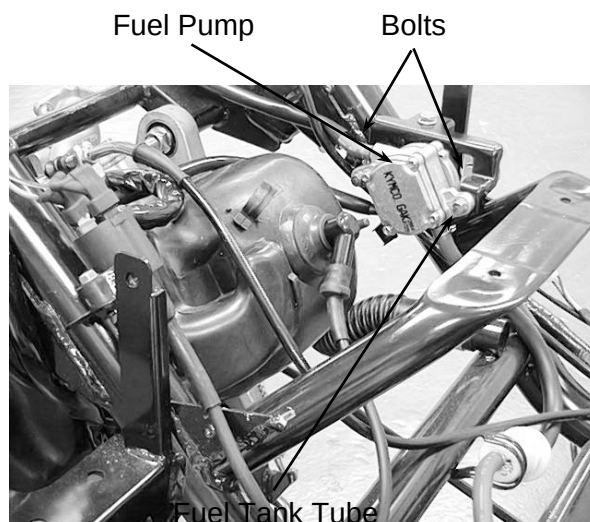
Install the reed valve in the reverse order of removal.

- *
- Install a new gasket with the gasket indentation aligned with the reed valve.
 - After installation, check for intake air leaks.

FUEL TANK

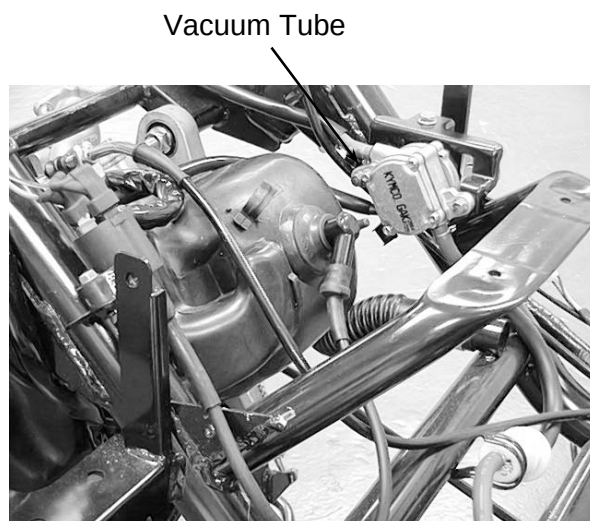
FUEL PUMP REMOVAL

Remove the met-in box.
Remove the frame body cover.
Remove the rear carrier.
Disconnect the fuel pump inlet, outlet and vacuum tubes.
Remove the two fuel pump attaching bolts and the fuel pump.



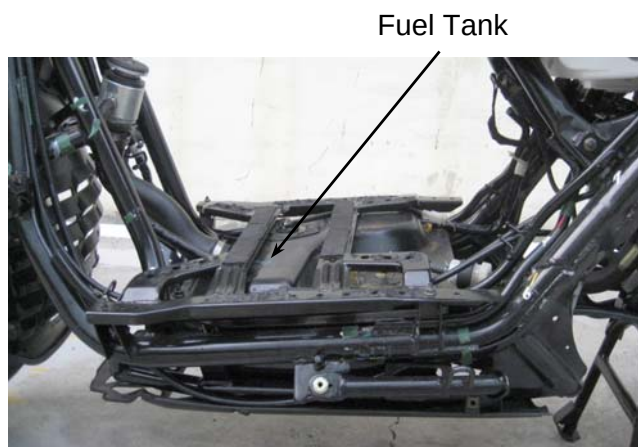
FUEL PUMP INSTALLATION

Install the fuel pump and secure it with the two bolts.
Connect the fuel pump inlet, outlet and vacuum tubes.
Install the seat, met-in box and frame center cover.



FUEL TANK REMOVAL

Remove the floor board.
Remove the leg shield.
Disconnect the fuel unit wire connector.
Remove the fuel tube between the fuel tank and the fuel filler.
Disconnect the fuel vapor tube.
Remove the fuel tank.
The installation sequence is the reverse of removal.



FUEL STRAINER REMOVAL

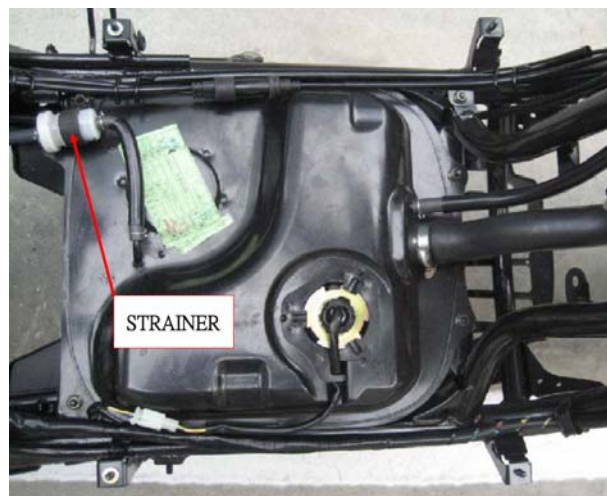
Remove the fuel strainer from the fuel tank.

Inspection

Inspect if the fuel strainer is clogged and clean it with compressed air.

*

- When removing the fuel strainer, do not allow flames or sparks near the working area and drain the residual gasoline into a container.



INSTALLATION

Install the fuel strainer with its arrow mark toward the fuel pump.

**HANDLEBAR/FRONT WHEEL/FRONT BRAKE/
FRONT SHOCK ABSORBER/STEERING STEM**

SERVICE INFORMATION-----	12- 1
TROUBLESHOOTING-----	12- 2
HANDLEBAR -----	12- 3
FRONT WHEEL-----	12- 6
FRONT BRAKE FLUID-----	12- 9
FRONT BRAKE PAD -----	12-11
BRAKE DISC INSPECTION -----	12-12
FRONT SHOCK ABSORBER-----	12-13
STEERING STEM-----	12-14

SERVICE INFORMATION

GENERAL INSTRUCTIONS

- Remove the motorcycle frame covers before removing the front wheel, steering handlebar, front shock absorber and front fork. Jack the motorcycle front wheel off the ground and be careful to prevent the motorcycle from falling down.
- During servicing, keep oil or grease off the brake pads and brake disk.

TORQUE VALUES

Handlebar post	6.0~7.0 kgf-m
Steering stem lock nut	6.0~6.5 kgf-m
Front axle	1.5~2.5 kgf-m
Brake caliper mounting bolt	3~4 kgf-m
Brake caliper bleed screw	0.4~0.7 kgf-m

TROUBLESHOOTING

Hard steering (heavy)

- Excessively tightened steering stem top cone race
- Broken steering balls
- Insufficient tire pressure

Front wheel wobbling

- Bent rim
- Loose front axle
- Bent spoke plate
- Faulty tire
- Improperly tightened axle nut

Steers to one side or does not track straight

- Uneven front shock absorbers
- Bent front fork
- Bent front axle or uneven tire

Soft front shock absorber

- Weak shock springs
- Insufficient damper oil

Poor brake performance

- Worn brake pads
- Contaminated brake pad surface
- Deformed brake disk
- Air in brake system
- Deteriorated brake fluid
- Worn brake master cylinder piston oil seal
- Clogged brake fluid line
- Unevenly worn brake caliper

Front shock absorber noise

- Slider bending
- Loose fork fasteners
- Lack of lubrication

HANDLEBAR

REMOVAL

Remove the lower handlebar cover and front cover.

Remove two bolts and disconnect the brake light switch wire, then remove the rear brake master cylinder.

Remove the two bolts and disconnect the brake light switch wire, then remove the front brake master cylinder.

Remove the inner cover.



Electric starter button Headlight switch

Remove the handlebar lock nut and take out the bolt.

Remove the handlebar.



INSTALLATION

Install the handlebar onto the steering stem and install the handlebar, lock nut and bolt. Tighten the bolt to the specified torque.

Torque: 6.0~6.5 kgf-m



12. HANDLEBAR/FRONT WHEEL/FRONT BRAKE/ FRONT SHOCK ABSORBER/STEERING STEM



G-DINK 50

Install the front and rear master cylinders and connect the brake light switch wires.



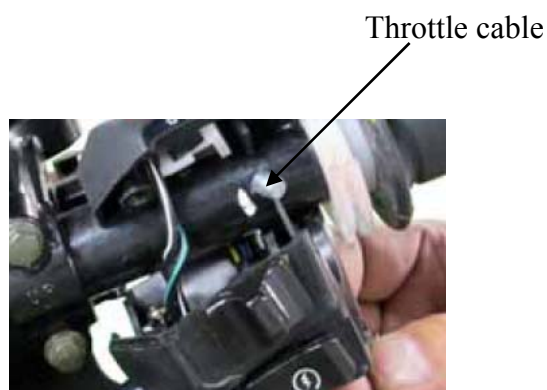
Electric starter button Headlight switch

DISASSEMBLY

Remove two screws attaching to the right handlebar switch.



Disconnect the throttle cable from the throttle grip.
Remove the right handlebar switch.



Remove two screws and then remove the left handlebar switch.



ASSEMBLY

Install the left handlebar switch.

- * Align the pin on the left handlebar switch with the hole on the handlebar.

Install and tighten the two screws securely.

Install the right handlebar switch.

- * Align the pin on the right handlebar switch with the hole on the handlebar.



Lubricate the throttle grip front end with grease and then connect the throttle cable to the throttle grip.

Install and tighten the two screws.

FRONT WHEEL

REMOVAL

Jack the scooter front wheel off the ground.
Remove the bolt and then pull out the axle.
Remove the front wheel and collar.

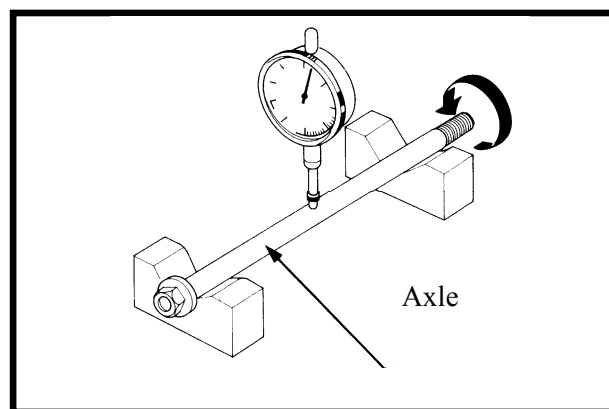


AXLE RUNOUT INSPECTION

Set the axle in V blocks and measure the runout using a dial gauge.

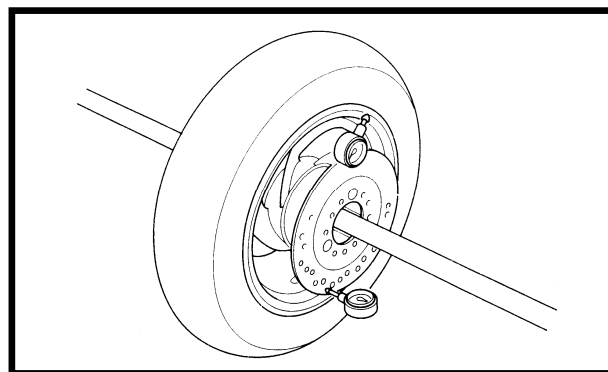
The actual runout is 1/2 of the total indicator reading.

Service Limit: 0.2 mm (0.008 in)



WHEEL RIM INSPECTION

Check the wheel rim runout.



INSTALLATION

Apply grease to the collar, then install the collar onto the wheel.



Dust Seal

DISASSEMBLY

Remove the side collar and dust seal.

Turn the inner race of each bearing with your finger to see if they turn smoothly and quietly. Also check if the outer race fits tightly in the hub.

Replace the bearings if the races do not turn smoothly, quietly, or if they fit loosely in the hub.

Remove the front wheel bearing.



Bearing

Remove the distance collar from wheel.

FRONT BRAKE FLUID

FLUID REPLACEMENT/AIR BLEEDING

*

- A contaminated brake disc or pad reduces stopping power. Discard contaminated pads and clean a contaminated disc with a high quality brake degreasing agent.
- Do not allow foreign material to enter the system when filling the reservoir.
- Avoid spilling brake fluid on painted, plastic or rubber parts. Place a rag over these parts whenever the system is serviced.



BRAKE FLUID DRAINING

Make sure that the master cylinder parallel to the ground before removing the reservoir cover.

Remove two screws.

Remove the reservoir cover, diaphragm plate and diaphragm.

Connect a bleed hose to the bleed valve.



Loosen the bleed valve and apply the brake lever.

Stop operating the brake when no more fluid flows out of the bleed valve.

BRAKE FLUID FILLING/AIR BLEEDING

* Do not mix different types of fluid since they are not compatible.

Fill the master cylinder with DOT 4 to the upper level.

Connect a commercially available brake bleeder to the front caliper bleed valve.

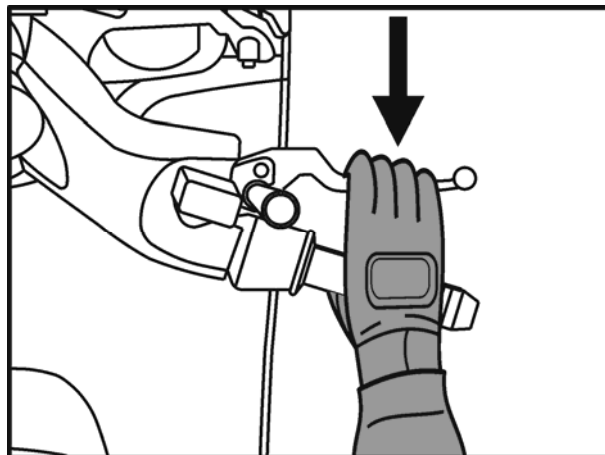
Check the fluid level often while bleeding the brake to prevent air from being pumped into the system.

Pump the brake bleeder and loosen the front caliper bleed valve. Add fluid when the fluid level in the master cylinder is low to prevent drawing air into the system.

Repeat the above procedures until no air bubbles appear in the plastic hose.

Close the front caliper bleeding valve and operate the front brake lever.

If it's still spongy, bleeding the system again.



If the brake bleeder is not available, perform the following procedure.

Pump up the system pressure with the brake lever until there are no air bubbles in the fluid flowing out of the reservoir small hole and lever resistance is felt.

1. Pump the brake lever several times, then squeeze the brake lever all the way and loosen the bleed valve 1/4 turn. Wait several seconds and close the bleed valve.

* Do not release the brake lever until the bleed valve has been closed.

2. Release the brake lever slowly until the bleed valve has been closed. Add fluid when the fluid level in the master cylinder is low to prevent drawing air into the system.
3. Repeat the steps 1 - 2 until there are no air bubbles in the bleed hose.

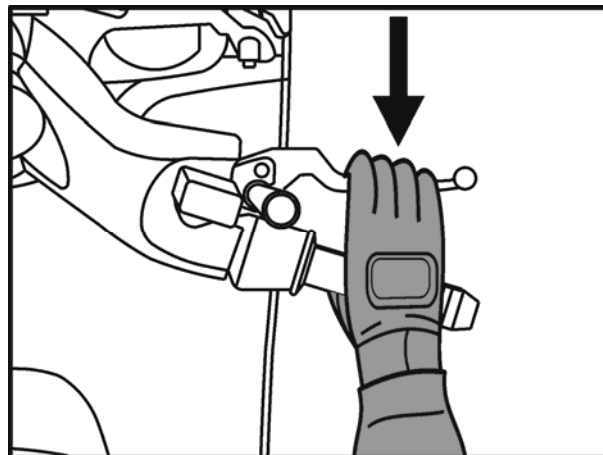
After bleeding air completely, tighten the bleed valve to the specified torque.

Torque: 6 N-m (0.6 kgf-m, 4.3 lbf-ft)

Fill the reservoir to the casting ledge with DOT 4 to the upper level.

Install the diaphragm, set plate and reservoir cover and tighten the screws to the specified torque.

Torque: 2 N-m (0.2 kgf-m, 1.1 lbf-ft)



FRONT BRAKE PAD

BRAKE PAD REPLACEMENT

Remove the caliper mounting bolts, then remove the caliper.



Brake Pads

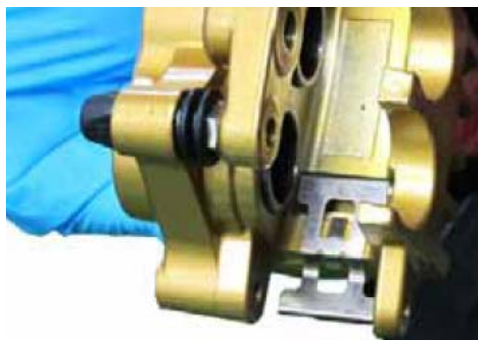
Remove the brake pads.



* Always replace the brake pads in pairs to ensure even disc pressure.

12. HANDLEBAR/FRONT WHEEL/FRONT BRAKE/ FRONT SHOCK ABSORBER/STEERING STEM

Install new pads so that their ends rest on the pad retainer on the brake properly.



Install the front caliper onto the fork leg and then install and tighten the new two caliper mounting bolts to the specified torque.

Torque: 35 N-m (3.5 kgf-m)

Tighten the pad pins to the specified torque.

Torque: 18 N-m (1.8 kgf-m, 13 lbf-ft)



BRAKE DISC INSPECTION

ITEM		STANDARD	SERVICE LIMIT
Brake disc thickness	Front	5±0.1mm (0.2±0.004in)	4.0mm (0.16in)
	Rear	4±0.2mm (0.16±0.004in)	3.5mm (0.14in)



FRONT SHOCK ABSORBER

REMOVAL

Remove the front cover and front fender.
Remove the front brake caliper
Remove the front wheel
Remove the speed wheel sensor bolt and then remove the brake hose guide from right front shock absorber.
Remove two mounting bolts and then remove the right/left front shock absorber.



INSTALLATION

Installation is in the reverse order of removal.

- * Tighten the shock absorber mounting bolt to the specified torque.
- Torque: 2.7 kgf-m (27 N-m, 19.5 lbf-ft)**

INSPECTION

Inspect the following items and replace if necessary.

- Front shock absorber tube bending, damage or wear
- Weak front shock absorber spring
- Damper and damper rod bending
- Oil seal damage or wear



STEERING STEM

REMOVAL

Remove the steering handlebar.
Remove the front brake hose and speed wheel sensor connector from the guide.

Hold the steering stem top cone race and remove the steering stem lock nut by using the special tool.

Special tool:

Lock nut wrench F00002



Lock Nut Wrench



Remove the top cone race and washer.
Remove the steering stem.



12. HANDLEBAR/FRONT WHEEL/FRONT BRAKE/ FRONT SHOCK ABSORBER/STEERING STEM



G-DINK 50

Inspect the ball races, cone races and steel balls for wear or damage. Replace if necessary.

Remove the top balls.

Remove the upper ball race by using a chisel if necessary.



Remove the bottom balls.

Remove the bottom ball race.



Remove the bottom cone race by using a chisel if necessary.

* Be careful not to damage the steering stem.



Install with reverse operation.

REAR WHEEL/REAR BRAKE/REAR SHOCK ABSORBER

SERVICE INFORMATION 13-2

TROUBLESHOOTING 13-2

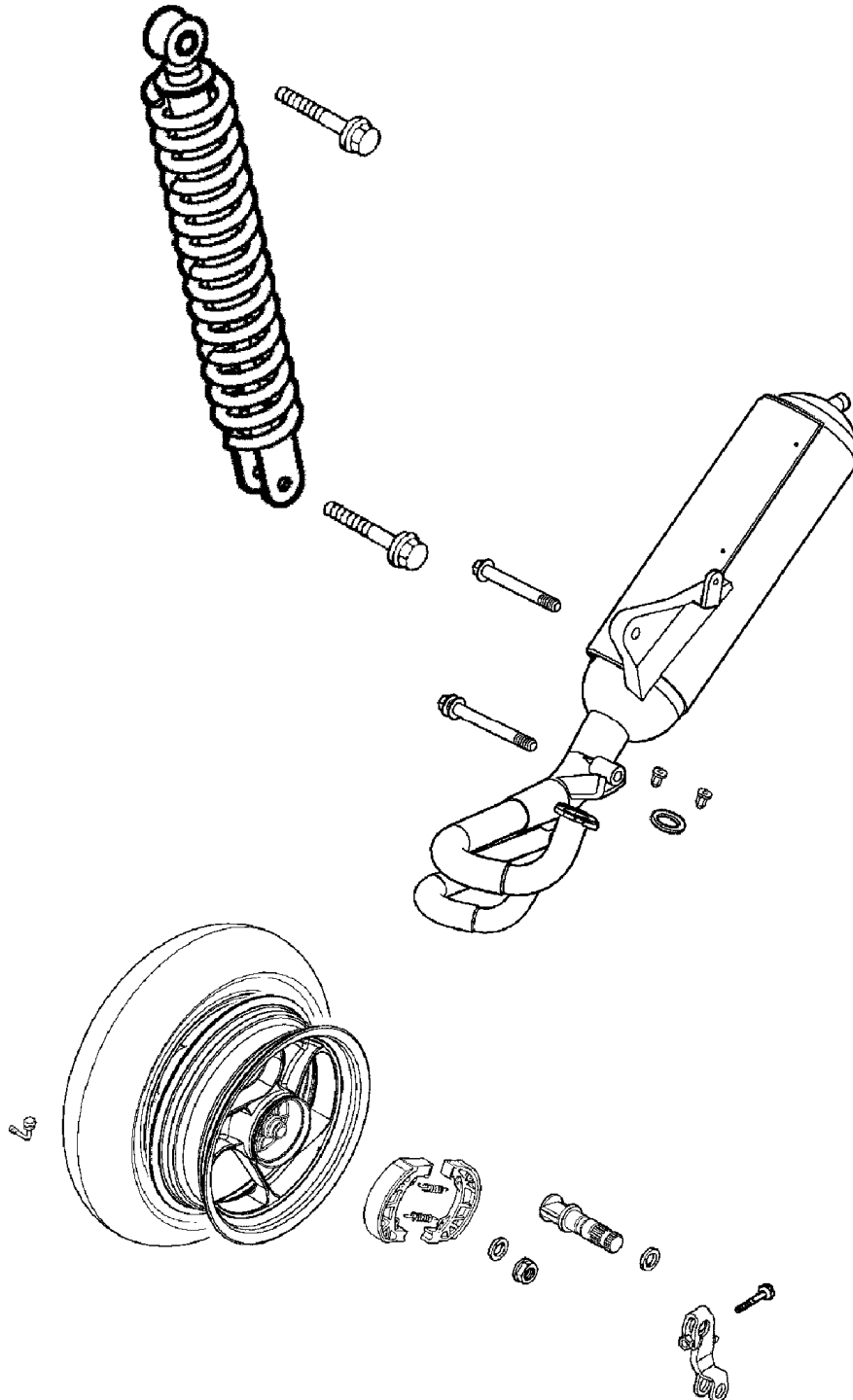
REAR WHEEL 13-3

REAR BRAKE..... 13-4

REAR SHOCK ABSORBER 13-7

13. REAR WHEEL/REAR BRAKE/REAR SHOCK ABSORBER

G-DINK 50



13. REAR WHEEL/REAR BRAKE/REAR SHOCK ABSORBER

G-DINK 50

SERVICE INFORMATION

SPECIFICATIONS

TORQUE VALUES

Rear axle nut 11.0~13.0kg-m
Rear shock absorber upper mount bolt 3.5~4.5kg-m
Rear shock absorber lower mount bolt 2.4~3.0kg-m

SPECIAL TOOL

Rear shock absorber remover
Rear shock absorber compressor

TROUBLESHOOTING

Rear wheel wobbling

- Bent rim
- Faulty tire
- Axle not tightened properly

Soft rear shock absorber

- Weak shock absorber spring

Poor brake performance

- Brake not adjusted properly
- Contaminated brake linings
- Worn brake linings
- Worn brake shoes at cam contacting area
- Worn brake cam
- Improper engagement between brake arm and wear indicator plate

13. REAR WHEEL/REAR BRAKE/REAR SHOCK ABSORBER

G-DINK 50

REAR WHEEL

REMOVAL

Remove the two exhaust muffler joint lock nuts.
Remove the two exhaust muffler lock bolts.
Remove the exhaust muffler.
Remove the rear axle nut to remove the rear wheel.

Rear Axle Nut



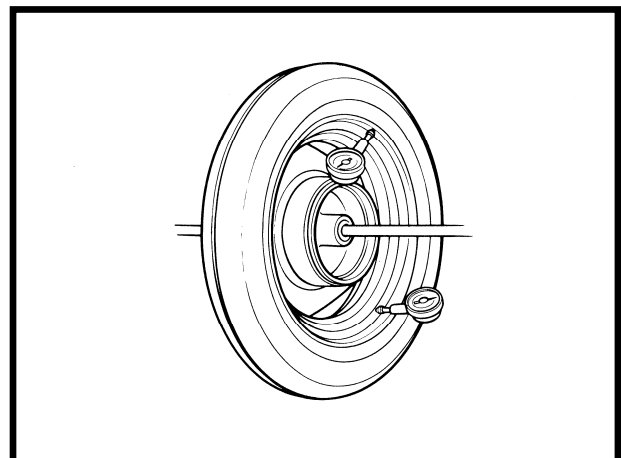
INSPECTION

Measure the rear wheel rim runout.

Service Limits:

Radial : 2.0mm replace if over

Axial : 2.0mm replace if over



INSTALLATION

Install the rear wheel and apply SAE30# engine oil to the axle threads. Then, tighten the rear axle nut.

Torque values:

Rear axle nut: 11.0~13.0kg-m

Rear Axle Nut



13. REAR WHEEL/REAR BRAKE/REAR SHOCK ABSORBER

G-DINK 50

REAR BRAKE

Remove the rear wheel.
Inspect the rear brake drum.
Measure the rear brake drum I.D.

Service Limit: 95.5mm replace if over

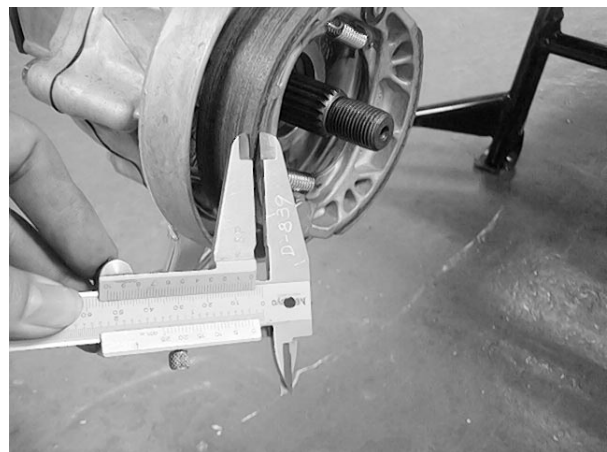


BRAKE LINING INSPECTION

Measure the brake lining thickness.
Service Limit: 2.0mm replace if below

*

Keep oil or grease off the brake linings.

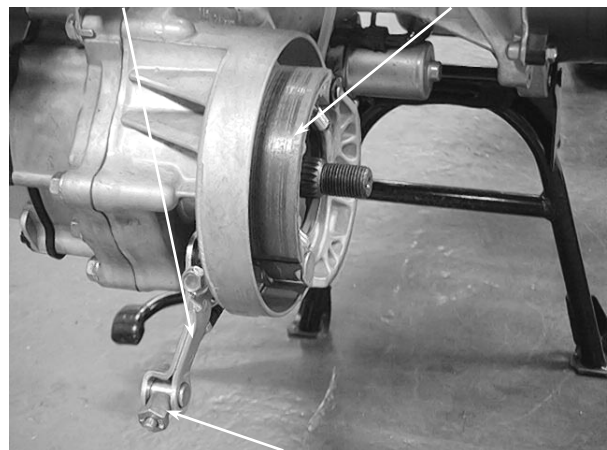


REAR BRAKE DISASSEMBLY

Remove the rear brake adjusting nut and disconnect the rear brake cable.
Remove the rear brake shoes.

Brake Arm

Brake Shoes



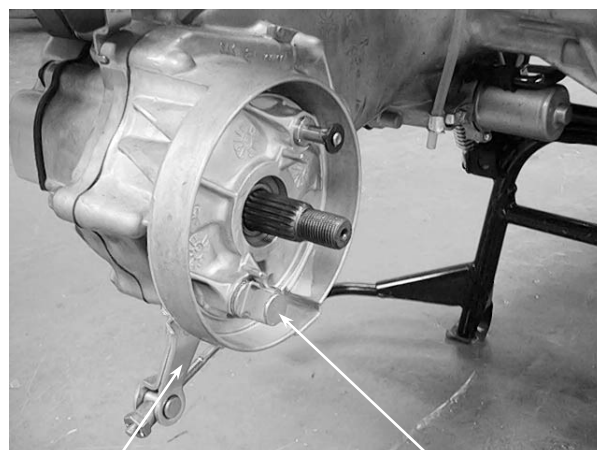
Adjusting Nut

13. REAR WHEEL/REAR BRAKE/REAR SHOCK ABSORBER

G-DINK 50

Remove the brake cam bolt to remove the brake arm, wear indicator plate and felt seal.

Remove the. brake arm.



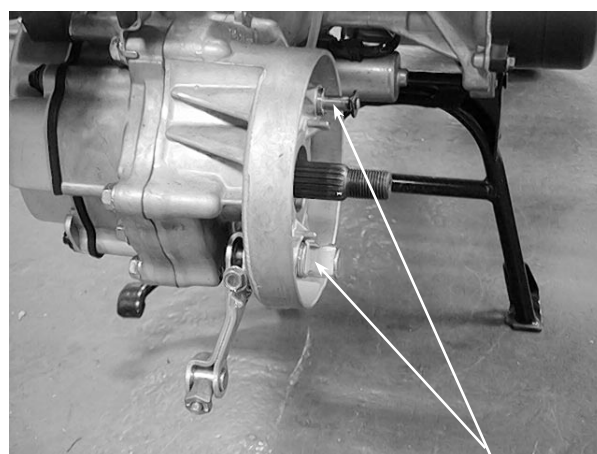
Brake Arm

Brake Cam

REAR BRAKE ASSEMBLY

Apply grease to the anchor pin and brake shoe moving parts.

Apply grease to the brake cam and install it.



Grease

Apply engine oil to the felt seal and install it to the brake cam.

Install the wear indicator plate.

*

Align the wide tooth of the wear indicator plate with the wide groove on the brake cam.

Install the brake arm onto the brake cam.

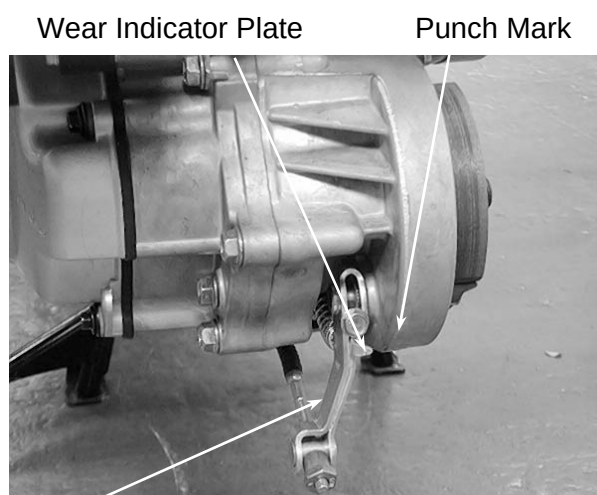
*

Align the punch mark on the brake arm with the scribed line on the brake cam.

Install and tighten the brake arm bolt.

Install the brake arm return spring.

Install the brake shoes.



Wear Indicator Plate

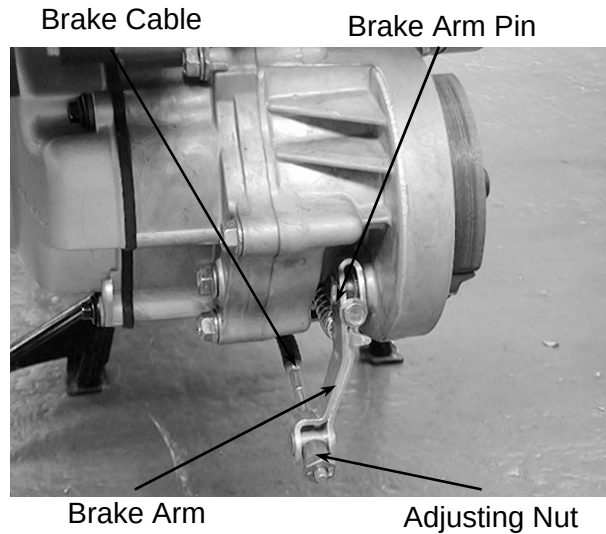
Punch Mark

Brake Arm

13. REAR WHEEL/REAR BRAKE/REAR SHOCK ABSORBER

G-DINK 50

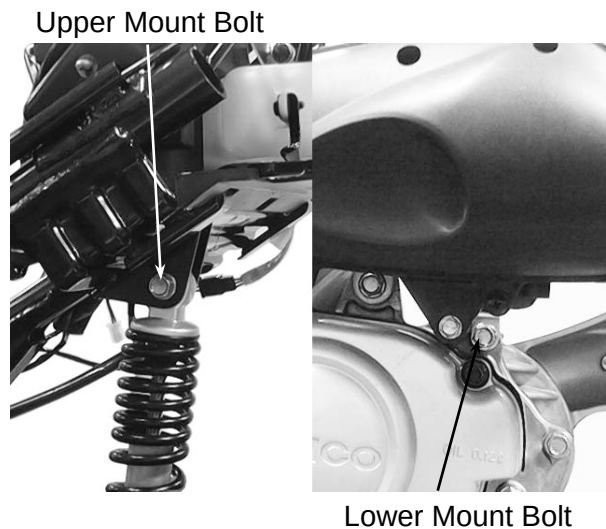
Install the brake arm pin.
Connect the brake cable and install the adjusting nut.
Install the rear wheel.
Adjust the rear brake lever free play.



REAR SHOCK ABSORBER

REMOVAL

Remove the front cover.
Remove the met-in box.
Remove the air cleaner case.
Remove the rear shock absorber upper and lower mount bolts to remove the rear shock absorber.



INSTALLATION

Install the rear shock absorber.
Install the rear shock absorber upper mount bolt and then install the lower mount bolt.

Torque:

Upper Mount Bolt: 3.5~4.5kg-m

Lower Mount Bolt: 2.4~3.0kg-m

Install the frame body cover.

