

YAMAHA

YZ80E1

ASSEMBLY MANUAL



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FOREWORD

This Assembly Manual contains the information required for the correct reassembly of this Yamaha motorcycle prior to delivery to the customer. Since some external parts of the motorcycle have been removed at the Yamaha factory for the convenience of packing, assembly by the Yamaha dealer is required. It should be noted that the reassembled motorcycle should be thoroughly cleaned, inspected, and adjusted prior to delivery to the customer.

NOTICE

The service specifications given in this assembly manual are based on the model as manufactured. Modifications and significant changes in specifications and/or procedures will be forwarded to Authorized Yamaha Dealers. The procedures below are described in the order that the procedures are carried out correctly and completely. Failure to do so can result in poor performance and possible harm to the motorcycle and/or rider.

CONCERNING CARTE DAMAGE:

Follow the instructions in the Dealer warranty handbook, Procedure section.

Particularly important information is distinguished in this manual by the following notations.



The Safety Alert Symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

WARNING

Failure to follow **WARNING** instructions could result in severe injury or death to the motorcycle operator, a bystander, or a person inspecting or repairing the motorcycle.

CAUTION:








A **CAUTION** indicates special precautions that must be taken to avoid damage to the motorcycle.

NOTE:

A **NOTE** provides key information to make procedures easier or clearer.

SYMBOLS USED IN ASSEMBLY MANUAL

In order to simplify descriptions in assembly manuals, the following symbols are used:

-  : Coat with lithium soap base grease.
-  : Tighten to 10 Nm.
(10 Nm = 1.0 m·kg = 7.2 ft·lb)
-  : Front ward of the motorcycle.
-  : Provide a clearance.
-  : Install so that the arrow mark faces upward.
-  : Apply a motor oil.
-  : Made of rubber or plastics.

A	B	C	D	E

- A: Ref No. (indicating the order or operations.)
- B: Part name
- C: Quantity of parts per motorcycle.
- D: Place where parts are held.
 - V: Stored in vinyl bag.
 - C: Stored in carton box.
 - S: Fixed inside the crate and/or contained in the styrofoam tray (upper or lower).
- *: Temporarily installed or secured.
- E: Size or material of parts.
 - d/D: Diameter of part.
 - ℓ: Length of part.



YZ80E1

ASSEMBLY MANUAL

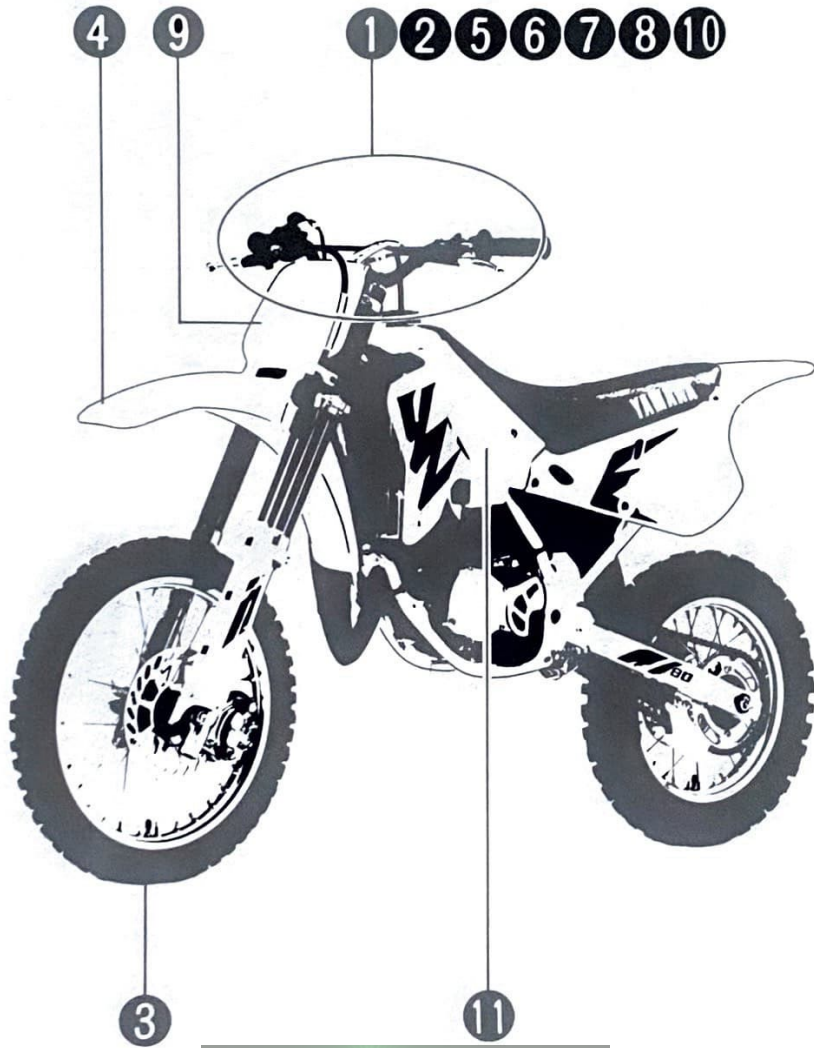
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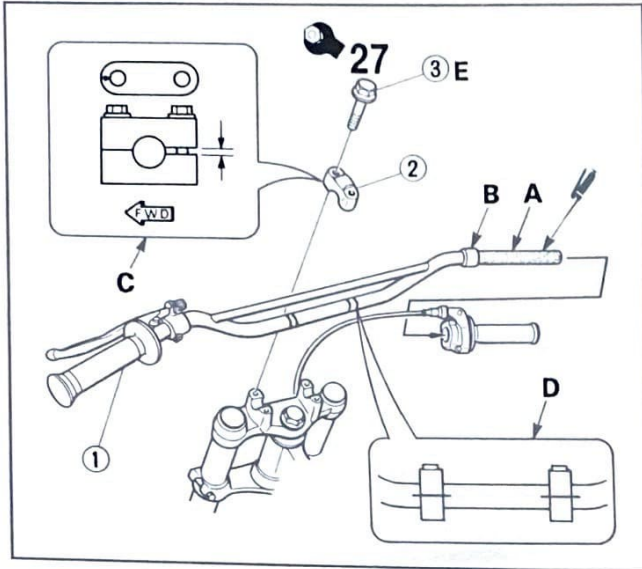
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SETUP PROCEDURES



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1. Handlebar



1	Handlebar	1	S	
2	Handlebar holder	2	V	
3	Flange bolt	4	V	d = 8 (0.31), l = 30 (1.17)

- A: Clean the right handlebar end. Apply the light coat grease.
- B: Before inserting the handlebar into the throttle grip, make sure the collar is installed.

⚠ WARNING
Proper cable and lead routing is essential to assure safe machine operation. Refer to "CABLE ROUTING".

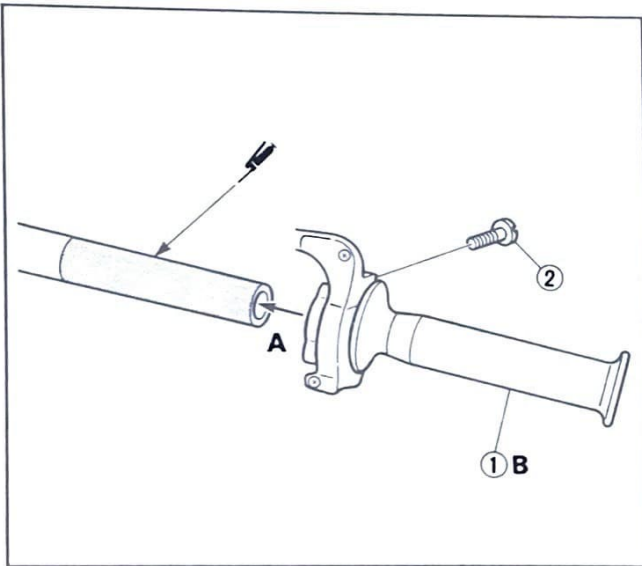
- C: The handlebar holder should be installed with the punch mark forward.

CAUTION:
First tighten the bolts on the front side, and then tighten the bolts on the rear side.

- D: Align the punch mark on the handlebar with the top of the lower handlebar holder.
- E: Tighten the bolts to specified torque.

Tightening torque:
27 Nm (2.7 m • kg, 19 ft • lb)

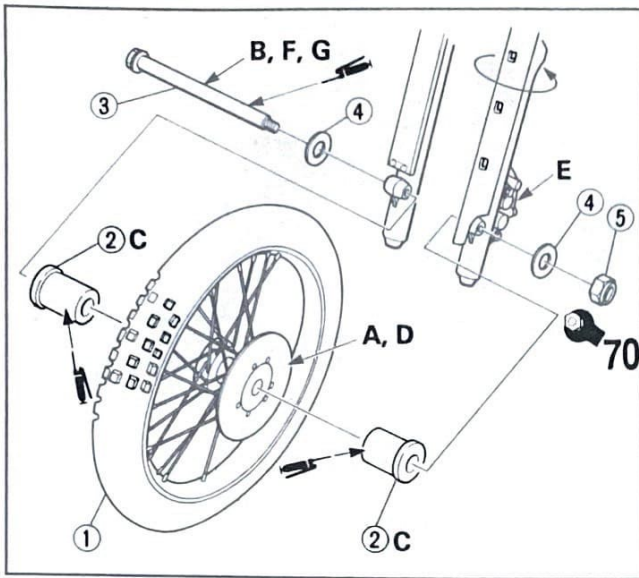
2. Throttle grip



1	Throttle grip	1	*	
2	Screw	2	*	d = 5 (0.20)

- A: Slip the throttle grip over the right handlebar to the limit and slide it back about 2 mm (0.08 in).
- B: Check the throttle grip for smooth action.

3. Front wheel



1	Front wheel	1	S	
2	Collar	2	V	
3	Front wheel axle	1	*	
4	Plain washer	2	*	
5	U-nut	1	*	

- A: Clean the brake disc.
 B: Clean the front wheel axle.
 C: Clean the collar.

- G: Make sure the axle is properly torqued.

⚠ WARNING

Take care not to put grease on the brake disc or inner surface of the brake pads. If you do so, clean using a rag dampened with a solvent. Foreign material on braking surface can cause impaired braking action.

Tightening torque:
 70 Nm (7.0 m • kg, 50 ft • lb)

CAUTION:

Stroke the front forks several times to make sure of proper fork operation. Work the left fork leg back and forth until the proper clearance between the disc and caliper bracket on the front fork are obtained.

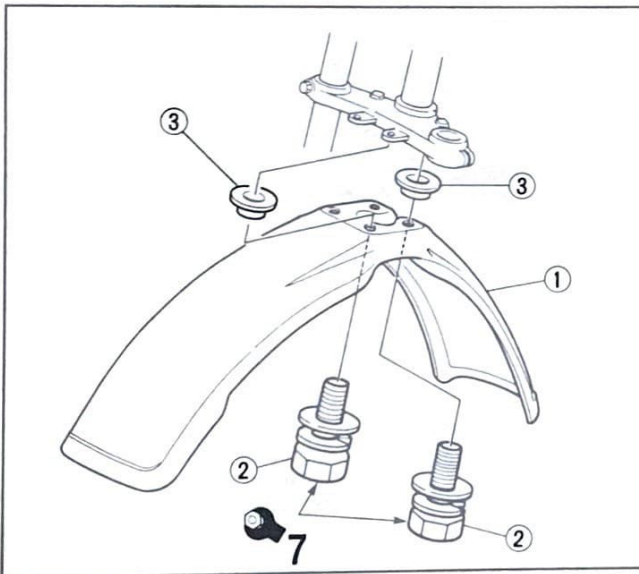
- E: Make sure there is enough gap between the brake pads.

NOTE:

Do not depress the brake lever when the caliper is off the brake disc as the brake pads will be forced to shut.

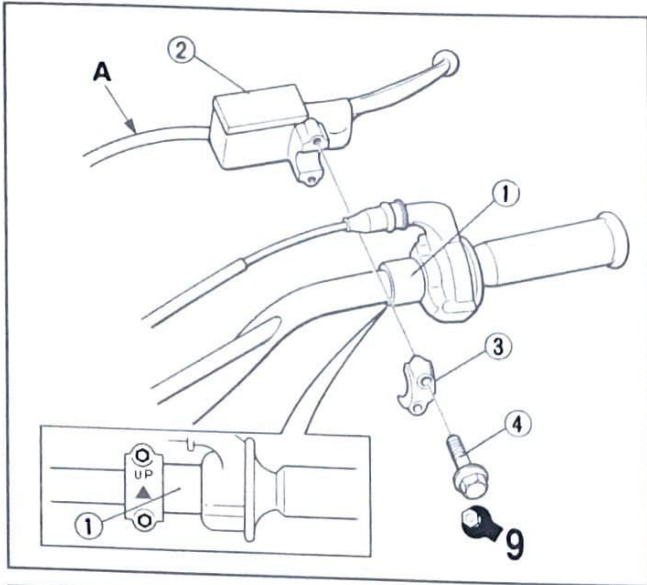
- F: Lift the front wheel and install the front wheel axle.

4. Front fender



1	Front fender	1	S	
2	Hexagon bolt with spring washer and plain washer	4	V	d=6 (0.24)
3	Collar	4	V	d=6 (0.24)

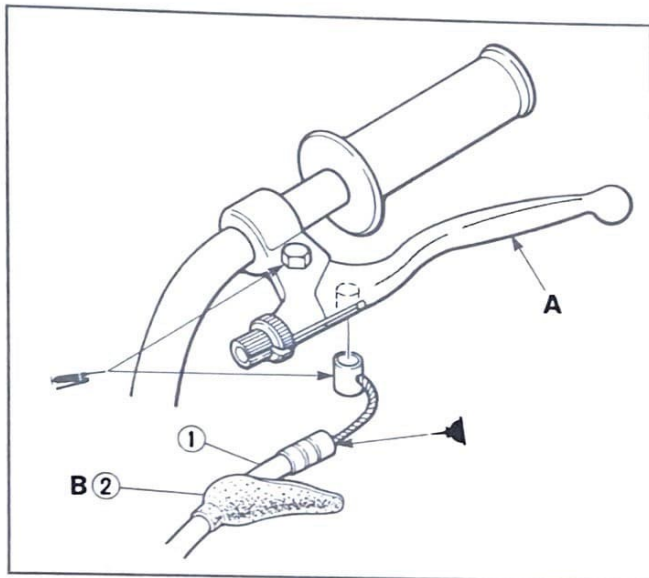
5. Front brake master cylinder



1	Collar	1	*	
2	Front brake master cylinder	1	*	
3	Master cylinder bracket	1	V	
4	Flange bolt	2	V	d=6 (0.24), l=25 (0.98)

A: **CAUTION:** _____
 Proper hose routing is essential to assure safe motorcycle operation.
 Refer to "CABLE ROUTING".

6. Clutch cable



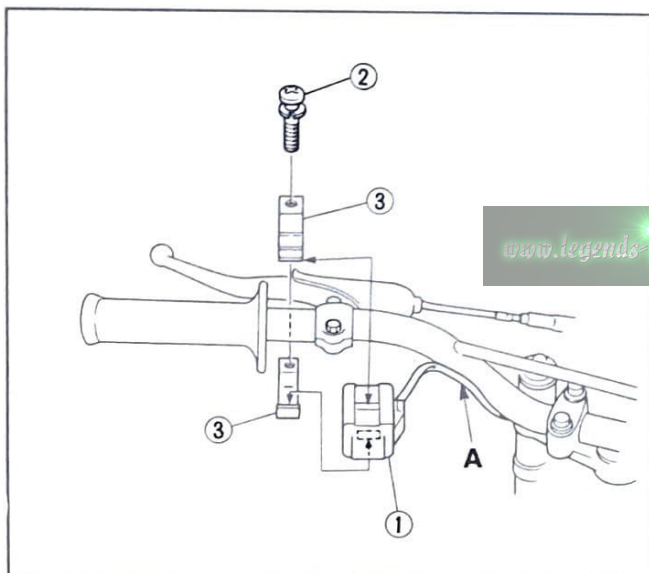
1	Clutch cable	1	*	
2	Cover	1	*	

A: Check the clutch lever for smooth action.

CAUTION: _____
 Proper cable routing is essential to assure safe motorcycle operation.
 Refer to "CABLE ROUTING".

B: After connecting the clutch cable, cover the lever pivot with the rubber cover.

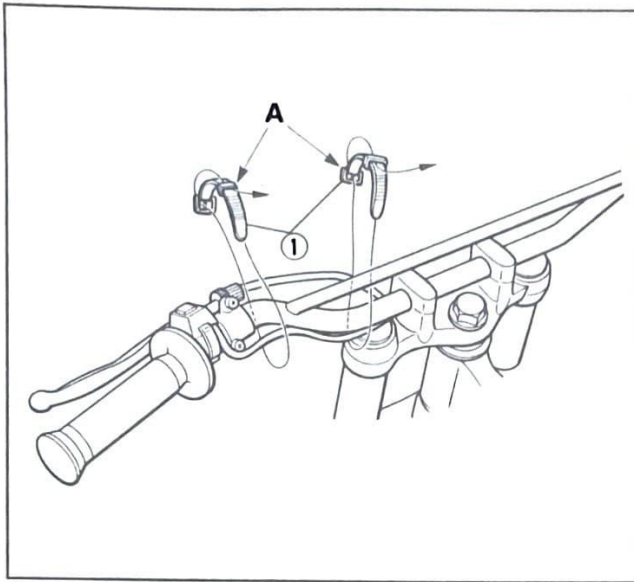
7. Engine stop switch



1	Engine stop switch	1	*	
2	Panhead screw with spring washer	1	V	d=3 (0.12), l=14 (0.54)
3	Switch holder (upper and lower)	2	V	

A: **CAUTION:** _____
 Proper cable routing is essential to assure safe motorcycle operation.
 Refer to "CABLE ROUTING".

8. Band

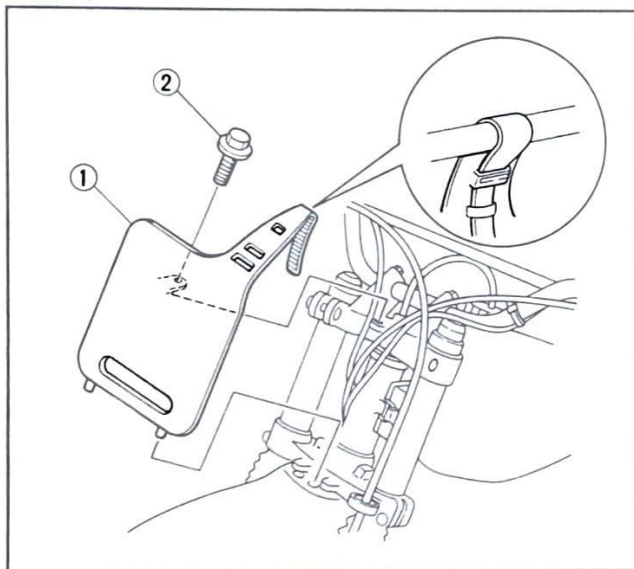


1	Band	2	V	
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A: Clamp the engine stop switch lead.

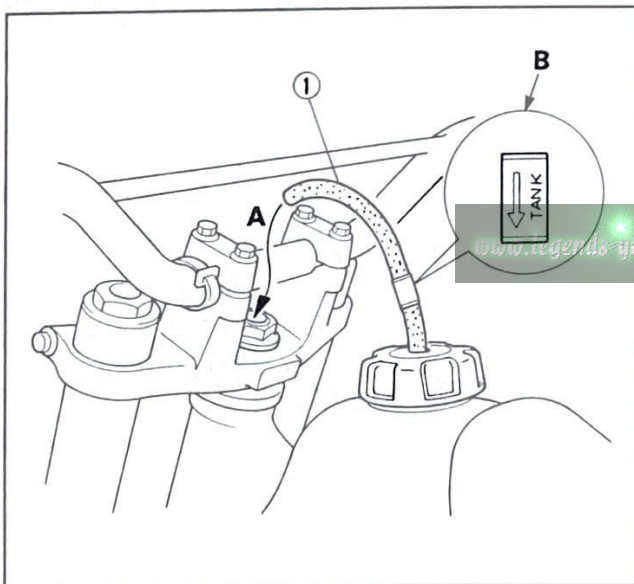
NOTE: _____
Refer to "CABLE ROUTING".

9. Number plate



1	Number plate	1	S	
2	Flange bolt	1	V	d=6 (0.24), l=12 (0.47)

10. Fuel tank breather hose



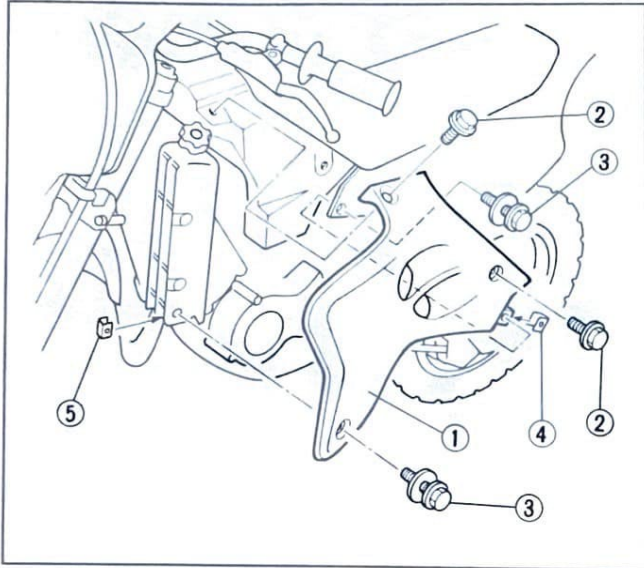
1	Fuel tank breather hose	1	V	
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A: Connect one end of the breather hose to the fuel tank filler cap, and insert the other end into the steering shaft nut.

NOTE: _____
Refer to "CABLE ROUTING".

B: Install the hose joint with its "←" mark to fuel cap.

11. Radiator cover



1	Radiator cover	1	S	
2	Flange bolt	2	V	d=6 (0.24)
3	Flange bolt with plain washer	2	V	d=6 (0.24)
4	Spring nut	1	V	
5	Spring nut	1	V	

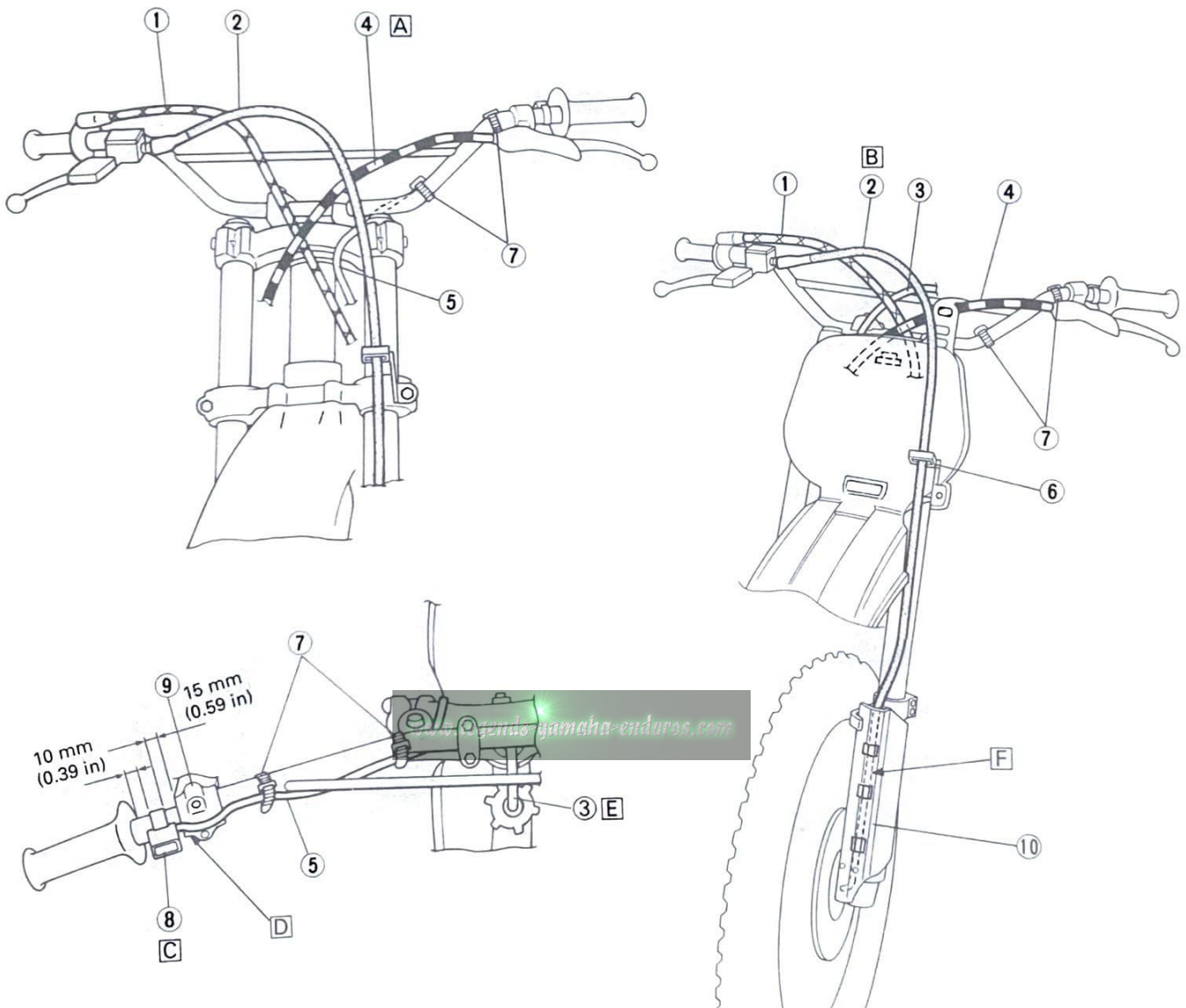
CABLE ROUTING

CAUTION:

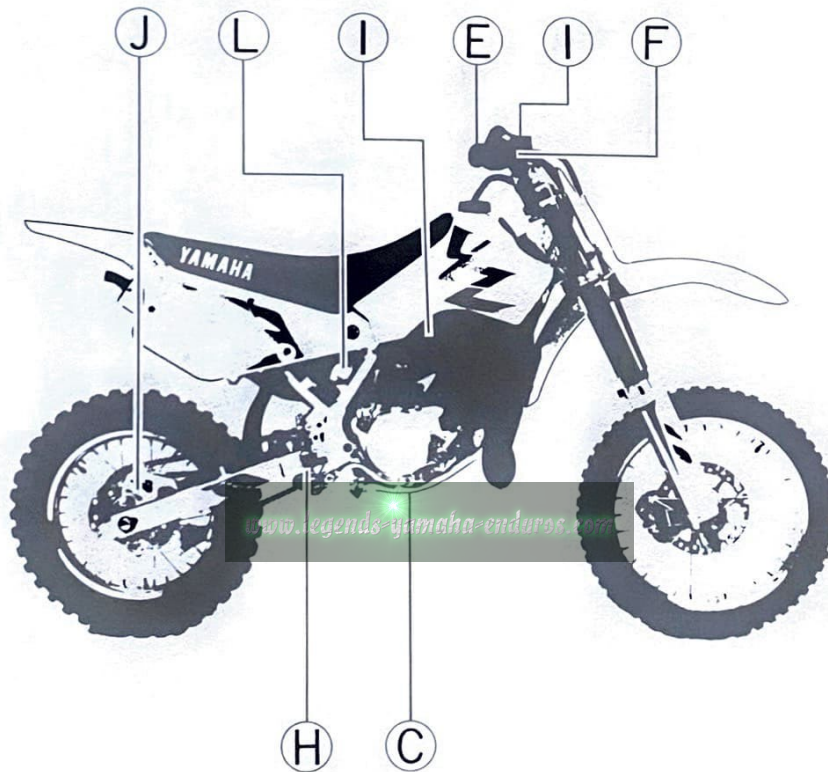
Proper cable and lead routing is essential to insure safe motorcycle operation.

- ① Throttle cable
- ② Brake hose
- ③ Fuel tank breather hose
- ④ Clutch cable
- ⑤ "ENGINE STOP" button lead
- ⑥ Cable guide
- ⑦ Band
- ⑧ "ENGINE STOP" button
- ⑨ Lever holder
- ⑩ Protector

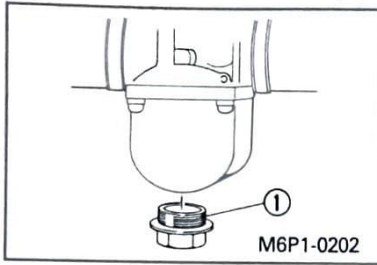
- A Pass the clutch cable between the brake hose and throttle cable.
- B Brake hose routing:
Master cylinder → Throttle cable (out side) → Cable guide (left of under bracket) → Guide (protector) → Protector (behind) → Brake hose holder → Caliper
- C Keep the clearance between the "Engine stop" button and lever holder.
- D Do not pinch the "Engine stop" button lead.
- E Insert the end of the fuel tank breather hose into the hole of steering shaft.
- F Pass the brake hose behind the protector and insert it into the ring of the protector.



ADJUSTMENTS AND PREDELIVERY SERVICE



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1. Drain plug

A. Fuel draining

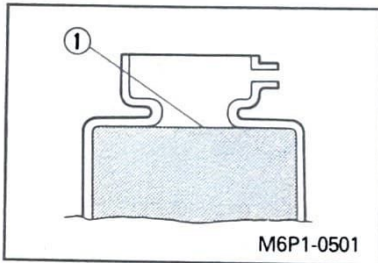
1. Put a rag under the carburetor so fuel does not contact the crankcase.
2. Loosen the drain plug and drain the standing fuel.

⚠ WARNING

FUEL IS HIGHLY FLAMMABLE:

- Always turn off the engine when draining.
- Take care not to spill any fuel on the engine or exhaust pipe(s)/muffler(s) when draining.
- Never drain fuel while smoking or in the vicinity of an open flame.

3. Retighten the drain plug securely.



1. Coolant level

B. Coolant level

1. Check
 - a. Place the motorcycle on a level place.
 - b. Remove the radiator cap and check the coolant level in the radiator tank when the engine is cold.

⚠ WARNING

Do not remove the radiator cap when the engine is hot.

NOTE:

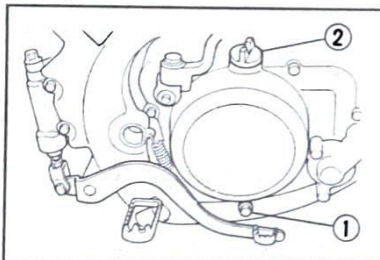
Be sure the motorcycle is positioned straight up when checking the coolant level; a slight tilt toward the side can produce false readings.

2. Adjust
To increase coolant level, add the water to proper level.

Recommend water:
Tap water (Soft water)

CAUTION:

Hard water or salt water is harmful to the engine parts. You may use boiled water or distilled water, if soft water is unavailable.



1. Drain bolt 2. Oil filler cap

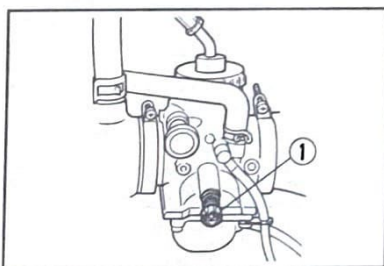
C. Transmission oil level

1. Check
 - a. Place the motorcycle on a level place.
 - b. Warm up the engine for a few minutes.
 - c. Stop the engine.
 - d. Remove the drain bolt and oil filler cap.
 - e. Drain the transmission oil.
 - f. Measure the transmission oil quantity.

Oil capacity (periodic oil change):
0.50 L (0.44 Imp qt, 0.52 US qt)

2. Adjust
To increase oil quantity, add the oil in proper quantity.

Recommended oil:
SAE 10W30 type SE motor oil or
Yamalube 4 (10W30)
Oil capacity (Periodic change):
0.50 L (0.44 Imp qt, 0.52 US qt)



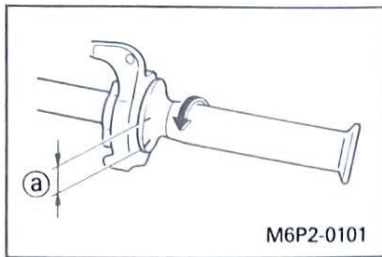
1. Throttle stop screw

D. Idle speed

1. Check
 - a. Start the engine and warm it up for a few minutes.
 - b. Check the engine idle speed.

Engine idle speed:
As desired

2. Adjust
 - Turning the throttle stop screw in (Clock-wise) → Engine speed increases.
 - Turning the throttle stop screw out (Counter clockwise) → Engine speed decreases.



M6P2-0101

a. Free play

E. Throttle grip free play

1. Check

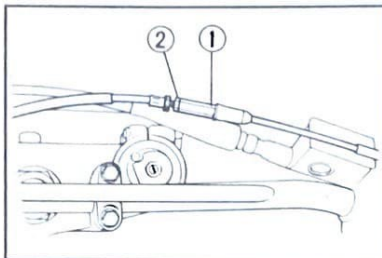
Free play: 3 – 5 mm (0.12 – 0.20 in)

2. Adjust
 - a. Loosen the locknut.
 - b. Turn the adjuster in or out until the correct free play is obtained.
 - c. Tighten the locknut.

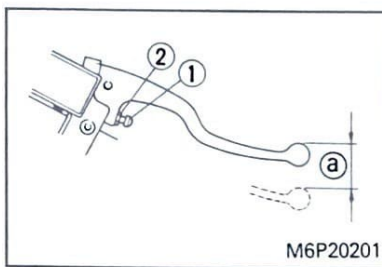
NOTE: Before adjusting the throttle cable free play, the engine idling speed should be adjusted.

⚠ WARNING

After adjusting, turn the handlebar to right and left and make sure that the engine idling does not run faster.



1. Adjuster 2. Locknut



M6P20201

1. Adjuster 2. Locknut
a. Free play

F. Front brake lever free play

1. Check

Free play:
10 – 20 mm (0.4 – 0.8 in)

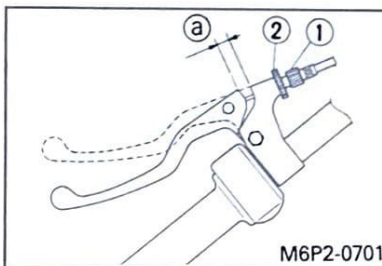
2. Adjust
 - a. Loosen the locknut.
 - b. Turn the adjuster in or out until the correct free play is obtained.
 - c. Tighten the locknut.

CAUTION:

Make sure the brake is working properly.

⚠ WARNING

A soft or spongy feeling in the brake lever can indicate the presence of air in the brake system. This air must be removed by bleeding the brake system before the motorcycle is operated. Air in the system will cause greatly diminished braking capability and can result in loss of control and an accident. Inspect and bleed the system if necessary.



M6P2-0701

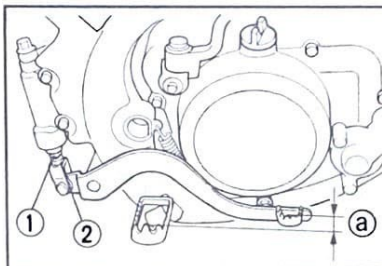
1. Adjuster 2. Locknut
a. Free play

G. Clutch lever free play

1. Check

Free play:
2 – 3 mm (0.08 – 0.12 in)

2. Adjust
 - a. Loosen the locknut.
 - b. Turn the adjuster in or out until the correct free play is obtained.
 - c. Tighten the locknut.



1. Adjuster 2. Locknut
a. Pedal position

H. Rear brake pedal position

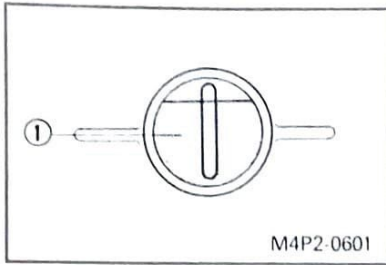
1. Check

Brake pedal position:
3 – 8 mm (0.12 – 0.31 in)

2. Adjust
 - a. Loosen the locknut.
 - b. Turn the adjuster in or out until the correct pedal position is obtained.
 - c. Tighten the locknut.

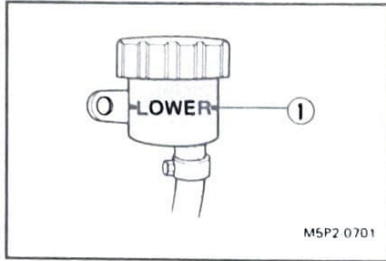
⚠ WARNING

After the pedal height adjustment, make sure that the rear brake does not drag.



M4P2-0601

1. "LOWER" level



M5P2-0701

1. "LOWER" level

I. Brake fluid level (front and rear)

1. Check

Front

- Make sure the master cylinder top is horizontal by turning the handlebar.
- The brake fluid is sufficient if it is over the "LOWER" level.

Rear

- Make sure the reservoir tank top is horizontal by placing the motorcycle on a level place.
- The brake fluid is sufficient if it is over the "LOWER" level.

2. Adjust

Add the proper brake fluid until the level is above the "LOWER" level.

Recommended brake fluid: DOT #4

NOTE:

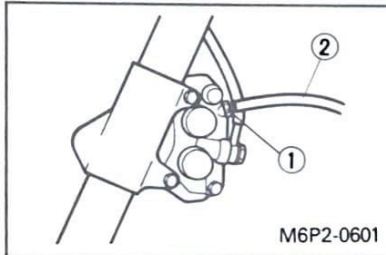
If DOT #4 is not available, #3 can be used.

CAUTION:

Check the operation of the brake after refilling with the brake fluid.

WARNING

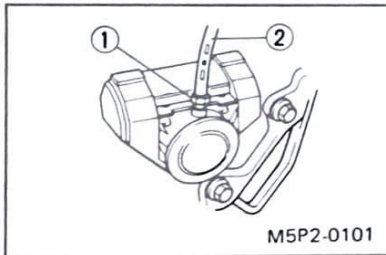
- Use only designated quality brake fluid to avoid poor brake performance.
- Refill with same type and brand of brake fluid; mixing fluids could result in poor brake performance.
- Be sure that water or other contaminants do not enter master cylinder when refilling.
- Clean up spilled fluid immediately to avoid erosion of painted surfaces or plastic parts.



M6P2-0601

1. Bleed screw

2. Clear plastic hose



M5P2-0101

1. Bleed screw

2. Clear plastic hose

J. Bleeding the brake system (front and rear brake)

WARNING

Bleed the brake system if:

- The system has been disassembled.
- A brake hose has been loosened or removed.
- The brake fluid is very low.
- The brake operation is faulty.

A loss of braking performance may occur if the brake system is not properly bled.

Air bleeding steps

- Add proper brake fluid to the reservoir.
- Install reservoir tank cap.
Be careful not to spill any fluid or allow the reservoir to over flow.
- Connect the clear plastic hose (4.5 mm (0.18 in) inside dia.) tightly to the caliper bleed screw.
- Place the other end of the hose into a container.
- Slowly apply the brake lever or pedal several times.
- Pull the lever in or push down on the pedal. Hold the lever or pedal in position.
- Loosen the bleed screw and allow the lever or pedal to travel towards its limit.
- Tighten the bleed screw when the lever or pedal limit has been reached; then release the lever or pedal.
- Repeat steps (e) to (h) until all of the air bubbles have been removed from the systems.

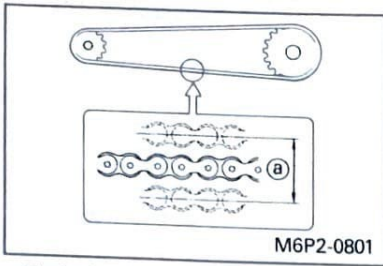
NOTE:

If bleeding is difficult, it may be necessary to let the brake fluid system stabilize for a few hours. Repeat the bleeding procedure when the tiny bubbles in system have disappeared.

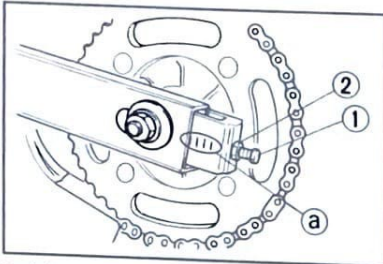
- Add brake fluid (DOT #4) until the reservoir is full.

WARNING

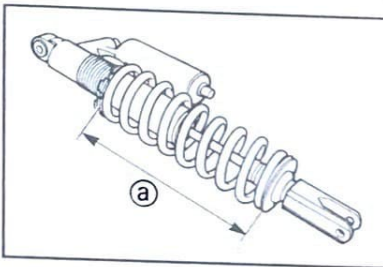
Check the operation of the brake after bleeding the brake system(s).



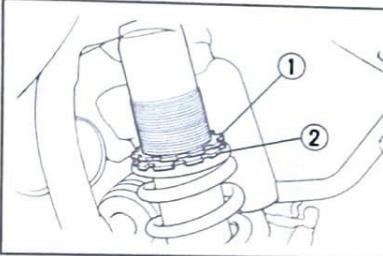
a. Chain slack



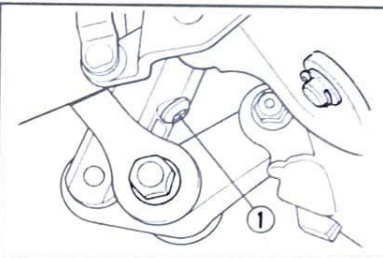
1. Adjuster
2. Locknut
3. Mark for alignment



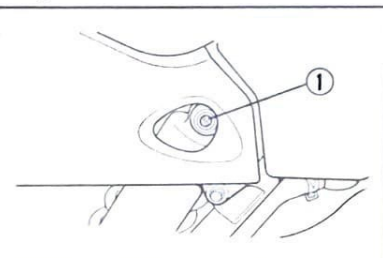
1. Installed length



1. Locknut
2. Adjuster



1. Adjuster



1. Adjuster

K. Drive chain slack

1. Check

NOTE: _____
Before checking the drive chain slack, rotate the rear wheel several turns and check slack at several points to find the tightest point. Check the chain slack with the rear wheel in this "tightest" position.

- a. Place the motorcycle on level place and hold it on upright position.
- b. Check the chain slack.

Chain slack:
5 - 15 mm (0.2 - 0.6 in)

NOTE: _____
Be sure the motorcycle is positioned straight up without an operator on it when checking the chain slack.

2. Adjust

- a. Loosen the rear wheel axle nut.
- b. Loosen the locknuts on each side.
- c. Turn each adjuster exactly the same amount to maintain correct axle alignment.
(There are marks on each side of swingarm; use them to check for proper alignment.)
 - To tighten the chain, turn the adjuster clockwise.
 - To loosen the chain, turn the adjuster counterclockwise and push the wheel forward.

CAUTION: _____
Too small chain slack will overload the engine and other vital parts; keep the slack within the specified limits.

- d. Tighten the locknuts and rear axle nut.

Axle nut torque:
110 Nm (11.0 m • kg, 80 ft • lb)

- e. Check the drive chain slack.

L. Rear shock absorber

1. Check

Installed length (STD setting):
210 mm (8.27 in)
Rebound damping (STD setting):
8 clicks turns out
Compression damping (STD setting):
10 clicks turns out

2. Adjust

- Spring preload
 - a. Loosen the locknut.
 - b. Turn the adjuster in or out until the adjustment is suitable.
 - c. Tighten the locknut.

CAUTION: _____
Never attempt to turn the adjuster beyond the maximum or minimum setting.

- Rebound damping
 - a. Turn in the adjuster stiffest position.
 - b. Turn out the adjuster 8 clicks from the stiffest position.

CAUTION: _____
Do not turn out (in) the adjuster from the damping force minimum (maximum) setting.

- Compression damping
 - a. Turn in the adjuster stiffest position.
 - b. Turn out the adjuster 10 clicks from the stiffest position.

CAUTION: _____
Do not turn out (in) the adjuster from the damping force minimum (maximum) setting.

APPENDICES

SERVICE DATA

YZ80E1		
Engine idling speed:	As desired	
Spark plug: Type Gap	B10EG (NGK) 0.5 ~ 0.6 mm (0.020 ~ 0.024 in)	
Fuel: Recommended fuel Fuel tank capacity	Premium unleaded fuel with a research octane number of 95 or higher 5 L (1.10 Imp gal, 1.32 US gal)	
Engine oil: Recommended oil, mixing ratio	Yamalube R (24 : 1) Castrol R30 (20 : 1) Castrol A747 (20 : 1)	
Tire pressure:	Front	Rear
	100 kPa (1.00 kg/cm ² , 15 psi)	100 kPa (1.00 kg/cm ² , 15 psi)

STANDARD EQUIPMENT

No.	Part name	Q'ty
1	Owner's service manual	1
2	Sidestand	1
3	Main jet (#270)	1
4	Main jet (#300)	1

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TIGHTENING TORQUE

Part to be tightened	Thread size	Tightening torque		
		Nm	m • kg	ft • lb
Engine: Spark plug	—	20	2.0	14
Chassis:			See "NOTE".	
Handle crown and outer tube	M8 × 1.25	22	2.2	16
Under bracket and outer tube	M8 × 1.25	24	2.4	17
Handle crown and steering shaft	M22 × 1.0	110	11	80
Handlebar holder and handle crown	M8 × 1.25	27	2.7	19
Steering ring nut	M25 × 1.0			
Front fork and cap bolt	M40 × 1.0	28	2.8	20
Front fork and base valve	M22 × 1.0	55	5.5	40
Cap bolt and damper rod (front fork)	M10 × 1.0	15	1.5	11
Front fork and brake hose holder	M6 × 1.0	10	1.0	7.2
Front fork and protector	M6 × 1.0	10	1.0	7.2
Front brake hose guide and guide stay	M5 × 0.8	4	0.4	2.9
Front brake master cylinder and bracket	M6 × 1.0	9	0.9	6.5
Front brake master cylinder cap	M4 × 0.7	2	0.2	1.4
Front brake hose union bolt	M10 × 1.25	26	2.6	19
Caliper bracket (front) and front fork	M8 × 1.25	30	3.0	22
Front brake caliper and caliper bracket	M8 × 1.25	23	2.3	17
Front brake caliper and bleed screw	M7 × 1.0	6	0.6	4.3
Front wheel axle and nut	M12 × 1.25	70	7.0	50
Front brake disk and wheel hub	M6 × 1.0	12	1.2	8.7
Rear brake master cylinder and frame	M6 × 1.0	10	1.0	7.2
Rear brake reservoir tank and frame	M6 × 1.0	10	1.0	7.2
Rear brake caliper and caliper bracket	M8 × 1.25	23	2.3	17
Rear brake caliper and pad pin	M10 × 1.0	18	1.8	13
Rear brake caliper and bleed screw	M8 × 1.25	6	0.6	4.3
Protector and caliper bracket	M6 × 1.0	10	1.0	7.2
Rear brake hose union bolt	M10 × 1.25	26	2.6	19
Rear wheel axle and nut	M14 × 1.5	110	11	80
Driven sprocket and wheel hub	M8 × 1.25	43	4.3	31
Rear brake disk and wheel hub	M6 × 1.0	12	1.2	8.7
Engine mounting:				
Engine and frame (front)	M8 × 1.25	40	4.0	29
Engine and frame (lower)	M8 × 1.25	40	4.0	29
Pivot shaft and nut	M12 × 1.25	53	5.3	38
Relay arm and frame	M10 × 1.25	54	5.4	39
Relay arm and connecting rod	M12 × 1.25	53	5.3	38
Connectiong rod and swingarm	M12 × 1.25	53	5.3	38
Rear shock absorber and frame	M10 × 1.25	38	3.8	27
Rear shock absorber and relay arm	M10 × 1.25	32	3.2	23

NOTE:

1. First, tighten the ring nut approximately 38 Nm (3.8 m • kg, 27 ft • lb) by using the torque wrench, then loosen the ring nut one turn.
2. Retighten the ring nut to specification 4 Nm (0.4 m • kg, 2.9 ft • lb).

Part to be tightened	Thread size	Tightening torque		
		Nm	m • kg	ft • lb
Back stay and frame	M8 × 1.25	16	1.6	11
Drive chaine tensioner (upper) and frame	M8 × 1.25	23	2.3	17
Drive chain tensioner (lower) and frame	M6 × 1.0	10	1.0	7.2
Seal guard and swingarm	M6 × 1.0	10	1.0	7.2
Support chain and swingarm	M8 × 1.25	16	1.6	11
Brake hose holder and swingarm	M5 × —	4	0.4	2.9
Fuel tank and frame	M6 × 1.0	7	0.7	5.1
Fuel cock and fuel tank	M6 × 1.0	4	0.4	2.9
Damper holder and fuel tank	M6 × 1.0	7	0.7	5.1
Seat set bracket and fuel tank	M6 × 1.0	7	0.7	5.1
Air scoop mounting	M6 × 1.0	7	0.7	5.1
Front fender and under bracket	M6 × 1.0	7	0.7	5.1
Rear fender mounting	M6 × 1.0	7	0.7	5.1
Side cover (left and right) mounting	M6 × 1.0	7	0.7	5.1
Seat mounting	M6 × 1.0	7	0.7	5.1

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