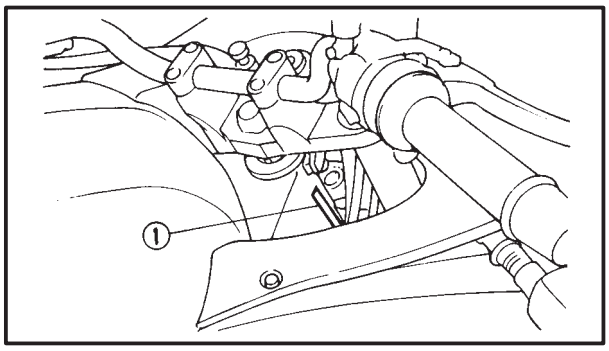
YAMAHA

TDM850 '96

4TX-AE1

SERVICE MANUAL



EB100000

GENERAL INFORMATION

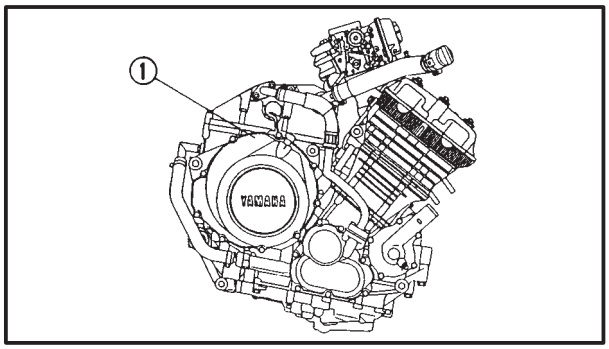
MOTORCYCLE IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

The vehicle identification number ① is stamped into the right side of the steering head.

NOTE:

The vehicle identification number is used to identify the motorcycle and may be used to register the motorcycle with a licensing authority.



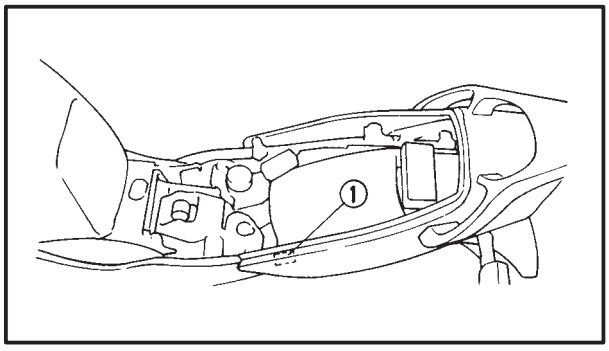
EB100030

ENGINE SERIAL NUMBER

The engine serial number ① is stamped into the crankcase.

NOTE:

The first three digits of the engine serial number indicate the model type; the remaining digits are the unit production number.

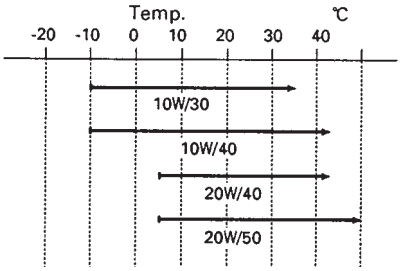


MODEL LABEL

The model label ① is affixed to the frame. This information will be needed to order spare parts.

SPECIFICATIONS

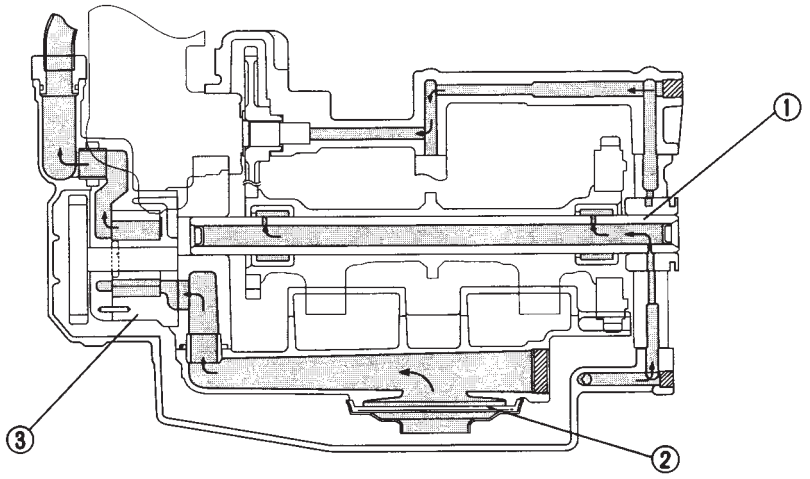
GENERAL SPECIFICATIONS

Item	Standard
Model:	TDM850
Model code:	4TX1
Dimensions: Overall length Overall width Overall height Seat height Wheelbase Minimum ground clearance Minimum turning radius	 2,165 mm, 2,200 mm (D, DK, SF, N, S) 790 mm 1,285 mm 805 mm 1,475 mm 165 mm 2,900 mm
Basic weight (With oil and full fuel tank):	229 kg
Engine: Engine type Cylinder arrangement Displacement Bore × stroke Compression ratio Compression pressure (STD) Starting system	 Liquid-cooled 4-stroke, DOHC, 5 valve Forward-inclined parallel 2-cylinder 0.849 L 89.5 × 67.5 mm 10.5 : 1 1,200 kPa (12 kg/cm^2, 12 bar) at 300 r/min Electric starter
Lubrication system:	Dry sump
Oil type or grade: Engine oil	 API Standard: API SE or higher grade
Oil capacity: Engine oil Periodic oil change With oil filter replacement Total amount	 3.5 L 3.6 L 4.2 L

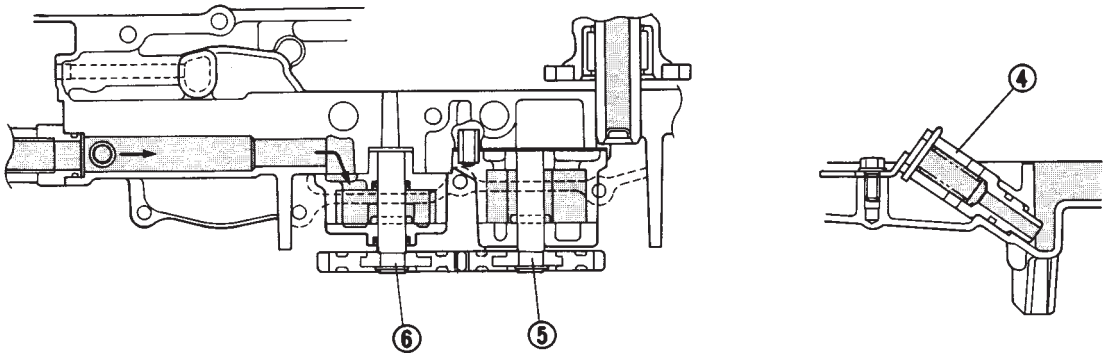
CHASSIS

Item		Standard	Limit
Steering system:			
Steering bearing type		Angular bearing	•••
Front suspension:			
Front fork travel		149 mm	•••
Fork spring free length		505 mm	500 mm
Spring rate	(K1)	6.4 N/mm (0.64 kg/mm)	•••
Stroke	(K1)	0 ~ 149 mm	•••
Optional spring		No	•••
Oil capacity (per fork tube)		0.515 L	•••
Oil level		130 mm	•••
Oil grade		Fork oil 01 or equivalent	•••
Rear suspension:			
Shock absorber travel		47 mm	•••
Spring free length	(K1/K2)	144 mm/69 mm	•••
Fitting length	(K1/K2)	136 mm/65 mm	•••
Spring rate	(K1/K2)	260 N/mm (26.0 kg/mm)/182 N/mm (18.2 kg/mm)	•••
Stroke	(K1/K2)	0 ~ 30/30 ~ 47 mm	•••
Optional spring		No	•••
Swingarm:			
Free play limit	end	•••	1 mm
	side	•••	0.3 mm
Front wheel:			
Type		Cast wheel	•••
Rim size		18 × MT3.00	•••
Rim material		Aluminum	•••
Rim runout limit	radial	•••	1 mm
	lateral	•••	0.5 mm
Rear wheel:			
Type		Cast wheel	•••
Rim size		17 × MT4.00	•••
Rim material		Aluminum	•••
Rim runout limit	radial	•••	1 mm
	lateral	•••	0.5 mm
Drive chain:			
Type/manufacturer		525HV/DAIDO	•••
No. of links		114	•••
Chain slack		40 ~ 50 mm	•••

① Front balancer
② Oil strainer
③ Oil pump
④ Relief valve
⑤ Oil pump (for pumping oil to the oil tank)
⑥ Oil pump (for lubricating the engine parts)



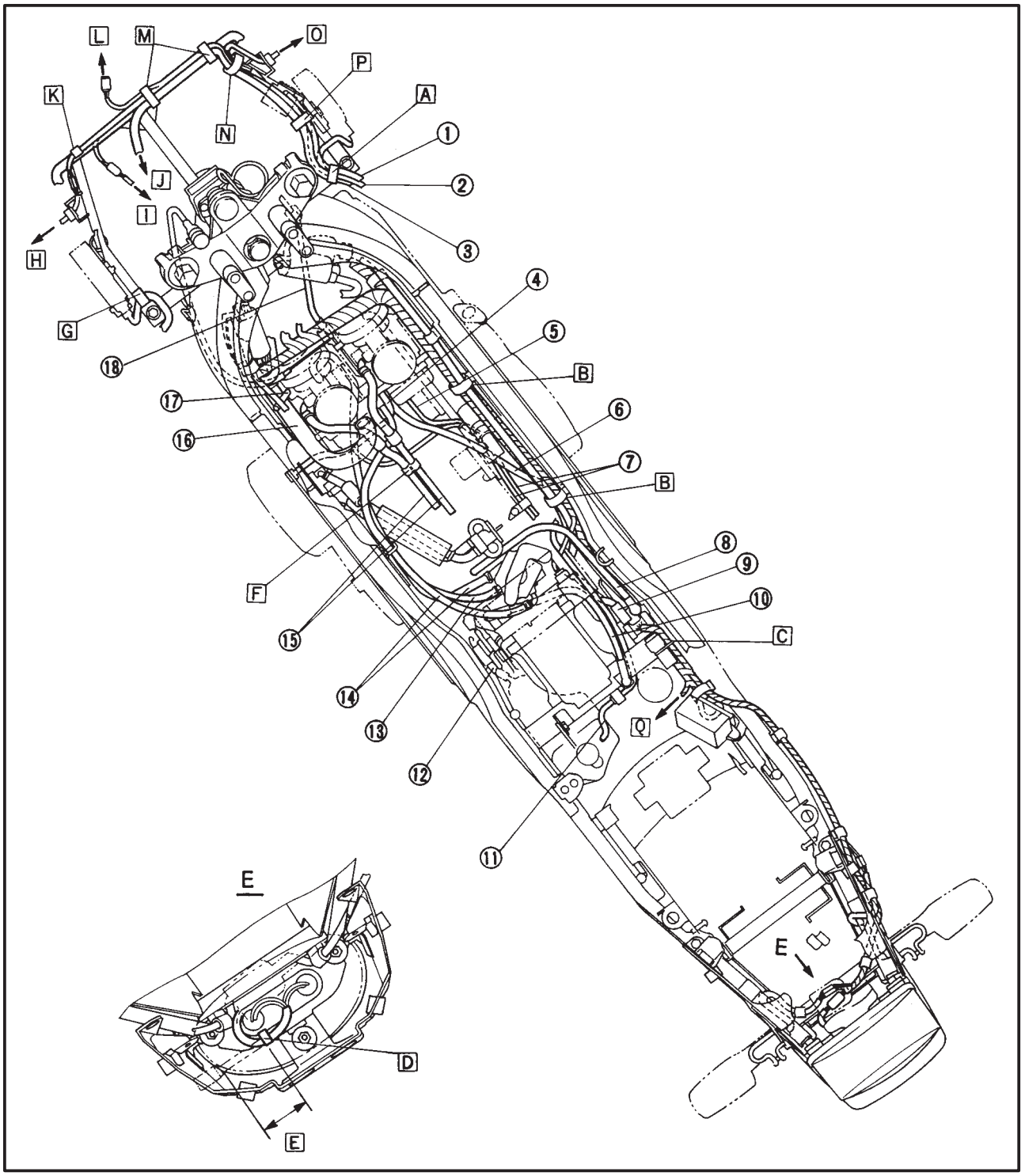
A



B

① Headlight lead
② Wire harness
③ Meter light lead
④ Throttle stop screw cable
⑤ Vacuum hose (#1)
⑥ Carburetor air vent hose
⑦ Carburetor breather hose
⑧ Starter motor lead
⑨ Battery positive lead
⑩ Battery negative lead
⑪ Coolant reservoir breather hose
⑫ Coolant reservoir hose
⑬ Vacuum hose (#2)
⑭ Fuel hose
⑮ Carburetor breather hose
⑯ Cylinder head breather hose
⑰ Air filter case breather hose
⑱ Throttle cable

[A] Fasten the meter light lead, headlight lead and wire harness with a plastic clamp.
[B] Fasten the wire harness and coolant reservoir hose with a plastic clamp.
[C] Pass the starter relay lead through the guide.



ENGINE

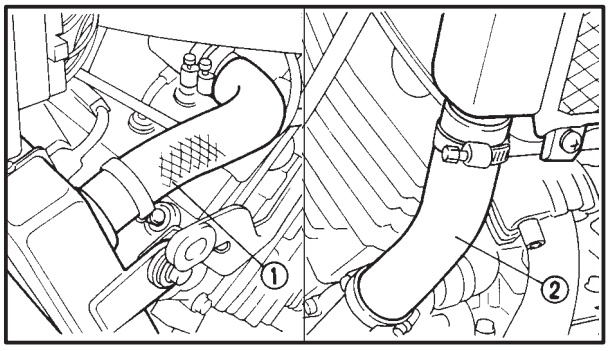
VALVE CLEARANCE ADJUSTMENT

NOTE:

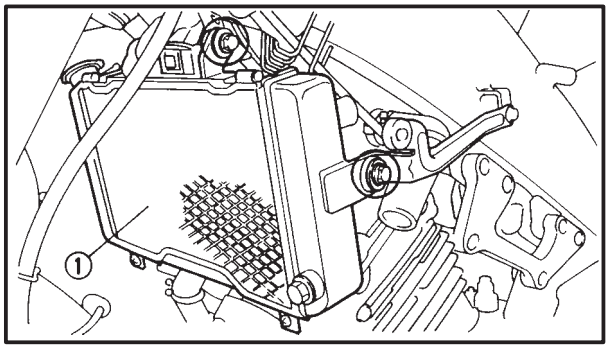
- The valve clearance should be adjusted when the engine is cool to touch.
- The piston must be at Top Dead Center (T.D.C.) on compression stroke to check or adjust the valve clearance.

1. Remove:
   - Side cowling
   - Seat
   - Side cover
   - Fuel tank
     Refer to “COWLINGS, SEAT, TAIL COVER AND FUEL TANK”.
   - Air filter case
     Refer to “AIR FILTER CASE”.

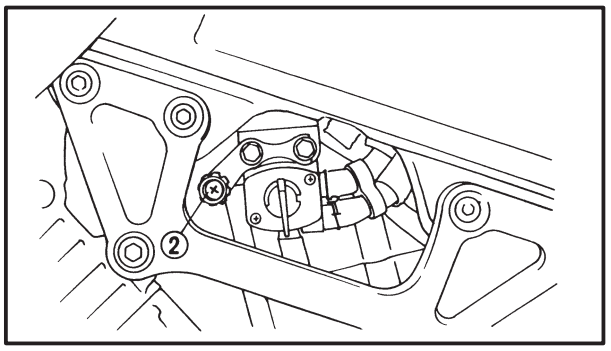
2. Drain:
   - Coolant
     Refer to “COOLANT REPLACEMENT”.



3. Disconnect:
   - Hose 2 ①
   - Hose 3 ②
   - Coolant reservoir hose (from radiator side)
   - Fan motor lead coupler



4. Remove:
   - Radiator ①



• Turn the throttle stop screw ② in or out until specified idling speed is obtained.

Turnning in:	**Idling speed is increased.**
Turnning out:	**Idling speed is decreased.**

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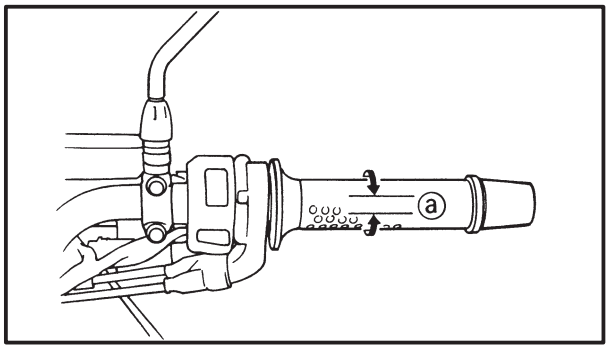
6. Adjust:
   • Throttle cable free play
   Refer to "THROTTLE CABLE FREE PLAY ADJUSTMENT".

Free play:
3 ~ 5 mm
At throttle grip flange

THROTTLE CABLE ADJUSTMENT

NOTE:

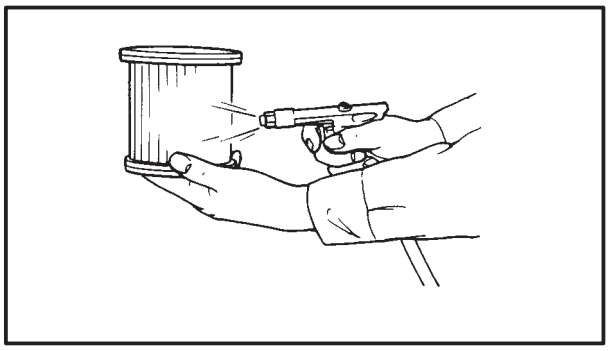
Engine idling speed and carburetor synchronization should be adjusted properly before adjusting the throttle cable free play.



1. Check:
   • Throttle cable free play ⓐ
   Out of specification → Adjust.

Free play:
3 ~ 5 mm
At throttle grip flange

2. Remove:
   • Side cowling
   • Seat
   • Side cover
   • Fuel tank
   Refer to "COWLINGS, SEAT, TAIL COVER AND FUEL TANK".
   • Air filter case
   Refer to "AIR FILTER CASE".



3. Inspect:
   • Air filter element
   Damage → Replace.
4. Clean:
   • Air filter element
   Blow off dust from the outer surface of the element with compressed air.

5. Install:
   • Air filter element
   • Air filter case cover

NOTE:

Make sure the element is properly seated in the filter case.

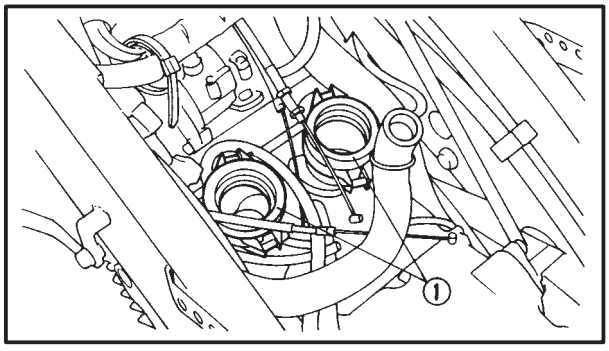
6. Install:
   • All removed parts

NOTE:

Install all removed parts in reversed order of their removal.

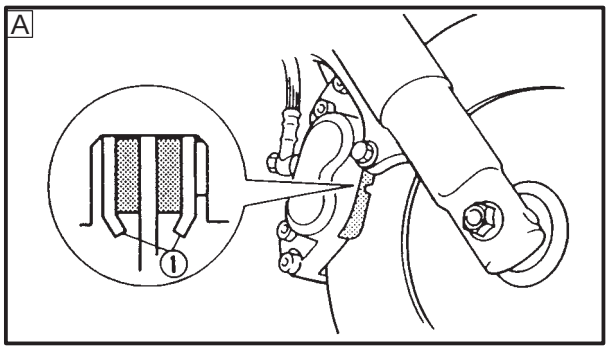
CARBURETOR JOINT INSPECTION

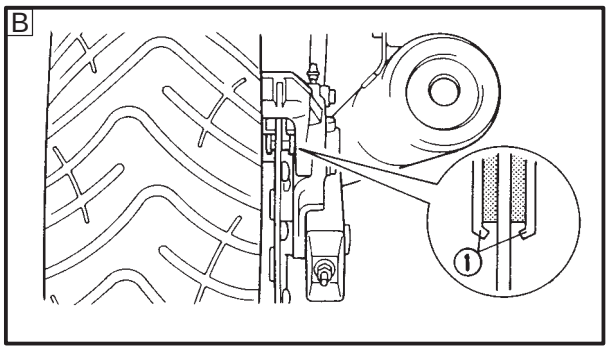
1. Remove:
   • Side cowling
   • Seat
   • Side cover
   • Fuel tank
   Refer to “COWLINGS, SEAT, TAIL COVER AND FUEL TANK”.
   • Air filter case
   Refer to “AIR FILTER CASE”.
2. Inspect:
   • Carburetor joints ①
   Cracks/Damage → Replace.
   Refer to “CARBURETOR” in CHAPTER 6.
3. Install:
   • All removed parts



NOTE:

Install all removed parts in reversed order of their removal.





A Front
B Rear

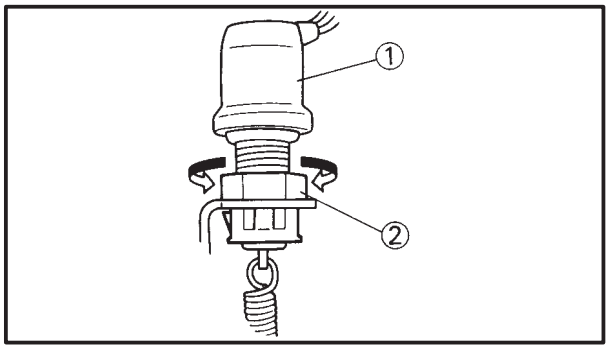
BRAKE PAD INSPECTION

1. Activate the brake lever or brake pedal.
2. Inspect:
   • Brake pad
   Wear indicator ① almost contacting the brake disc → Replace brake pad as a set.
   Refer to "FRONT AND REAR BRAKE" in CHAPTER 7.

BRAKE LIGHT SWITCH ADJUSTMENT

NOTE:

The brake light switch is operated by movement of the brake pedal.
Proper adjustment is achieved when the brake light comes on just before the brake begins to take effect.

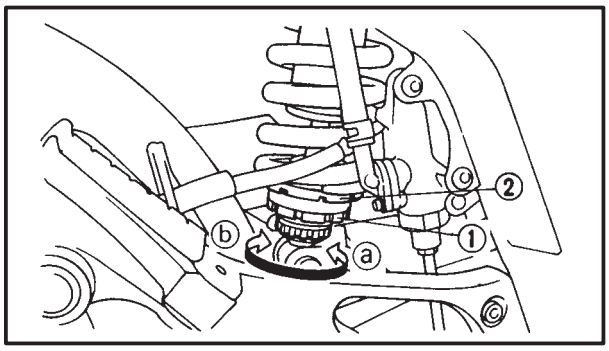


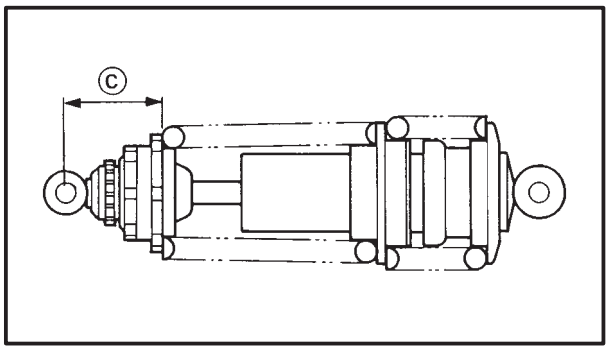
1. Check:
   • Brake light operation
   Incorrect → Adjust.
2. Adjust:
   • Brake light operating timing

Adjustment steps:

• Hold the main body ① of the switch with your hand so that it does not rotate, and turn the adjuster ② in or out until the operating timing is correct.

Turnning in:	**Brake light on later.**
Turnning out:	**Brake light on sooner.**





2. Adjust:
   • Spring preload
   Fine adjustment (bottom)

Adjustment steps:
• Loosen the locknut ①.
• Turn the adjuster ② in or out.

Turnning in ⓐ :	**Spring preload is increased.**
Turnning out ⓑ :	**Spring preload is decreased.**

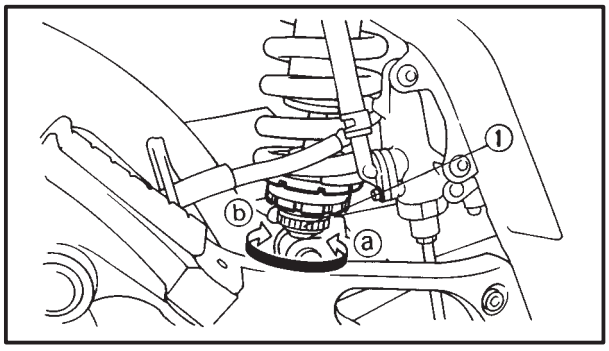
Measurement length ⓒ:
Standard: 61 mm
Minimum: 59 mm
Maximum: 63 mm

• Tighten the locknut.

Lock nut:
70 Nm (7.0 m•kg)

CAUTION:

Always tighten the locknut against the spring adjusting nut and tighten the locknut to the specified torque.



Damping force
1. Adjust:
   • Damping force
   Turn the adjuster ① in or out.

Turnning in ⓐ :	**Damping force is increased.**
Turnning out ⓑ :	**Damping force is decreased.**

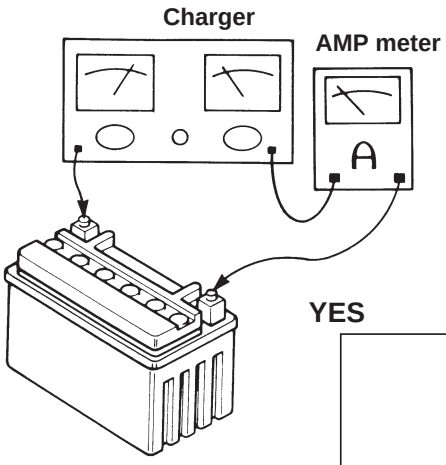
Adjuster position:
Standard: 20 clicks out
Minimum: 10 clicks out
Maximum: 0 clicks out

*: From the fully turned-in position.

CAUTION:

Never turn the adjuster beyond the maximum or minimum setting.

Charging method using a variable-current (voltage) type charger



Measure the open-circuit voltage prior to charging.

Connect a charger and AMP meter to the battery and start charging.

Make sure that the current is higher than the standard charging current written on the battery.

YES

NO

By turning the charging voltage adjust dial, set the charging voltage at 20 ~ 25 V.

Monitor the amperage for 3 ~ 5 minutes to check if the standard charging current is reached.

YES

Adjust the voltage so that the current is at the standard charging level.

NO

If the current does not exceed the standard charging current after 5 minutes, replace the battery.

Set the timer according to the charging time suitable for the open-circuit voltage.
Refer to “Battery condition checking steps.”

If charging requires more than 5 hours, it is advisable to check the charging current after a lapse of 5 hours. If there is any change in the amperage, readjust the voltage to obtain the standard charging current.

Measure the battery open-circuit voltage after leaving the battery unused for more than 30 minutes.
12.8 V or more --- Charging is complete.
R12.7 V or less --- Recharging is required.
Under 12.0 V --- Replace the battery.

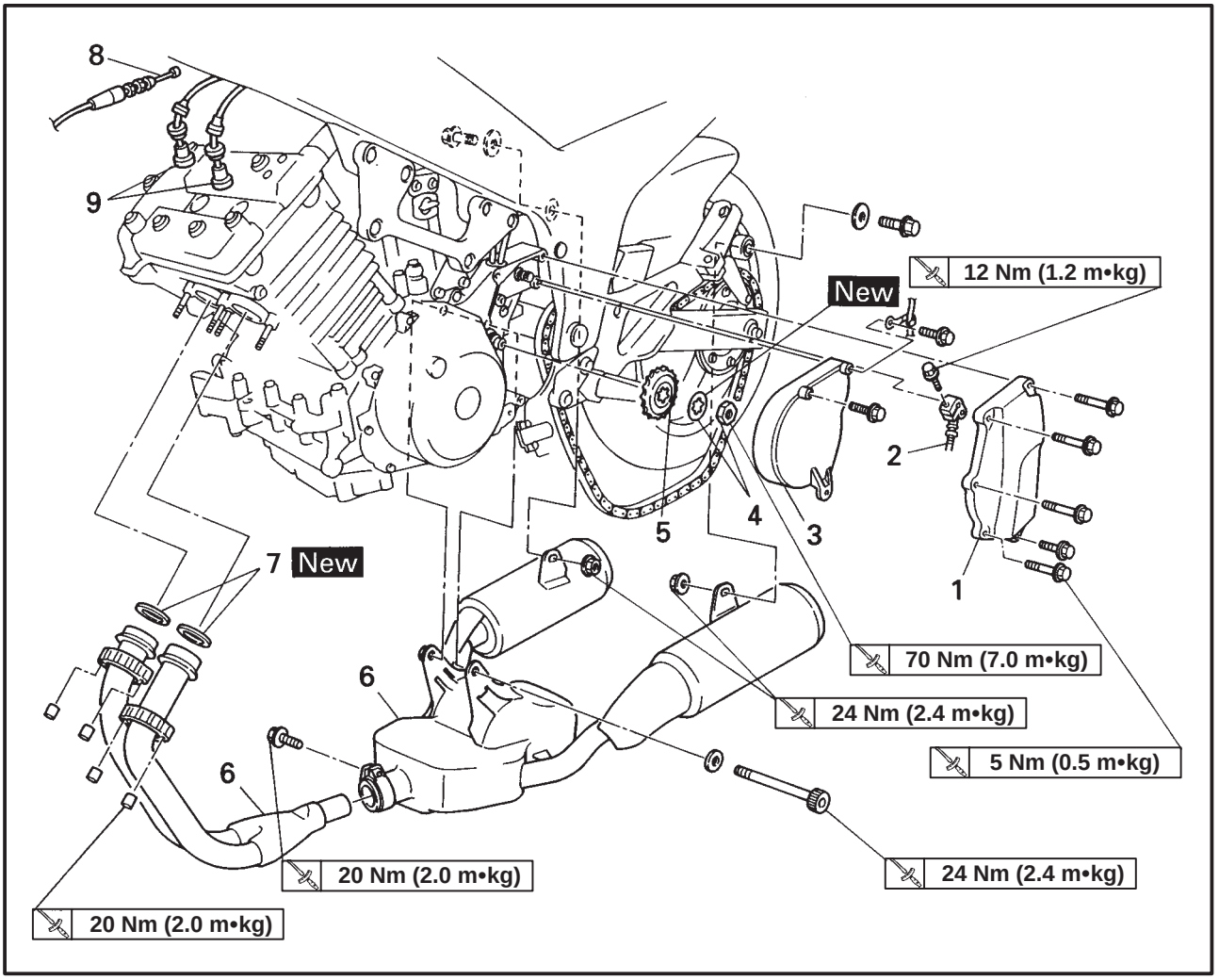
NOTE:

Voltage should be measured 30 minutes after the machine is stopped.

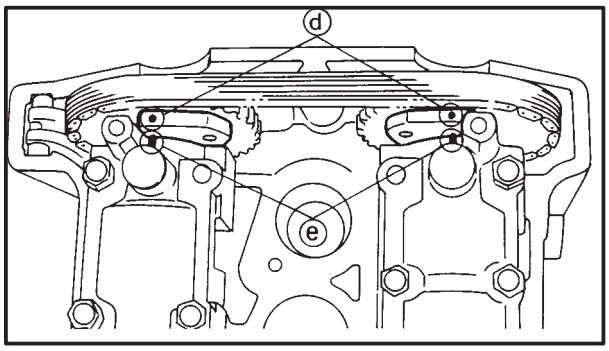
NOTE:

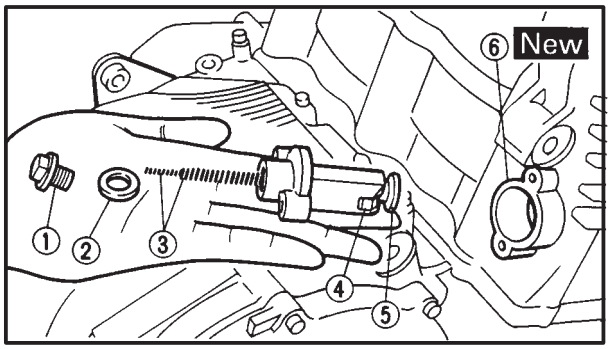
Set the charging voltage at 16 ~ 17 V. (If the setting is lower, charging will be insufficient. If too high, the battery will be over-charged.)

DRIVE SPROCKET AND EXHAUST PIPE/MUFFLER



Order	Job name/Part name	Q'ty	Remarks
	Drive sprocket and exhaust pipe/muffler removal		Remove the parts in the order below.
	Air filter case		Refer to "AIR FILTER CASE" in CHAPTER 3.
	Carburetor assembly		Refer to "CARBURETOR" in CHAPTER 6.
	Radiator assembly		Refer to "RADIATOR" in CHAPTER 5.
	Thermostatic valve assembly		Refer to "THERMOSTATIC VALVE" in CHAPTER 5.
1	Drive sprocket cover 1	1	
2	Shift arm	1	
3	Drive sprocket cover 2	1	
4	Nut/Lock washer	1/1	
5	Drive sprocket/Drive chain	1/1	
6	Exhaust pipe/Muffler	1/1	
7	Exhaust pipe gasket	2	
8	Clutch cable	1	
9	Spark plug caps	2	
			For installation, reverse the removal procedure.





CAUTION:

Do not turn the crankshaft during the camshaft installation. Damage or improper valve timing will result.

- Make sure that marks ⓓ and ⓔ are aligned after the crankshaft is rotated twice and the piston is at TDC.

4. Install:
   - Timing chain guide (exhaust)
5. Install:
   - Timing chain tensioner

Installation steps:
- Remove the tensioner cap bolt ①, washer ② and springs ③.
- Release the timing chain tensioner one-way cam ④ and push the tensioner rod ⑤ all the way in.
- Install a gasket ⑥. New
- Install the timing chain tensioner.

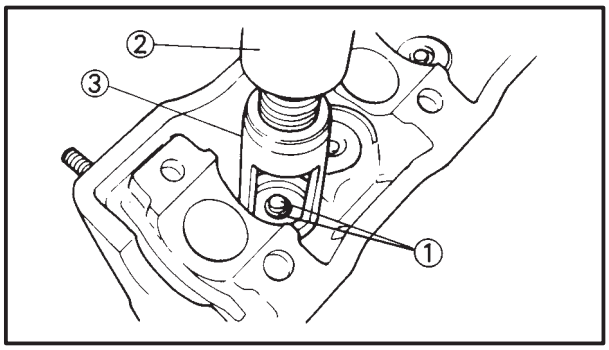
	Timing chain tensioner: 10 Nm (1.0 m•kg)

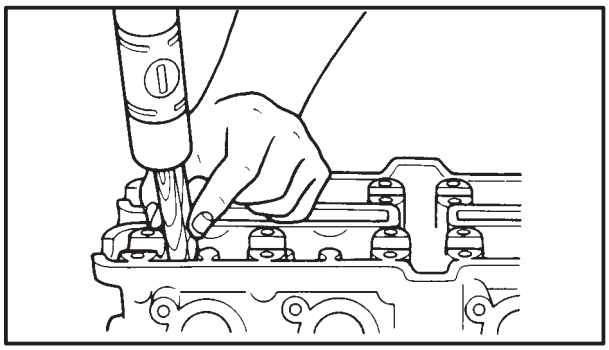
- Install the springs ③ and washer ②.
- Install the tensioner cap bolt ①.

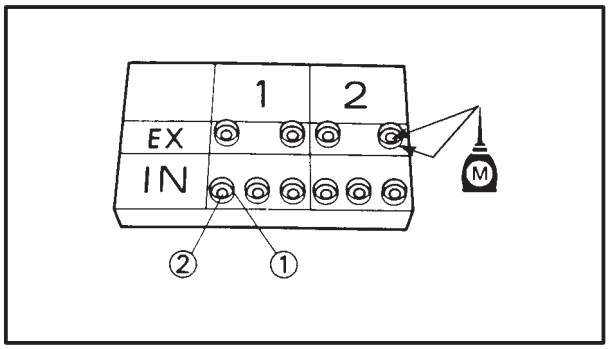
	Cap bolt: 20 Nm (2.0 m•kg)

6. Turn:
   - Crankshaft
     Counterclockwise several turns
7. Check:
   - A.C. magneto "T" mark
     Align with the crankcase stationary pointer.
   - Camshaft punched marks
     Align with the camshaft cap embossed marks.
     Out of alignment → Adjust.
8. Tighten:
   - Camshaft sprocket bolts.

24 Nm (2.4 m•kg)







2. Install:
   • Valve cotters ①

NOTE:

Install the valve cotters while compressing the valve spring with the valve spring compressor.

Valve spring compressor ②:
90890-04019
Attachment ③:
90890-04108

3. Secure the valve cotters ① onto the valve stem by tapping lightly with a piece of wood.

NOTE:

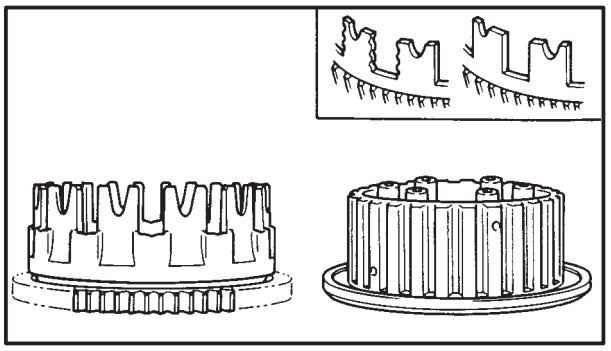
Do not hit so much as to damage the valve.

4. Install:
   • Pads ①
   • Valve lifters ②

NOTE:

- The valve lifters must move smoothly when rotated with the finger.
- Each valve lifter and pad must be reinstalled in their original position.

Refer to "VALVE CLEARANCE ADJUSTMENT" in CHAPTER 3.



4. Inspect:
   • Dogs
   (on the clutch housing)
   Pitting/Wear/Damage → Deburr or replace.
   • Clutch housing bearing
   Wear/Damage → Replace clutch housing.

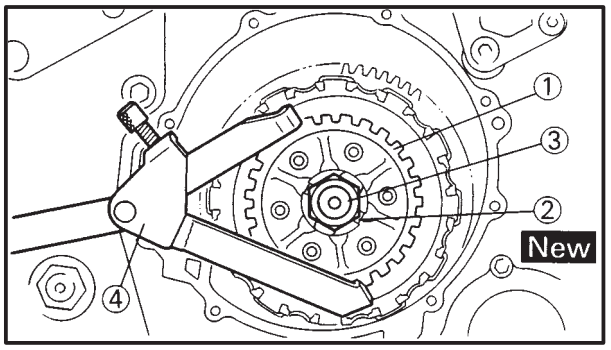
NOTE:

Pitting on the clutch housing dogs will cause erratic operation.

   • Clutch boss splines
   Pitting/Wear/Damage → Replace clutch boss.

NOTE:

Pitting on the clutch boss splines will cause erratic operation.



INSTALLATION

1. Install:
   • Clutch boss ①
   • Lock washer ② New
   • Clutch boss nut ③

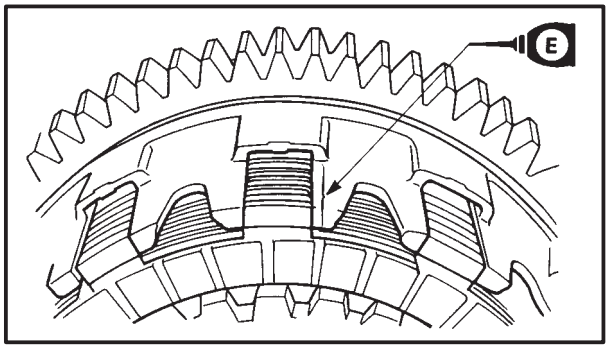
70 Nm (7.0 m•kg)

NOTE:

Tighten the clutch boss nut while holding the clutch boss with the universal clutch holder ④.

Universal clutch holder:
90890-04086

2. Bend the lock washer tab along a flat side of the nut.

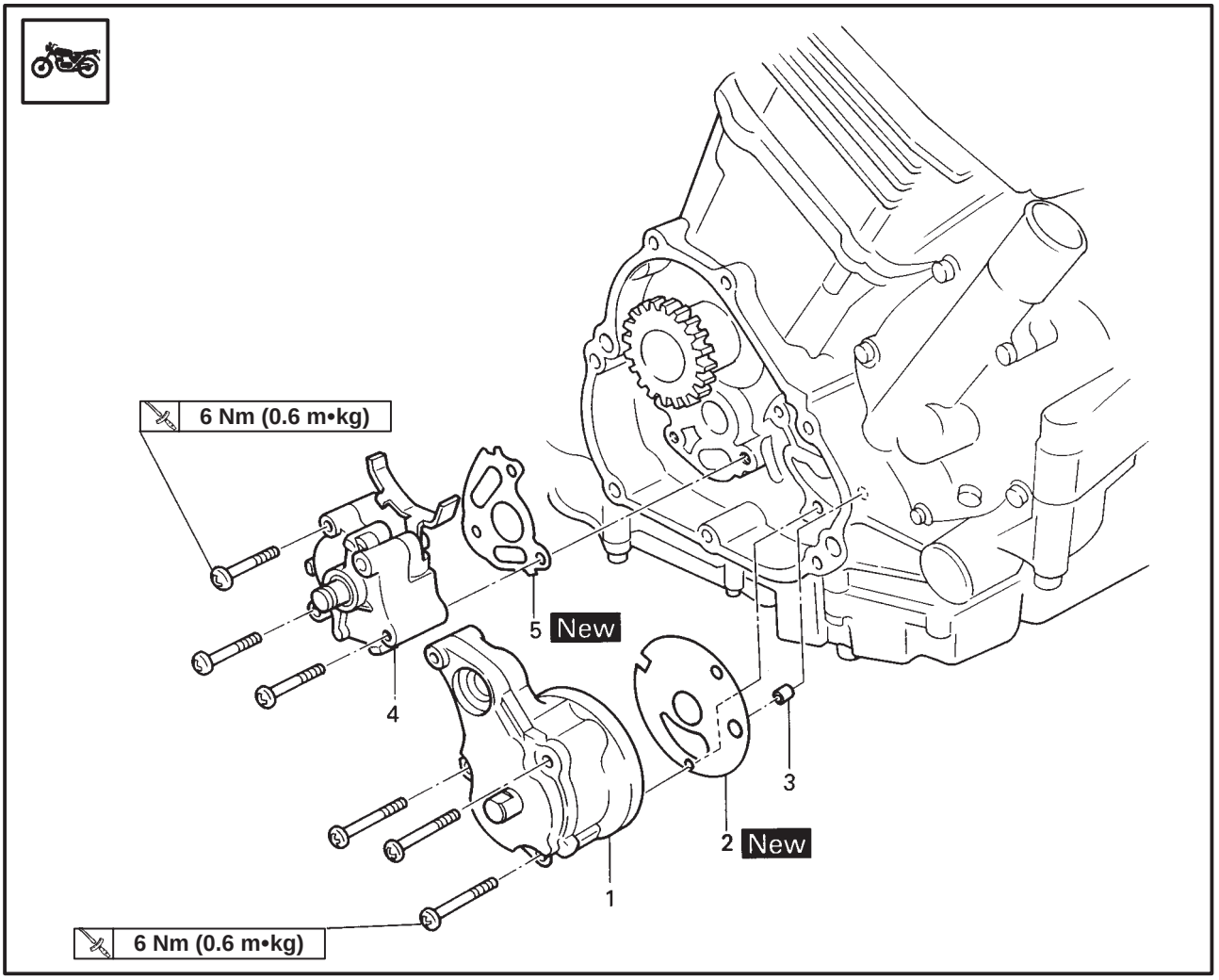


3. Install:
   • Friction plates
   • Clutch plates

NOTE:

• Mount friction and clutch plate alternately.
• Lubricate the friction plates with engine oil.

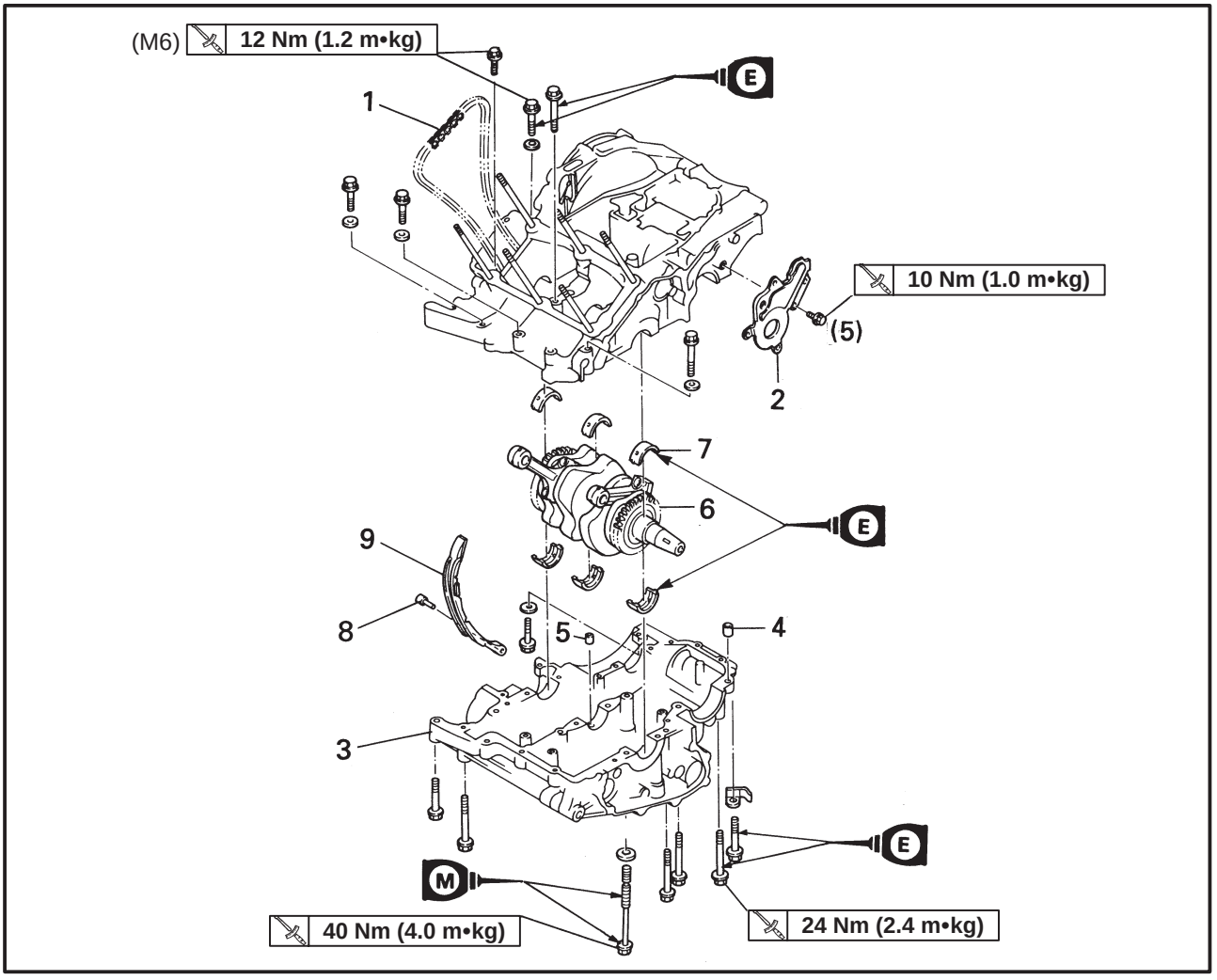
OIL PUMP



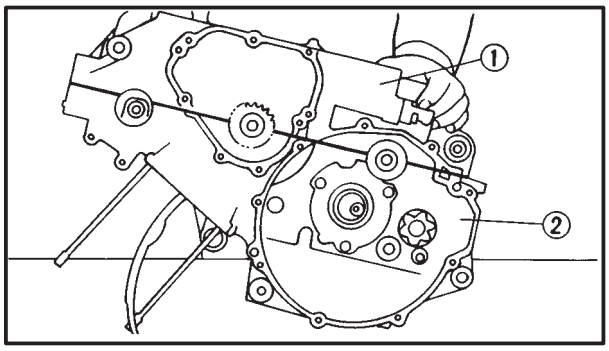
Order	Job name/Part name	Q'ty	Remarks
	Oil pump removal		Remove the parts in the order below.
1	Oil pump assembly 1 (For pumping oil to the oil tank)	1	
2	Gasket	1	
3	Dowel pin	1	
4	Oil pump assembly 2 (For lubricating the engine parts)	1	
5	Gasket	1	
			For installation, reverse the removal procedure.

CRANKSHAFT

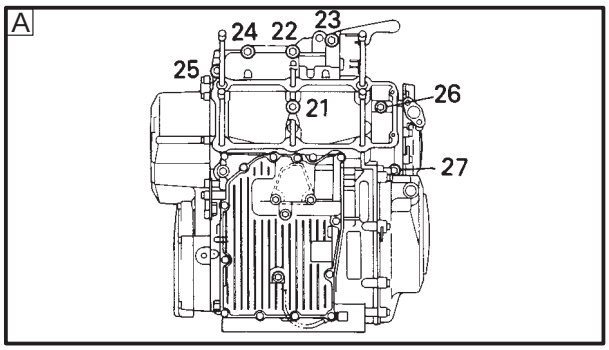
CRANKSHAFT ASSEMBLY

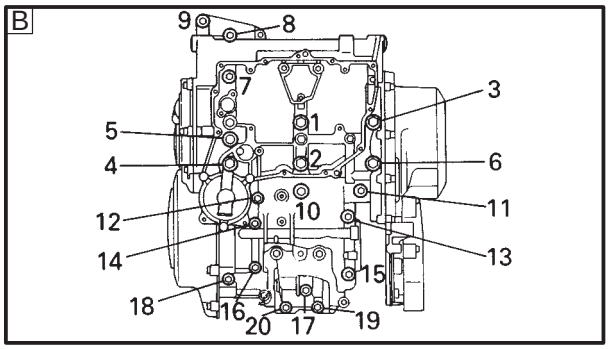


Order	Job name/Part name	Q'ty	Remarks
	Crankshaft removal		Remove the parts in the order below.
	Balancer weight		Refer to "BALANCER".
	Water pump		Refer to "WATER PUMP" in CHAPTER 5.
1	Timing chain	1	
2	Cover plate	1	Refer to "REMOVAL", and "INSTALLATION".
3	Lower crankcase	1	
4	Dowel pin	1	
5	Nozzle	1	
6	Crankshaft assembly	1	
7	Main journal bearing	6	
8	Pin	1	
9	Timing chain guide (intake)	1	
			For installation, reverse the removal procedure.



10. Install:
   • Lower crankcase ①
   (onto upper crankcase ②)
   Place the lower crankcase assembly onto the upper crankcase assembly.





CAUTION:

Before tightening the crankcase bolts, check the following point:
- **Be sure the gears shift correctly when the shift cam is turned by hand.**

11. Tighten:
   • Lower crankcase bolt
   (follow the proper tightening sequence)
   • Upper crankcase bolt

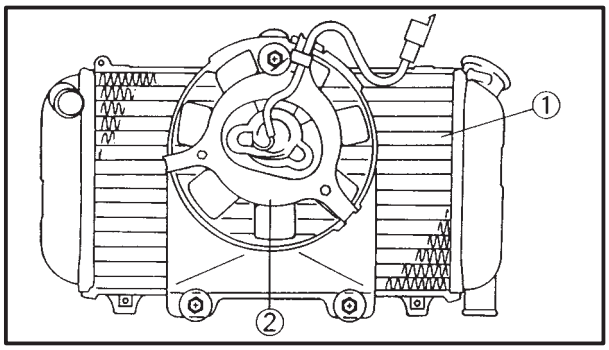
	① ~ ⑥ **(M10):** **40 Nm (4.0 m•kg)** ⑦ ~ ⑩, ⑬, ⑮, ⑳ ~ ㉕ **(M8)** **24 Nm (2.4 m•kg)** ⑪, ⑫, ⑬, ⑮ ~ ⑲, ㉖, ㉗ **(M6)** **12 Nm (1.2 m•kg)**

A Upper crankcase

B Lower crankcase

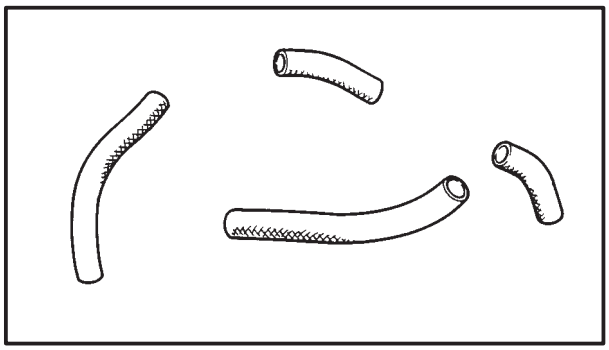
NOTE:
- Lubricate the threads of bolts (No. ① ~ ⑥) with molybdenum disulfide motor oil.
- Lubricate the threads of bolts (No. ⑦ ~ ㉗) with engine oil.
- Install a copper washer on bolts No. ⑱, ㉑, ㉓, ㉕.
- Install a lead holder on bolt No. ⑳.
- Tighten the bolts in the tightening sequence cast on the crankcase.

12. Install:
   • Cover plate — **10 Nm (1.0 m•kg)**



INSPECTION

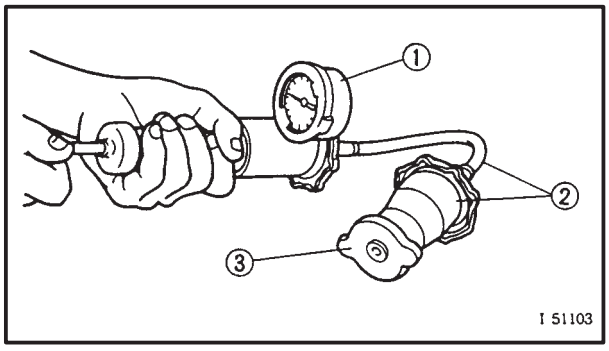
1. Inspect:
   • Radiator core ①
   Obstruction → Blow out with compressed air through rear of the radiator.
   Flattened fin → Repair/Replace.
2. Inspect:
   • Fan ②
   • Cracks/Damage → Replace.



3. Inspect:
   • Radiator hoses
   Crancks/Damage → Replace.

4. Measure:
   • Radiator cap opening pressure
   Radiator cap opens at pressure below the specified pressure → Replace.

Radiator cap opening pressure:
75 ~ 105 kPa
(0.75 ~ 1.05 kg/cm^2, 0.75 ~ 1.05 bar)



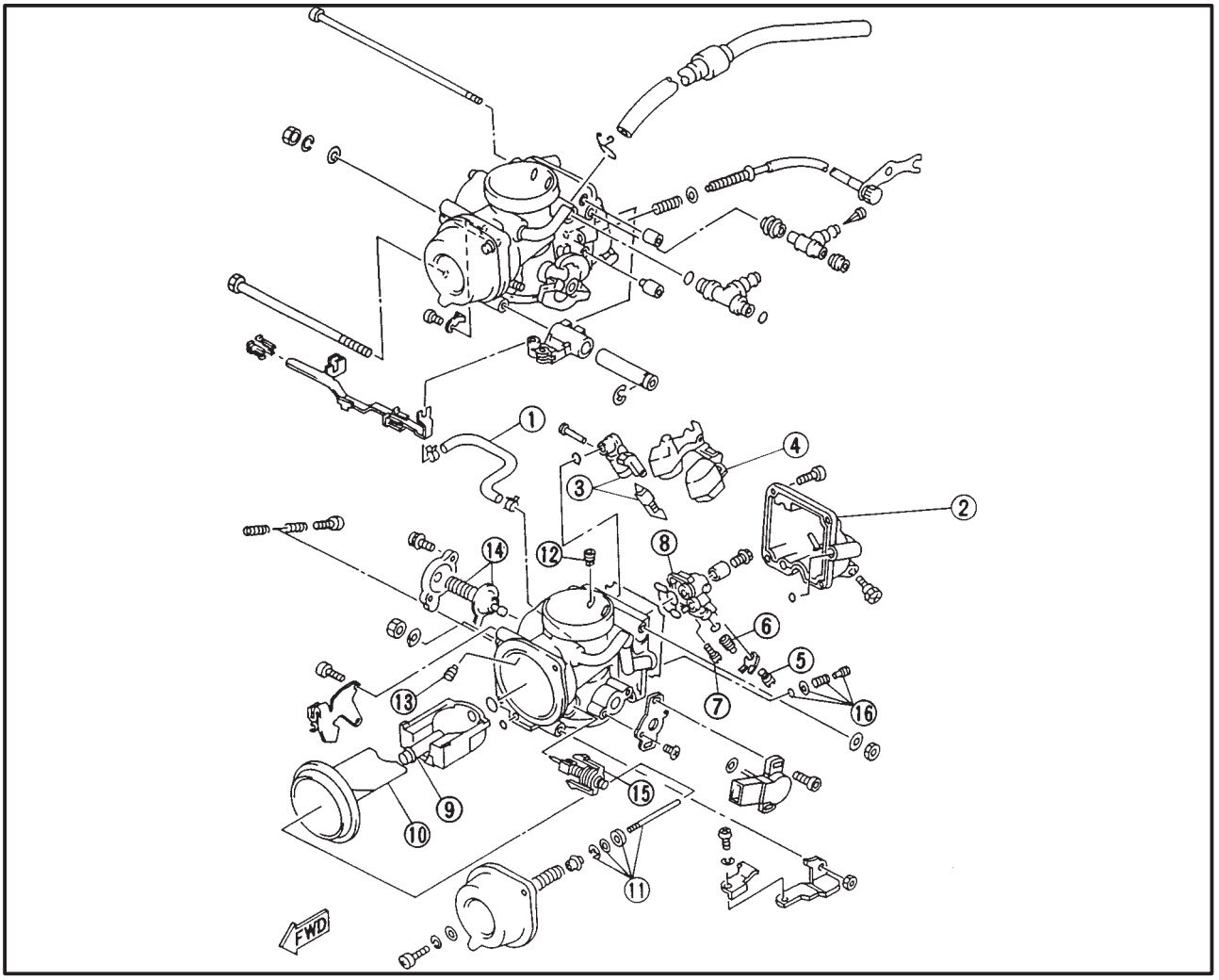
Measurement steps:

• Attach the radiator cap tester ① and adapter ② to the radiator cap ③.

Radiator cap tester:
90890-01325
Adapter:
90890-01352

• Apply the specified pressure for 10 seconds, and make sure there is no pressure drop.

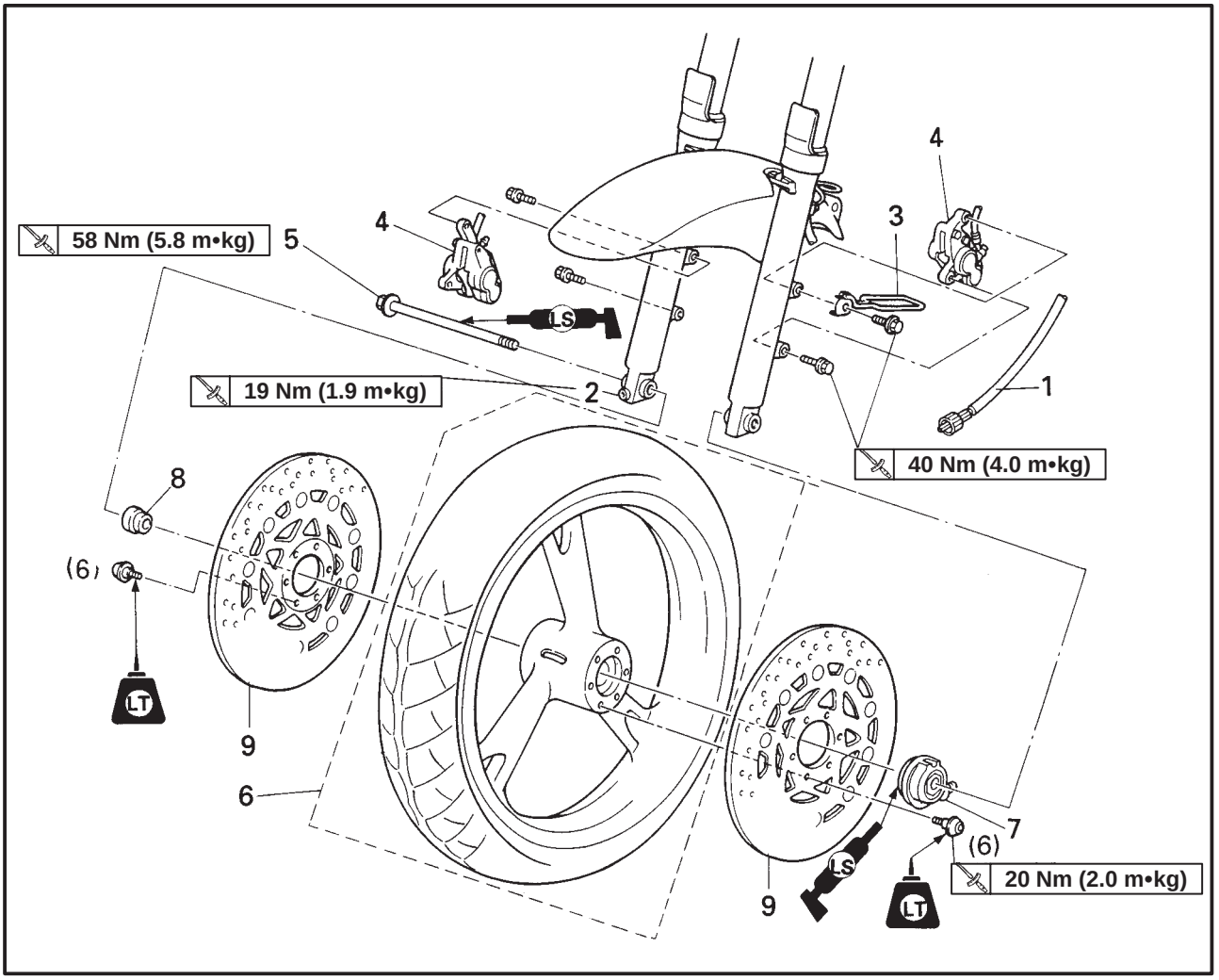
CARBURETOR



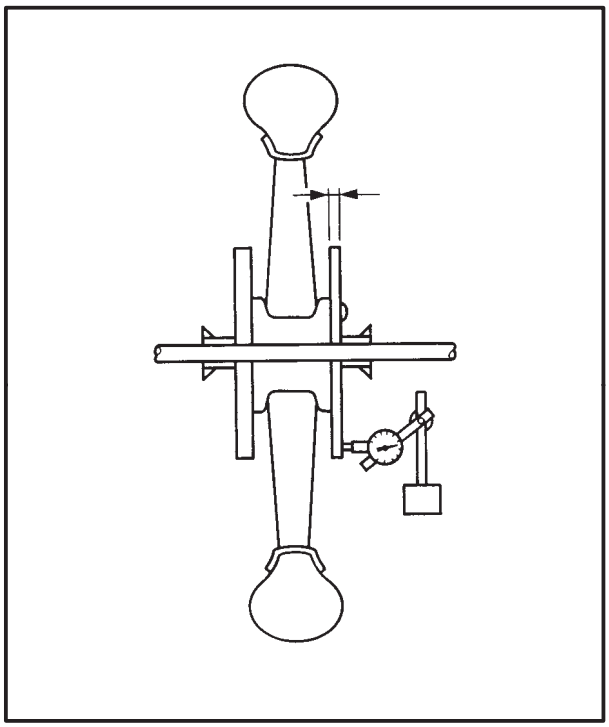
Order	Job name/Part name	Q'ty	Remarks
	Carburetor disassembly		Disassemble the parts in the order below.
①	Carburetor heater hose	1	
②	Float chamber	1	
③	Needle valve	1	
④	Float	1	
⑤	Starter jet	1	Refer to "INSTALLATION".
⑥	Main jet	1	
⑦	Pilot jet	1	
⑧	Jet housing	1	
⑨	Jet needle	1	
⑩	Throttle valve	1	

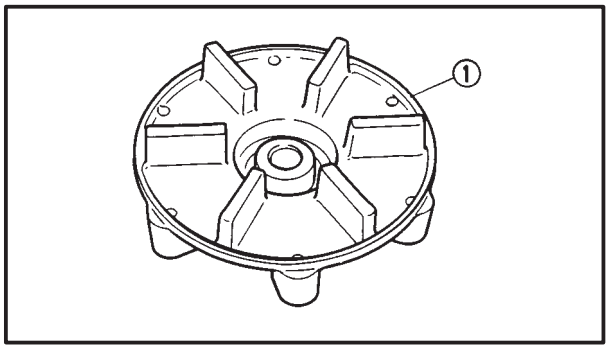
CHASSIS

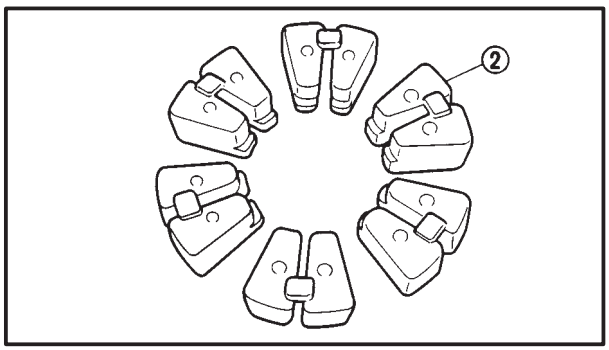
FRONT WHEEL AND BRAKE DISCS



Order	Job name/Part name	Q'ty	Remarks
	Front wheel and brake disc removal		Remove the parts in the order below. **NOTE:** Elevate the front wheel by placing a suitable stand under the engine.
1	Speedometer cable	1	Disconnect
2	Pinch bolt (front wheel axle)	1	Loosen
3	Cable guide	1	
4	Brake caliper (left/right)	1/1	
5	Front wheel axle	1	Refer to "INSTALLATION".
6	Front wheel	1	
7	Speedometer gear unit	1	
8	Collar	1	
9	Brake disc (left/right)	1/1	
			For installation, reverse the removal procedure.







INSPECTION

1. Inspect:
   - Rear wheel axle
     Refer to "FRONT WHEEL AND BRAKE DISC".
2. Measure:
   - Wheel runout
     Refer to "FRONT WHEEL AND BRAKE DISC".
3. Install:
   - Wheel bearings
   - Oil seals
   - Collars
     Refer to "FRONT WHEEL AND BRAKE DISC".
4. Measure:
   - Brake disc deflection
     Out of specification → Inspect wheel runout.
     If wheel runout is in good condition, replace the brake disc(s).

NOTE:

Remove the brake caliper before inspecting the brake disc deflection.

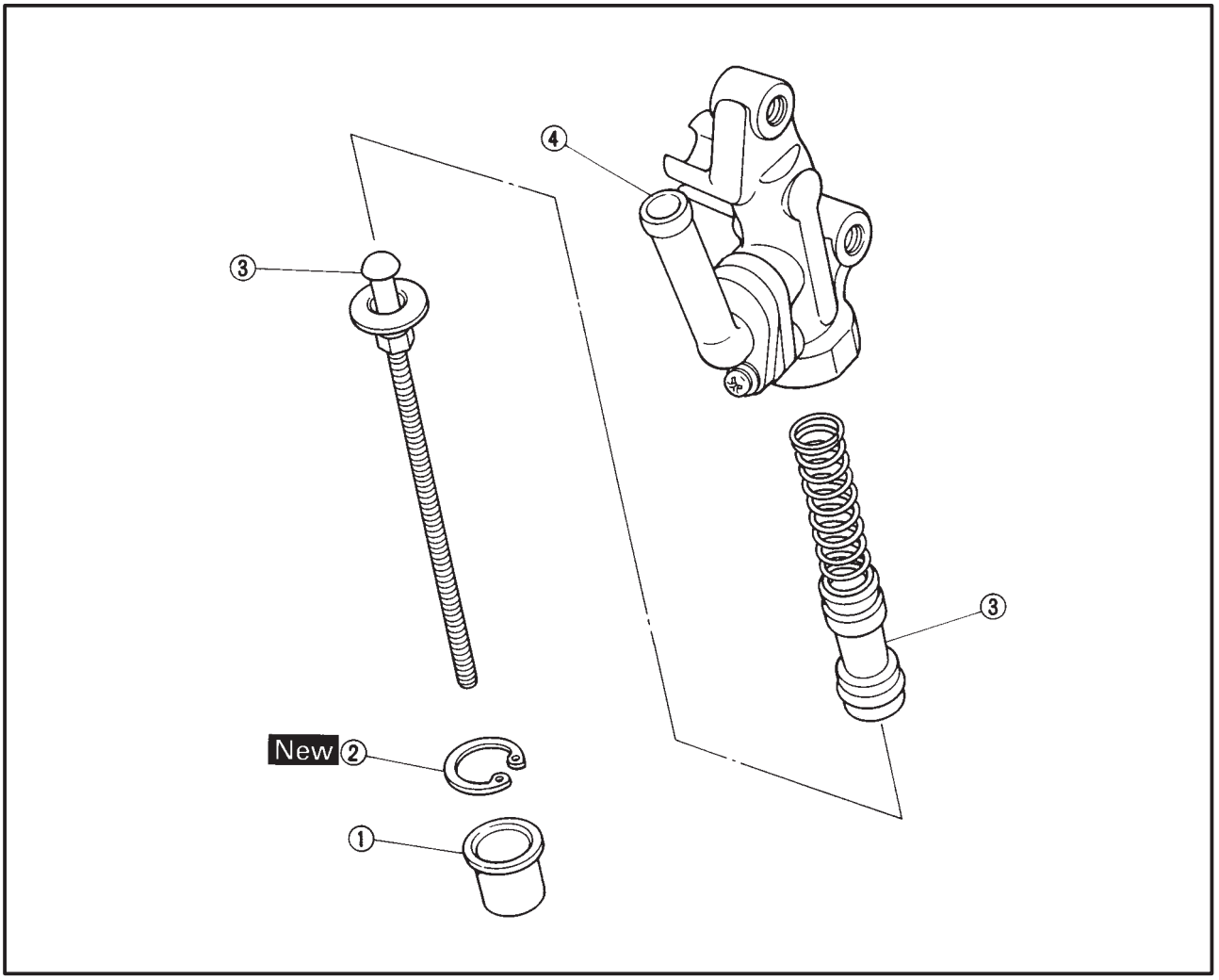
Maximum deflection:
0.15 mm

- Brake disc thickness
  Out of specification → Replace.

Minimum thickness:
4.5 mm

Measuring point 1 ~ 3 mm

5. Inspect:
   - Clutch hub ①
     Cracks/Damage → Replace.
   - Rubber dampers ②
     Wear/Damage → Replace.



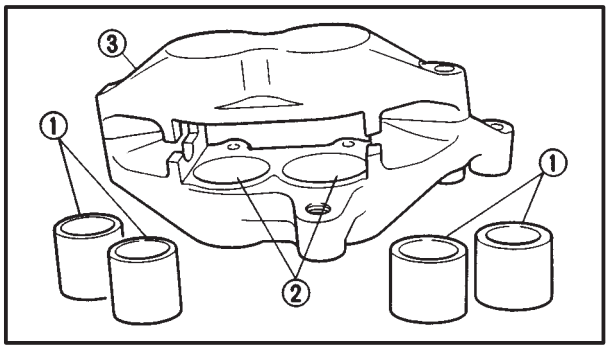
Order	Job name/Part name	Q'ty	Remarks
	Rear brake master cylinder disconnection		Disconnect the parts in the order below.
①	Boot	1	
②	Circlip	1	
③	Master cylinder kit	1	
④	Master cylinder body	1	
			For assembly, reverse the disconnection procedure.

CALIPER INSPECTION AND REPAIR

Recommended brake component replacement schedule:	
Brake pads	As required
Piston seal, dust seal	Every two years
Brake hoses	Every two years
Brake fluid	Replace only when brakes are disassembled.

⚠ WARNING

All internal brake components should be cleaned in new brake fluid only. Do not use solvents as they will cause seals to swell and distort.



1. Inspect:
   - Caliper piston ①
     Scratches/Rust/Wear → Replace caliper assembly.
   - Caliper cylinder ②
     Wear/Scratches → Replace caliper assembly.
   - Caliper body ③
     Cracks/Damage → Replace.
   - Oil delivery passage (caliper body)
     Blow out with compressed air.

⚠ WARNING

Replace the piston seals and dust seals whenever the caliper is disassembled.

CALIPER ASSEMBLY

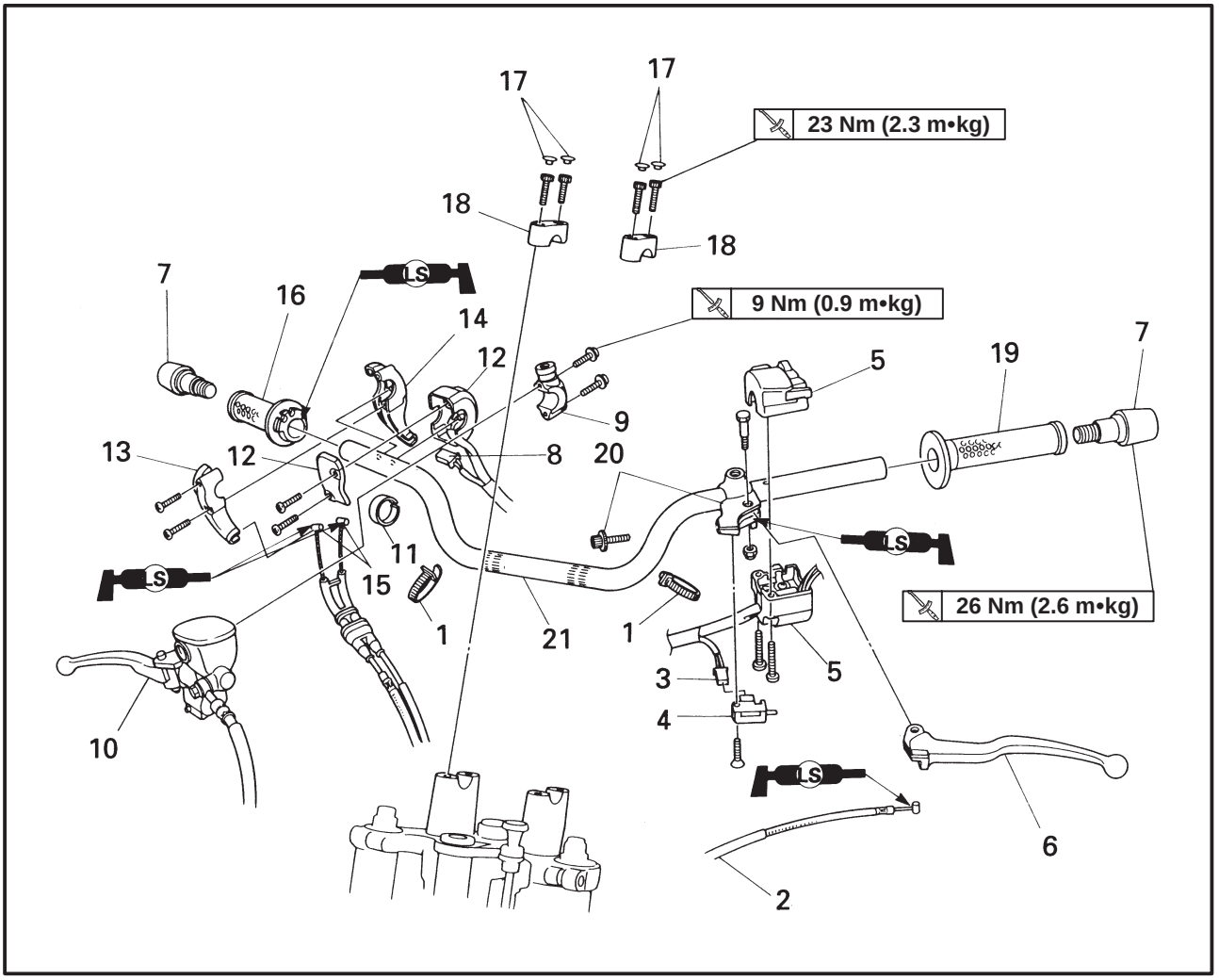
⚠ WARNING

- **All internal parts should be cleaned in new brake fluid only.**
- **Internal parts should be lubricated with brake fluid when installed.**

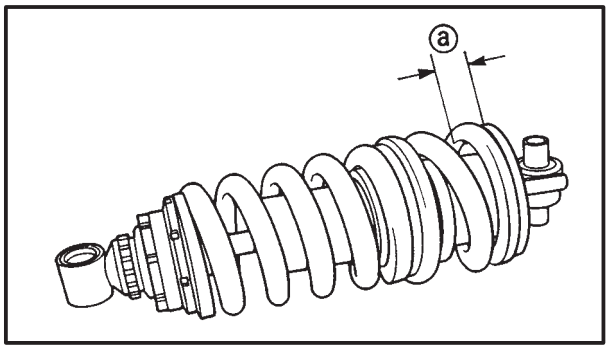
	Recommended brake fluid: **DOT 4**

- **Replace the piston seals and dust seals whenever a caliper is disassembled.**

HANDLEBAR



Order	Job name/Part name	Q'ty	Remarks
	Handlebar removal		Remove the parts in the order below.
1	Band	2	
2	Clutch cable	1	
3	Clutch switch lead coupler	1	Disconnect
4	Clutch switch	1	
5	Left handlebar switch	1	
6	Clutch lever	1	
7	Grip end	2	Refer to "INSTALLATION".
8	Front brake switch lead coupler	1	
9	Master cylinder bracket	1	Disconnect
10	Master cylinder assembly	1	
11	Collar	1	



HANDLING NOTES

⚠ WARNING

This shock absorber contains highly compressed nitrogen gas. Rear and understand the following information before handling the shock absorber. The manufacturer cannot be held responsible for property damage or personal injury that may result from improper handling.

1. **Do not tamper or attempt to open the cylinder assembly.**
2. **Do not subject shock absorber to an open flame or other high heat. This may cause the unit to explode due to excessive gas pressure.**
3. **Do not deform or damage the cylinder in any way. Cylinder damage will result in poor damping performance.**

NOTES ON DISPOSAL

Shock absorber disposal steps:

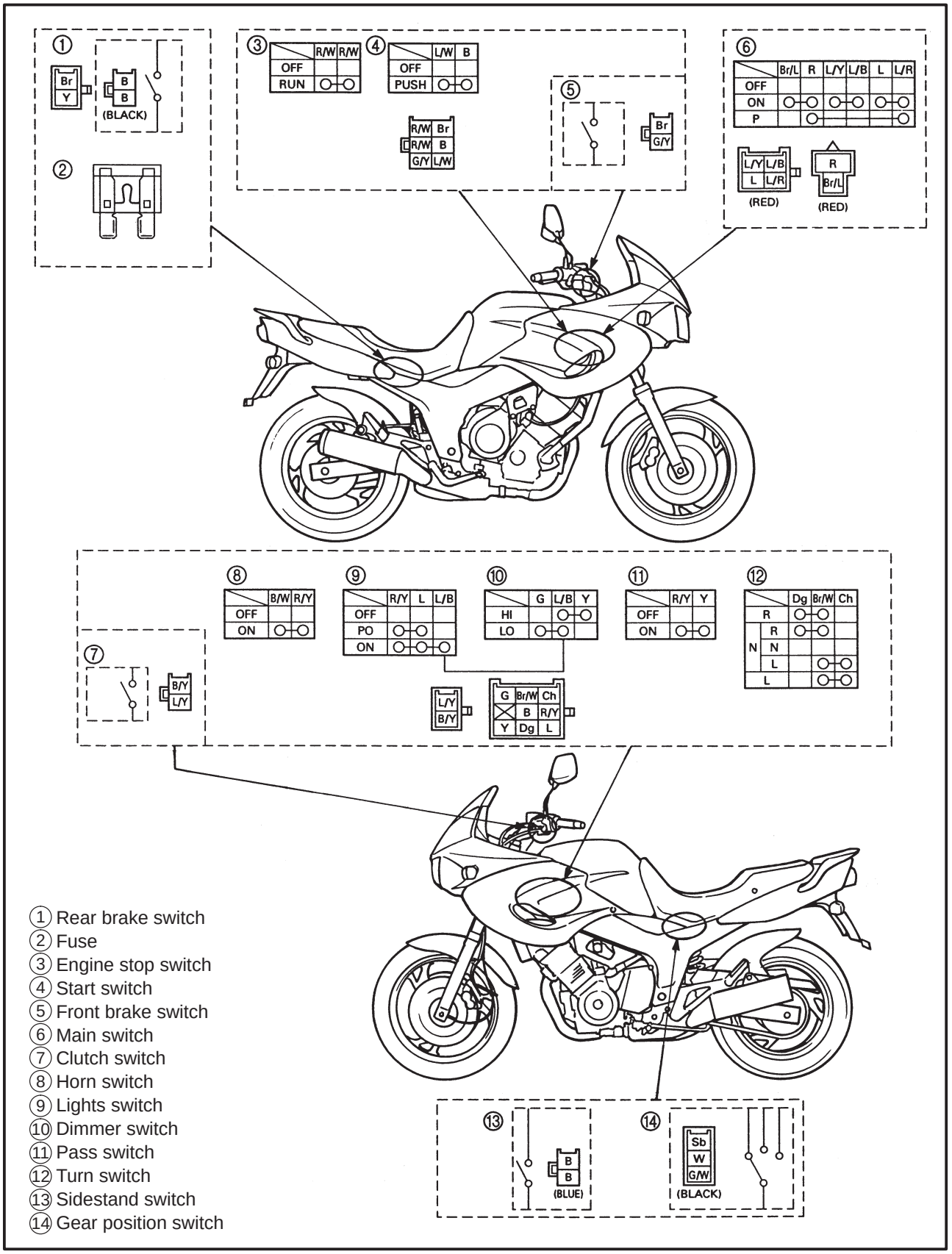
- Gas pressure must be released before disposing of the shock absorber. To do so, drill a 2 ~ 3 mm hole through the cylinder wall at a point 15 ~ 20 mm ⓐ from the end of the gas chamber.

⚠ WARNING

Wear eye protection to prevent eyes damage from escaping gas and/or metal chips.

SWITCH CONTINUITY INSPECTION

Refer to “SWITCH INSPECTION” and check for continuity between lead terminals.
Poor connection, no continuity → Correct or replace.
* The coupler locations are circled.



① Rear brake switch
② Fuse
③ Engine stop switch
④ Start switch
⑤ Front brake switch
⑥ Main switch
⑦ Clutch switch
⑧ Horn switch
⑨ Lights switch
⑩ Dimmer switch
⑪ Pass switch
⑫ Turn switch
⑬ Sidestand switch
⑭ Gear position switch

✳

⇩

3. Starter motor
• Remove the starter motor from the engine. • Check the starter motor. Refer to “INSPECTION AND REPAIR”.

⇩ MOVES

4. Starting circuit cut-off relay
• Disconnect the starting circuit cut-off relay coupler from the wire harness. • Connect the pocket tester (Ω × 1) and battery (12 V) to the starting circuit cut-off relay coupler terminals.
Battery (+) terminal → Red/Black terminal① Battery (–) terminal → Black/Yellow terminal②
Tester (+) terminal → Blue/White terminal③ Tester (–) terminal → Blue/White terminal④

• Check the starting circuit cut-off relay for continuity.

⇩ CONTINUITY

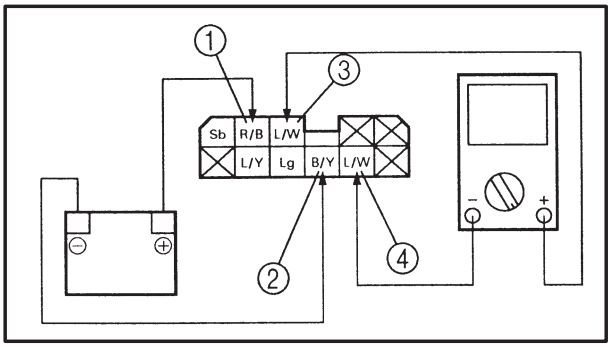
✳

⚠ WARNING

This check is likely to produce sparks, so be sure that no flammable gas or fluid is in the vicinity.

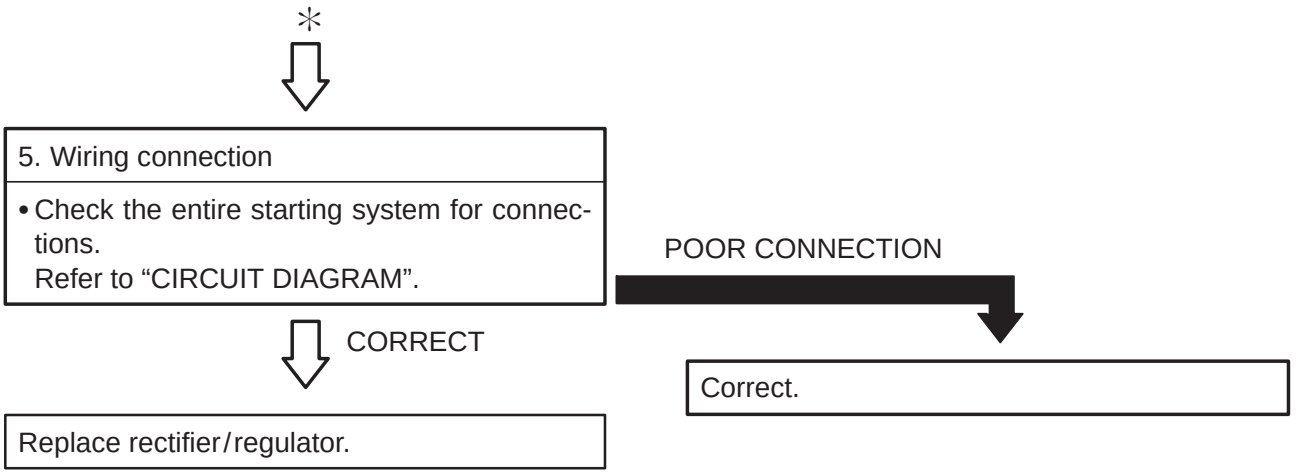
DOES NOT MOVE ➡

• Repair or replace starter motor. Refer to “INSPECTION AND REPAIR”.



NO CONTINUITY ➡

Replace starting circuit cut-off relay.


*
5. Wiring connection
• Check the entire starting system for connections.
Refer to “CIRCUIT DIAGRAM”.
POOR CONNECTION
CORRECT
Correct.
Replace rectifier/regulator.

TROUBLESHOOTING

• FLASHER LIGHTS, BRAKE LIGHT AND/OR INDICATOR LIGHTS DO NOT COME ON.
• HORN DOES NOT SOUND.

Procedure
Check:
1. Fuse (main, head and signal)
2. Battery
3. Main switch
4. Wiring connection
   (entire signal system)

NOTE:
- Remove the following parts before troubleshooting.

1) Seat
2) Side cowlings
3) Side covers
4) Fuel tank
5) Air filter case

- Use the following special tool in this troubleshooting.

Pocket tester:
90890-03112

1. Fuse (main, head and signal)

Refer to “SWITCH INSPECTION”.

NO CONTINUITY → Replace fuse(s).

CONTINUITY ⇩

2. Battery

- Check the battery condition.
  Refer to “BATTERY INSPECTION” in CHAPTER 3.

Open circuit voltage:
12.8 V or more at 20°C

INCORRECT → • Clean battery terminals.
• Recharge or replace the battery.

CORRECT ⇩

✳

*

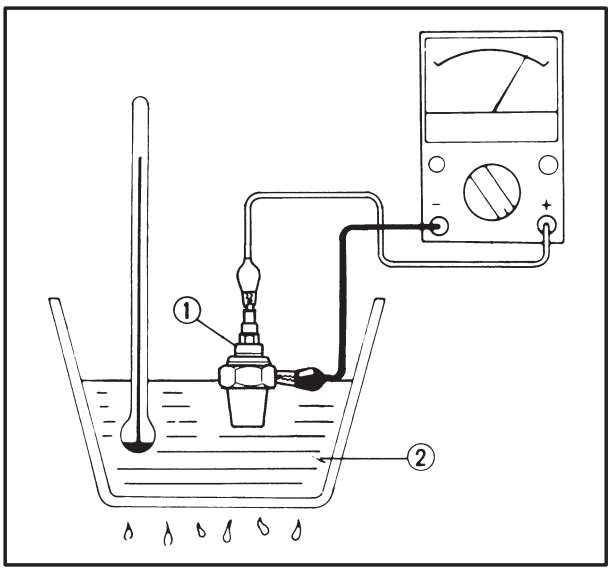
6. Thermo unit

- Remove the thermo unit from the radiator.
- Connect the pocket tester (Ω × 10) to the thermo unit ①.
- Immerse the thermo unit in the water ②.
- Measure the resistance.

Thermo unit resistance:
80°C: 47 ~ 53 Ω
100°C: 26 ~ 30 Ω

⚠ WARNING

- **Handle the thermo unit with special care.**
- **Never subject it to strong shock or allow it to be dropped. Should it be dropped, it must be replaced.**



BAD CONDITION

Replace thermo unit.

GOOD CONDITION

7. Wiring connection

Check the entire cooling system for connections. Refer to “CIRCUIT DIAGRAM”.

POOR CONNECTION

Correct.

CORRECT

Replace the temperature meter.