

# SERVICE MANUAL

Product: Daelim S4 Four Eddy 50 4-Stroke Power Motorcycle Service Repair Workshop Manual  
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**S4** *FOUR*

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## CONTENTS

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GENERAL	SERVICE INFORMATION	1
	INSPECTIONS / ADJUSTMENTS	2
	EXTERNAL PARTS	3
ENGINE	LUBRICATION SYSTEM	4
	FUEL SYSTEM	5
	ENGINE REMOVAL/INSTALLATION	6
	LH. CRANK CASE COVER / KICK STARTER / CONTINUOUSLY VARIABLE TRANSMISSION	7
	AC GENERATOR	8
	CYLINDER HEAD / VALVE	9
	CYLINDER / PISTON	10
	TRANSMISSION / CRANKSHAFT / CRANKCASE	11
FRAME	FRONT WHEEL / FRONT FORK / STEERING / BRAKE	12
	REAR WHEEL / REAR BRAKE / REAR CUSHION	13
ELECTRICAL SYSTEM	CHARGING SYSTEM	14
	IGNITION SYSTEM	15
	STARTER SYSTEM	16
	LIGHTS / SWITCHES / HORN	17
	TROUBLE SHOOTING	18
	WIRING DIAGRAM	19



**EDDY**  
*50 4-Stroke Power*

## 1. SERVICE INFORMATION

SERIAL NUMBER LOCATION . . . . .	1-1	LUBRICATION OIL . . . . .	1-6
SPECIFICATIONS . . . . .	1-2	WIRING DIAGRAM . . . . .	1-7
TWIST TORQUE . . . . .	1-4	GENERAL SAFETY . . . . .	1-11
SYMBOLS / ABBREVIATIONS . . . . .	1-5	CAUTION WHEN WIRING . . . . .	1-15

1

### SERIAL NUMBER LOCATION



ENGINE SERIAL NUMBER LOCATION

FRAME SERIAL NUMBER LOCATION

## SPECIFICATION

	ITEM	SPECIFICATION
DIMENSIONS	OVERALL LENGTH	1.790mm
	OVERALL WIDTH	670mm
	OVERALL HEIGHT	1.102mm
	WHEEL BASE	1.250mm
	SEAT HEIGHT	750mm
	GROUND CLEARANCE	120mm
	DRY WEIGHT	94kg
	GROSS WEIGHT	224kg
FRAME	TYPE	Underbone
	FRONT SUSPENSION	Telescopic
	REAR SUSPENSION	Swing Arm
	FRONT TIRE SIZE/TYPE	3.50 -10 51J
	REAR TIRE SIZE/TYPE	3.50 -10 51J
	TIRE PRESSURE 1 person FRONT	2.00kg/cm <sup>2</sup>
	REAR	2.00kg/cm <sup>2</sup>
	2 persons FRONT	2.00kg/cm <sup>2</sup>
	REAR	2.25kg/cm <sup>2</sup>
	FRONT BRAKE	-Hydraulic
	REAR BRAKE	-Mechanical Drum
	FUEL TANK CAPACITY Full capacity	5.0L
	Reserve capacity	1.5L
	CASTER ANGLE	27°
ENGINE	TYPE	Air cooled 4cycle SOHC engine
	CYLINDERS, ARRANGEMENT	1(single cylinder), front angle 90 °
	BORE X STROKE	39.0 x 39.5mm
	DISPLACEMENT	49.5cc
	COMPRESSION RATIO	10.5 : 1
	VALVES	SOHC chain drive
	ENGINE OIL CAPACITY	0.85L (Full capacity)
		0.70L (at changing)
	TRANSMISSION OIL CAPACITY	0.12L (Full capacity)
	LUBRICATION TYPE	Forced pressure splash type
	AIR CLEANER TYPE	Paper filter
	COMPRESSION PRESSURE	10kg/cm <sup>2</sup> (600rpm)
	INTAKE VALVE IN VALVE OPEN	0 °BTDC
	CLOSE	25 °ABDC
	EX VALVE OPEN	33 °BBDC
	CLOSE	0 °ATDC
	VALVE CLEARANCE INTAKE	0.1mm
	EXHAUST	0.1mm

	ITEM	SPECIFICATION
CARBURETOR	TYPE/VENTURY BORE	CV type(vacumm)/ 16mm
	MODEL MARK	PD19J
	CHOKE TYPE	Auto-bystarter
	MAIN JET	#110
	PILOT SCREW REVERSE REVOLUTION SPEED	1 3/4
	FLOAT LEVEL	11mm
	IDLE SPEED	1,700 ± 100 rpm
DRIVE TRAIN	CLUTCH TYPE	Automatic Transmission(V-belt type)
	PRIMARY REDUCTION	3.533
	SECONDARY REDUCTION	3.714
ELECTRICAL SYSTEM	IGNITION SYSTEM	AC-CDI
	IGNITION TIMING F MARK	BTDC 14 °
	BATTERY CAPACITY	12V 6Ah
	SPARK PLUG	CR6HSA
	SPARK PLUG GAP	0.6~0.7mm
	FUSE CAPACITY	15A
	STARTING SYSTEM	STARTER MOTOR / KICK
	HEADLIGHT(HIGH / LOW)	12V 35 / 35W
	WINKER LIGHT(HIGH/LOW)	12V 10W
	TAIL/ STOP LIGHT	12V 21 / 5W
	HIGH-BEAM PILOT LAMP	12V 3W
	WINKER PILOT LAMP	12V 3W X 2
	SPEEDOMETER LAMP	12V 1.7W X 2

## SERVICE INFORMATION

# TORQUE VALUES

## ENGINE

ITEM	Q'TY	THREAD DIA (mm)	TORQUE VALUE	REFERENCE
TAPPET ADJUSTING ROLL CAP	1	30	1.5 kgf · m	Apply the engine oil
OIL DRAIN PLUG BOLT	1	12	2.5 kgf · m	
VALVE ADJUST SCREW LOCK NUT	2	5	1.1 kgf · m	
CYLINDER HEAD BOLT	2	6	1.1 kgf · m	
FLYWHEEL NUT	1	12	5.5 kgf · m	
DRIVE FACE NUT	1	12	5.5 kgf · m	
CLUTCH OUTER BOLT	1	10	4.0 kgf · m	
SPARK PLUG	1	10	1.2 kgf · m	
DRIVE PLATE	1	28	5.5 kgf · m	Apply the engine oil
CAM SHAFT HOLDER NUT	4	7	2.0 kgf · m	
CAM CHAIN TENSIONER FLANGE BOLT	2	6	1.0 kgf · m	
CAM CHAIN TENSIONER PAN SCREW	1	6	0.4 kgf · m	
CYLINDER HEAD COVER BOLT	4	6	1.1 kgf · m	
MISSION COVER BOLT	8	6	1.2 kgf · m	
MISSION COVER DRAIN BOLT	1	8	1.0 kgf · m	
MISSION COVER CHECK BOLT	1	8	0.9 kgf · m	
COOLING FAN BOLT	3	6	1.0 kgf · m	
STARTER MOTOR FLANGE BOLT	2	6	0.9 kgf · m	

## FRAME

ITEM	Q'TY	THREAD DIA (mm)	TORQUE VALUE	REFERENCE
STEERING LOCK NUT	1	26	7.0 kgf · m	
STEERING TOP NUT	1	26	0.25 kgf · m	
HANDLE BAR LOCK NUT	1	10	4.5 kgf · m	
FRONT AXLE NUT	1	12	6.0 kgf · m	
FRONT CALIPER BRACKET BOLT	1	10	3.0 kgf · m	
FRONT MASTER CYLINDER HOLDER BOLT	2	6	1.2 kgf · m	
FRONT DISK PLATE BOLT	3	8	4.25 kgf · m	
FRONT FORK BOLT	2	22	2.25 kgf · m	
REAR WHEEL AXLE NUT	1	16	12 kgf · m	
REAR CUSHION UPPER BOLT	1	8	4.0 kgf · m	
REAR CUSHION UNDER BOLT	1	8	4.0 kgf · m	
REAR CUSHION UPPER METAL LOCK NUT	1	10	3.5 kgf · m	
ENGINE HANGER UPPER BOLT	1	10	4.5 kgf · m	
MAIN STAND BOLT	1	10	4.0 kgf · m	
SIDE STAND PIVOT SCREW	1	10	1.5 kgf · m	
SIDE STAND PIVOT NUT	1	10	4.5 kgf · m	

Torque values listed above are for specific tightening points. Torque values for other items are listed in the following table.

ITEM	TORQUE VALUE	ITEM	TORQUE VALUE
5mm BOLT, NUT	0.5 kgf · m	5mm SCREW	0.4 kgf · m
6mm BOLT, NUT	1.0 kgf · m	6mm SCREW	0.9 kgf · m
8mm BOLT, NUT	2.2 kgf · m	6mm SCREW BOLT, NUT	1.2 kgf · m
10mm BOLT, NUT	3.5 kgf · m	8mm SCREW BOLT, NUT	2.7 kgf · m
12mm BOLT, NUT	5.5 kgf · m	10mm SCREW BOLT, NUT	4.0 kgf · m



## SYMBOLS / ABBREVIATIONS














The following symbols are used in this manual to represent job-related warnings or cautions.

SYMBOL	MEANING	SYMBOL	MEANING
WARNING	Indicates dangerous area. Serious accident may result if instructions are not followed.	CAUTION	Indicates important work. Minor injury or vehicle part damage may result if instruction are not followed.
		NOTE	Indicates general safety matters. Provides safety and appropriate handling procedures.

The following abbreviations are used in this manual.

ASS'Y	ASSEMBLY
LH.	Left
RH.	Right

The following symbols indicate oil adding, oil change, or parts.

SYMBOL	CAUTION
	Use recommended engine oil, unless otherwise specified.
	Use molybdenum oil solution (mixture of the engine oil and molybdenum grease with the ratio 1:1)
	Use multi-purpose grease (Lithium based multi-purpose grease NLG #2 or equivalent)
	Use molybdenum disulfide grease (containing more than 3% molybdenum disulfide, NLGI #2 or equivalent)
	Use molybdenum disulfide paste containing more than 40% molybdenum disulfide, NLGI #2 or equivalent)
	Use silicone grease
	Apply a locking agent. Use the agent of the middle strength, unless otherwise specified
	Apply sealant
	Replace the parts with new ones before assembly
	Use brake fluid, DOT3 or DOT4. Use the recommended brake fluid, unless otherwise specified
	Use Fork or Suspension Fluid
	Use special tool
	Use option tool. These tools are obtained as you order parts.
( 3-1 )	Indicates reference page. (Example : Refer to page 3-1)

Special grease, etc. that do not correspond to the above are indicated without using symbols.

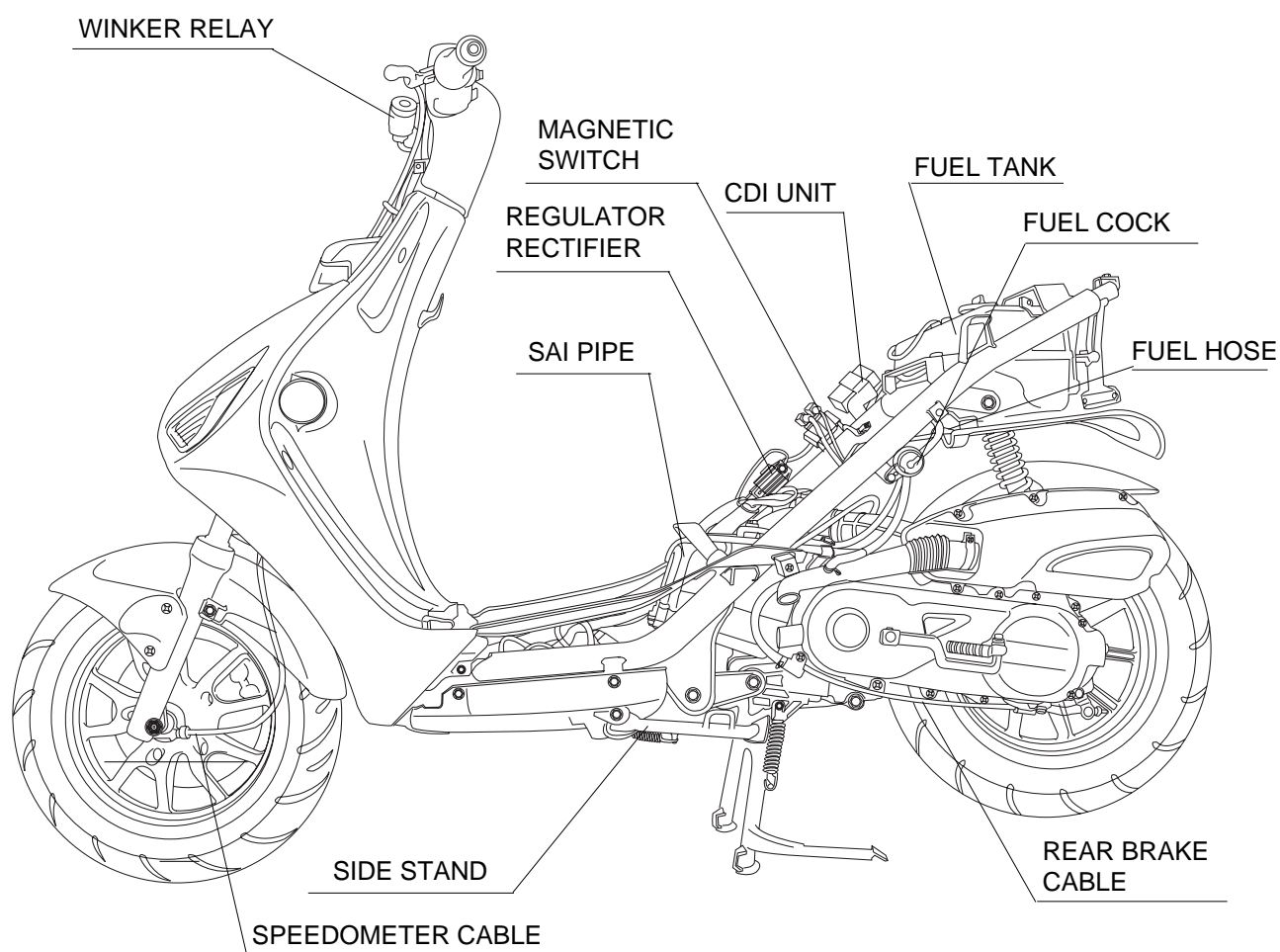
LUBRICATION OIL

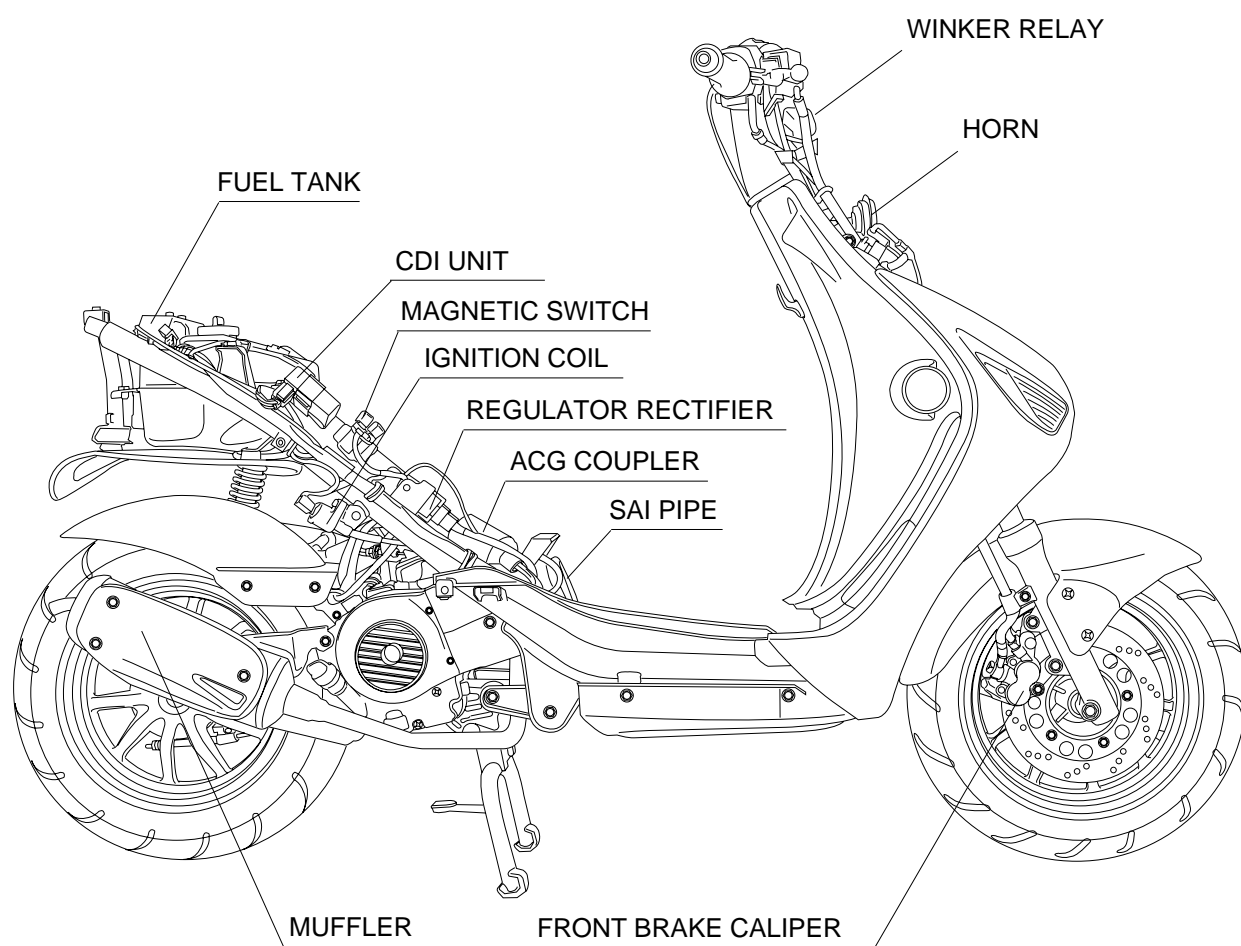
ENGINE PARTS

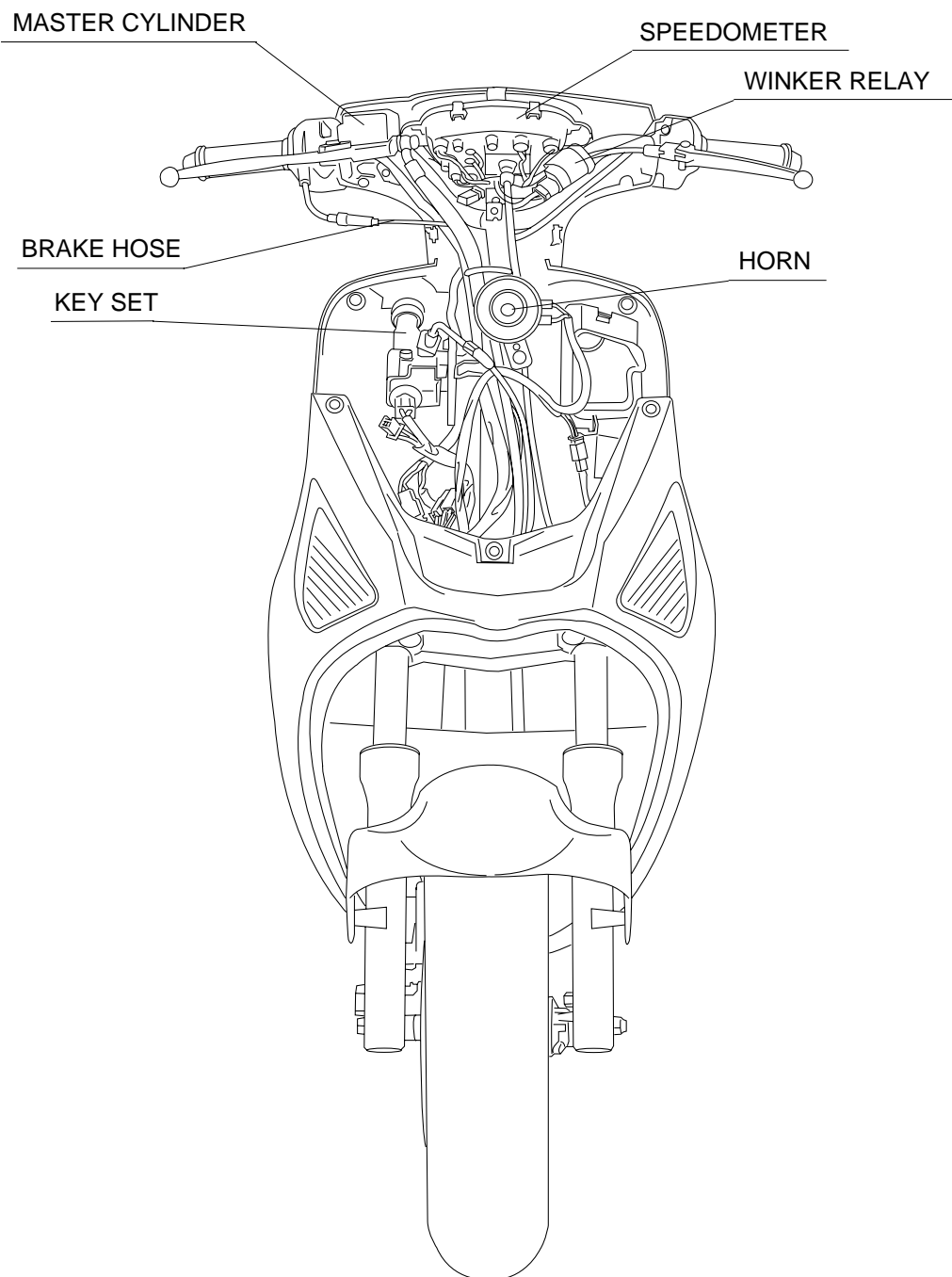
APPLICATION AREA	REMARKS
VALVE GUIDE / VALVE STEM WORKING AREA CONTACT AREA OF CAM SHAFT CONTACT AREA OF VALVE ROCKER ARM CAM SHAFT DRIVE CHAIN PISTON & PISTON RING GROOVE INSIDE CYLINDER CONNECTING ROD PISTON PIN HOLE CONNECTING ROD CRANK SHAFT OIL PUMP DRIVE CHAIN COUNTER SHAFT GEAR FINAL GEAR BEARING SURFACE OF O-RING OIL SEAL	<ul style="list-style-type: none"><li>• SAE15W-40 or SAE10W-40</li><li>• API SL</li></ul>
AREA OF FRICTION SPRING WORK / SHAFT WORK AREA OF SHAFT WORK	HEAT RESISTENT GREASE

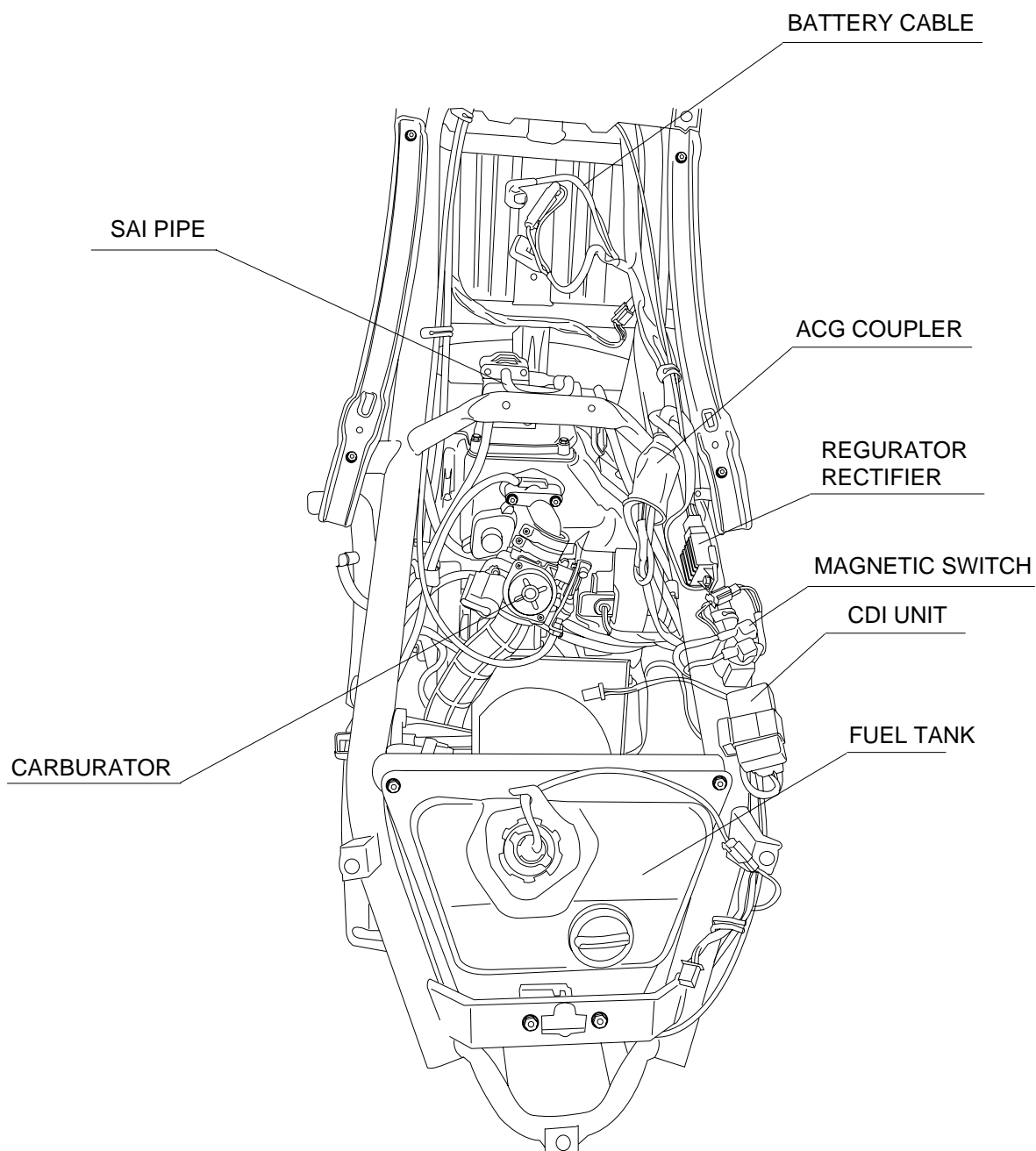
# WIRING DIAGRAM

1









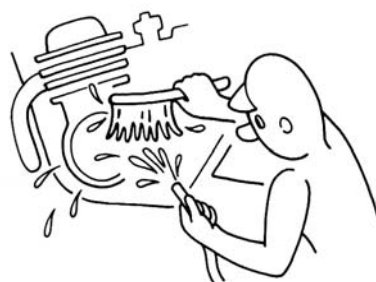
# GENERAL SAFETY

## WARNING

1. Do not run the engine for a long time in closed or not well-ventilated area because the exhaust gas contains toxic substances such as carbon monoxide, hydrocarbon, nitric oxide.
2. The battery fluid(lean sulfuric acid) is extremely toxic. It is dangerous if skin is exposed to it or if it enters into the eye. Be careful in handling. When exposed to the battery fluid, wash it with water and get a medical check up.(store the battery fluid in a safe place to avoid touching by the children)
3. Pay attention not to be burned and always put on the protection gears because the engine or the muffler is hot right after engine stops.
4. Gasoline is extremely flammable. Maintenance must performed in the place free of the open fire or electric spark.
5. When more than two person are working, always pay attention to other worker's action and always have safety in mind.
6. The skin exposed to used engine oil can be a major reason of the skin cancer. Pay attention not to exposed and wash carefully with soap and water after handling.
7. If compressed air is used to clean the brake, dust scattered in the air can be breathed in by workers. Please take action not to scatter dust in the brake cleaner, etc.
8. Flammable nitrogen gas is generated during charging the battery so charging must be performed in well-ventilated area and free of the open fire and spark.

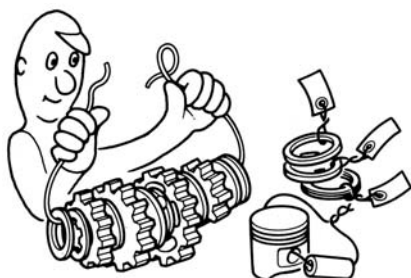
# SERVICE RULES

1. Parts and lubrication oil must be DAELIM genuine or recommended parts.
2. Before maintenance, remove deposit or dust from the chasis.



## SERVICE INFORMATION

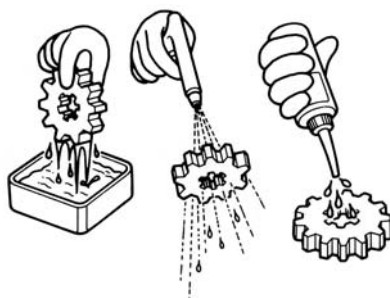
3. Store the parts of each system discriminatively to install each part in the right place.



4. After removing gasket, O-ring, piston pin clip and cotter pin, always replace them with the new one. When removing the snap ring, it can be easily missed after transformation or installation.



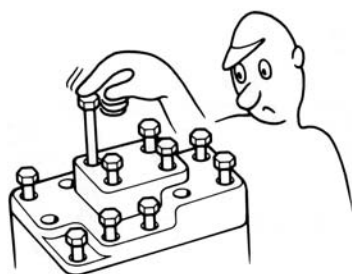
5. Clean the parts after the overhaul and before the test and remove the cleaning oil with compressed air. Apply oil to seal face during installation.



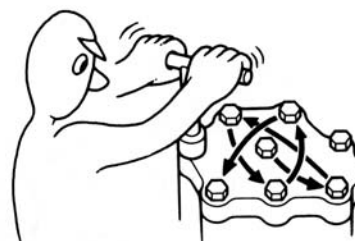
6. Check necessary place and measure necessary data during installation. When installing, return to the state before removing.



7. Align the bolts to uniform the tightening points before tightening them when you don't know the bolt length.



8. Bolts, nuts and pieces must be tightened from the bigger diameter to the smaller one, from inside to outside and diagonally with the specified torque.



9. Check to see if the rubber part is worn out when removing it and replace it if necessary. Some rubber part is weak to gasoline and kerosene, so pay attention not to soak with gasoline or oils.

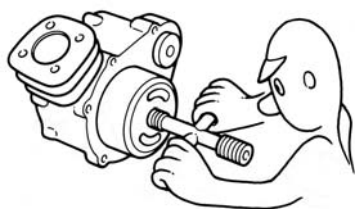


10. Recommended grease must be applied to or filled in the specified place.

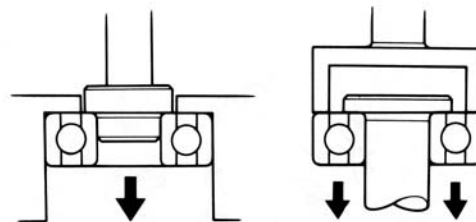




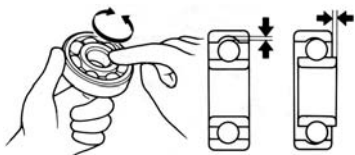
11. Maintenance needed to use the specialized tools must be performed with the right tool.



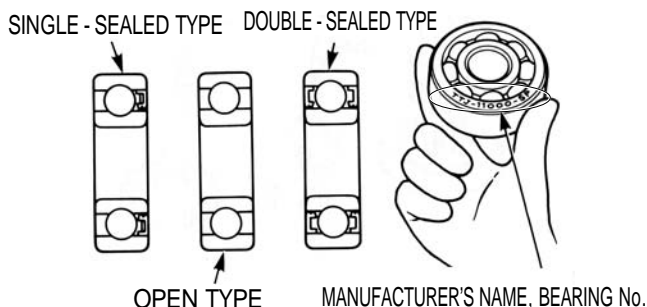
12. Never reuse the ball bearing removed with the ball applied pressure when removing press-fitted the bearing.



13. Check the smooth rotation of inner or outer race of the ball bearing by rotating it manually.
- Replace the ball bearing having excessive axial/longitudinal hanging.
  - Wipe the ball bearing likely to have hanging with cleaning oil.(except double-sided sealed type ball bearing)
  - Replace the ball bearing of which press-fitted part is slacked at the case or shaft.



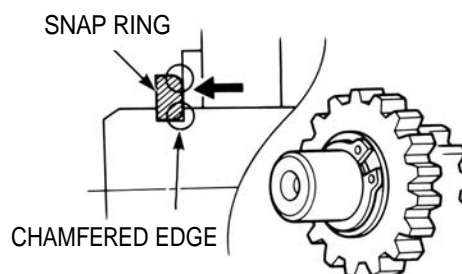
14. Pay attention to installation direction in case of the single-sided sealed ball bearing. Install the open-direction or double-sided sealed bearing in the way that the face marked with manufacturer and size should direct to the outer axle.



15. When blowing the ball bearing with compressed air after cleaning, keep the race from rotating. High speed rotation of the race may damage the bearing. Prior to installation, apply oil or grease to the bearing.



16. Install the snap ring so that chamfered side directs to the load-applied side. After installation, check the proper installation by rotating the snap ring.



17. Check each part for proper tightening and operation after installation.



18. The brake fluid and coolant can damage the painted plastic or rubber parts. Keep these parts from contacting with them and wash these parts with water in case of contact.

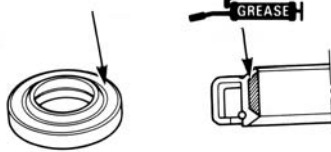


## SERVICE INFORMATION

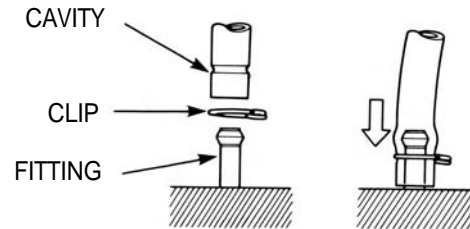
1

19. Install the oil seal so that the manufacturer marked surface directs outer surface.(direction not covered with oil)
- Pay attention not to bend or damage the lip
  - Apply the grease to the lip

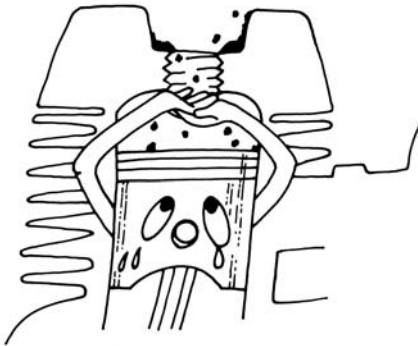
MANUFACTURER'S NAME



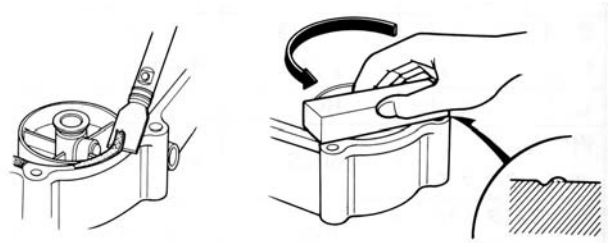
20. Connect the tube until the tube fully inserted in the joint. Install the clip if it is supplied. Replace the tube having slacked end.



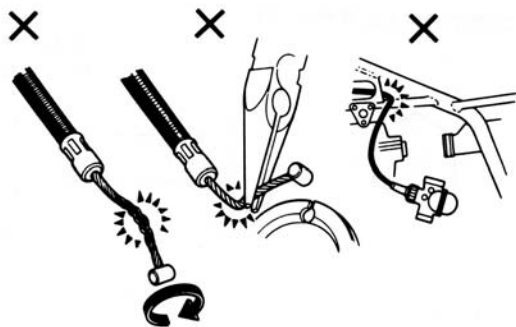
21. Keep the pneumatic system interior or the engine interior from the infiltration of dust.



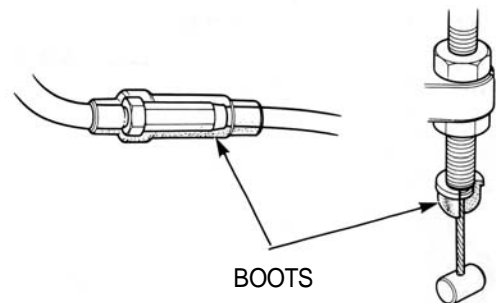
22. Install the gasket mounted in the contact surface of each case of the engine while removing gasket material completely. Remove damaged contact surface by wiping with the oil stone equally.



23. Pay attention not to bend the cable excessively. Transformed or damaged cable may cause malfunction or damage.

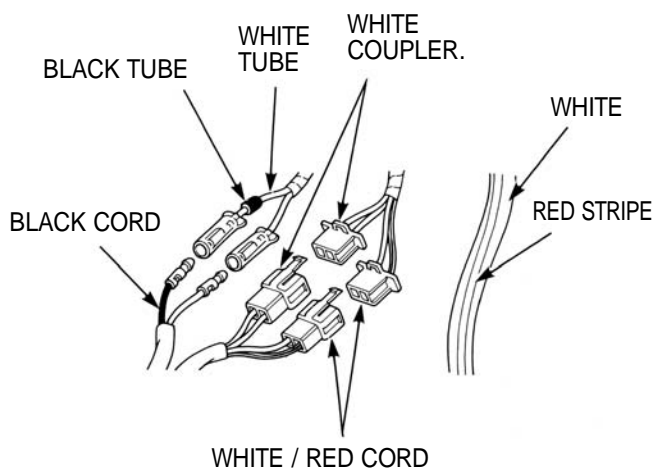


24. Install the boots with the installing groove by inserting the boots into the groove.

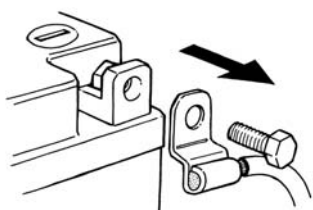


## CAUTION WHEN WIRING

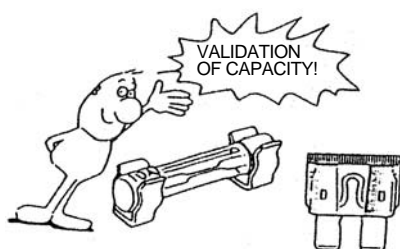
- Each cord must be connected depending on its color. When connecting different cord, attach color tube around the connector. Connect the coupler to the connector with same color and same pin number.
- Identify the two-colored cord by main color first and then striped color.



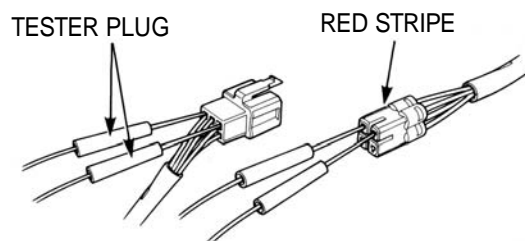
- When disconnecting the battery, the minus terminal must be disconnected first.
- Make sure that the tool such as spanner do not contact with the frame.



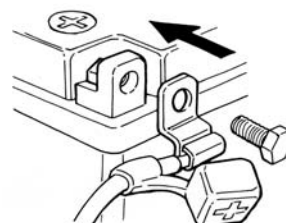
- If the fuse is short-circuited, find out the cause and repair. Replace with the fuse having the specified capacity.



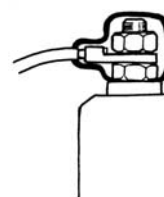
- When measuring voltage or resistance of the cord terminal using tester, contact the tester plug behind of the coupler. Pay attention not to open the cord terminal and contact the tester plug from the front of the coupler in case of water-proof coupler.



- Recheck the condition of contact, securing and continuity of each part after maintenance.
- When connecting the battery, the plus terminal must be connected first.
- After connecting the terminal, apply the grease to the terminal.



- Connect covers to the terminal after maintenance.

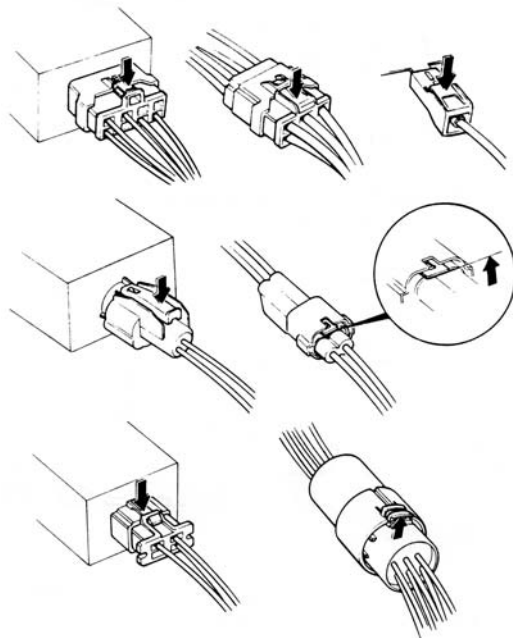


- If there is rust in the terminal, remove the rust with sand paper prior to connecting.

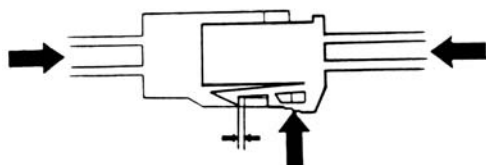


## SERVICE INFORMATION

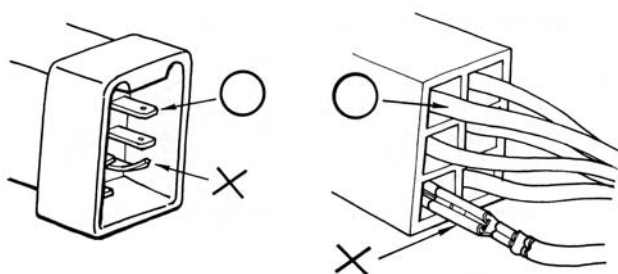
- Turn off the main switch before connecting/disconnecting.
- Release the lock to disconnect the lock of the coupler.
- The lock of the coupler has two types according to releasing method (press type and pull type) so release it properly according to the shape.
- Typical releasing method of the coupler is illustrated in the following.



- Release the lock by inserting the coupler slightly and then narrowing connection to remove the coupler.



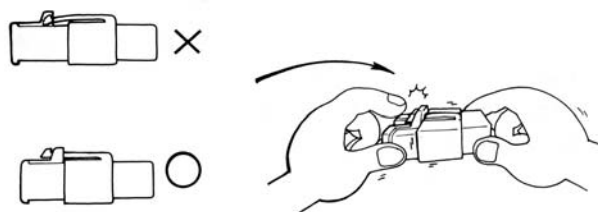
- Check to see if there is bended terminal and secure it to avoid disconnecting.



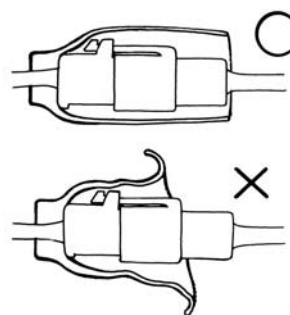
- When disconnecting the coupler, disconnect it while holding the coupler body. Pull while holding the wire harness cord and do not remove the coupler connection.



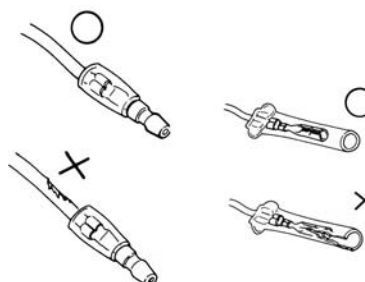
- Insert the lock of the coupler until the lock is fully secured.



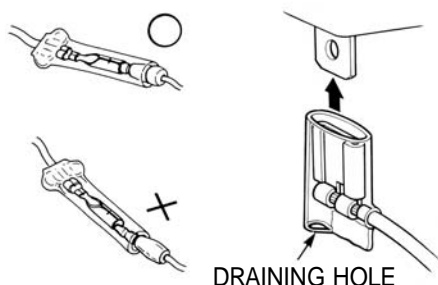
- Pay attention not to damage the vinyl cover of the coupler.



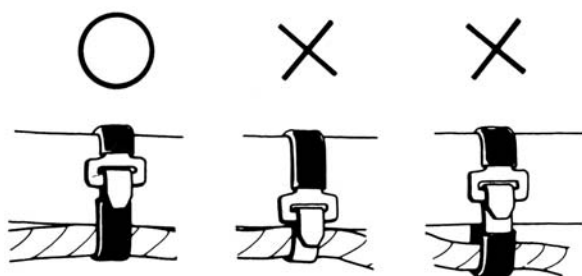
- If the wire harness coating is damaged, repair by winding vinyl tape or replace it.
- Prior to connecting the connector, make sure that the cover is not damaged and the mess terminal is not opened.



- Insert the connector until the vinyl cover is fully inserted into the terminal.
- The opening of the vinyl cover must face at the ground direction but in case of the plain connector, the draining opening must face at the sky direction.



- Wire band must be secured firmly in the specified location of the frame. In case of aluminium band, secure the wire harness to the coated part.



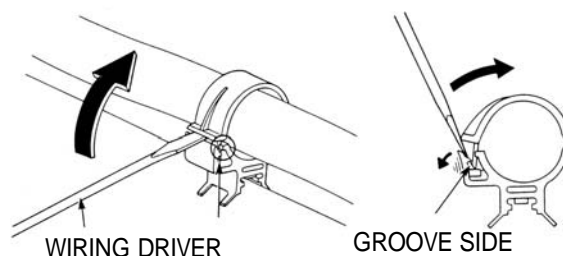
- In case of the weld clamp, do not clamp in the welded part.



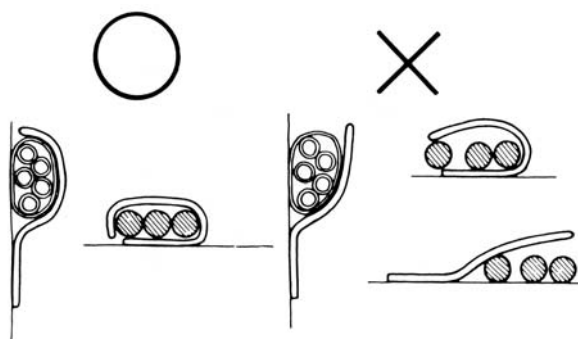
- When clamping the wire, pay attention not to contact with hot part.



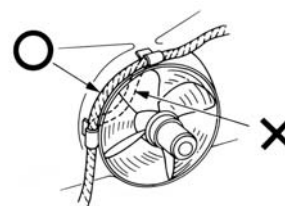
- When removing T-start, broaden the groove of T-start using the wiring driver and release the torque.
- Connect the harness and the hose to T-start and then insert until the groove is locked.
- When removing T-start from the frame, replace it with the new one.



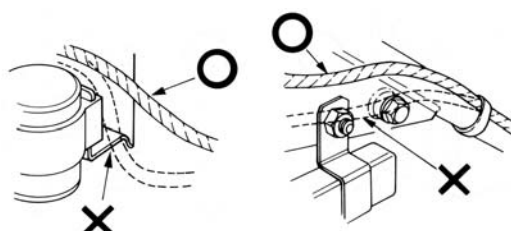
- Secure the wire harness firmly using the clamp.



- When clamping the wire harness, make sure that the harness is not contacted with the shaft or rotating part.

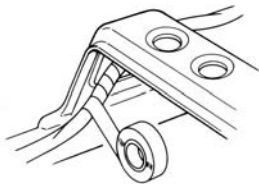


- The wire harness must be routed without contacting with the end of the lamp or any sharp edge.
- The wire harness must be routed without contacting with the end of the bolt or the piece.

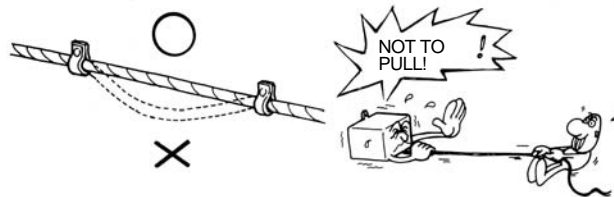


## SERVICE INFORMATION

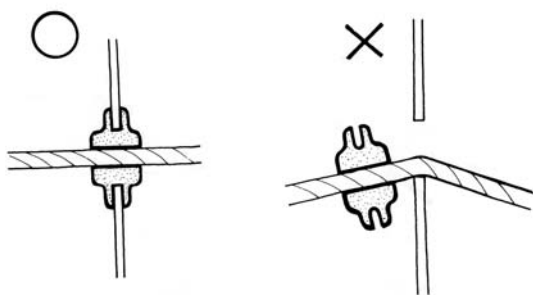
- In case that the wire harness is contacted with the end or the sharp edge, protect both parts with tube or tape.



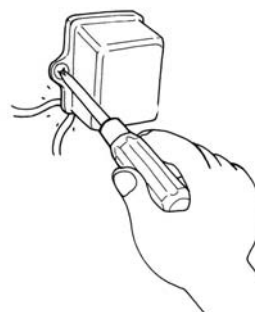
- The wire must not hang down or be pulled excessively.



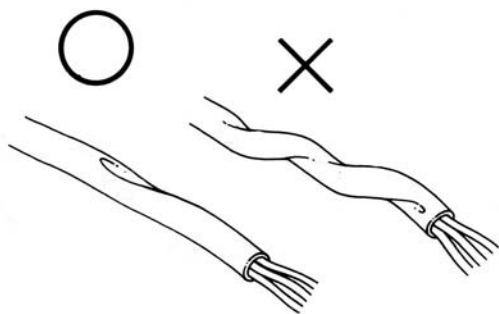
- If necessary, lock the wire harness properly.



- When mounting parts, make sure that the wire harness is not pressed by the parts.



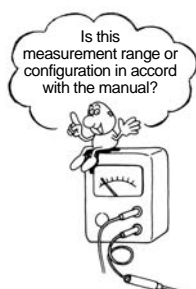
- Do not twist the wire harness.



- Wire the wire harness not to be pulled or expanded when the handle is turned to the right or the left completely. Avoid excessive bending or chewing and interference with the engine.



- Prior to using the tester, please read the manual carefully and understand the contents.
- When testing the resistance of the tester, the zero adjustment must be performed before testing.



- Do not drop or throw the parts especially semiconductor contained parts because these parts may be damaged by the impact of the drop.



## 2. INSPECTIONS/ADJUSTMENTS

<b>SERVICE INFORMATION . . . . .</b>	<b>2-1</b>	<b>DRIVE BELT . . . . .</b>	<b>2-7</b>
<b>MAINTENANCE SCHEDULE . . . . .</b>	<b>2-3</b>	<b>BRAKE FLUID . . . . .</b>	<b>2-8</b>
<b>FUEL LINE . . . . .</b>	<b>2-4</b>	<b>BRAKE PAD/SHOE . . . . .</b>	<b>2-8</b>
<b>THROTTLE GRIP OPERATION . . . . .</b>	<b>2-4</b>	<b>SIDE STAND . . . . .</b>	<b>2-9</b>
<b>AIR CLEANER . . . . .</b>	<b>2-5</b>	<b>SUSPENSION . . . . .</b>	<b>2-9</b>
<b>SPARK PLUG . . . . .</b>	<b>2-5</b>	<b>FASTENING BOLTS, NUTS . . . . .</b>	<b>2-9</b>
<b>VALVE GAP . . . . .</b>	<b>2-5</b>	<b>WHEELS/TIRES . . . . .</b>	<b>2-10</b>
<b>CYLINDER COMPRESSION PRESSURE . . . . .</b>	<b>2-6</b>	<b>STEERING STEM . . . . .</b>	<b>2-10</b>
<b>CARBURETOR IDLING . . . . .</b>	<b>2-7</b>	<b>BATTERY . . . . .</b>	<b>2-10</b>
<b>TRANSMISSION OIL . . . . .</b>	<b>2-7</b>	<b>LUBRICATION POINTS . . . . .</b>	<b>2-11</b>
<b>ENGINE OIL . . . . .</b>	<b>2-7</b>		

## SERVICE INFORMATION

### WARNING

- The exhaust gas contains poisonous substance. Do not keep engine idling in a closed or poorly ventilated place for a long period of time.
- Refer to the chapter 4 about the engine fluid
- Stand the main stand prior to the beginning work

### EPAIR STANDARDS

THROTTLE GRIP DIFFE		2-6mm
SPARK PLUG		CR6HSA
SPARK PLUG GAP		0.6-0.7mm
VALVE GAP	IN	0.1mm
	EX	0.1mm
CARBURETOR IDLE SPEED		1,700 ± 100rpm
CYLINDER COMPRES SION PRESSURE		10kg/cm <sup>2</sup> (600rpm)

### TIRES

TIRE PRESSUR AT COLD ROLLING	ONE PERSON	F R O N T	2.00 kgf/cm <sup>2</sup> (28psi)
		R E A R	2.00 kgf · cm <sup>2</sup> (28psi)
	TWO PERSONS	F R O N T	2.00 kgf · cm <sup>2</sup> (28psi)
		R E A R	2.25 kgf · cm <sup>2</sup> (33psi)
TIRE SIZE		F R O N T	3.50 -10 51J
		R E A R	3.50 -10 51J

## INSPECTIONS / ADJUSTMENTS

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### TORQUE

SPARK PLUG	1.2kgf·m
CYLINDER HEAD COVER BOLT	0.9kgf·m
VALVE ADJUSTING NUT	1.1kgf·m

### TOOL

WRENCH 8×9mm  
ADJUST WRENCH  
COMPRESSION GAUGE



## REGULAR INSPECTION SCHEDULE

- Carry out pre-operation check at each scheduled maintenance period based on the information described in the owner's manual.

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

R : REPLACE L : LUBRICATE C : CLEAN

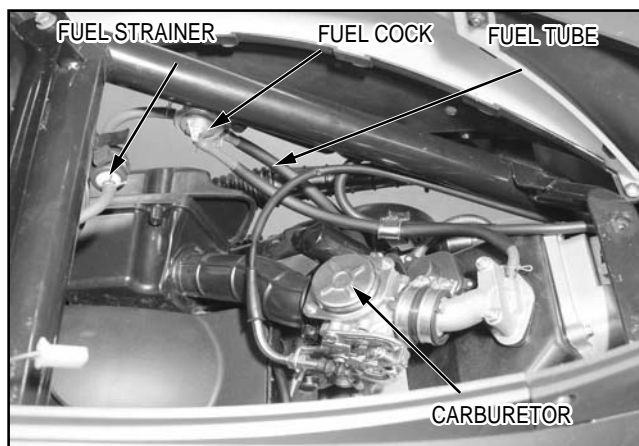
FREQUENCY  ITEM		ODOMETER READING(NOTE 1)				NOTE
		500km	4,000km	8,000km	12,000km	
		1 month	6 months	12 months	18 months	
ㄟ	FUEL LINE(FUEL TUBE)	I	I	I	I	
ㄟ	THROTTLE GRIP OPERATION		I	I	I	
	AIR CLEANER	C	C	R	C	NOTE 2
	SPARK PLUG	I	I	I	I	
ㄟ	VALVE GAP	I	I	I	I	
	TRANSMISSION OIL				R	NOTE 3
	ENGINE OIL	R	R	R	R	
ㄟ	ENGINE OIL FILTER SCREEN	C	C	C	C	
ㄟ	CARBURETOR IDLE SPEED	I	I	I	I	
ㄟ	DRIVE BELT		I	I	I	
ㄟ	WEIGHT ROLLER		I	I	I	
ㄟ	SLIDE PIECE		I	I	I	
ㄟㄟ	GREASING AT INNER PART OF MOVABLE DRIVE FACE		L	L	L	
	BRAKE FLUID		I	I	I	NOTE 3
	BRAKE SHOE/PAD WEAR	I	I	I	I	
	BRAKE SYSTEM	I	I	I	I	
ㄟ	BRAKE STOP SWITCH		I	I	I	
ㄟ	HEADLIGHT ADJUSTMENT	I	I	I	I	
	SIDE STAND		I	I	I	
ㄟ	SUSPENSION		I	I	I	
ㄟ	BOLTS, NUTS, FASTENERS	I		I		
ㄟㄟ	WHEELS/TIRES		I	I	I	
ㄟㄟ	STEERING HEAD BEARING	I	I	I	I	NOTE 3

\* If there are no appropriate type of tools and maintenance data available, or if you do not have mechanical technology contact authorized maintenance shops, dealers or other designated repair shops for maintenance and inspections.

\*\* To ensure safety, inspections and maintenance of these parts must be carried out by authorized maintenance shops, dealers or other designated repair shops.

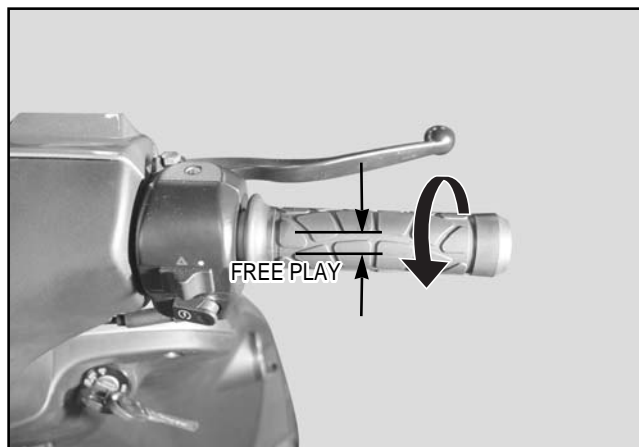
### NOTE

1. After the odometer reading exceeds 12,000km, repeat maintenance service at intervals indicated in the table.
2. After riding in areas with high humidity or pollution, carry out maintenance service more frequently.
3. Replace every 2 years. Proper technology is required for this job.



### FUEL LINE(FUEL TUBE)

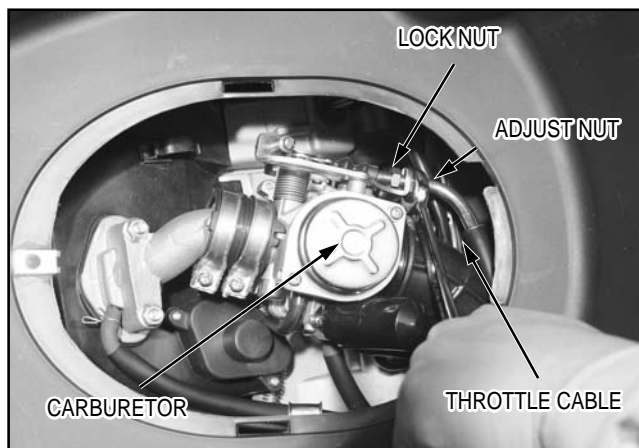
- Remove the luggage box.
- Check the fuel line connected to the fuel cock and carburetor. If the fuel line is cracked, damaged or leaks, replace it.



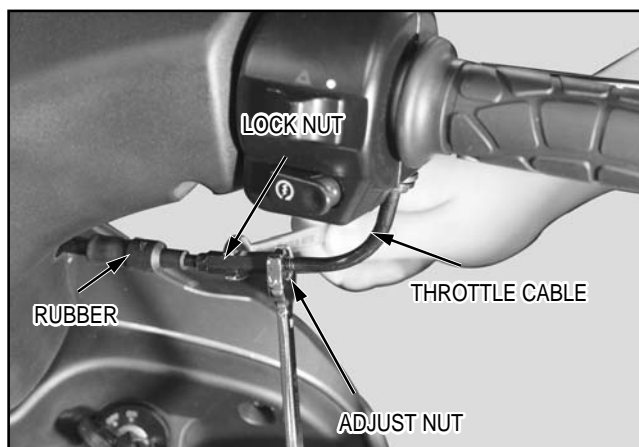
### THROTTLE GRIP OPERATION

- Check to see if the throttle grip operates smoothly in any steering position.
- If the throttle grip does not operate properly, check the throttle cable for aging, damage or kinking.
- Check the throttle grip free play.

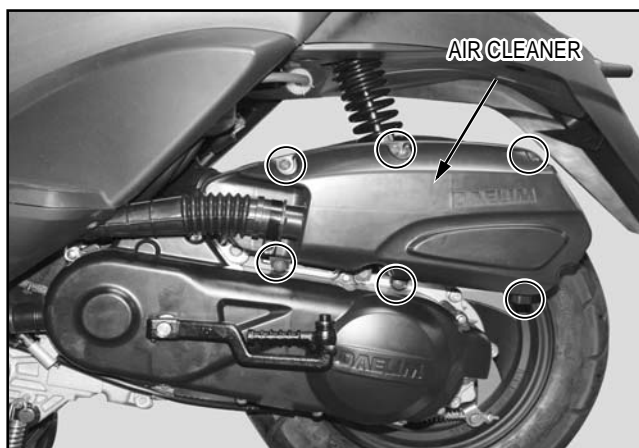
**FREE PLAY : 2~6 mm**



- For main adjustment of the throttle grip freeplay, adjust the nut on the carburetor side.
- Loosen the lock nut, turn the adjuster nut and adjust of it.

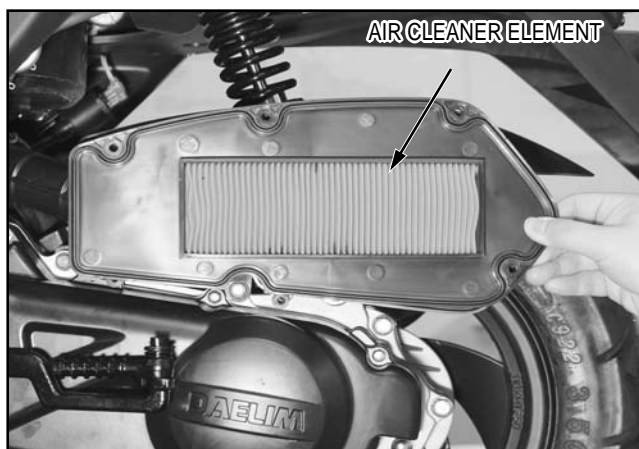


- For minute adjustment, to adjust the adjuster nut under the throttle grip.
- Remove the rubber.
- Loosen the lock nut, turn adjuster nut and adjust of it.



## AIR CLEANER

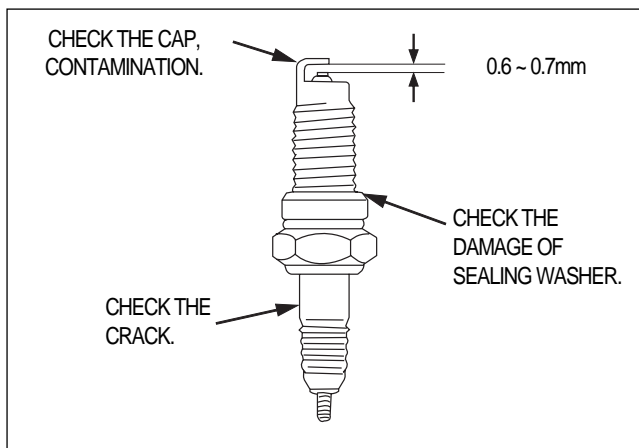
- Loosen the 6 screws securing the air cleaner case cover and remove it.



- Remove the air cleaner element.
- Check the element, if it is dirty or damaged, replace it.

### CAUTION

- Clean away dirt by tapping slightly the paper element if its surface has very dirty or there is much dirt on it. Also, blow away dirt stuck to the surface of filter from the inner side (carburetor) of the filter.



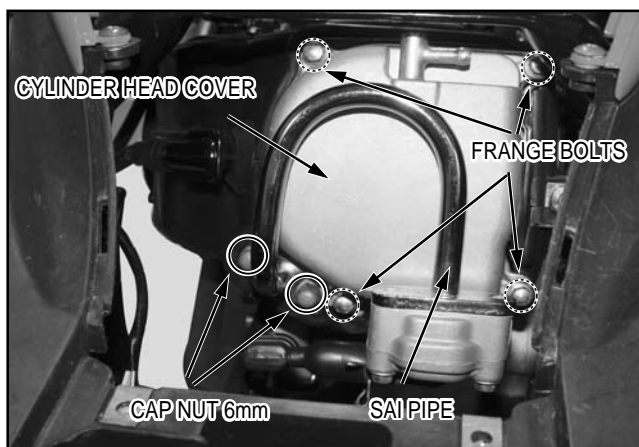
## SPARK PLUG

- Remove the center cover.
- Remove the spark plug cap and disassemble the plug.
- If the spark plug is severely contaminated or damaged, replace with a new one. If the plug can be reused after removing only carbon, use plug cleaner and wire brush to clean the plug.
- Always use the feeler gauge to check the gap.

**GENUINE PLUG : CR6HSA**  
**SPARK PLUG GAP : 0.6~0.7mm**  
**TORQUE :1.2 kgf · m**

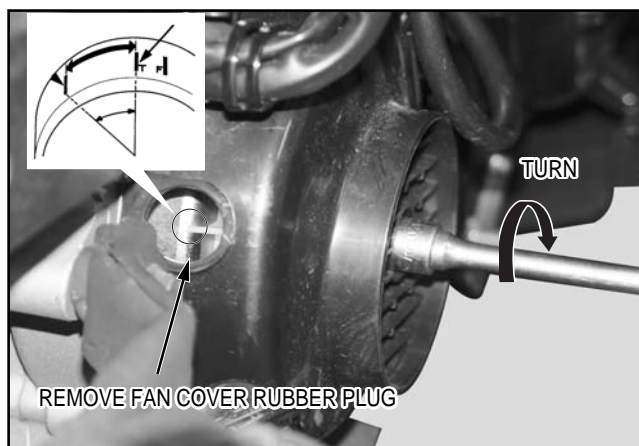
### CAUTION

- First, assemble it temporarily by hand and tighten completely the spark plug by using of the spark plug wrench.



## VALVE CLEARANCE

- Remove luggage vox
- Remove center cover
- Disassemble 4 cylinder head cover bolts
- Disassemble 2 cap nut 6mm

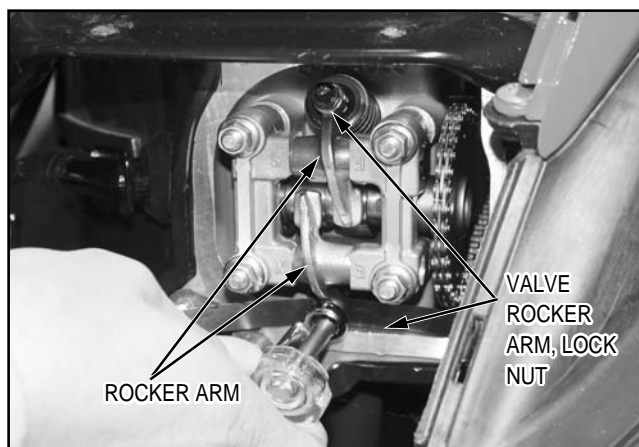


### CAUTION

- Inspect and adjust the valve clearance when the engine is cold (35°C).
- Remove cooling fan cover.
- Turn the flywheel counterclockwise, and align the "T" mark of the flywheel with index mark of the RH. crankcase cover.
- Verify that the piston is located at the top dead center.

- Measure the valve clearance with feeler gauge.

**VALVE CLEARANCE : INTAKE  $0.1 \pm 0.02$ MM  
EXHAUST  $0.1 \pm 0.02$ MM**

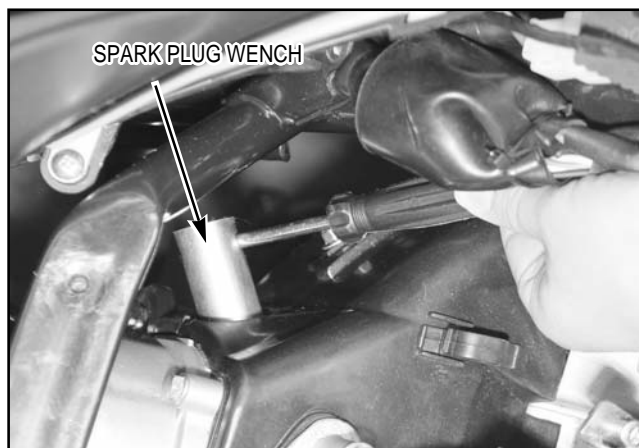


- Loosen the lock nut with a valve wrench, and set valve clearance to the prescribed level by turning the adjusting screw with a valve adjusting wrench, and tighten the lock nut.
- After setting clearance to the prescribed level, hold the adjuster screw with a valve adjusting wrench, and tighten the lock nut.

**TORQUE : 1.1 kgf.m**

**TOOL: WRENCH 8X9 MM  
ADJUST WRENCH  
FILLER GAUGE**

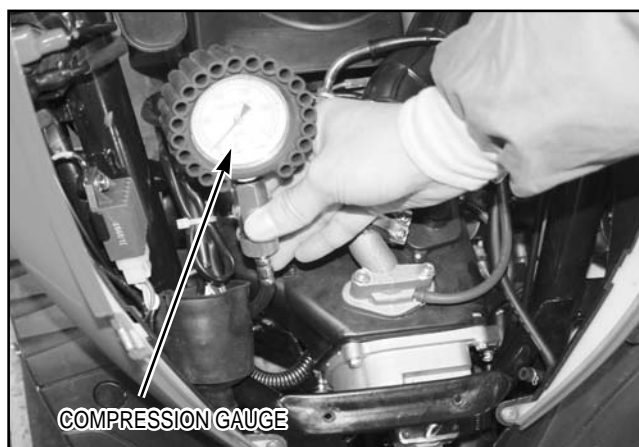
- Measure the valve clearance again.
- Install the cylinder head cover and tighten the bolts.  
**TORQUE : 0.9 kgf · m**



## CYLINDER COMPRESSION PRESSURE

- Start and warm up the engine.
- Stop the engine, and remove the spark plug cap and spark plug.
- Install the compression gauge.
- Open the throttle completely, and crank the engine with the starter motor until the gauge reading rises.

**TOOL : COMPRESSION GAUGE**



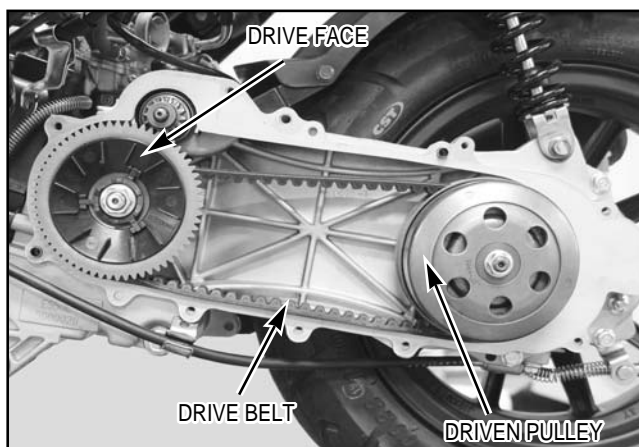
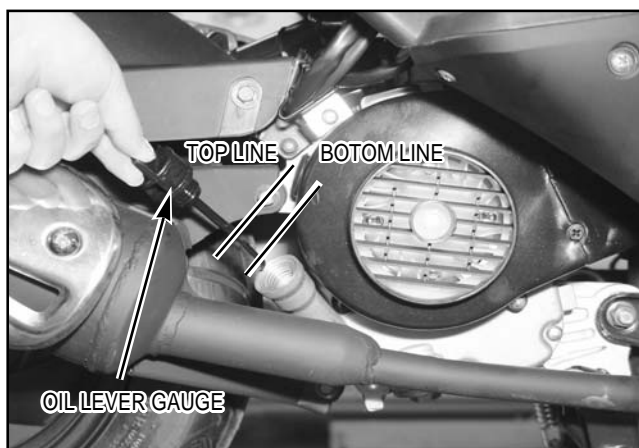
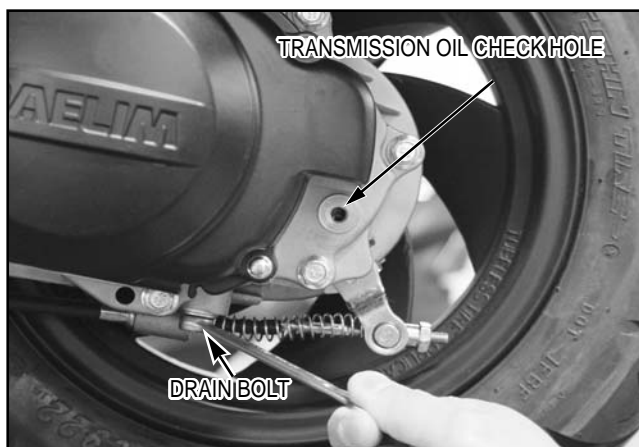
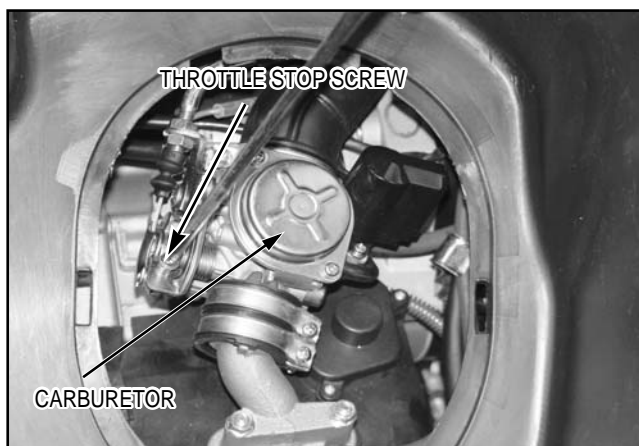
### NOTE

- The maximum reading is usually reached within 4~7 seconds.

**COMPRESSION PRESSURE : 10 kgf/cm<sup>2</sup> (600RPM)**

- If the pressure is low, check the following:
  - Inadequate valve clearance adjustment
  - Valve leakage
  - Leakage from the cylinder head gasket
  - Piston/ cylinder worn.
- If pressure is high, check the following:
  - Carbon deposits on the piston head, and cylinder head





## CARBURETOR IDL SPEED

- Turn the main key to the left, disassemble the lock nut and raise up the seat.
- Remove the carburetor maintenance cover on the luggage box.
- Connect to the ignition code
- Meet the specified RPM by adjusting the throttle stop screw with the screw driver.

### NOTE

- Erect the motorcycle on the main stand.
- After checking all engine adjustments whether satisfying conditions, adjust them.
- Heat the engine to make accurate idling inspection and adjustment.
- Turn the throttle stop screw and make adjustments to the prescribed speed.  
IDLE : 1,800±100 rpm

### CAUTION

- Do not excessive adjustment the pilot screw it could be effect to starting.
- Refer to the page 5-9 for adjusting the pilot screw.

## TRANSMISSION OIL

### INSPECTION

- Loosen the oil check blot and measure the oil level.
- If the oil level is low, add the oil(SAE80W-90).
- Tighten the oil check bolt.

**TRANSMISSION OIL CAPACITY : 0.12 L**

### NOTE

- Make sure that the oil sealing washer is in good condition.
- Replace the transmission when it is contaminated seriously.
- Erect the transmission when it is contaminated seriously.

## ENGINE OIL

### INSPECTION

- Warm up the engine so that heat up the engine oil fully.
- Stop the engine and loosen the oil level gauge then, check the oil level.
- It is good if the oil surface is between the lower level line and upper that of the sight glass. If the oil level is near the lower level line or below that, refuel the recommended oil to the upper level line.

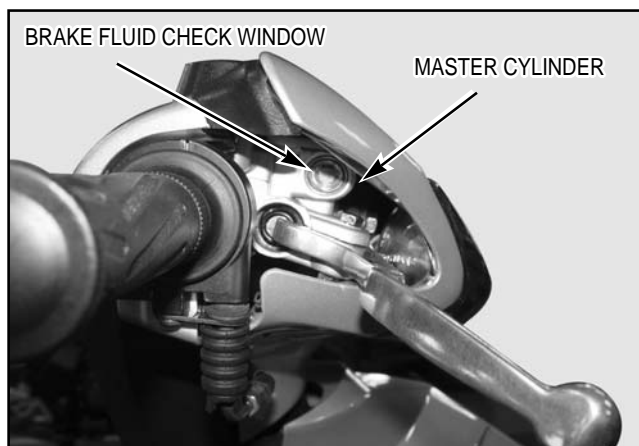
**ENGINE OIL CAPACITY : 0.8 L**

### NOTE

- Erect the motorcycle on the main stand and try.

## DRIVE BELT

- Remove the 2 air cleaner mounting bolts.
- Remove the kick arm.
- Remove the LH. Crankcase cover.
- Check the drive belt for excessive wear or damage
- Check the schedule maintenance period, replace the new drive belt if possible.

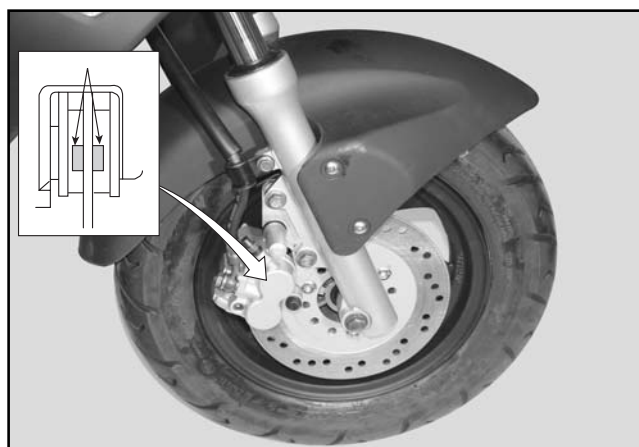


## BRAKE FLUID

- Check the oil level of front master cylinder.
- If the oil level is near the lower limit level, remove the oil cup cap, diaphragm and fill DOT3 or DOT4 brake fluid to the top limit line.
- If the brake fluid reaches to the lower limit line, check the leaking of the brake system entirely.

### NOTE

- If the brake pad is worn severely, brake fluid level can be down.



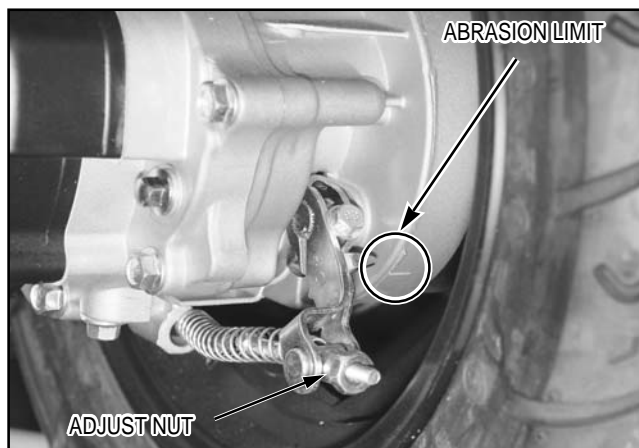
## BRAKE PAD / SHOE

### BRAKE PAD REPLACEMENT

- Check the brake pads for wear.
- If the red mark on the pad reaches to the brake disk, replace the pads.
- Check the front brake hose for crack and damage, replace it immediately if the brake fluid leaks.

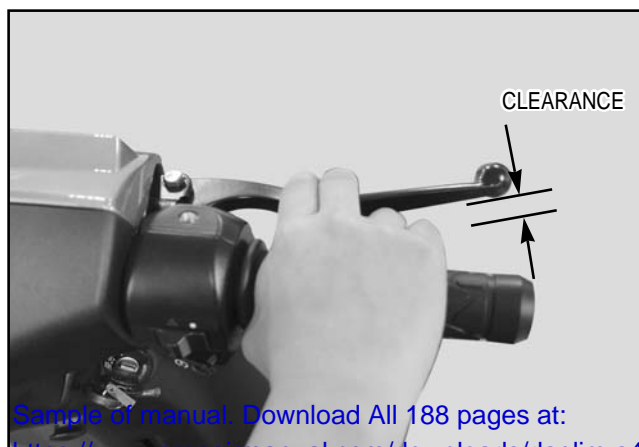
### NOTE

- Replace the brake pads in sets.



### BRAKE SHOE REPLACEMENT

- If the arrow mark of the wear limit with the indication mark when the parking brake lever is tightly depressed, it indicates the brake lining has reached to the service limit. Replace the brake shoes.
- Adjustment of rear brake tolerance.
  - Adjust the tolerance by turning adjust nut.



### BRAKE LEVER CLEARANCE

- Check the clearance after pulling the lever.
  - FRONT: 10~20 MM**
  - REAR : 10~20 MM**