



YAMAHA MBK

YN50 2002
5RN-AE1

SERVICE MANUAL

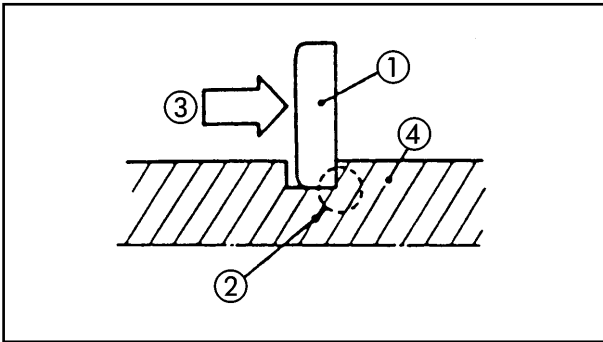
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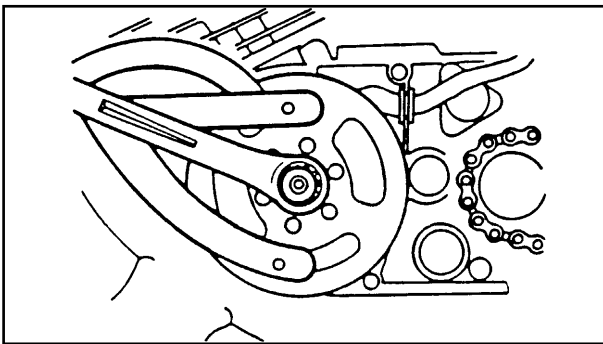


CIRCLIPS

1. All circlips should be carefully inspected before assembly. Always replace circlips of the piston drum after use. Replace deformed circlips. When installing a circlip ①, ensure that the corner with the sharp edge ② is placed in the opposing direction to the thrust ③ it receives. See sectional view. ④ Axle

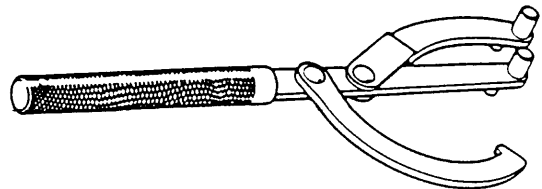
SPECIAL TOOLS

Appropriate special tools are needed to complete and perfect assembly with accuracy. Using correct tools will help to avoid damage caused by the use of incorrect tools or improvised techniques.

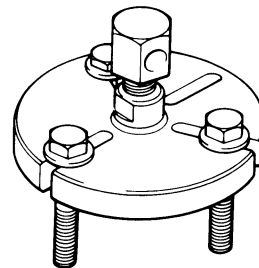


FOR SERVICING THE ENGINE

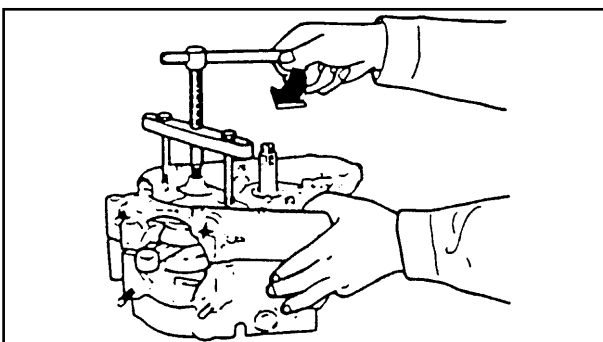
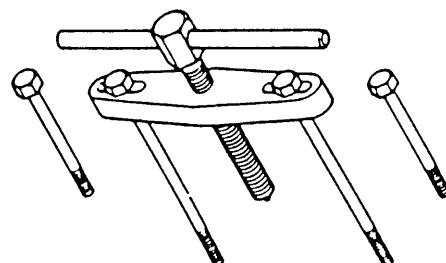
1. Engine wheel holding tool (90890-01235)



2. Engine wheel removal tool (90890-01362)



3. Crankcase separation tool (90890-01135)



MAINTENANCE SPECIFICATIONS

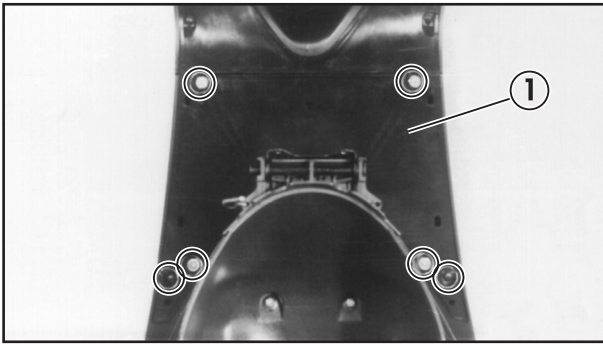
SPEC



Model	YN50R					
Automatic centrifugal clutch: Thickness of clutch shoe <Limit> Free length of clutch shoe spring Clutch revolutions Clutch binding revolutions	2 mm <1 mm> 29.9 mm 3.600±250 rpm 5.600±400 rpm					
Transmission: Main axle deflection limit Drive axle deflection limit	0.08 mm 0.08 mm					
Choke handle: Type Pedal friction force	Ratchet type 150 ~ 250 g					
Air filter oil grade (oil filter):	Oil for foam air filter 2T oil for air-cooled engines					
Carburettor: Type/Manufacturer/Quantity Main jet (M.J.) Retaining position of jet needles (J.N.) Main air jet (M.A.I.) Pilot jet (P.J.) Pilot air screw (P.A.S.) Valve seat size engine idling	PHVA/Dellorto/1		YP12/GURTNER/1			
		#78/5AD	#65//SA15	#74/5AD	#62/SA15	#60/SA19
	A12-3/5	A20-3/5	B10A-2/3	B10A-2/3	L3035H-1/3	
	ø 1.5	ø 1.5	-	-	-	
	#36/5AD	#36/SA15	#38/5AD	#38/SA15	#36/SA19	
	$1 \frac{1}{4} \pm \frac{1}{4}$	$2 \frac{1}{8} \pm \frac{1}{8}$	$1 \frac{1}{8}$	$1 \frac{7}{8}$	$1 \frac{7}{8}$	
	1.2	1.4				
1.800 r.p.m.	1.800 r.p.m					

REAR BODYWORK AND FOOTREST

INSP
ADJ



6. Remove:
- Footrest ①

INSTALLATION

When the foot support panel and the rear cover are being installed, reverse the removal process.

Remember the following points.



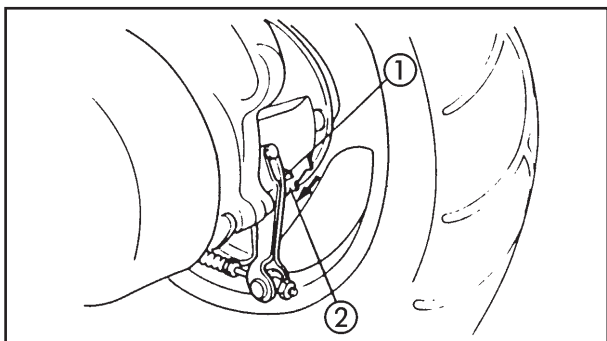
1. Install:
- Side covers

NOTE:

- Match up the support and hole and then apply pressure.

INSPECTION OF BRAKE SHOES / INSPECTION OF BRAKE FLUID LEVEL

INSP
ADJ



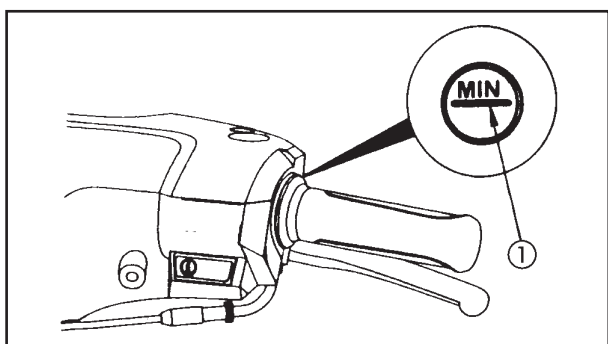
INSPECTION OF BRAKE SHOES

1. Activate the brake lever
2. Inspect:
 - Wear indicator ①Indicator on wear limit line ② → Change the brake shoes.

INSPECTION OF BRAKE FLUID LEVEL

NOTE:

Place the scooter upright when inspecting the fluid level.



1. Inspect:
 - Fluid level.The fluid level is below the minimum level line → Refill up to correct level.



Recommended fluid:
DOT 4

ATTENTION:

The fluid may corrode painted surfaces or plastic parts. Always clean any spilt fluid immediately.

⚠ WARNING:

- Only use fluid of the designated quality. Otherwise the rubber seals may deteriorate due to leakages and poor performance of the brakes.
- Refill with the same type of fluid. The mixture of fluids may cause a damaging chemical reaction which may cause the poor performance of the brakes.
- Take care not to let water enter the pump while it is being filled. The water will lower the boiling point of the fluid significantly and may cause a steam blockage.

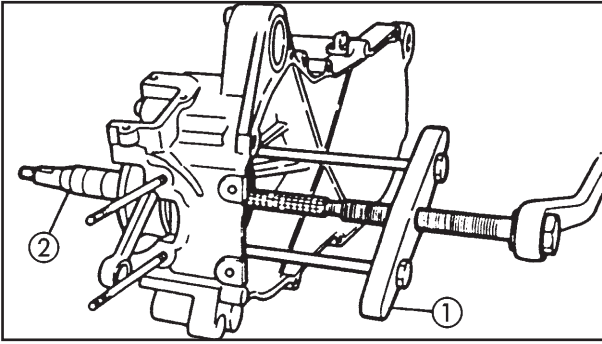


CHAPTER 4 GENERAL OVERHAUL OF ENGINE

ENGINE REMOVAL	4-1
REAR COVER AND FOOTREST PANEL	4-1
CARBURETTOR	4-1
SILENCER ASSEMBLY	4-1
CABLES AND TUBES	4-2
REMOVAL OF ENGINE	4-3
DISASSEMBLY THE ENGINE	4-4
REAR WHEEL	4-4
CENTRAL SUPPORT	4-4
CYLINDER HEAD AND CYLINDERS	4-4
PISTON PINS AND PISTON	4-4
KICK STARTER.....	4-5
PRIMARY PULLEY WHEEL	4-6
SECONDARY PULLEY WHEEL	4-6
STARTER SYSTEM	4-7
TRANSMISSION	4-8
MAGNETIC FLYWHEEL	4-8
AUTOLUBRICATION PUMP	4-9
CRANKCASE AND CRANKSHAFT	4-9
INSPECTION AND REPAIR	4-11
CYLINDER HEAD	4-11
CYLINDER AND PISTON	4-11
PISTON RINGS	4-13
PISTON PIN AND PISTON PIN BEARING	4-14
KICK STARTER	4-15
TRANSMISSION.....	4-16
AUTOLUBRICATION PUMP.....	4-16
CRANKSHAFT	4-16
PRIMARY PULLEY WHEEL	4-17
SECONDARY PULLEY WHEEL	4-18
TRAPEZOIDAL BELT.....	4-19
GEARS AND STARTER CLUTCH	4-19
ASSEMBLY AND ADJUSTMENT OF ENGINE	4-21
CRANKSHAFT AND CRANKCASE.....	4-21
AUTOLUBRICATION PUMP.....	4-23
FLYWHEEL MAGNET	4-24
TRANSMISSION.....	4-25
STARTER MOTOR.....	4-27
SECONDARY PULLEY WHEEL	4-29
PRIMARY PULLEY WHEEL	4-29
STARTER PEDAL	4-30
PISTON AND PISTON PIN	4-35
CYLINDER AND HEAD	4-36
ENGINE ASSEMBLY	4-38

DISASSEMBLY THE ENGINE

ENG



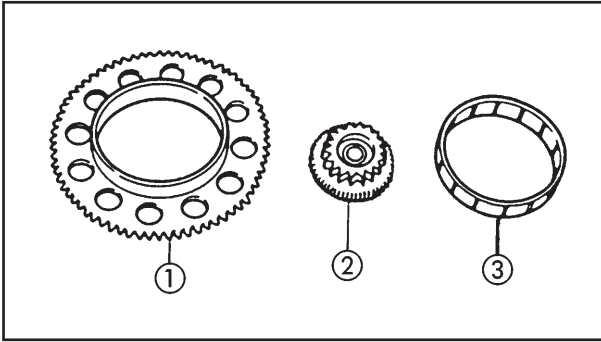
3. Remove:
 - Crankcase (right)
While pressure is applied, strike alternately on the engine assembly hubs.

4. Apply:
 - Crankcase separation tool ①



Crankcase separation tool
90890-01135

5. Remove:
 - Crankshaft ②



2. Inspect:

- Starter wheel gear teeth ①
- Intermediate gear teeth ②
Burr/Spalling/Non-uniformity/Wear → Change
- Bearing ③ (starter wheel gear)
Pitting/Damage → Change

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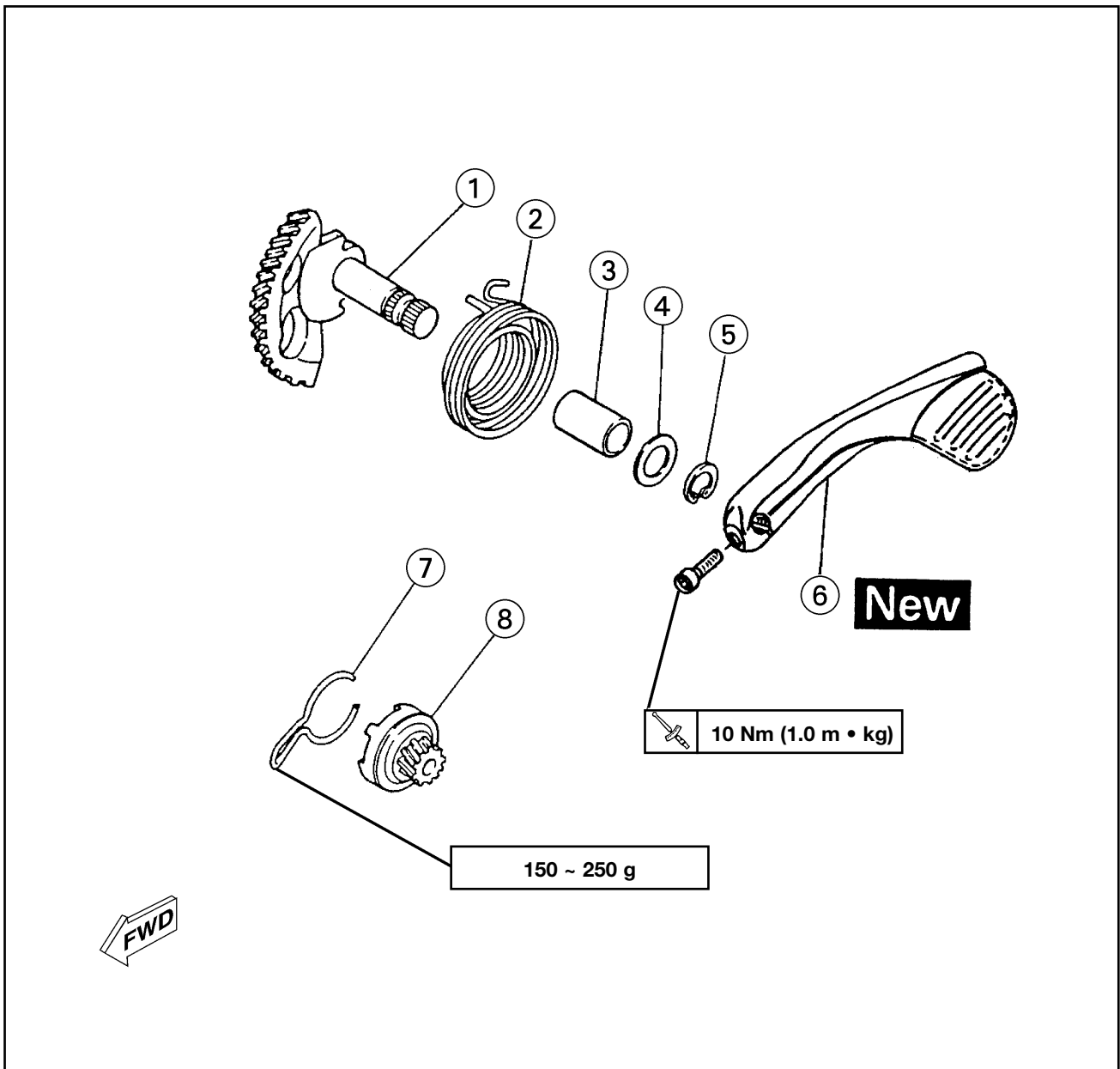
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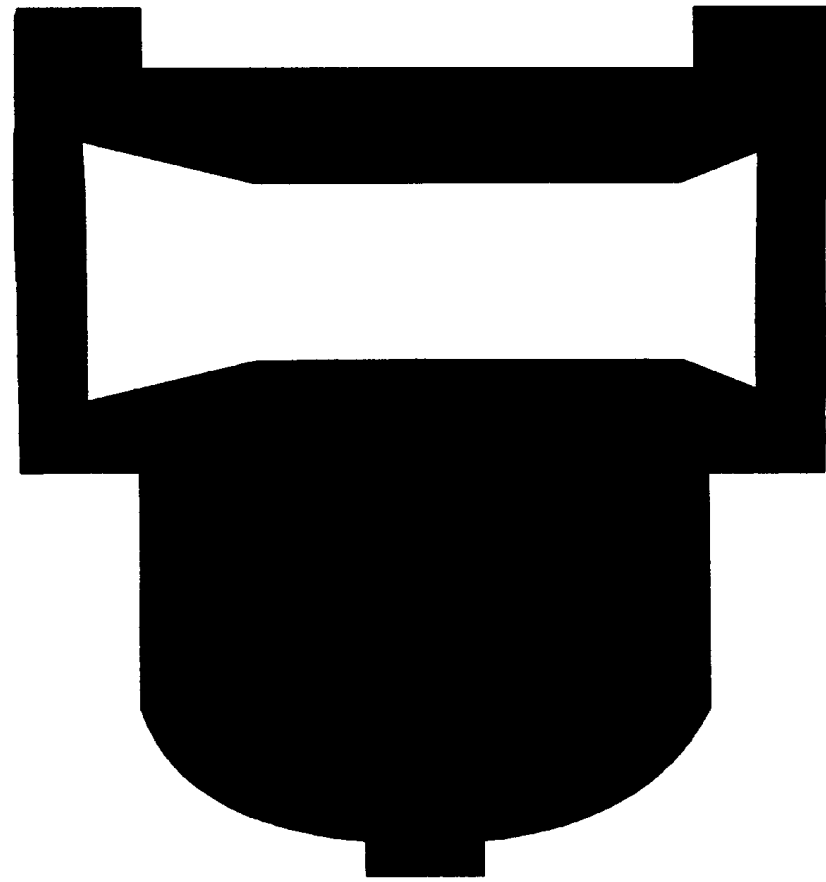
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KICKSTART PEDAL

- ① Pedal axle
- ② Return spring
- ③ Bushing
- ④ Flat washer
- ⑤ Elastic retainer
- ⑥ Starter pedal
- ⑦ Spring
- ⑧ Pedal pinion gear



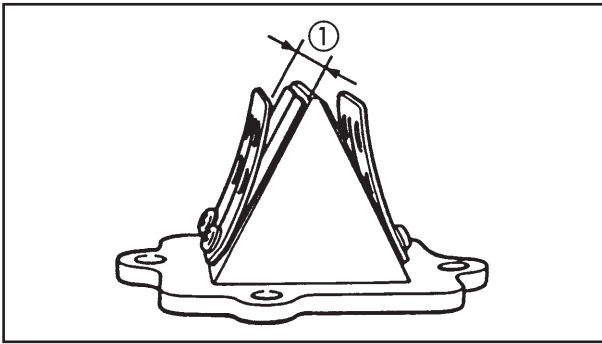


CARB

5

REED VALVE

CARB

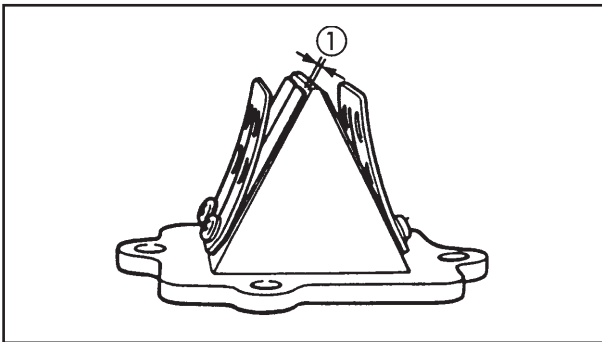


2. Measure:

- valve stopper height ①
Out of specification → Adjust the stopper/Replace the valve stopper.



Height of valve stopper ①
6.0 ~ 6.4 mm



3. Measure:

- clearance of reed valve ①
Out of specification → Replace the reed valve.



Clearance of reed valve ①
Less than 0.2 mm

INSTALLING THE REED VALVE

When the reed valve assembly is installed, reverse the removal procedure. Bear in mind the following points.

1. Install:

- gasket **New**

2. Tighten:

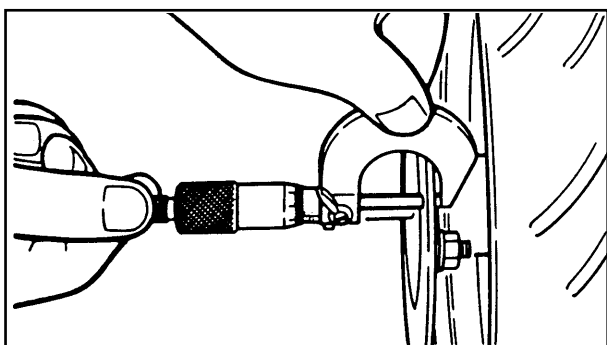
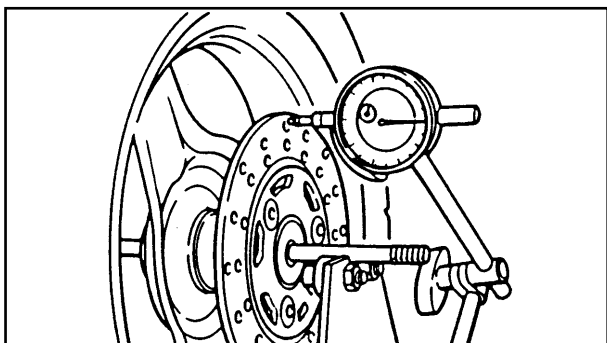
- tighten the bolts for reed valve



Reed valve
11 Nm (1.1 m • kg)

NOTE: _____

Tighten each bolt gradually to avoid it being deformed.



CHECKING THE BRAKE DISC

1. Measure:

- Deflection of brake disc
Outside specified value → Inspect run-out of wheel.
If the wheel is in good condition, change the brake disc



Maximum deflection
0.5 mm

- Brake disc thickness
Outside specified value → Change



Minimum thickness
3.0 mm



Bolt (brake disc)
2.0 m • kg
LOCTITE®



INSTALLATION

Reverse the removal procedure.

The following points should be remembered

1. Install:
 - Front fork:
 - Stopper ring

NOTE:

Attach the stopper ring correctly on the inner tube groove.



2. Tighten:
 - Positioning bolt (lower bracket)

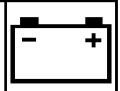


Positioning bolt (inner lever arm)
30 Nm (3.0 m • kg, 22 ft • lb)

3. Install:
 - Front wheel
 - Brake calliper
 - Clasp (brake hose)
 - Speedometer cable
See "FRONT WHEEL" section
 - Front mudguard
See chapter 3, section "FRONT BODY-WORK MUDGUARD"



Wheel axle
48 Nm (4.8 m • kg, 35 ft • lb)

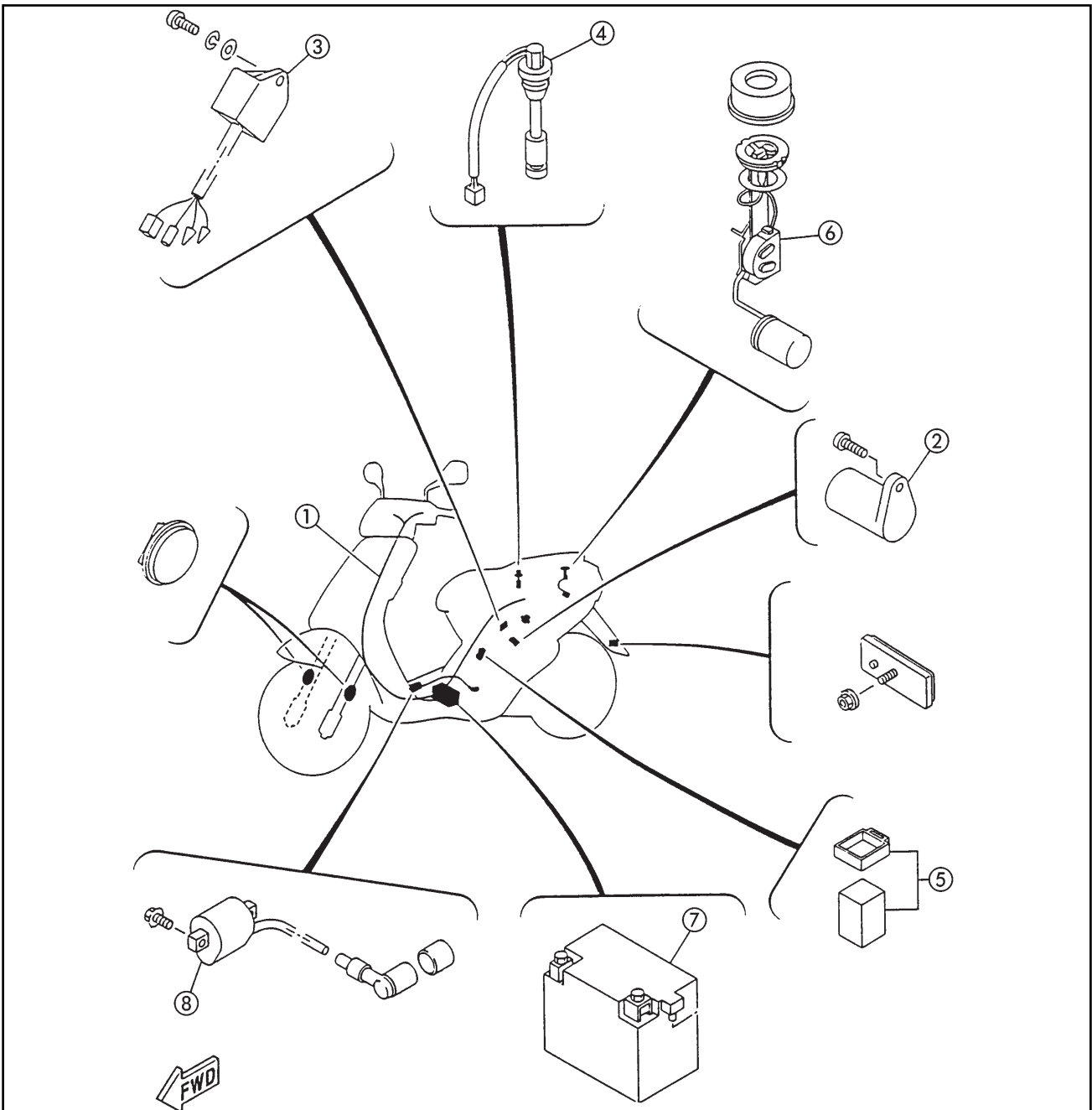


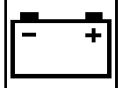
ELECTRICAL SYSTEM

ELECTRICAL COMPONENTS

- ① Wire harness
- ② Starter motor
- ③ CDI unit
- ④ Engine oil level gauge
- ⑤ Starter relay
- ⑥ Fuel level gauge
- ⑦ Battery
- ⑧ Ignition coil

<p>BATTERY SPECIFIC GRAVITY: 1,280</p>
<p>IGNITION COIL: PRIMARY COIL RESISTANCE: 0.56 ~ 0.84 Ω at 20 °C (68 °F) SECONDARY COIL RESISTANCE: 5.7 ~ 8.5 Ω at 20 °C (68 °F)</p>





TROUBLESHOOTING

THE BATTERY IS NOT CHARGED

NOTE:

- Remove the following parts before carrying out the repair of the fault.
 - 1) Side covers (right and left)
 - 2) Rear cover
- Use the following special tool for this repair.



Inductive tachometer:
90890-03113



Pocket tester:
90890-03112

1. Fuse (main)

- Remove the fuse.
- Connect the pocket tester ($\Omega \times 1$) to the fuse.
- Check the fuse to see if there is continuity



CONTINUITY

2. Battery

- Check the condition of the battery. See chapter 3, section "INSPECTION OF THE BATTERY".

Open circuit voltage:
12.8 V or more at 20 °C (68 °F)



CORRECT

3. Charging voltage

- Connect the inductive tachometer on the spark plug cable
- Connect the pocket tester (20 V CC) on the battery.

Cable (+) of the tester → Terminal (+)
Cable (-) of the tester → Terminal (-)

- Start the engine and accelerate to 5,000 rpm/min.
- Check charging voltage.



Charging voltage:
14 ~ 15 V at 5,000 rpm/min.

NOTE:

Use a fully charged battery.



OUTSIDE SPECIFIED VALUE

*

NO CONTINUITY

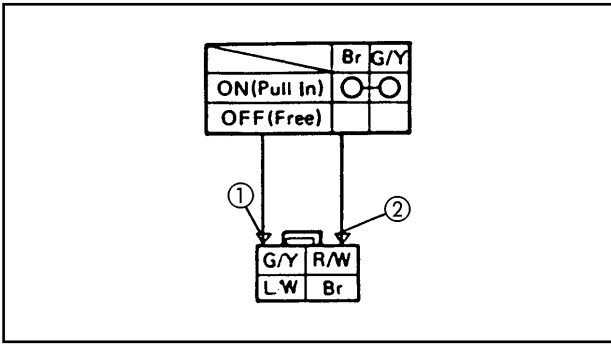
The fuse is defective, change.

INCORRECT

- Clean the battery terminals
- Recharge or change the battery.

SATISFIES THE SPECIFIED VALUE

The charging circuit is in good condition.



INCORRECT

The brake switch is defective, change.

CORRECTO

3. Voltage

- Connect the pocket tester (20 V DC) on the bulb holder connector.
- Cable (+) of tester → Green/Yellow ①
- Cable (-) of tester → Black ②
- Place the main switch on “ON”.
- Activate the brake lever.
- Check if there is a voltage (12 V) on the “Green/Yellow” cable of the bulb holder connector.

OUTSIDE SPECIFIED VALUE

The connection circuit from the main switch to the connector of the bulb holder is defective, change.

SATISFIES THE SPECIFIED VALUE (12 V)

The circuit is in good condition.

3. The Master lights do not flash.

1. Bulb and bulb holder.

- Check the bulb and bulb holder for continuity.

NO CONTINUITY

Change the bulb and/or bulb holder.

CONTINUITY

2. Turning signal switch “↔”

- Disconnect the handlebar switch coupler (left) from the installation.
- Check the switch component for continuity between “Brown/white” ① and “Chocolate ②” and “Brown/White” ① and “Dark green” ③

CORRECT

*

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