PERIODIC MAINTENANCE AND MINOR REPAIR

Periodic inspection, adjustment and lubrication will keep your motorcycle in the safest and most efficient condition possible. Safety is an obligation of the motorcycle owner.

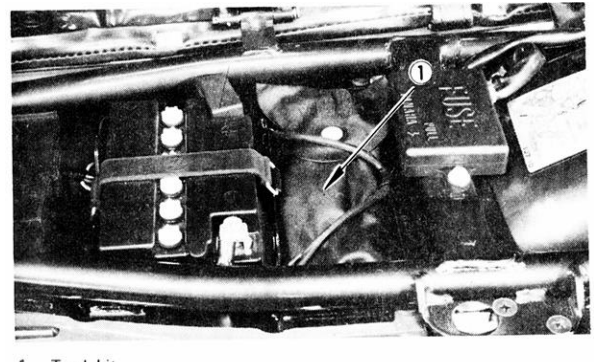
The most important points of motorcycle inspection, adjustment and lubrication are explained in the following pages.

CAUTION:

If the owner is not familiar with motorcycle service, this work should be done by a Yamaha dealer.

Tool kit

The servicing information included in this manual is intended to provide you. the owner, with the necessary information for completing your own preventive maintenance and minor repairs. The tools provided in the owner's tool kit are sufficient for this purpose, except that a torque wrench is also necessary to properly tighten nuts and bolts.



1. Tool kit

PERIODIC MAINTENANCE

Item	Remarks	Initial km (mile)				Thereafter every km (mile)		
		400 (250)	800 (500)	1,600 (1,000)	3,200 (2,000)	1,600 (1,000)	3,200 (2,000)	6,400 (4,000)
Cylinder	Check compression				×			×
Valves	Check/Adjust valve clearance				check			9,600 (6,000)
Cam chain	Check/Adjust chain tension	×			4,800 (3,000)			4,800 (3,000)
Spark plugs	Inspect/Clean or replace as required	×			×		×	
Air filter	Dry type — Clean/Replace as required			×	×	×		
Carburetor	Check operation/Adjust as required		×		×		×	
Brake system (complete)	Check/Adjust as required — Repair as required	×	×	×	×	×		
Wheels and tires	Check pressure/Wear/Balance	×	×	×	×	×		
Fuel petcocks	Clean/Flush tank as required	×		×			×	
Battery	Top-up/Check specific gravity and breather pipe	×	×	×	×	×		
Ignition timing	Adjust/Clean or replace parts as required		×		×		×	
Lights/Signals	Check operation/Replace as required	×	×	×	×	×		
Fittings/Fasteners	Tighten before each trip and/or ...	×	×	×	×	×		

LUBRICATION INTERVALS

Item	Remarks	Type	Initial km (mile)				Thereafter every km (mile)		
			400 (250)	800 (500)	1,600 (1,000)	1,200 (2,000)	1,600 (1,000)	3,200 (2,000)	6,400 (4,000)
Engine/Transmission oil	Replace/Warm engine before draining	See page 19.				2,400 (1,500)			4,800 (3,000)
Oil filter	Replace/After installing start engine check for oil leaks		×			1,800 (3,000)			9,600 (6,000)
Middle/Final gear oil	Replace	See page 19.	×						9,600 (6,000)
Control/Meter cables	Apply thoroughly	Yamaha Chain and Cable Lube or SAE 10W/30 motor oil			×	X		×	
Throttle grip/ Housing	Apply lightly	Lithium base grease	×			X			×
Hydraulic brake fluid reserve (Front and rear)	Use new fluid only— See note (page 32).	DOT No. 3 Brake fluid	check	check	check	check	check		
Front forks	Drain completely— Check specifications	Yamaha Fork Oil 20W				×			×
Steering bearings	Inspect thoroughly/ Pack moderately yearly or ...	Medium-weight wheel bearing grease				check			12,800 (8,000)

Item	Remarks	Type	Initial km (mile)				Thereafter every km (mile)		
			400 (250)	800 (500)	1,600 (1,000)	3,200 (2,000)	1,600 (1,000)	3,200 (2,000)	6,400 (4,000)
Speedometer gear housing	Inspect thoroughly/ Pack moderately	Lithium base grease				×			×
Rear arm pivot shafts	Apply grease fully yearly or ...	Medium-weight wheel bearing grease							12,800 (8,000)
Wheel bearings	Do not over-pack yearly or ...	Medium-weight wheel bearing grease							12,800 (8,000)
Point cam lubrication wicks	Apply very lightly	Light-weight machine oil			×			×	

NOTE:

Brake fluid replacement:

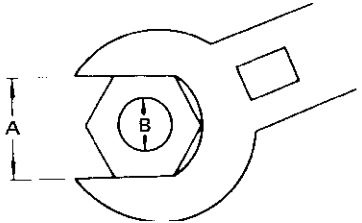
1. **When disassembling the master cylinder or caliper cylinder, replace the brake fluid. Normally check the brake fluid level and add the fluid as required.**
2. **On the inner parts of the master cylinder and caliper cylinder. replace the oil seals every two years.**
3. **Replace the brake hoses every four years. or if cracked or damaged.**

Torque specifications

(For a more complete list, refer to the Service Manual for this model.1
Use a torque wrench to tighten these items. It is recommended that these items be checked occasionally, especially before a long tour. Always check the tightness of these items whenever they are loosened for any reaso

Item	Torque
Spark plug	2.0 m-kg (14 ft-lb)
Cam chain tensioner cover	1.3 m-kg (9 ft-lb)
Engine drain plug	4.5 m-kg (33 ft-lb)
Middle gear drain plug	4.5 m-kg (33 ft-lb)
Kick starter	2.0 m-kg (14 ft-lb)
Shift lever	0.9 m-kg (6.5 ft-lb)
Front engine mount bolts	5.5 m-kg (40 ft-lb)
Rear engine mount bolts	10 m-kg (72 ft-lb)
Steering pinch bolts (8 mm stud)	1.8 m-kg (13 ft-lb)
Shock absorber (top)	3.0 m-kg (22 ft-lb)
Shock absorber (bottom)	4.0 m-kg (29 ft-lb)
Front wheel axle	9.0 m-kg (65 ft-lb)
Front axle holder (cap)	2.0 m-kg (14 ft-lb)
Rear wheel axle	15 m-kg (108 ft-ib)
Rear axle pinch bolt	0.6 m-kg (4 ft-lb)
F. Brake caliper bolt	4.5 m-kg (33 ft-lb)
Final gear drain plug	2.3 m-kg (17 ft-lb)

A (Nut)	B (Bolt)	General Torque Specifications	
		m-kg	ft-lb
10 mm	6 mm	I.O	7.2
12 mm	8 mm	2,0	15
14 mm	10 mm	4.0	29
17 mm	12 mm	4.5	33
19 mm	14 mm	5.0	36
22 mm	16 mm	6,5	47
24 mm	18 mm	7.0	50
27 mm	20 mm	8.0	58



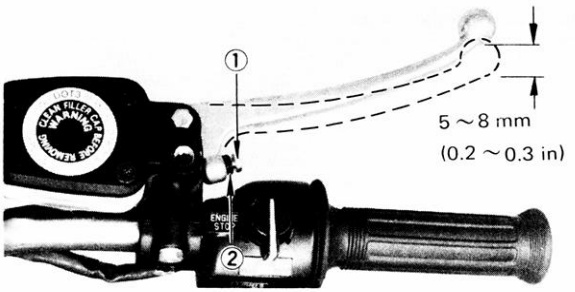
Front brake adjustment

The front brake lever should be so adjusted that it has a free play of 5 ~ 8 mm (0.2 ~ 0.3 in) at the lever end.

1. **Loosen the locknut on the brake lever.**
2. **Turn the adjustor so that the brake lever movement at the lever end is 5 ~ 8 mm (0.2 ~ 0.3 in) before the adjustor contacts the master cylinder piston.**
3. **After adjusting, tighten the locknut.**

NOTE:

Check for correct play and make sure it is working properly.

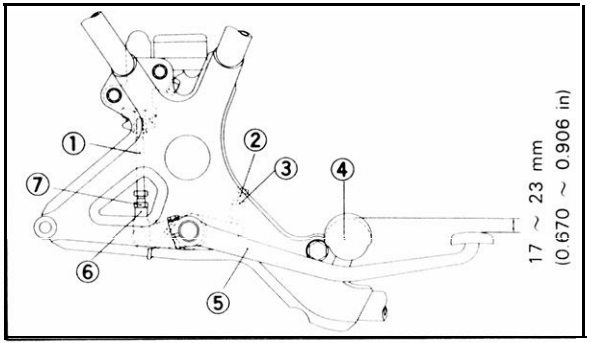


1. Adjusting screw
2. Locknut

Rear brake

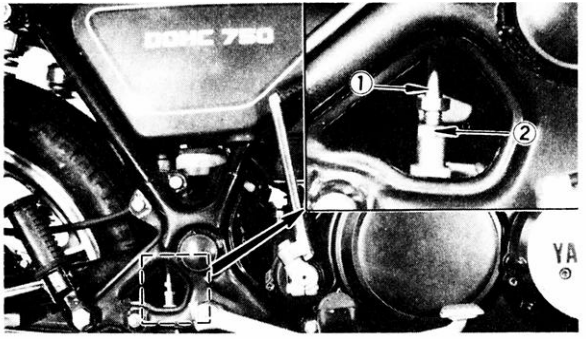
CAUTION:

For the brake pedal position adjustment, be sure to proceed as follows; (It is advisable to have your Yamaha dealer make this adjustment.)



1. Brake rod
2. Adjustor bolt (for pedal height)
3. Locknut
4. Foot rest
5. Brake pedal
6. Joint
7. Locknut

1. Loosen the adjustor locknut (for pedal height).
2. By turning the adjustor bolt clockwise or counterclockwise. adjust the brake pedal position as shown in the illustration.
3. Secure the adjustor locknut.
4. Loosen the brake rod adjustor locknut.
5. Turn in the brake rod until it lightly touches the master cylinder. then turn it out by approx. 1-3/4 turns.



1. Brake rod 2. Locknut

NOTE:

See that the punched mark on the brake rod is not above the top surface of the adjustor locknut in securing the brake rod adjustor locknut.

Inspecting the brake fluid level

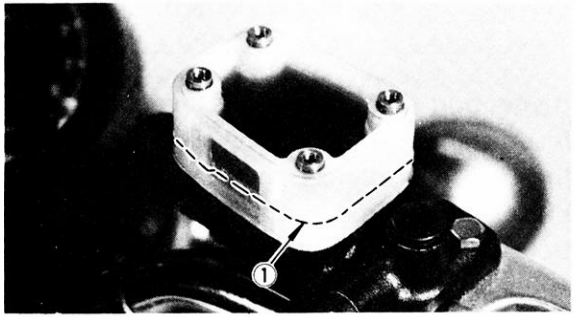
Insufficient brake fluid may allow air to enter the brake system, possibly causing the brakes to become ineffective.

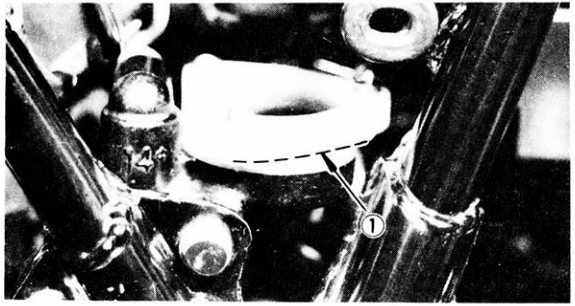
Before riding, check the brake fluid level and replenish when necessary. and observe these precautions:

1. Use only the designated quality brake fluid: otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance.

Recommended brake fluids:
DOT #3

2. Refill with the same type of brake fluid; mixing fluids may result in a harmful chemical reaction and lead to poor performance.





1. Lower level

3. Be careful that water does not enter the master cylinder when refilling. Water will significantly lower the boiling point and may result in vapor lock.
4. Brake fluid may erode painted surfaces or plastic parts. Always clean up spilled fluid immediately.
5. Have a Yamaha dealer check if the brake fluid level goes down.

Brake fluid replacement

1. Complete fluid replacement should be done only by trained Yamaha service personnel.
2. Complete fluid replacement should be done whenever the caliper cylinder or master cylinder is disassembled, or the fluid becomes seriously contaminated.
3. Have your Yamaha dealer replace the following components whenever damaged or leaking. Also:

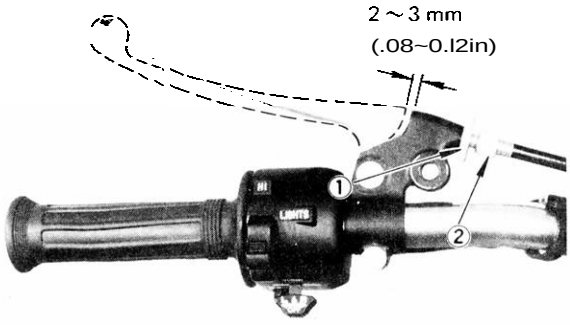
a Replace all brake seals every two years.
b Replace all brake hoses every four years.

Clutch adjustment

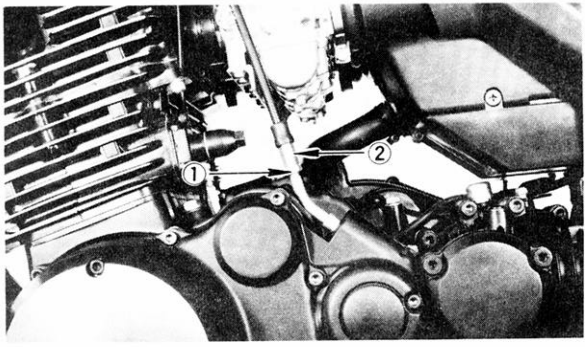
This model has a clutch cable length adjustor and a clutch mechanism adjustor. The cable length adjustors are used to take up slack from cable stretch and to provide sufficient free play for proper clutch operation under various operating conditions. The clutch mechanism adjustor is used to provide the correct amount of clutch "throw" for proper disengagement. Normally. once the mechanism is properly adjusted. the only adjustment required is maintenance of free play at the clutch handle lever.

1. Freeplay adjustment

   Loosen either the handle lever adjustor locknut or the cable length adjustor locknut. Next, turn the length adjustor either in or out until proper lever free play is achieved.



1. Locknut 2. Adjustor



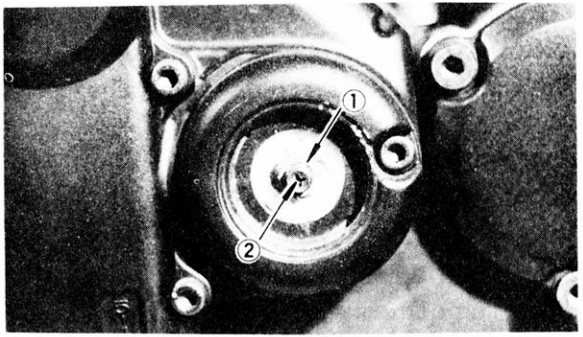
1. Locknut 2. Adjustor

2. Mechanism adjustment

The second adjustment is located behind the adjusting cover. Removing the cover will expose the adjusting set screw and locknut.

Loosen the locknut. rotate the set screw in until it lightly seats against the clutch push rod that works with the set screw to operate the clutch. Back the set screw out 1/4 turn and tighten the locknut. This adjustment must be checked because heat and clutch wear will affect this free play. possibly enough to cause incomplete clutch operation.

Recheck clutch cable adjustment at handlebar after adjusting.



2. Adjustor

Carburetor adjustment

The carburetor is a vital part of the engine and requires very sophisticated adjustment. Most adjusting should be left to a Yamaha dealer who has the professional knowledge and experience to do so. However, the following points may be serviced by the owner as part of his usual maintenance routine.