



YZ80S

ASSEMBLY MANUAL



FORWARD

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

NOTICE

When this model may require improvements, the service specifications may be subject to change in the future. If any change is introduced into the specifications or assembly procedures, Yamaha dealers will be notified through technical service information to be published by Yamaha.

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

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

CAUTION: A CAUTION indicates special procedures that must be followed to avoid damage to the machine.

WARNING: A WARNING indicates special procedures that must be followed to avoid injury to a machine operator or person inspecting or repairing the machine.


**TECHNICAL PUBLICATIONS
SERVICE DIVISION
MOTORCYCLE OPERATIONS
YAMAHA MOTOR CO., LTD.**


**YZ80S
ASSEMBLY MANUAL
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SYMBOLS USED IN ASSEMBLY MANUAL

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


 : Coat with lithium soap base grease.

 10 : Tighten to 10 Nm.
(10 Nm = 1.0 m•kg = 7.2 ft•lb)

 : Front ward of the vehicle.

 : 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
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A: Ref No. (indicating the order or operations.)

B: Part name

C: Quantity of parts per vehicle.

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.

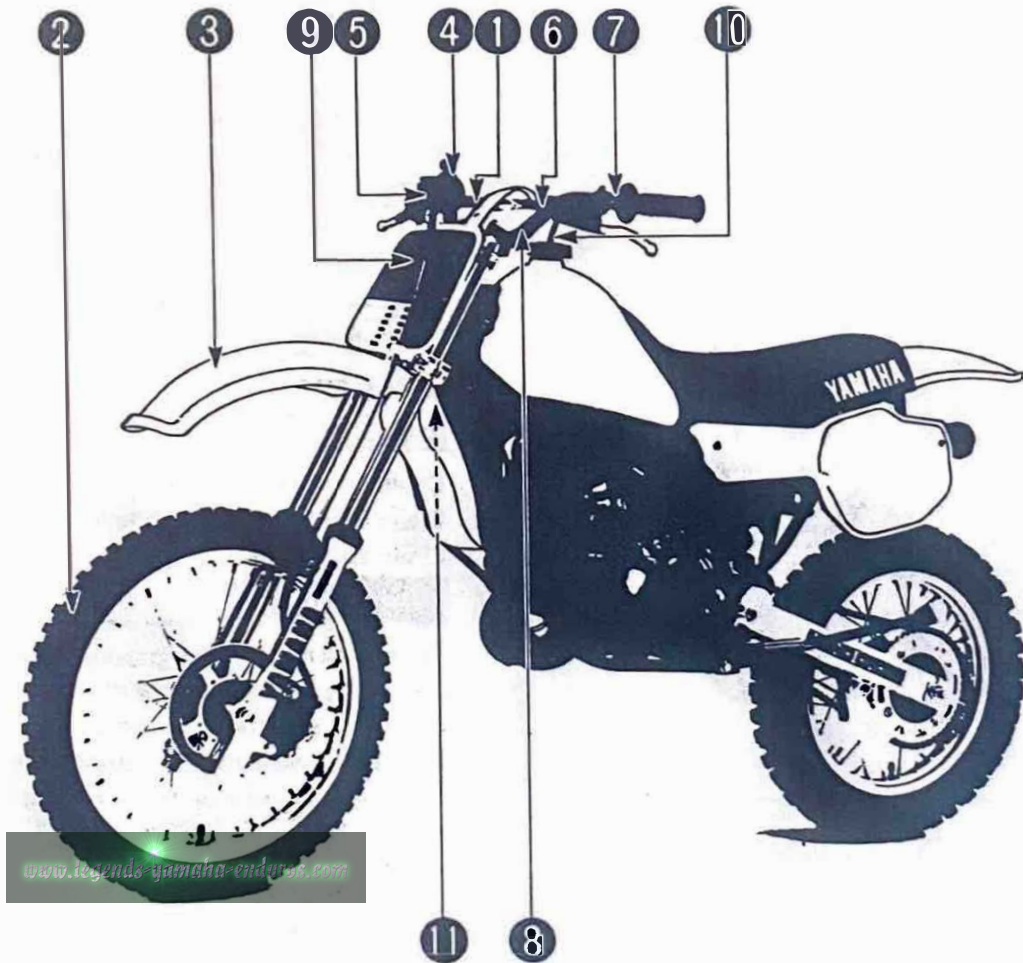
d/D: Diameter of part.

ℓ : Length of part.

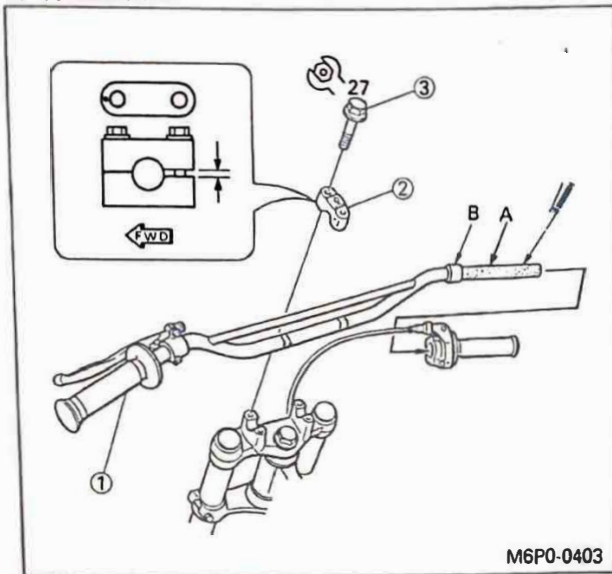


ex. 5 (0.2) = 5 mm (0.2 in)

SETUP PROCEDURES



1. Handlebar



1	Handlebar	1	S	
2	Handlebar holder	4	V	d = 8 (0.32) ℓ = 30 (1.17)
3	Flange bolt	2	V	

A: Clean the right handlebar end. Apply the light coat grease.

B: Before inserting the handlebar into the throttle grip, make sure that the collar is installed.

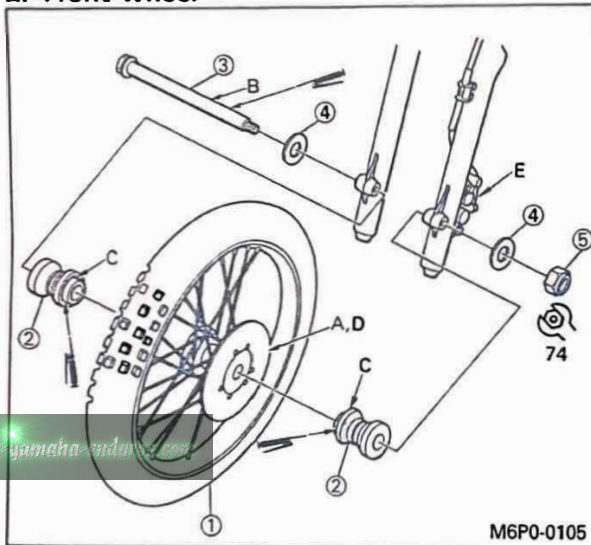
WARNING:

Proper cable and lead routing is essential to assure safe machine operation. REFER TO "CABLE ROUTING".

NOTE:

The throttle cables should not be twisted, and make certain the throttle grip rotates on the handlebar freely, without binding.

2. Front wheel



1	Front wheel	1	S	
2	Wheel axle collar	2	V	
3	Front wheel axle	1	*	d = 12 (0.47)
4	Plain washer	2	*	d = 12 (0.47), D = 22 (0.87)
5	U-nut	1	*	d = 12 (0.47)

A: Clean the brake disc.

B: Clean the front wheel axle.

C: Clean the collar.

D: **WARNING:**

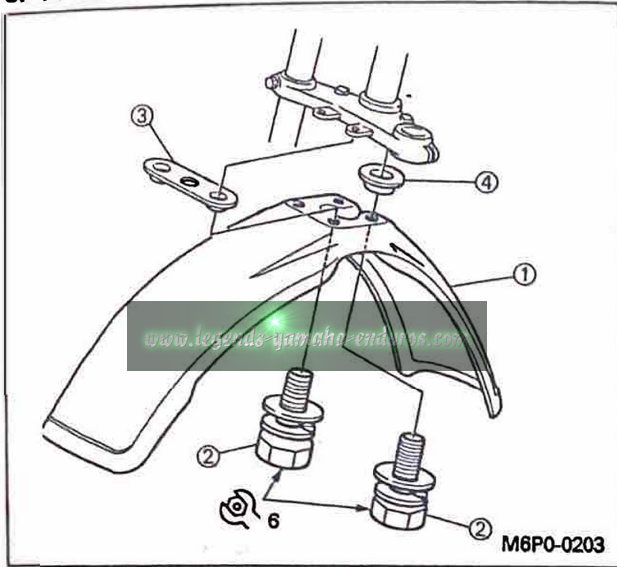
Take care not to put grease on the brake disc or inner surface of the brake pads. If you do so, clean using a rag dampened with a solvent. Foreign material on braking surface can cause impaired braking action.

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

NOTE:

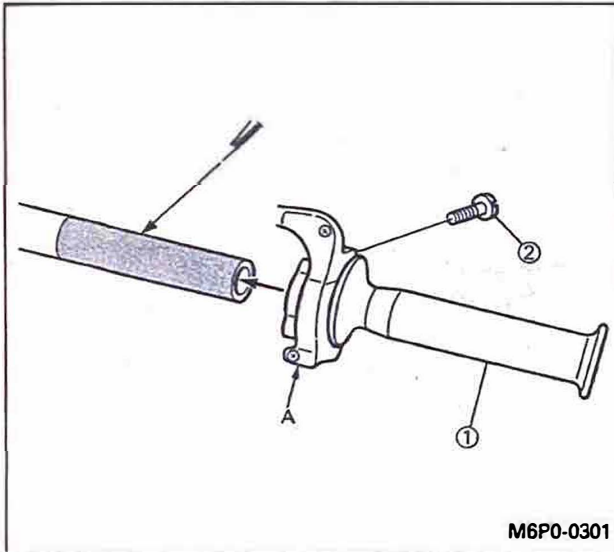
Do not depress the brake lever when the wheel is off the machine as the brake pads will be forced to shut.

3. Front fender



1	Front fender	1	S	
2	Hexagon bolt with spring washer and plain washer	4	V	d=6 (0.24), ℓ=20 (0.78)
3	Special washer	1	V	
4	Collar	2	V	d=6 (0.24)

4. Throttle grip



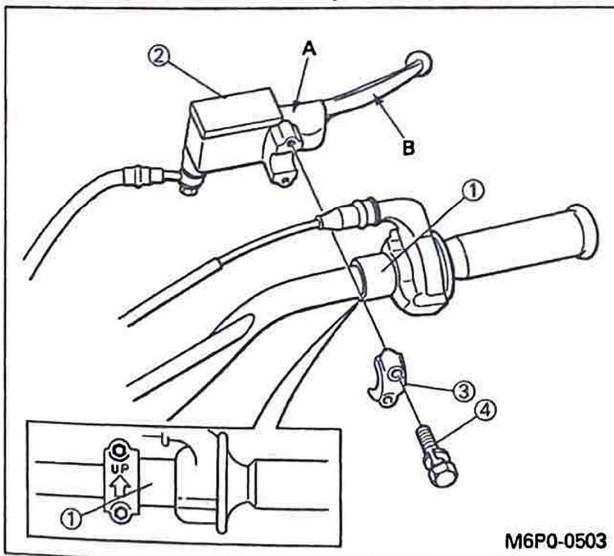
1	Throttle grip	1	*	
2	Panhead screw	2	*	d=5 (0.20),

A: Slip the throttle grip over the right handlebar to the limit and slide it back about 2 mm (0.08 in).

WARNING: _____

CHECK THE THROTTLE GRIP FOR SMOOTH ACTION!

5. Front brake master cylinder



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

A: Lubricate the pivoting part of the brake lever.

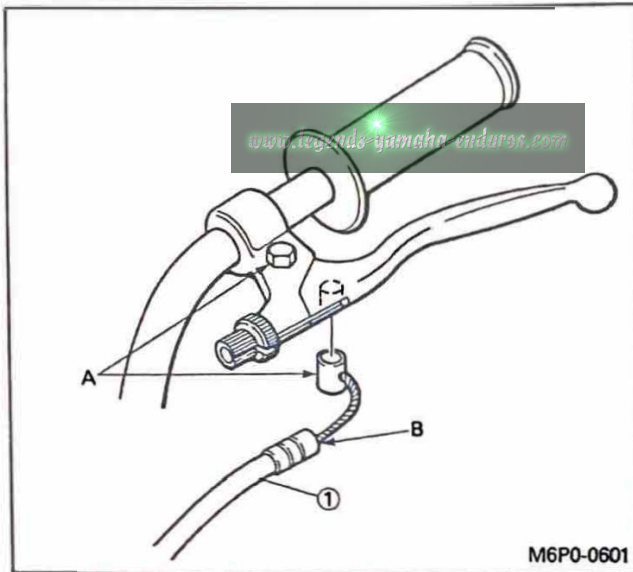
Recommended lubricants:
Yamaha cable lube

B: Check the brake lever for smooth action.

WARNING: _____

Proper hose routing is essential to assure safe machine operation. REFER TO "CABLE ROUTING."

6. Clutch cable



1	Clutch cable	1	*	
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A: Lubricate the pivoting part of the clutch lever.

Recommended lubricants:
Yamaha Cable Lube

B: To install the clutch cable, be sure to proceed as follows:

- a. Fully loosen the locknut on the lever holder, and screw in the adjuster on the lever holder until tight. Next, align the slit in the adjuster and locknut with the slit in the lever holder.
- b. Insert the cable end into the lever hole, and hook the outer cable end onto the locknut, then squeeze the lever. Next, while pulling the outer cable in the direction opposite to the lever, release the lever quickly while releasing it seat the outer cable into the adjuster.

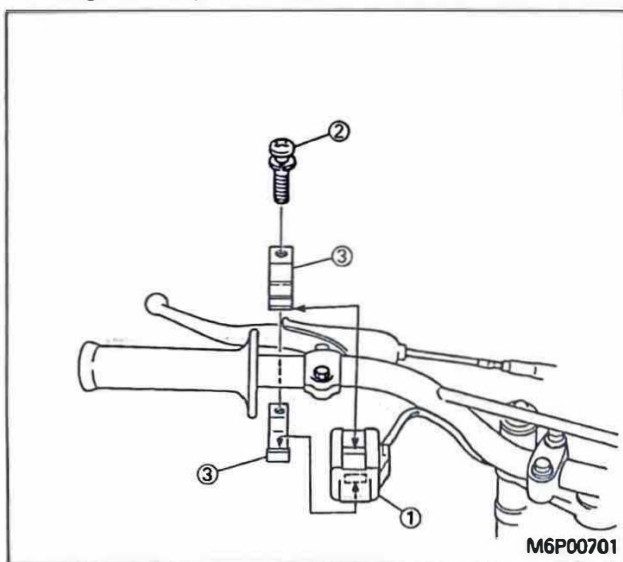
NOTE: _____

Check the clutch lever for smooth action. REFER TO "ADJUSTMENT AND PERDELIVERY SERVICE."

WARNING: _____

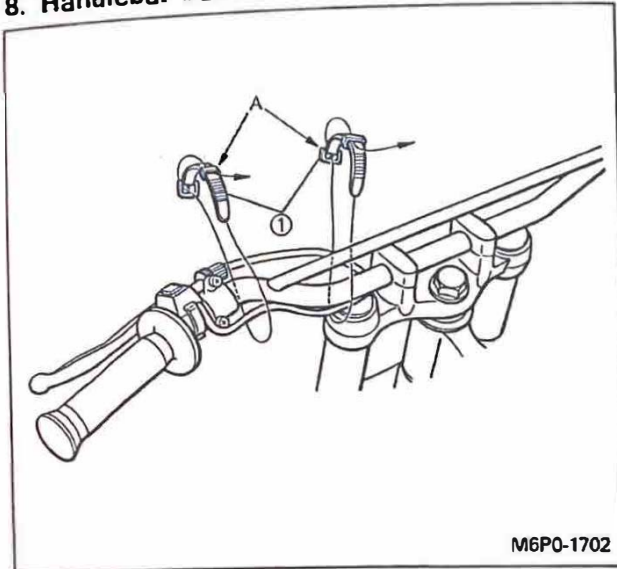
Proper cable routing is essential to assure safe vehicle operation. REFER TO "CABLE ROUTING."

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	Engine stop switch holder (Upper and lower)	2	V	

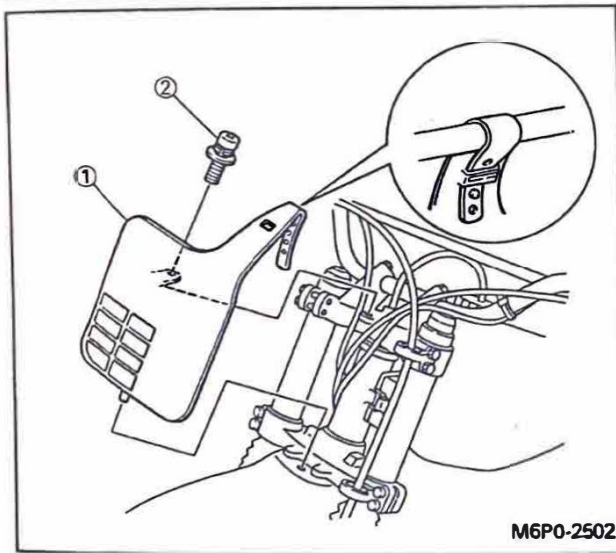
8. Handlebar band



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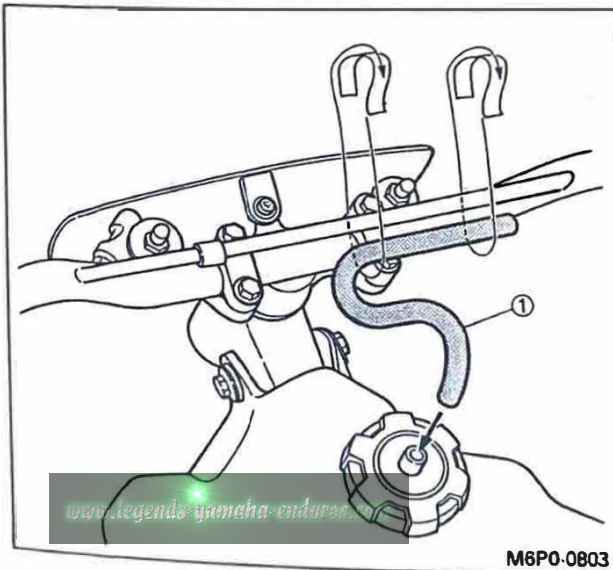
A: Clamp the engine stop switch lead.

9. Number plate



1	Number plate	1	S	
2	Panhead screw with spring washer and plain washer	1	V	d = 6 (0.24), ℓ = 16 (0.62)

10. Fuel tank breather pipe



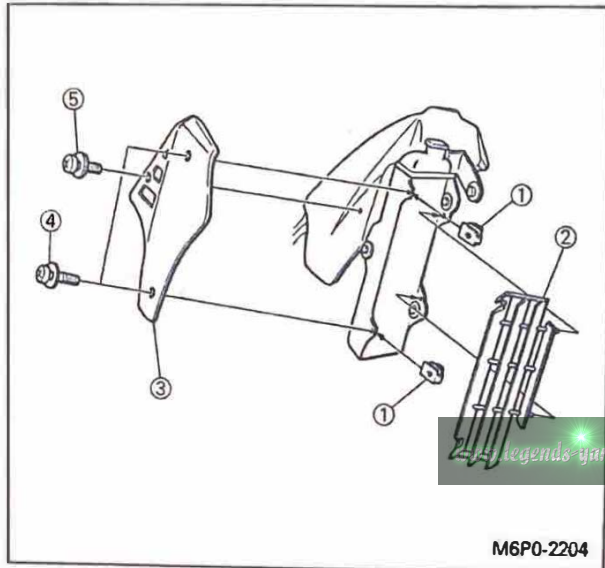
1	Fuel tank breather pipe	1	C	Rubber
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Clamp the fuel tank breather hose with adhesive tapes.

NOTE: _____

Refer to "CABLE ROUTING."

11. Radiator cover

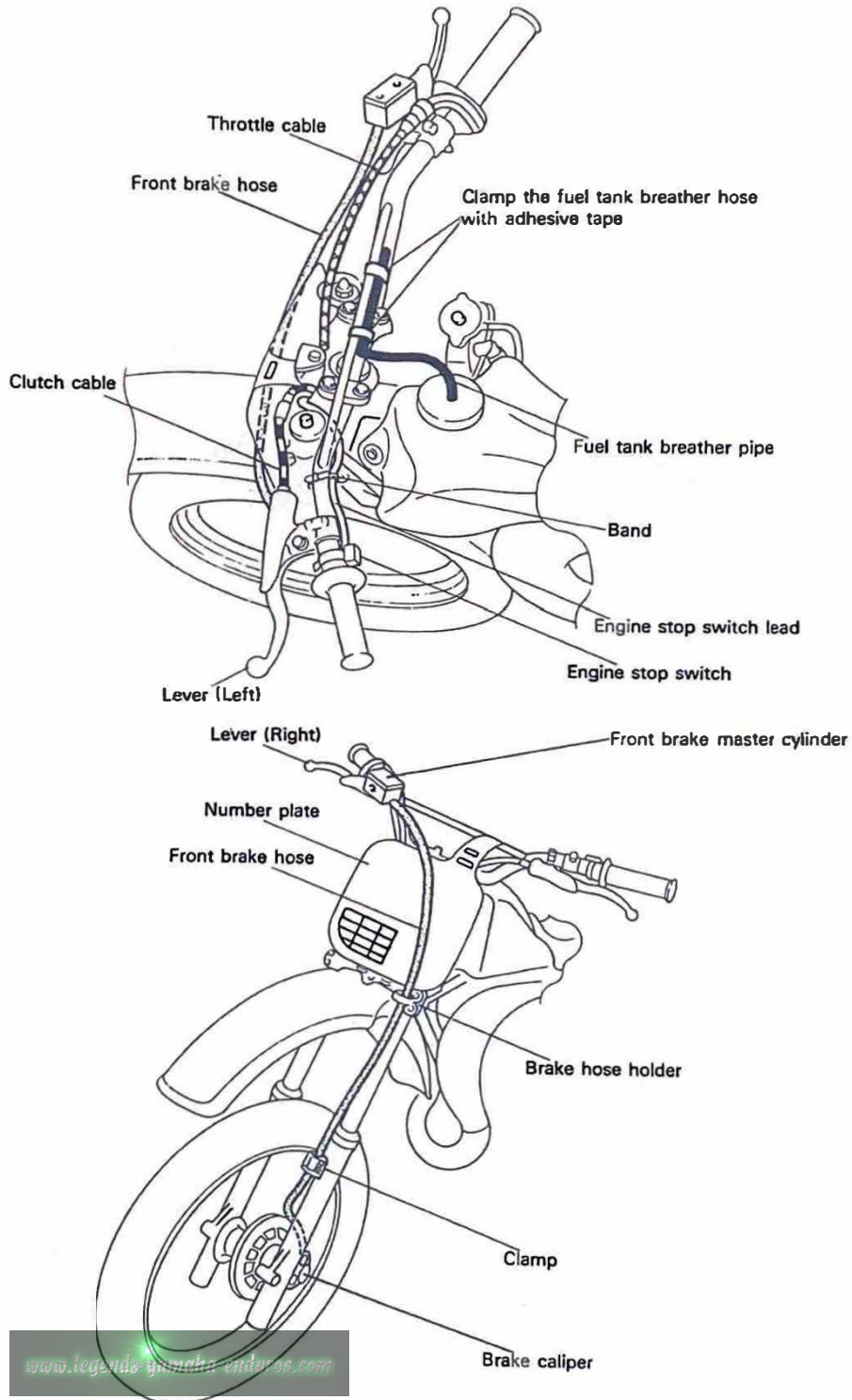


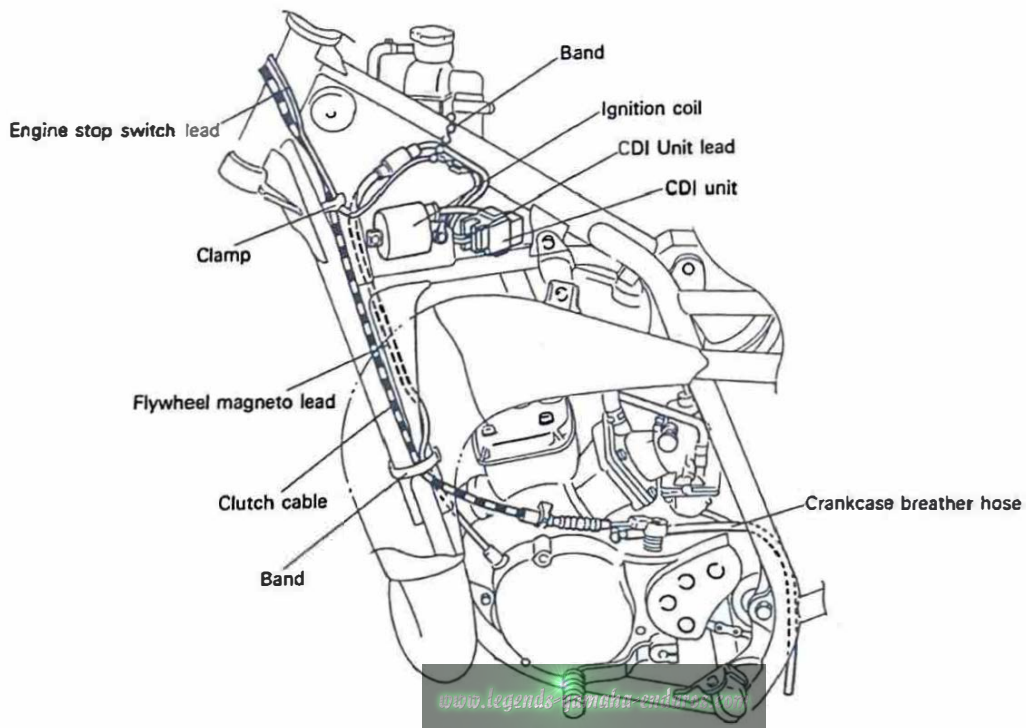
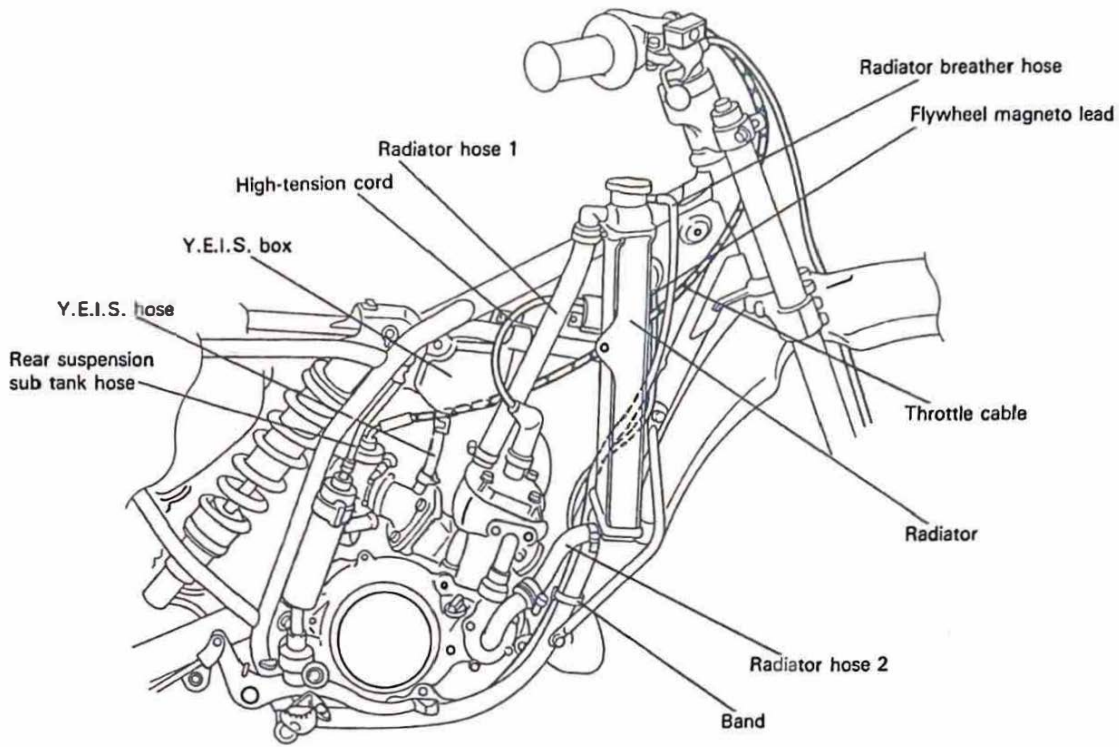
1	Spring nut	2	V	d = 5 (0.20)
2	Radiator plate	1	C	
3	Radiator cover	1	C	
4	Panhead screw with spring washer and plain washer	2	V	d = 5 (0.20), ℓ = 20 (0.98)
5	Panhead screw with spring washer and plain washer	1	V	d = 6 (0.24), ℓ = 16 (0.63)

CABLE ROUTING

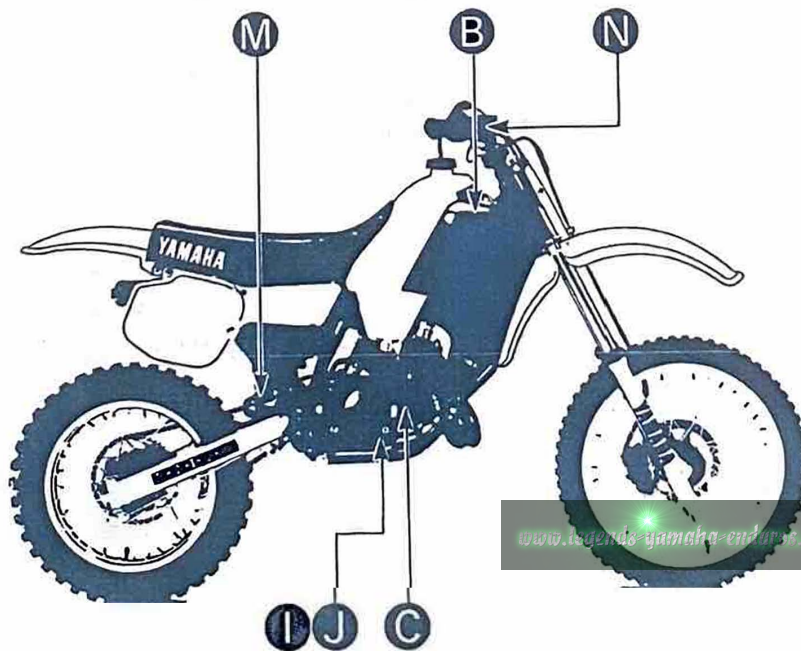
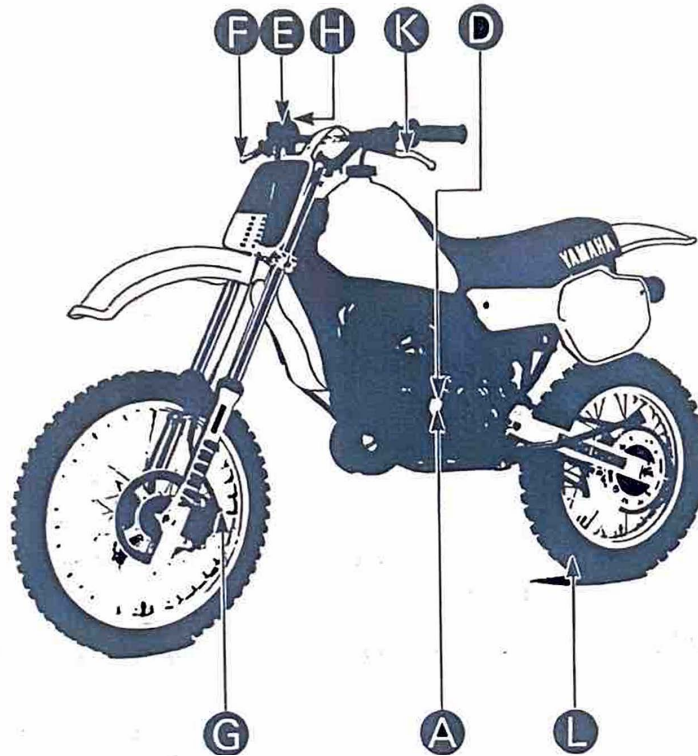
CAUTION:

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

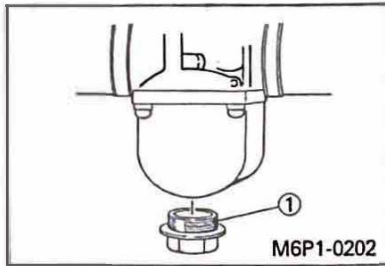




ADJUSTMENTS AND PREDELIVERY SERVICE



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1. Drain plug

A. Fuel draining

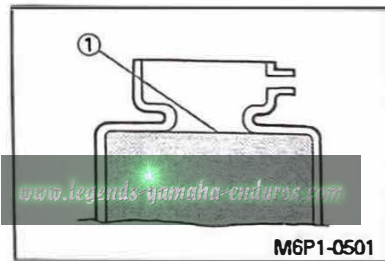
1. Put a rag under the carburetor so fuel does not contact the crankcase.
2. Loosen the drain plug and drain the standing fuel.

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

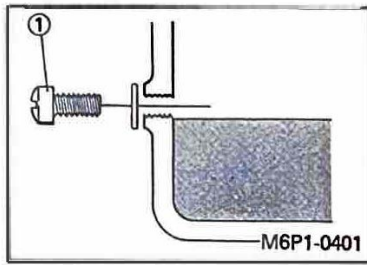
2. Adjust

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

Recommended 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. Checking bolt

C. Transmission oil level

1. Check
 - a. Place the machine on a level place.
 - b. Warm up the engine for a few minutes.
 - c. Stop the engine.
 - d. Remove the checking bolt.
 - e. The oil level is satisfactory if it is up to the hole bottom brim.

NOTE:

Be sure the machine is positioned straight up when checking the oil level.

2. Adjust

To increase oil level, add the oil to proper level.

Recommended oil:

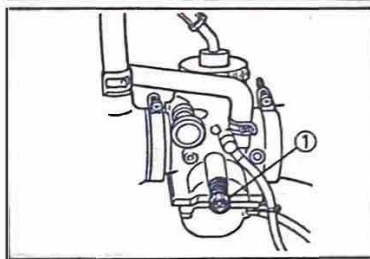
SAE 10W30 type SE motor oil or Yamalube 4-Cycle oil

Oil capacity (Periodic change):

0.75 L (0.66 Imp qt, 0.80 US qt)

CAUTION:

Do not add any chemical additives to the oil. The transmission oil also lubricates the clutch, and additives could cause the clutch to slip.



1. Throttle stop screw

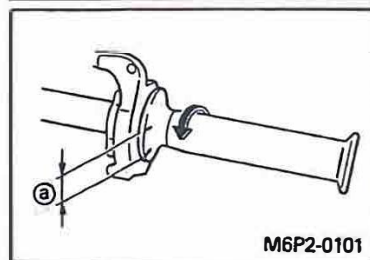
D. Idle speed

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

Engine idle: as desired

2. Adjust

- Turning the throttle stop screw in (Clockwise) → Engine speed increases.
- Turning the throttle stop screw out (Counterclockwise) → Engine speed decreases.



a. Free play

E. Throttle grip free play

1. Check

Free play:

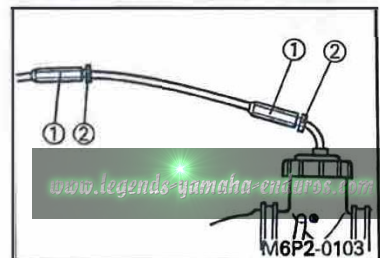
3 – 5 mm (0.12 – 0.20 in)

2. Adjust

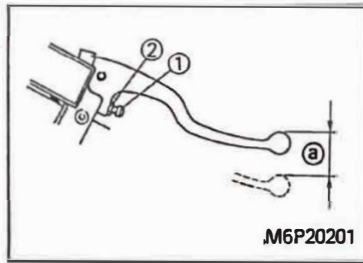
- a. Loosen the locknut.
- b. Turn the adjuster in or out until the adjustment is suitable.
- c. Tighten the locknut.

NOTE:

- Before adjusting the throttle cable free play, the engine idling speed should be adjusted.
- After adjustment, start the engine and check throttle operation. Turn the handlebars from lock to lock and note if the engine speeds up, if it does, the cable adjustment is too tight and must be readjusted.



1. Adjuster
2. Locknut



1. Adjuster
2. Locknut
- a. Free play

F. Front brake lever free play

1. Check

Free play:
5 – 8 mm (0.20 – 0.32 in)

2. Adjust

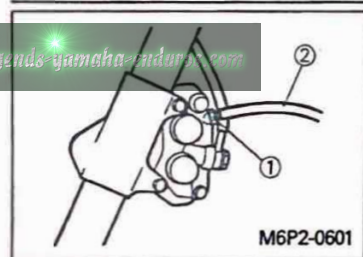
- a. Loosen the locknut.
- b. Turn the adjuster in or out until the adjustment is suitable.
- c. Tighten the locknut.

NOTE: _____

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 machine is operated. Air in the system will result in greatly diminished braking capability and can result in loss of control and an accident. Inspect and bleed the system if necessary.



1. Bleed screw
2. Transparent hose

G. Bleeding the brake system

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.

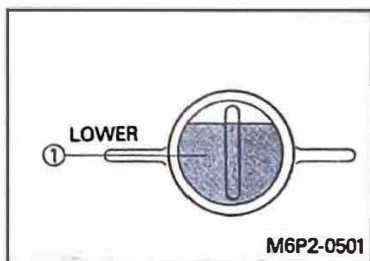
A dangerous loss of braking performance may occur if the brake system is not properly bled.

Air bleeding steps:

- a. Add proper brake fluid to the reservoir
- b. Install diaphragm.
Be careful not to spill any fluid or allow the reservoir to overflow.
- c. Connect the clear plastic tube (4.5 mm, 3/16 in inside dia.) tightly to the caliper bleed screw ①.
- d. Place the other end of the tube into a container.
- e. Slowly apply the brake lever several times.
- f. Pull the lever and hold the lever in "ON" position.
- g. Loosen the bleed screw and allow the lever to travel towards its limit.
- h. Tighten the bleed screw when the lever or pedal limit has been reached, then release the lever.
- i. Repeat steps (e) to (h) until all of the air bubbles have been removed from the system.

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.



1. "LOWER" level

H. Brake fluid level

1. Check
 - a. Make sure the master cylinder top is horizontal by turning the handlebars.
 - b. The brake fluid level is satisfactory if it is over the "LOWER" level.
2. Adjust
To increase brake fluid level, add the brake fluid to proper level.

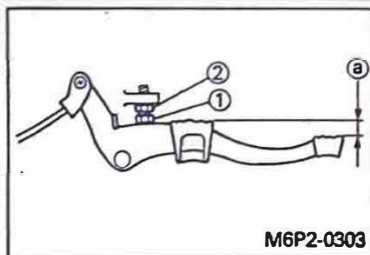
Recommended brake fluid:
DOT #3

NOTE:

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.



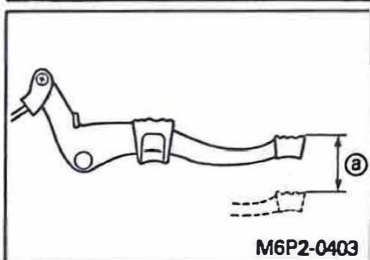
1. Adjuster
2. Locknut
- a. Pedal position

I. Rear brake pedal position

1. Check

Brake pedal position:
10 mm (0.39 in)

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



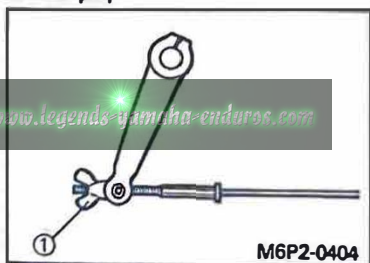
- a. Free play

J. Rear brake pedal free play

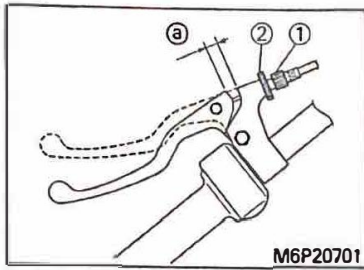
1. Check

Free play:
20~30 mm (0.8~1.2 in)

2. Adjust
 - a. Turn the adjuster in or out until the adjustment is suitable.



1. Adjuster



1. Adjuster
2. Lock nut
- a. Free play

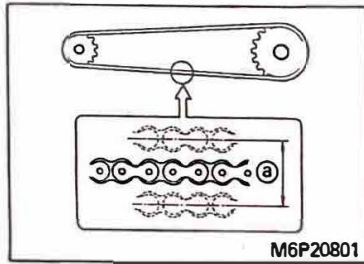
K. Clutch lever free play

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 adjustment is suitable.
- c. Tighten the locknut.



- a. Chain slack

L. 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 machine on a level place.

Chain slack:
20–30 mm (0.8–1.2 in)

NOTE: _____

Be sure the machine is positioned straight up without an operator on it when checking the chain slack.

2. Adjust

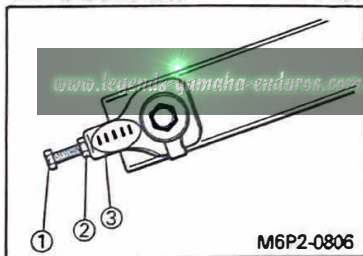
- a. Loosen the rear brake adjuster.
- b. Loosen the rear wheel axle nut.
- c. Loosen the locknuts on each side.
- d. To loosen the chain, turn the adjuster counter-clockwise and push the wheel forward.

NOTE: _____

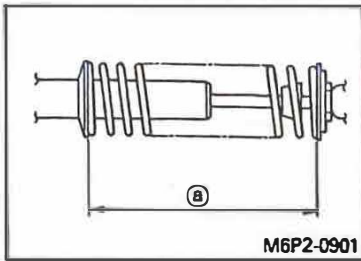
Turn each adjuster exactly the same amount to maintain correct axle alignment.

- e. Tighten the locknuts.
- f. Tighten the rear axle nut.
- g. Adjust the brake pedal free play.

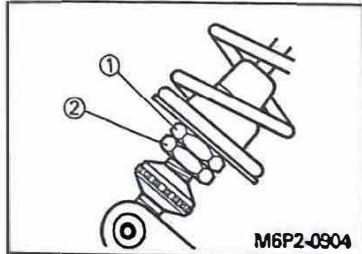
Tightening torque:
85 Nm (8.5 m•kg, 61 ft•lb)



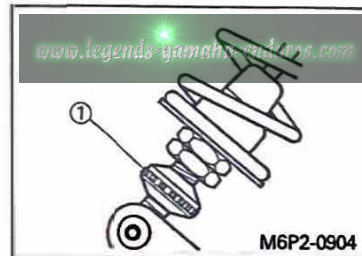
1. Chain puller



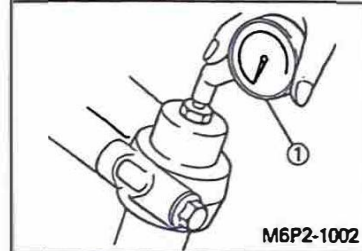
a. Installed length



1. Adjuster
2. Locknut



1. Adjuster



1. Air check gauge

M. Rear shock absorber

1. Check

Installed length (STD SETTING):

221 mm (8.62 in)

Rebound damping (STD SETTING):

7 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.

Tightening torque:

55 Nm (5.5 m•kg, 40 ft•lb)

- Rebound damping

a. Turn in the adjuster stiffest position.

b. Turn out the adjuster 7 clicks from the stiffest position.

NOTE:

Don't turn out the adjuster more than 10 clicks from the adjuster position.

N. Front fork air pressure

1. Check

a. Place a suitable stand under the engine to keep the front of machine raised off the floor. No weight on front wheel.

b. Use an air check gauge.

Standard air pressure:

Zero kPa

(Zero kg/cm², Zero psi)

Maximum air pressure:

118 kPa

(1.2 kg/cm², 17 psi)

2. Adjust

- To decrease air pressure

Release air by pushing valve pin.

APPENDICES

SERVICE DATA

Idling engine speed:	As desired	
Spark plug: Type Gap	QN-84 (CHAMPION) 0.6~0.7 mm (0.024~0.028 in)	
Fuel: Recommended fuel Fuel tank capacity	Premium fuel with an octane rating of at least 90 5.0 L (1.1 Imp gal, 1.3 US gal)	
Engine oil: Recommended oil, Mixing ratio:	Yamalube Racing 2-cycle oil (24 : 1) Castrol R30 (20 : 1) A545 (20 : 1) A747 (20 : 1)	
Tire pressure (Cold tire pressure):	Front	Rear
	98 kPa (1.0 kg/cm ² , 14 psi)	98 kPa (1.0 kg/cm ² , 14 psi)

Tightening Torque

Part to be tightened	Thread size	Tightening torque		
		Nm	m•kg	ft•lb
Engine:				
Spark plug	M14	25	2.5	18
Mission oil drain bolt	M12	20	2.0	14
Chassis:				
Engine mounting bolt	M8	40	4.0	29
Handle crown:				
Inner tube	M8	23	2.3	17
Steering shaft	M14	60	6.0	43
Handlebar holder	M8	27	2.7	19
Front wheel axle	M12	74	7.4	53
Front fender	M6	6	0.6	4.3
Rear wheel axle	M14	85	8.5	61
Rear hub	M8	30	3.0	22
Fuel tank stay	M6	7	0.7	5.1
Fuel tank	M6	7	0.7	5.1
Fuel cock	M6	7	0.7	5.1
Sidestand	M8	20	2.0	14
Sidestand bracket	M10	48	4.8	35
Rear fender	M8	17	1.7	12
Pivot shaft	M12	53	5.3	38
Rear sprocket	M8	25	2.5	18
Rear shock—Frame	M10	32	3.2	23
Footrest bracket	M10	50	5.0	36
Steering nut	M25	8	0.8	5.8
Brake disk—Hub	M6	7	0.7	5.1
Brake caliper—Front fork	M8	30	3.0	22
Rear shock—L arm	M10	32	3.2	23
L arm —Rear arm	M10	32	3.2	23
— Conrod	M10	32	3.2	23
Frame—Conrod	M10	32	3.2	23
Brake cam lever	M6	10	1.0	7.2

OWNER'S TOOL KIT

No.	Part name	Q'ty
1	Owner's tool bag	1
2	Spark plug wrench (19-21)	1
3	Spark plug wrench handle	1
4	Special spanner	1
5	Rotor puller	1

STANDARD EQUIPMENT

No.	Part name	Q'ty
1	Main jet (#270)	1
2	Main jet (#300)	1

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