
CHAPTER 2.

PERIODIC INSPECTIONS AND ADJUSTMENTS

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MAINTENANCE INTERVALS

PERIODIC INSPECTION AND ADJUSTMENT

MAINTENANCE INTERVALS

The following schedule is intended as a general guide to maintenance and lubrication. Bear in mind that such factors as weather, terrain, geographical location, and individual usage will alter the required maintenance and lubrication intervals.

Item	After break-in	Every 30 operation days	Every year	Remarks
TRANSMISSION Replace oil	●		●	Yamalube 4-cycle oil or SAE 10W30 SE motor oil
COOLING SYSTEM Check coolant leakage	●	●		Replace coolant every 2 years
SPARK PLUG Inspect and clean Replace if necessary	●	●		STD plug: B8ES or W24ES
AIR FILTER Clean and oil Replace if necessary	●	●		Use Foam air-filter oil
*CARBURETOR Inspect adjust and clean	●	●		
*FUEL LINE Check fuel hose for cracks or damage Replace if necessary		●		
THROTTLE OPERATION Inspect	●	●		
FRONT AND REAR BRAKE OPERATION Inspect and adjust free play if necessary	●	●		
FRONT AND REAR BRAKE FLUID Check fluid level and leakage	●	●		Fluid: DOT #4
*FRONT AND REAR BRAKE PAD Check pads wear Replace if necessary		●		
*CLUTCH Inspect free play and operation Adjust if necessary	●	●		
DRIVE CHAIN Lubricate, free play, alignment Replace if necessary	●	●		Use chain lube or SAE 30~50 motor oil Free play: 15 mm (0.59 in)
*DRIVE CHAIN GUARD AND ROLLERS Check wear and replace if necessary		●		Wear and alignment
*STEERING SYSTEM Inspect free play Clean and lube	●	●	●	Medium weight wheel bearing grease
*FRONT SUSPENSION Inspect and lubricate	●	●		Lithium base grease
*REAR SUSPENSION Inspect and lubricate	●	●		Lithium base grease

MAINTENANCE INTERVALS



Item	After break-in	Every 30 operation days	Every year	Remarks
TIRE, WHEELS Inspect air pressure, wheel run-out, and tire wear *Inspect bearings Replace bearings if necessary	●	●		Medium weight wheel bearing grease
THROTTLE, CONTROL CABLE Check routing and connection *Lubricate	●	●	●	Yamaha cable lube SAE 10W30 motor oil
OUTSIDE NUTS AND BOLTS Retighten	●	●		
FRAME Clean and inspect		●		
LIGHTING EQUIPMENT Inspect	●	●		

*It is recommended that these items be serviced by a Yamaha dealer.

NOTE: _____

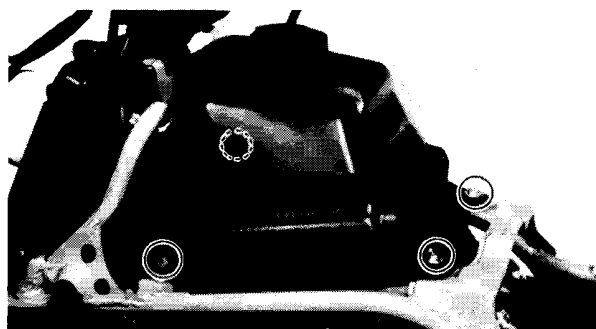
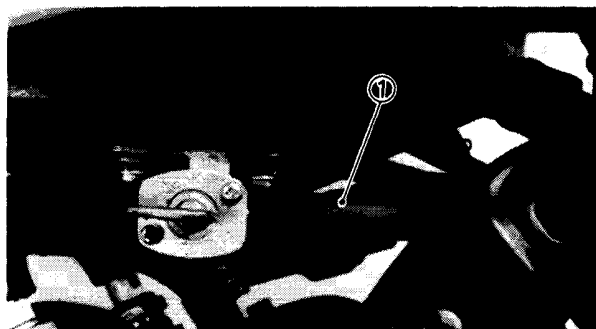
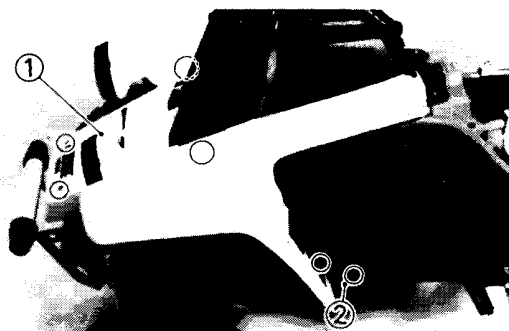
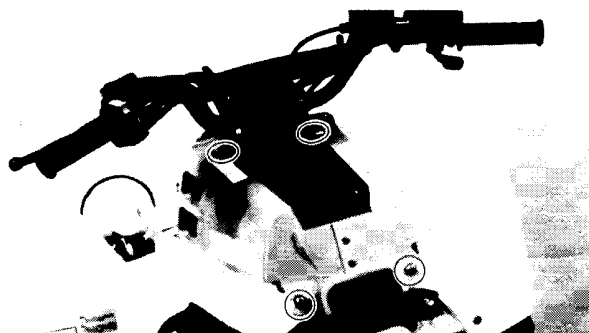
Brake fluid replacement:

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.

Recommended brake fluid:

DOT #4

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



ENGINE

CARBURETOR SYNCHRONIZATION

Carburetors must be adjusted to open and close simultaneously.

1. Remove:

- Seat
- Radiator cover

2. Remove:

- Fuel tank cover

3. Remove:

- Front fender ①
- Front fender stay ②

4. Turn the fuel cock to the "OFF" position.

5. Disconnect:

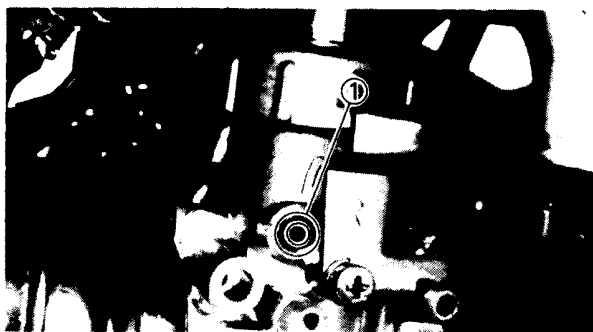
- Fuel hose ①

6. Remove:

- Fuel tank

CARBURETOR SYNCHRONIZATION/ IDLE SPEED ADJUSTMENT

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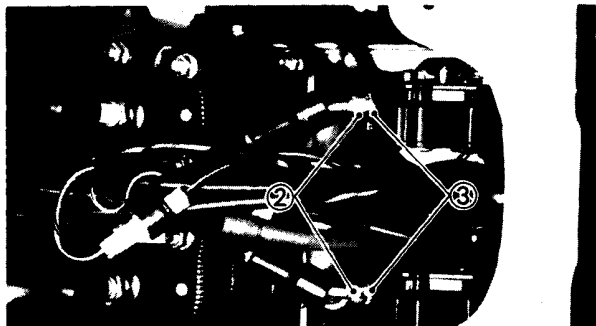


7. Check:

- Alignment marks ①
On the throttle valve.
Not aligned → Adjust the throttle cable.

Throttle cable adjustment steps:

- Snap the throttle lever a few times.
- Open the throttle lever until the alignment mark appears in the center of the window ① of the right carburetor.
- While keeping the throttle lever at this position, check the left carburetor window for the presence of the alignment mark at the same position.
- If not, adjust the throttle cable for the left carburetor.
- Loosen the locknut ②.
- Turn the adjuster ③ in or out until the alignment mark comes to the same position.
- Tighten the locknut.
- Finally check that both alignment marks appear at the same position at the same time.
- If not, repeat the above steps.



8. Check:

- Idle speed
Refer to "IDLE SPEED ADJUSTMENT" section.

9. Check:

- Throttle lever free play
Refer to "THROTTLE LEVER ADJUSTMENT" section.

10. Install:

- Fuel tank
- Front fender
- Fuel tank cover
- Radiator cover
- Seat

IDLE SPEED ADJUSTMENT

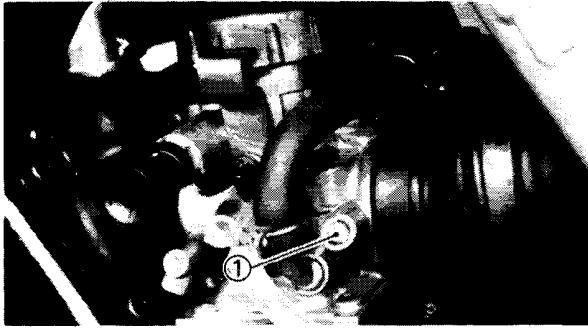
NOTE:

The carburetor synchronization should be set properly before adjusting the idle speed.

1. Remove:

- Seat

IDLE SPEED ADJUSTMENT



2. Adjust:
 - Idle speed

Idle speed adjustment steps:

- Turn in both pilot air screw ① until they lightly seat.

NOTE:

Right-hand carburetor pilot air screw located on inboard side of right carburetor.

- Turn out both pilot air screw to specification.

Pilot air screw (Turns out):

2.0

- Start the engine and let it warm up.
- Adjust the idle speed by turning the idle speed adjust screw ① in or out until the specific engine speed is obtained.

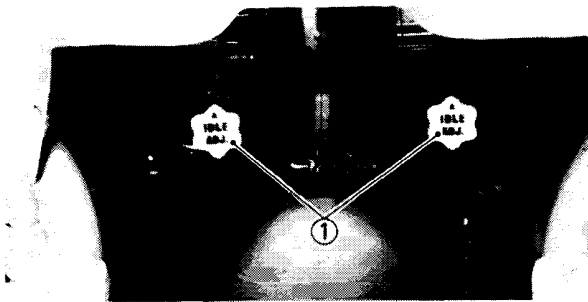


Engine Idle Speed:

1,450 ~ 1,550 r/min

NOTE:

- Idle speed adjust screws were preset at the factory. When adjusting idle speed, turn the right hand and left hand idle speed adjust screws in the same extent, or synchronization will be out.
- The pilot air screws and idle speed adjust screws are separate adjustments but they must be adjusted at the same time to achieve optimum operating condition at engine idle speeds.



3. Install:

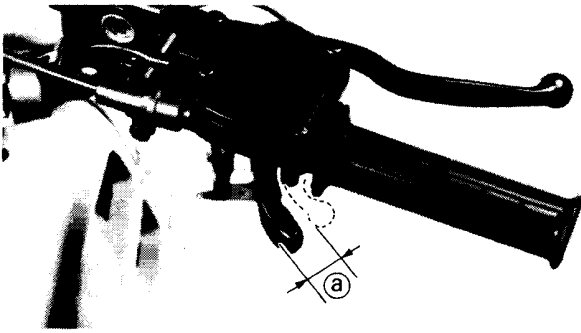
- Seat

4. Check:

- Throttle lever free play

Refer to "THROTTLE LEVER ADJUSTMENT" section.

THROTTLE LEVER ADJUSTMENT/ SPEED LIMITER ADJUSTMENT



THROTTLE LEVER ADJUSTMENT

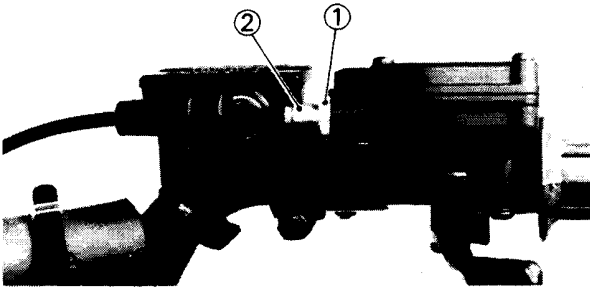
NOTE:

Before adjusting the throttle lever free play, the carburetor synchronization should be set properly.

1. Check:
 - Throttle lever free play (a)
 - Out of specification → Adjust.



Throttle Lever Free Play (a):
4 ~ 6 mm (0.16 ~ 0.24 in)



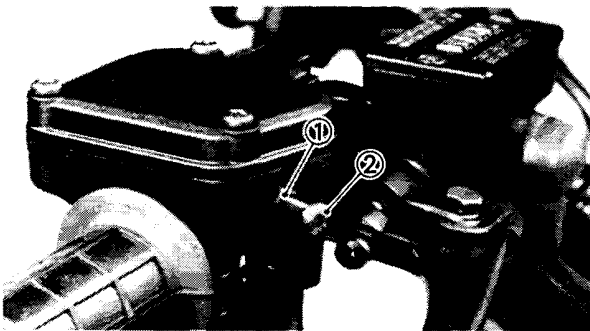
2. Adjust:
 - Throttle lever free play

Throttle lever free play adjustment steps:

- Loosen the locknut (1).
- Turn the adjuster (2) clockwise or counter-clockwise until proper free play is attained.
- Tighten the locknut.

SPEED LIMITER ADJUSTMENT

The speed limiter keeps the carburetor throttle from becoming full-open even when the throttle grip is turned to a maximum. Screwing in the adjuster stops the engine speed from increasing.



1. Adjust:
 - Speed limiter length

Speed limiter length adjustment steps:

- Loosen the locknut (1).
- Turn the adjuster (2) clockwise or counter-clockwise until proper length is attained.

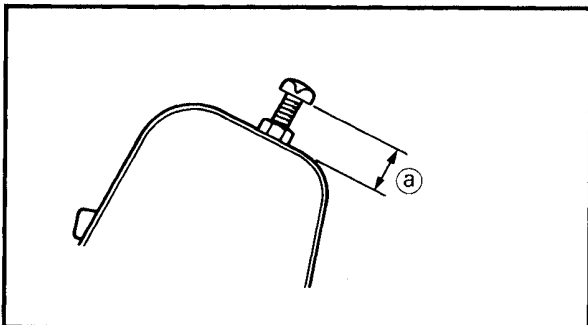


Speed Limiter Length (a):
12 mm (0.47 in)

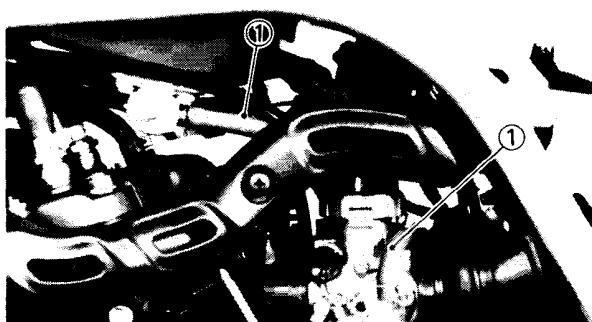
- Tighten the locknut.

WARNING:

- Particularly for a beginner rider, the speed limiter should be screwed in completely. Screw it out little by little as his riding technique improves. Never remove the speed limiter from the outset.

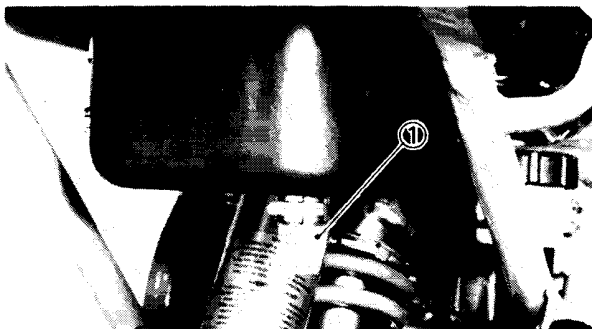


- For proper throttle lever operation do not turn out the adjuster more than 12 mm (0.47 in). Also adjust the throttle lever free play always to 4~6 mm (0.16~0.24 in).



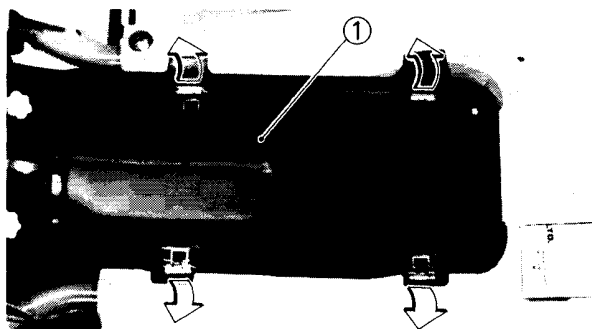
FUEL LINE INSPECTION

1. Inspect:
 - Fuel hoses ①
 - Cracks/Damage → Replace.

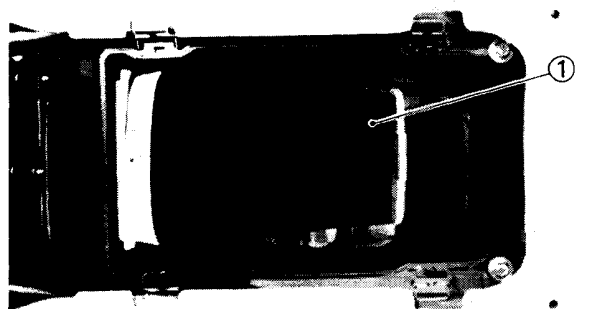


AIR FILTER CLEANING

NOTE: _____
 There is a check hose ① at the bottom of the air filter case. If dust and/or water collects in this hose, clean the air filter element and air filter case.



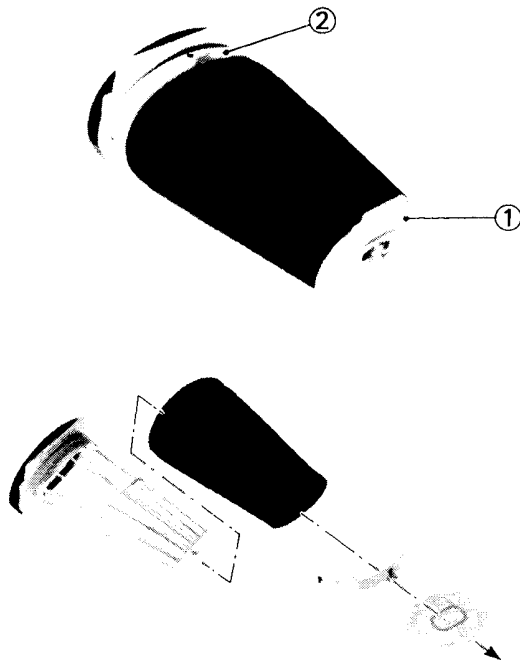
1. Remove:
 - Seat
 - Filter case ①



2. Remove:
 - Air filter ①

CAUTION: _____
 The engine should never be run without the air filter element; excessive piston and/or cylinder wear may result.

AIR FILTER CLEANING



3. Remove:
 - Element plate ①
From the guide.
 - Element holder ②

4. Remove:
 - Air filter element
5. Clean:
 - Air filter element
Clean it with solvent.

NOTE: _____
After cleaning, remove the remaining solvent by squeezing the element.

CAUTION: _____
Do not twist the filter element when squeezing the filter element.

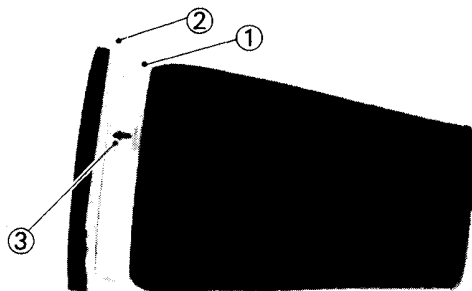
WARNING: _____
Never use low flash point solvents such as gasoline to clean the air filter element. Such solvent may lead to a fire or explosion.

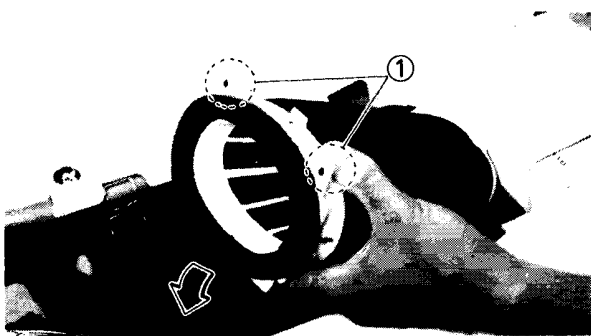
6. Inspect:
 - Element
Damage→Replace.
7. Apply:
 - SAE 10W30 motor oil
8. Squeeze out the excess oil.

NOTE: _____
The element should be wet but not dripping.

9. Apply:
 - All-purpose grease
To the air filter seat.
10. Install:
 - Air filter element
 - Element holder ①
 - Element plate

NOTE: _____
The arrow mark ③ on the element holder ① must point to the element guide ②.



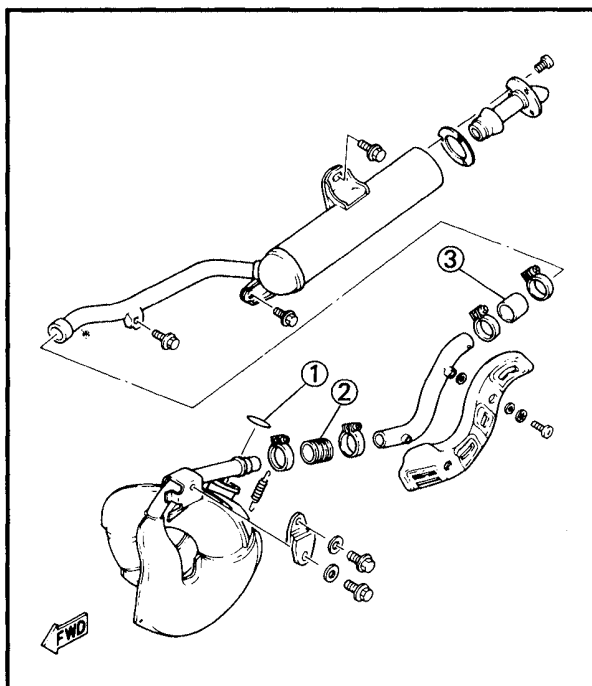


11. Install:

- Air filter

NOTE:

The arrow mark ① on the air filter guide should point to the upward of the air filter.



EXHAUST SYSTEM INSPECTION

1. Inspect:

- O-ring (Exhaust pipe) ①
 - Joint (Exhaust pipe) ②
 - Joint (Silencer) ③
- Damage → Replace.
Exhaust gas leakage → Repair.

TRANSMISSION OIL LEVEL INSPECTION

1. Inspect:

- Transmission oil level
- Oil level low → Add sufficient oil.

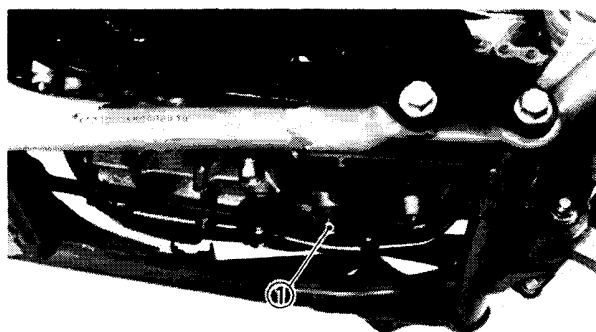


Transmission oil level inspection steps:

- Place the machine on a level place.
- Warm up the engine for several minutes, and stop it.
- Screw the dipstick ① completely out, and then just rest the dipstick in the hole.
- Pull up the dipstick, and inspect the oil level whether or not it is between maximum ② and minimum level ③.
- If the level is lower, add the oil up to the proper level.

TRANSMISSION OIL REPLACEMENT/ RADIATOR HOSE INSPECTION

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TRANSMISSION OIL REPLACEMENT

1. Place the machine on a level place.
2. Warm up the engine for several minutes, and stop it.
3. Place an oil pan under the engine.
4. Remove:
 - Dip stick
 - Drain plug ①Drain the transmission oil.
5. Inspect:
 - Gasket (Drain plug)Damage → Replace.
6. Tighten:
 - Drain plug



Drain Plug:
20 Nm (2.0 m·kg, 14 ft·lb)

7. Fill:
 - Crankcase

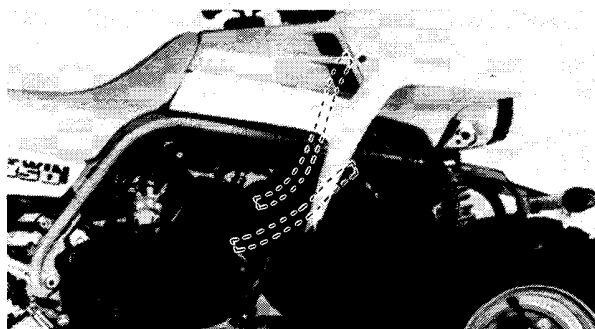


Recommended Oil:
SAE 10W30 Type SE Motor Oil
Periodic Oil Change:
1.5 L (1.3 Imp qt, 1.6 US qt)

CAUTION:

Do not allow foreign material to enter the crankcase.

8. Install:
 - Dipstick
9. Inspect:
 - Oil leaks
 - Oil level



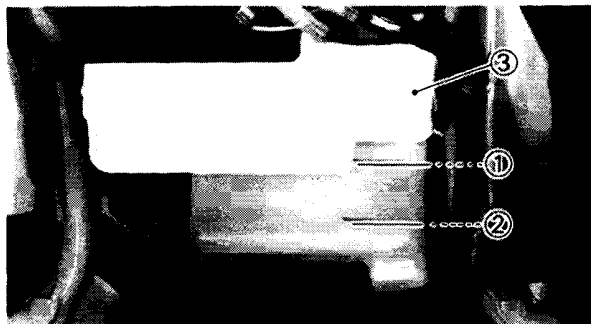
RADIATOR HOSE INSPECTION

1. Inspect:
 - Radiator hoses ①Crack/Damage/Coolant leakage → Repair or replace.
2. Inspect:
 - Cylinder
 - Crankcase coverCoolant leakage → Repair or replace.

COOLANT LEVEL INSPECTION

WARNING:

Do not remove the radiator cap when the engine and radiator are hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury. When the engine has cooled, open the radiator cap by the following procedure: Place a thick rag, like a towel, over the radiator cap, slowly rotate the cap counterclockwise to the detent. This procedure allows any residual pressure to escape. When the hissing sound has stopped, press down on the cap while turning counterclockwise and remove it.

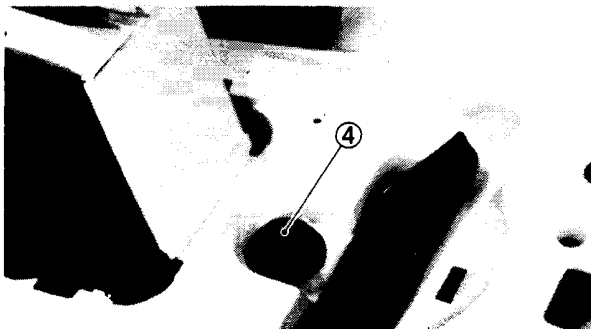


1. Inspect:

- Coolant level

Coolant level low → Add sufficient coolant.

- ① "FULL" level
- ② "LOW" level
- ③ Reservoir tank
- ④ Reservoir tank cap



Recommended Coolant:
 High Quality Ethylene Glycol
 Anti-freeze Containing
 Anti-corrosion for
 Aluminum Engine Inhibitors
 Coolant and Water (soft water)
Mixed Ratio:
 50%/50%
Total Amount:
 2.5 L (2.20 Imp qt, 2.64 US qt)
Reservoir Tank Capacity:
 0.28 L (0.25 Imp qt, 0.30 US qt)

CAUTION:

Hard water or salt water is harmful to the engine parts. You may use boiled water or distilled water, if you can't get soft water.

Handling notes of coolant

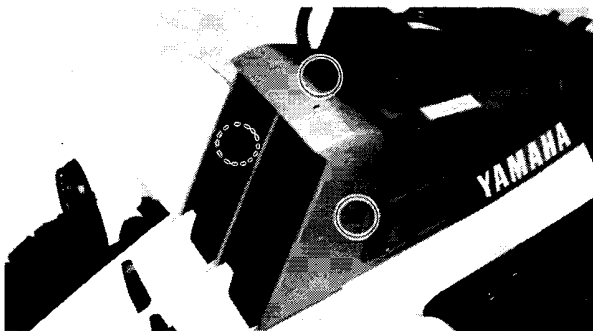
The coolant is harmful so it should be handled with special care.

- When coolant splashes to your eye.
Thoroughly wash your eye with water and see your doctor.
- When coolant splashes to your clothes.
Quickly wash it away with water and then with soap.
- When coolant is swallowed.
Quickly make him vomit and take him to a doctor.

COOLANT REPLACEMENT

CAUTION:

Replace the coolant every two years. Before replacing, remove the radiator cap and check the color of the coolant and mineral deposits in the radiator. Flush the coolant system, as required.

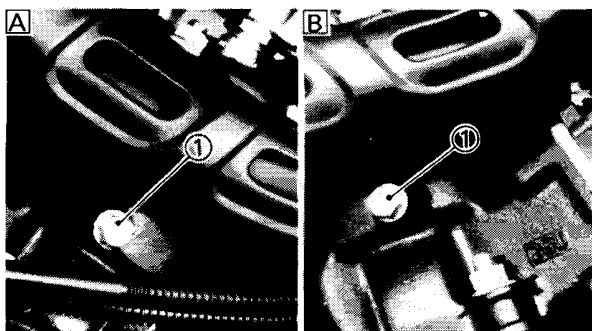


1. Remove:
 - Radiator cover



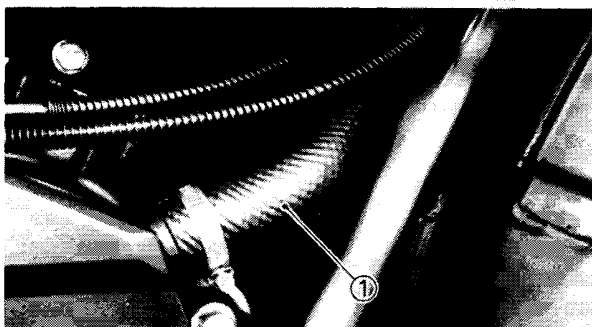
2. Remove:
 - Radiator cap ①

COOLANT REPLACEMENT



3. Remove:
 - Drain bolts ①

- A** Left side
B Right side



4. Remove:
 - Inlet hose ①
5. Drain:
 - Coolant (completely)


NOTE: _____
 Thoroughly flush the cooling system with clean tap water.

CAUTION: _____

Take care so that coolant does not splash to painted surfaces. If splashes, wash it away with water.



6. Inspect:
 - Drain bolt gaskets
 Damage → Replace.
7. Tighten:
 - Drain bolts

	Drain Bolt: 14 Nm (1.4 m•kg, 10 ft•lb)
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8. Connect:
 - Inlet hose

NOTE: _____
 Connect the inlet hose with its white painted mark ① upward.

9. Fill:
 - Coolant
 Fill the coolant into the radiator until the radiator is full.

COOLANT REPLACEMENT

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Recommended Coolant:

High Quality Ethylene Glycol
Anti-Freeze Containing Anti-
Corrosion for Aluminum Engine
Inhibitors

Coolant and Water Mixed Ratio:
50%/50%

Total Amount:

2.5 L (2.20 Imp qt, 2.64 US qt)

Reservoir Tank Capacity:

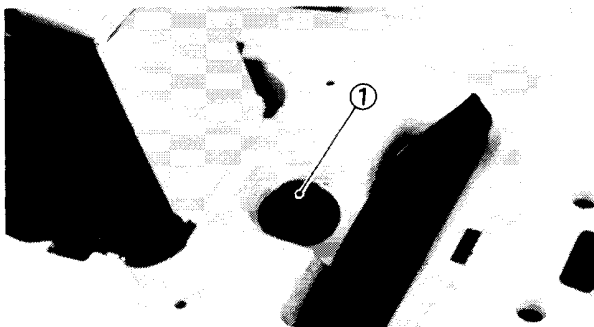
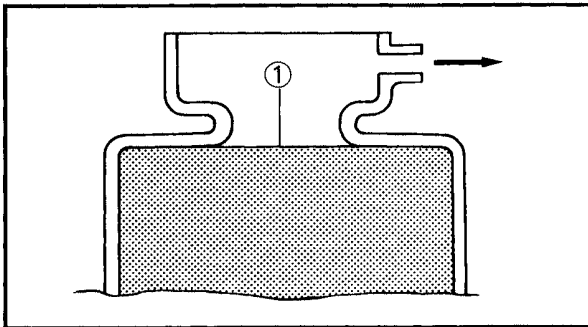
0.28 L (0.25 Imp qt, 0.30 US qt)

From "LOW" to "FULL" Level:

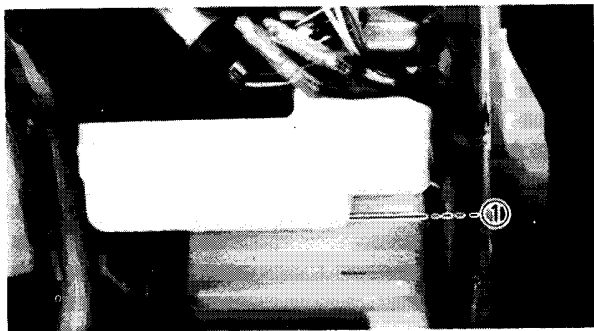
0.07 L (0.06 Imp qt, 0.07 US qt)

CAUTION:

- Hard water or salt water is harmful to the engine. You may use distilled water if you can't get soft water.
- Do not mix more than one type of ethylene glycol antifreeze containing corrosion for aluminum engine inhibitors.



10. Install:
 - Radiator cap
11. Run the engine several minutes.
12. Inspect:
 - Coolant level ① in the radiator
Coolant level low → Fill.
Fill the coolant until it reaches the top of the radiator.
13. Remove:
 - Seat
 - Reservoir tank cap ①



14. Fill:
 - Coolant
Fill the coolant in the reservoir tank until it reaches the "FULL" level line ① of the reservoir tank.
15. Install:
 - Reservoir tank cap
 - Seat
16. Inspect:
 - Cooling system
Coolant leaks → Repair.

CAUTION:

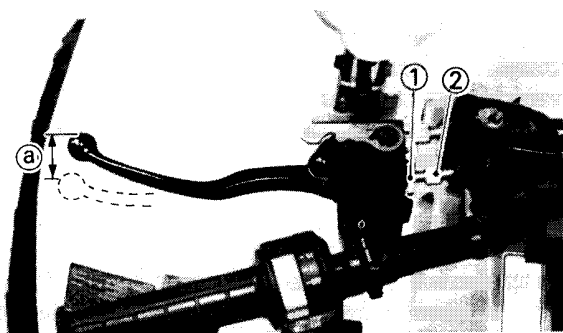
Always check coolant level, and check for coolant leakage before starting engine.


17. Install:
 - Radiator cover

CLUTCH ADJUSTMENT

Clutch Lever Free Play Adjustment

1. Loosen:
 - Adjuster locknut ①
2. Adjust:
 - Free play ②
 - Turn the adjuster ② in or out until correct free play is obtained.

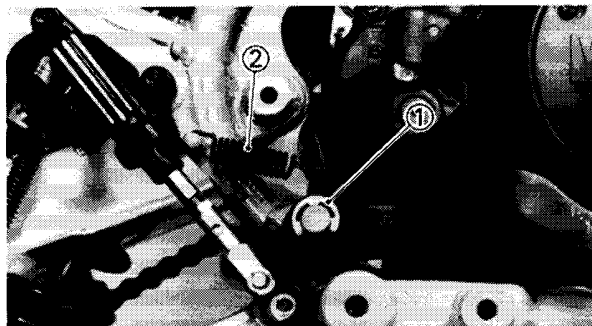


	<p>Clutch Lever Free Play: 10 ~ 15 mm (0.4 ~ 0.6 in)</p>
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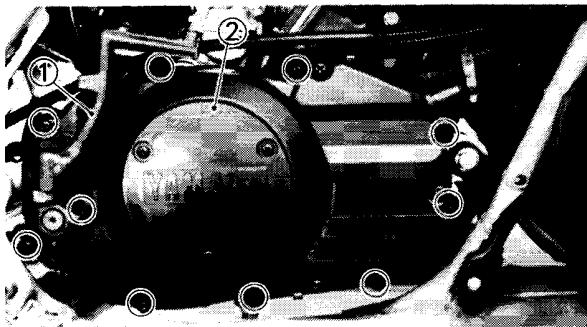
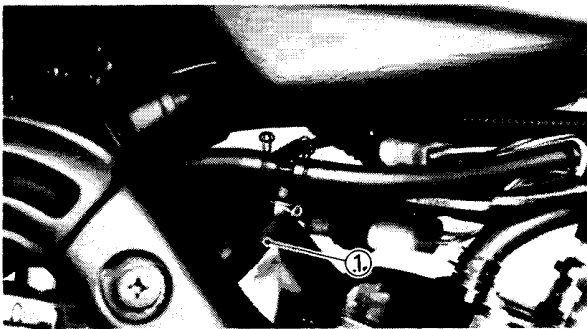
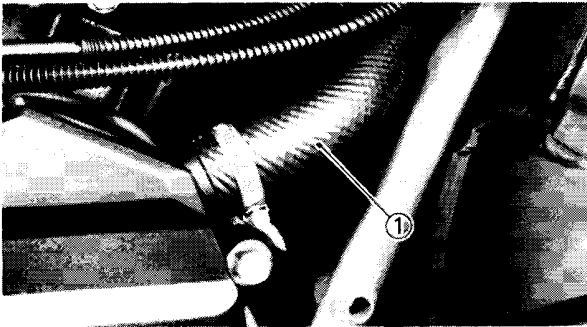
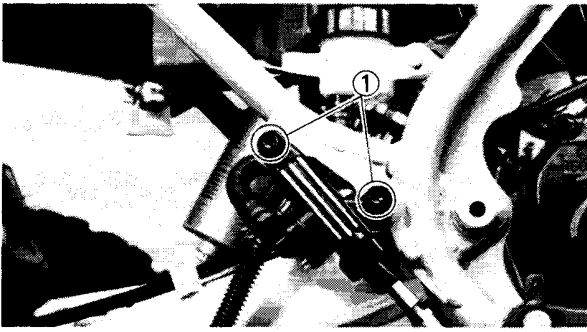
3. Tighten:
 - Locknut

Mechanism Adjustment

1. Loosen:
 - Clutch cable
2. Remove:
 - Footrest (Right)
 - Circlip ①
 - Spring ②



CLUTCH ADJUSTMENT

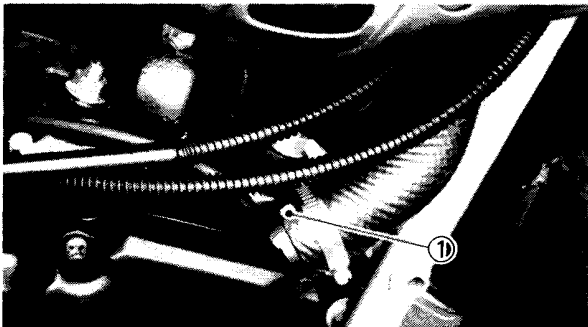
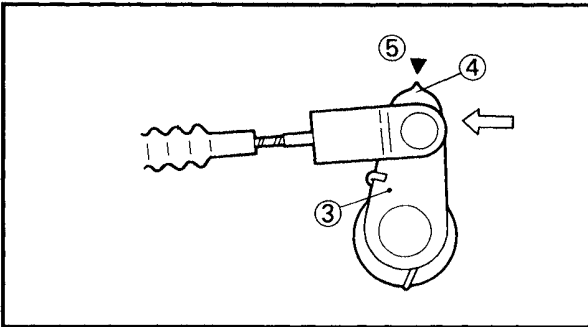
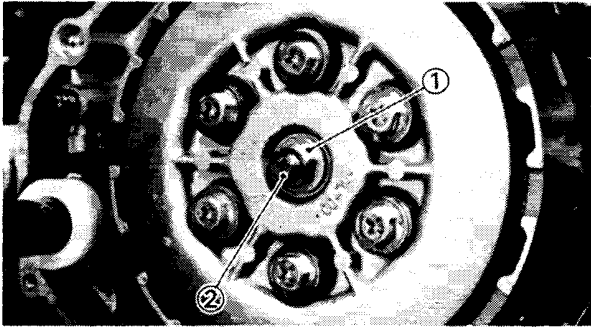


3. Remove:
 - Bolts ① (Rear brake master cylinder)
 - Rear brake pedal
4. Drain:
 - Transmission oil
Refer to "TRANSMISSION OIL REPLACEMENT" section.
 - Coolant
Refer to "COOLANT REPLACEMENT" section.
5. Disconnect:
 - Radiator hose ①

6. Disconnect:
 - Breather hose ①

7. Remove:
 - Kick crank ①
 - Crankcase cover (Right) ②
 - Dowel pin

CLUTCH ADJUSTMENT



8. Loosen:

- Locknut ①


9. Adjust:

- Free play

Move the push lever ③ toward the front with your finger until it stops. With the push lever in this position, turn the adjuster ② to align the mark ④ on the end of the push lever with the mark ⑤ (protuberance) on the crankcase.

10. Tighten:

- Locknut


	Locknut: 8 Nm (0.8 m•kg, 5.8 ft•lb)
---	---

11. Install:

- Dowel pin
- Crankcase cover (Right)

NOTE:

Tighten the crankcase cover holding screws in stage, using a crisscross pattern.


	Screws (Crankcase Cover): 7 Nm (0.7 m•kg, 5.1 ft•lb)
---	--

12. Install:

- Kick crank

NOTE:

Install the kick crank so that it does not contact the case.

	Bolt (Kick Crank): 25 Nm (2.5 m•kg, 18 ft•lb)
---	---

13. Connect:


- Radiator hose

NOTE:

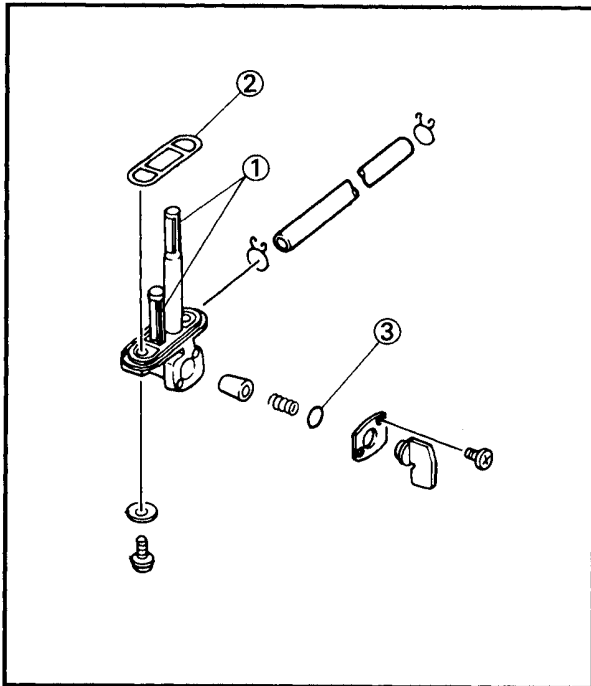
Connect the radiator hose with its white painted mark ① upward.

14. Install:

- Rear brake pedal
- Rear brake master cylinder
- Footrest

	Rear Brake Master Cylinder: 20 Nm (2.0 m•kg, 14 ft•lb)
	Footrest: 55 Nm (5.5 m•kg, 40 ft•lb)

FUEL COCK CLEANING/ FRONT BRAKE LEVER ADJUSTMENT



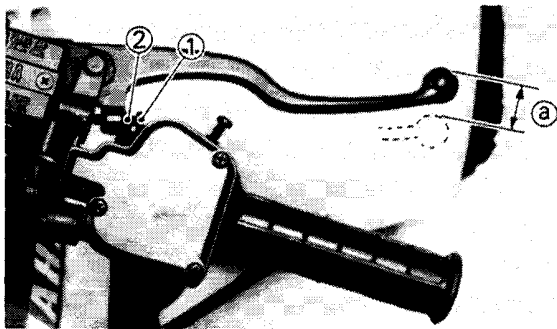
CHASSIS

FUEL COCK CLEANING

1. Turn the fuel cock lever to the "OFF".
2. Disconnect:
 - Fuel pipe
3. Remove:
 - Seat
 - Radiator cover
 - Fuel tank cover
 - Fuel tank
 - Fuel cock
4. Clean:
 - Filter screen ①
Clean it with solvent.
5. Inspect:
 - Gasket ②
 - Filter screen ①
 - O-ring ③
Damage → Replace.
6. Install:
 - Components in above list (Steps "3 and 2")

NOTE:

Be careful not to clamp the fuel cock too tightly as this may unseat the O-ring and gasket, and lead to a fuel leak.

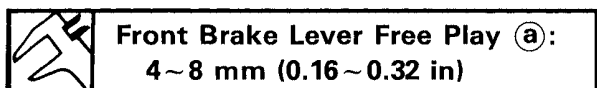


FRONT BRAKE LEVER ADJUSTMENT

CAUTION:

Proper lever free play is essential to avoid excessive brake drag.

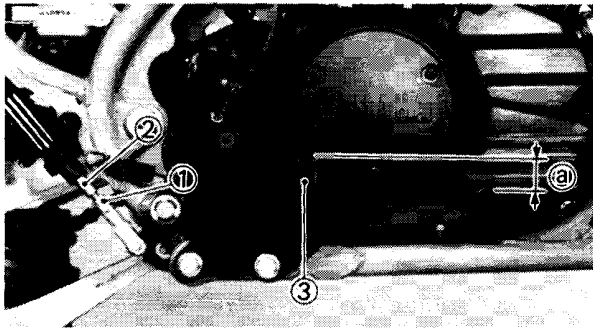
1. Loosen:
 - Adjuster locknut ②
2. Rotate:
 - Adjuster ①
Turn it clockwise or counterclockwise until proper lever end free play ① is attained.



3. Tighten:
 - Locknut



**REAR BRAKE PEDAL ADJUSTMENT/
BRAKE PADS INSPECTION**

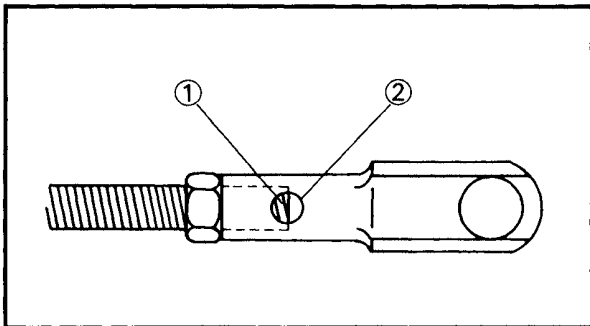


REAR BRAKE PEDAL ADJUSTMENT

1. Loosen:
 - Locknut ①
2. Rotate:
 - Adjuster ②
 Turn it clockwise or counterclockwise until proper brake pedal height ③ is attained.

Brake Pedal Height ③:
10 mm (0.4 in)

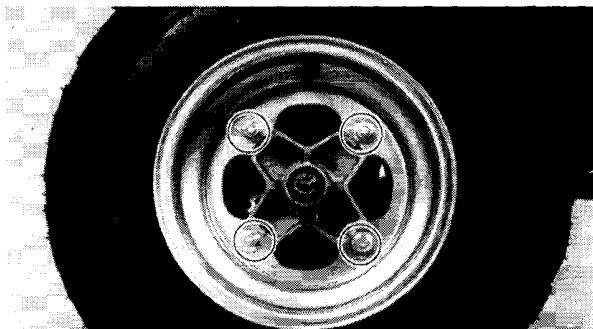
③ Footrest



3. Tighten:
 - Locknut

WARNING:

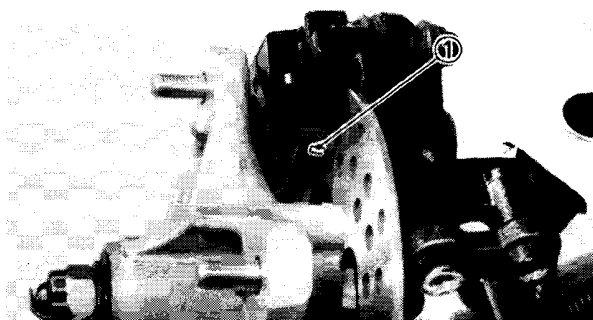
After adjusting the brake pedal height, visually check the adjuster end ① through the hole ② of the joint holder. The adjuster end must appear within this hole.



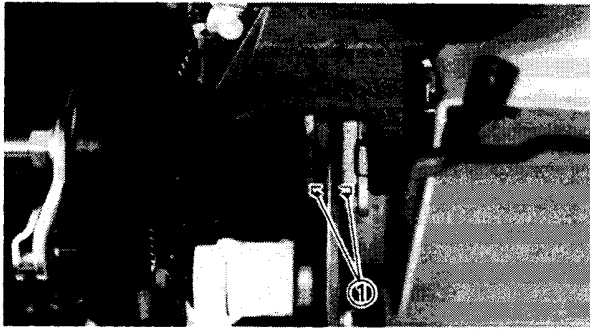
BRAKE PADS INSPECTION

Front Brake Pads

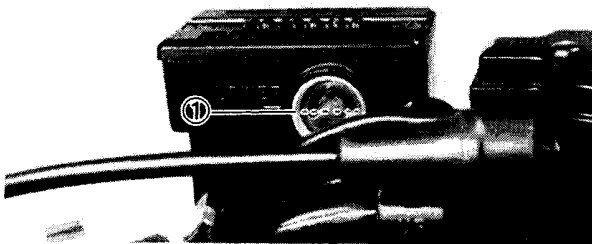
1. Remove:
 - Front wheel
2. Activate the brake lever.
3. Inspect:
 - Wear indicator ①
 Indicator almost contacts disc → Replace pads as a set.
Refer to "CHAPTER 6—FRONT BRAKE" section.



BRAKE FLUID INSPECTION/ PARKING BRAKE ADJUSTMENT



A



B

Rear Brake Pads

1. Depress the brake pedal.
2. Inspect:
 - Wear indicator ①
Indicator almost contacts disc → Replace pads as a set.
Refer to "CHAPTER 6.—REAR BRAKE" section.

BRAKE FLUID INSPECTION

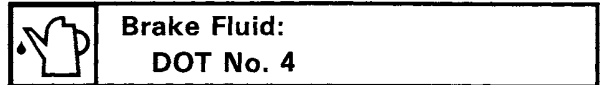
NOTE: _____

Before checking the brake fluid level, inspect the brake pads wear limit.

1. Check:
 - Brake fluid level
Low level ① → Replenish.

NOTE: _____

If DOT No. 4 is not available, No. 3 can be used.



NOTE: _____

Be sure that:

- Water does not enter the master cylinder when refilling.
- Spilled fluid is cleaned up immediately to prevent painted surfaces or plastic parts from eroding.

A FRONT BRAKE

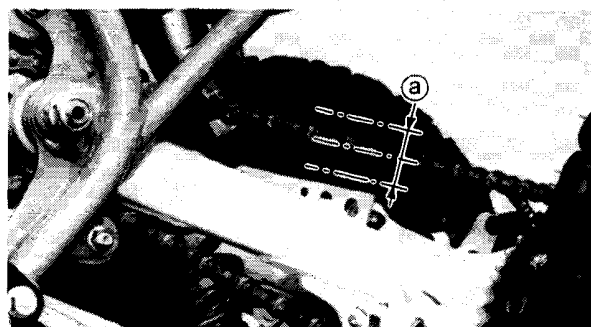
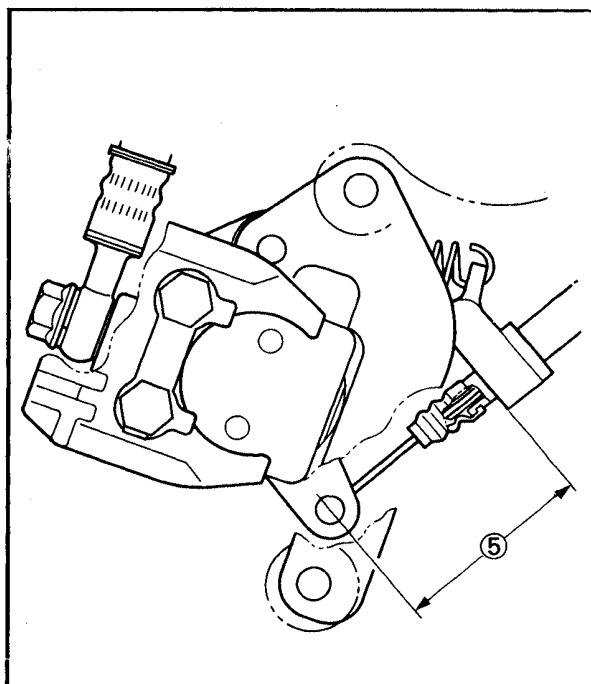
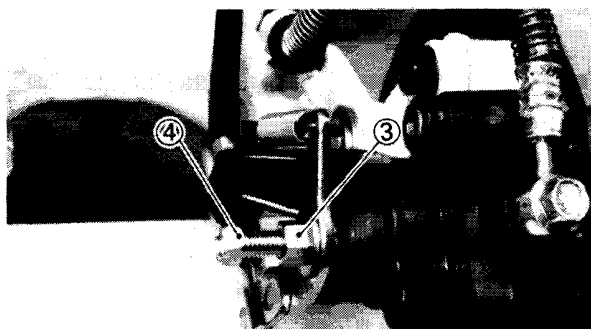
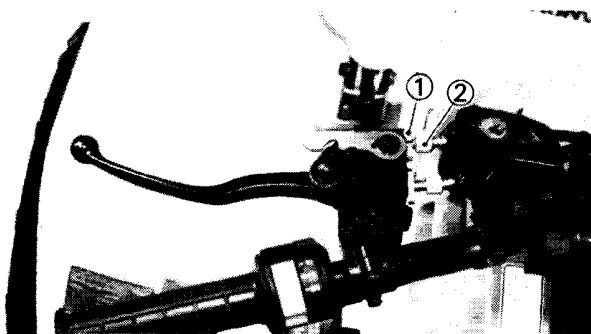
B REAR BRAKE

PARKING BRAKE ADJUSTMENT

The parking brake adjustment may be required if the parking brake does not hold properly.



PARKING BRAKE ADJUSTMENT/ DRIVE CHAIN SLACK ADJUSTMENT



1. Adjust:
 - Parking brake

Parking brake adjustment steps:

- Apply rear brake pedal 2 or 3 times.
- Loosen the locknut ① and fully loosen the parking brake cable adjuster ② on the left lever holder.
- Loosen the locknut ③ and adjusting bolt ④ on the rear caliper.
- Slowly screw in the adjusting bolt ④ by tool until it feels tight and screw it out 1/8 turn. Then tighten the locknut ③.



Locknut ③:
16 Nm (1.6 m•kg, 11 ft•lb)

CAUTION:

When tightening the locknut, hold the adjusting bolt with a spanner so that the adjusting bolt is not turned together with the locknut.

- Adjust parking brake cable length ⑤ by turning cable adjuster ② in or out.



Parking Brake Cable Length:
46 ~ 50 mm (1.81 ~ 1.97 in)

- Tighten the locknut ①.

WARNING:

After this adjustment is performed, block the rear of the machine off the ground, and spin the rear wheels to ensure there is no brake drag. If any brake drag is noticed, perform the above steps again.

DRIVE CHAIN SLACK ADJUSTMENT

Drive Chain Slack Check

1. Measure:
 - Drive chain slack ①

At the position shown in the photograph.
Out of specification → Adjust.

DRIVE CHAIN SLACK ADJUSTMENT

INSP
ADJ



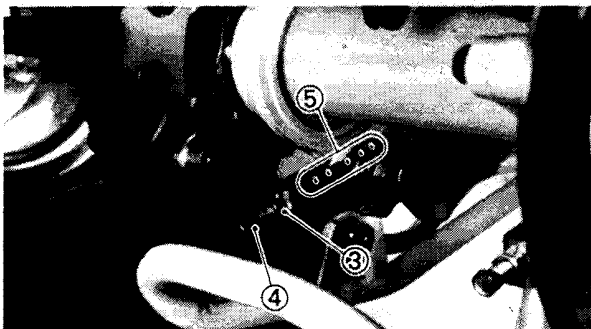
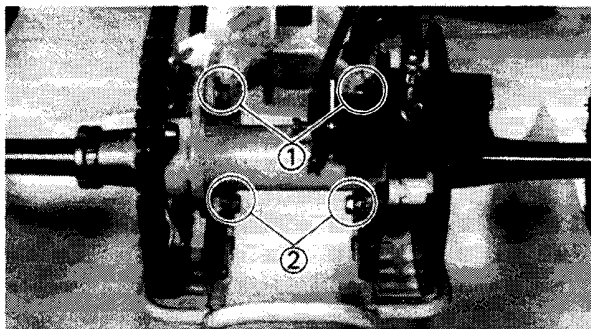
Drive chain slack measurement steps:

- Elevate the rear wheels by placing a suitable stand under the engine.
- Rotate the rear wheel several times.
- Check the chain slack several times to find the point where the chain is the tightest.
- Check the chain slack when the wheels are in this "tight chain" position.



Drive Chain Slack (a):
Standard: 15 mm (0.6 in)
Limit: 40 mm (1.6 in)

- If the chain slack exceeds the limit [40 mm (1.6 in)], adjust the chain slack.



Drive Chain Slack Adjustment

1. Adjust:

- Drive chain slack

Drive chain slack adjustment steps:

- Loosen the rear wheel hub upper bolts (1).
- Loosen the rear wheel hub lower bolts (2).
- Loosen the adjuster locknut (3).
- Adjust chain slack by turning the adjuster (4).

To Tighten → Turn adjuster (4) clockwise.

To Loosen → Turn adjuster (4) counter-clockwise and push wheel forward.

- Turn each adjuster exactly the same amount to maintain correct axle alignment. (There are marks (5) on each side of chain puller alignment.)

CAUTION:

Excessive chain slack will overload the engine and other vital parts; keep the slack within the specified limits.

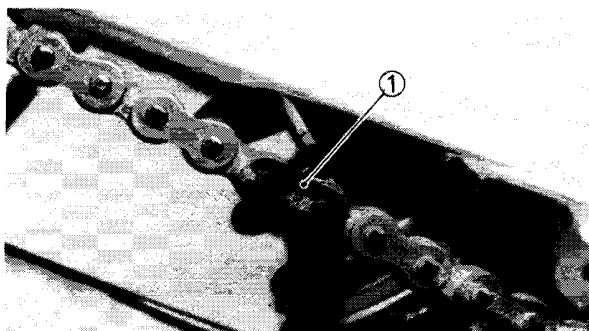
- If the chain slack cannot be adjusted, replace the sprockets and drive chain as a set.

- Tighten the rear wheel hub bolts and locknuts.



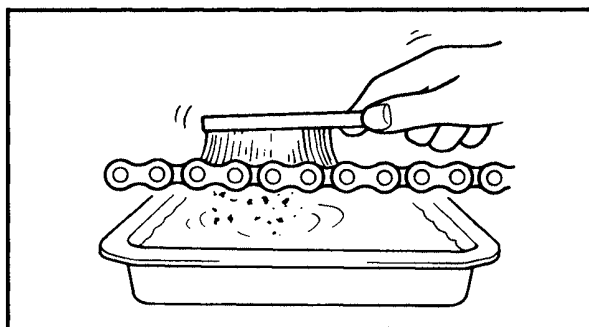
Rear Wheel Hub Lower Bolt:
60 Nm (6.0 m•kg, 43 ft•lb)
Rear Wheel Hub Upper Bolt:
120 Nm (12 m•kg, 85 ft•lb)
Locknuts (Chain Puller):
16 Nm (1.6 m•kg, 11 ft•lb)

NOTE: _____
The chain should be cleaned and lubricated after every use of the machine.



DRIVE CHAIN LUBRICATION

1. Remove:
 - Master link clip ①
 - Joint
 - Drive chain

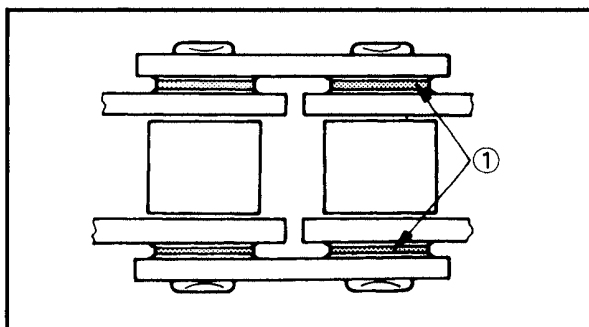


2. Clean:
 - Drive chain

Place it in kerosene, and brush off as much dirt as possible. Then remove the chain from the kerosene and dry the chain.

NOTE: _____

This machine has a drive chain with small rubber O-rings ① between the chain plates. Steam cleaning, high-pressure washes, and certain solvent can damage these O-rings. Use only kerosene to clean the drive chain.

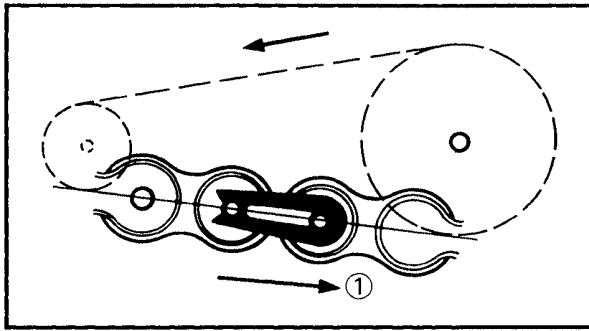


3. Lubricate:
 - Drive chain



Drive Chain Lubricant:
SAE 30~50 Motor oil or chain lubricants for "O-ring" chains

DRIVE CHAIN AND SPROCKET INSPECTION



CAUTION:

Do not use any other lubricants or O-rings damage may occur.

4. Install:
Drive chain

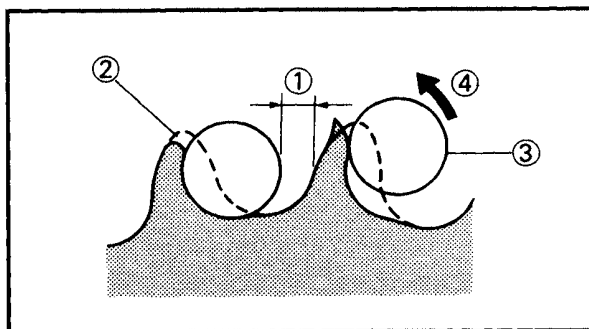
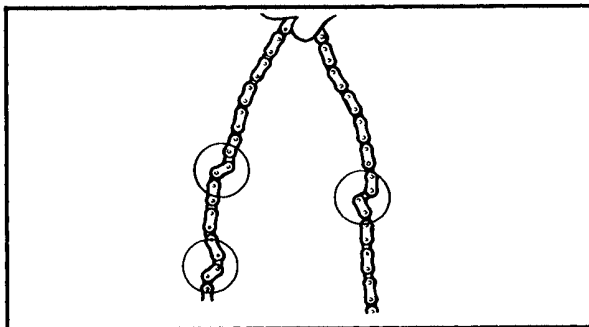
NOTE:

During reassembly, the master link clip must be installed with the rounded end facing the direction of travel.

- ① Turning direction

5. Adjust:

- Drive chain slack
Refer to "DRIVE CHAIN SLACK ADJUSTMENT" section.



DRIVE CHAIN AND SPROCKETS INSPECTION

1. Remove:

- Drive chain
Refer to "DRIVE CHAIN LUBRICATION" section.

2. Check:

- Drive chain stiffness
Clean and oil the chain and hold as illustrated.
Refer to "DRIVE CHAIN LUBRICATION" section.

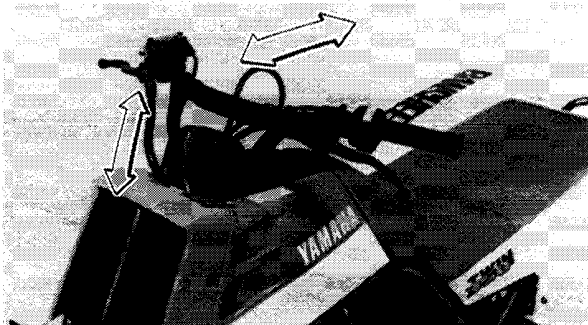
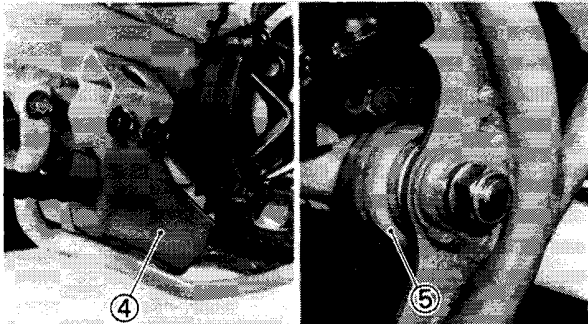
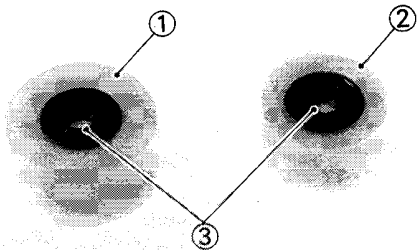
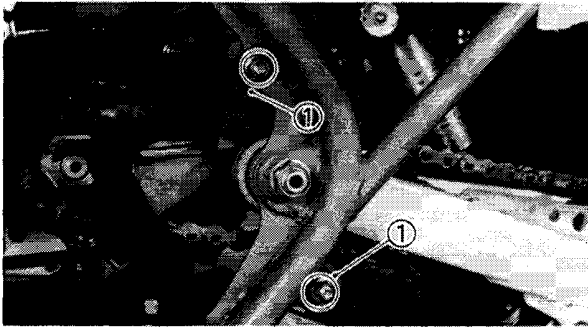
3. Inspect:

- Drive sprocket/Driven sprocket
More than 1/4 teeth ① wear → Replace sprocket.
Bent teeth → Replace sprocket.
Refer to "CHAPTER 6—REAR WHEEL AND WHEEL HUB" section.

- ② Correct
③ Roller
④ Slip off

4. Install:

- Drive chain
Refer to "DRIVE CHAIN LUBRICATION" section.



CHAIN TENSIONER AND CHAIN GUIDE INSPECTION

1. Remove:
 - Chain tensioner (Upper and lower) ①

2. Inspect:
 - Chain tensioner roller (Upper-Big) ①
 - Chain tensioner roller (Lower-Small) ②
 - Excessive wear → Replace.
3. Check:
 - Chain tensioner bearing ③
 - Tightness/Binding/Damage → Replace.
4. Inspect:
 - Chain support ④
 - Chain guide ⑤
 - Damage → Replace.
5. Install:
 - Chain tensioner (Upper and lower)

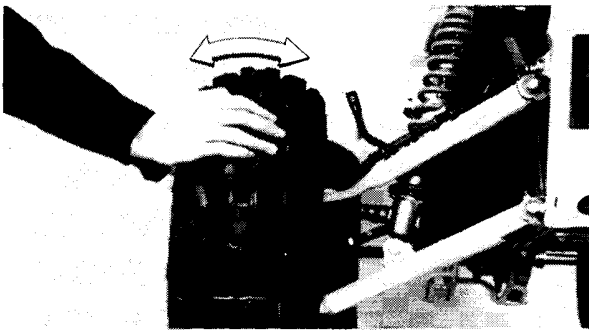
	<p>Bolt (Chain Tensioner): 9 Nm (0.9 m•kg, 6.8 ft•lb)</p>
--	---

STEERING SYSTEM INSPECTION

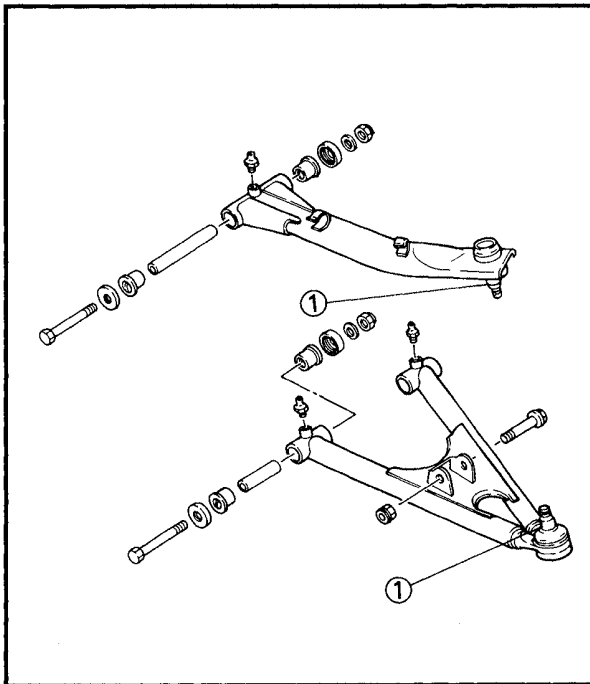
1. Place the machine on a level place.
2. Check:
 - Steering assembly bushings
 - Move the handlebar up and down, and/or back and forth.
 - Excessive play → Replace the steering shaft bushings.

3. Check:
 - Tie-rod ends
 - Turn the handlebar to the left and/or right until it stops completely, then slightly move the handlebar from left to right.
 - Tie-rod end ① has any vertical play → Replace the tie-rod end(s).

STEERING SYSTEM INSPECTION/CABLE INSPECTION AND LUBRICATION



4. Raise the front end of the machine so that there is no weight on the front wheels.
5. Check:
 - Ball joints ① and/or wheel bearings
Move the wheels laterally back and forth.
Excessive free play → Replace the front arms and/or wheel bearings.

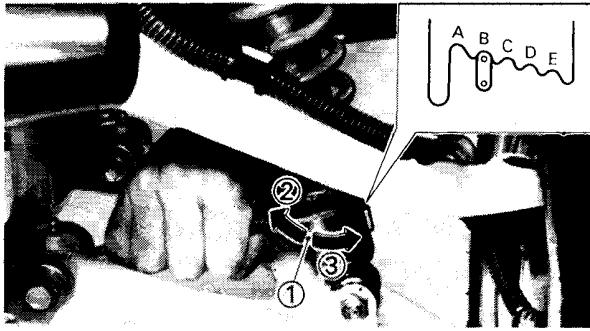


CABLE INSPECTION AND LUBRICATION

1. Damage to the outer housing of the various cables may cause corrosion. Often free movement will be obstructed. An unsafe condition may result. Replace such cables as soon as possible.
2. If the inner cables do not operate smoothly lubricate or replace them.



**Yamaha Chain and Cable Lube or
SAE 10W30 Motor Oil**



FRONT AND REAR SHOCK ABSORBER ADJUSTMENT

Front Shock Absorber

1. Adjust:

- Spring preload

Turn the adjuster ① to increase or decrease the spring preload.

Front Shock Absorber Preload			
Preload	Softer ② ←	Standard	Stiffer ③ →
Position	A	B	C,D,E

Rear Shock Absorber

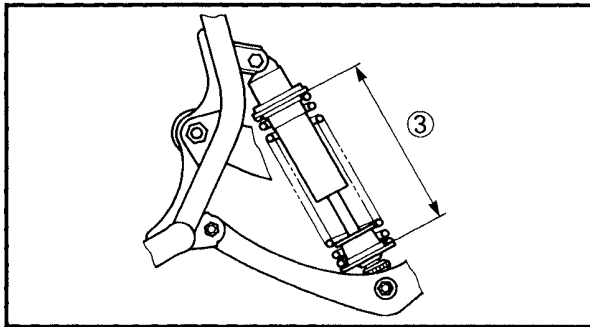
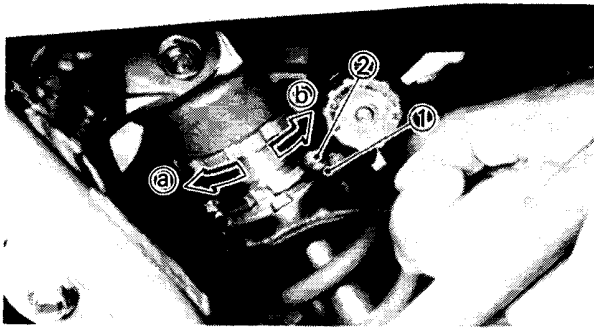
WARNING:

This shock absorber contains highly pressurized nitrogen gas. Read 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.

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

FRONT AND REAR SHOCK ABSORBER ADJUSTMENT

INSP
ADJ



1. Adjust:
- Spring preload

Spring preload adjustment steps:

- Elevate the rear wheels by placing the suitable stand.
- Loosen the locknut ②.
- Adjust the spring preload.

NOTE:

The length of the spring (installed) changes 1.5 mm (0.06 in) per turn of the adjuster.

③ Spring length

Stiffer ① → Increase the spring preload.
(Turn the adjuster ① in.)

Softer ② → Decrease the spring preload.
(Turn the adjuster ① out.)



Standard Spring Length (Installed):

218.5 mm (8.6 in)

Minimum Length (Installed):

210.5 mm (8.3 in)

Maximum Length (Installed):

225.5 mm (8.8 in)

CAUTION:

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

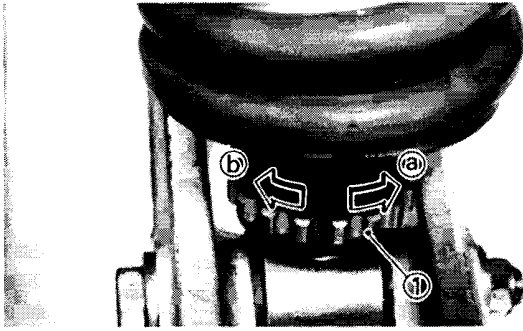
- Tighten the locknuts.



Locknut:

70 Nm (7.0 m•kg, 50 ft•lb)

FRONT AND REAR SHOCK ABSORBER ADJUSTMENT



2. Adjust:
- Rebound damping force

Rebound damping force adjustment steps:

- Turn the adjuster ① 12 clicks back from the fully turned-in position. (It is standard position)
- Adjust the rebound damping force.

Slower (a) → Increase the rebound damping force. (Turn the adjuster ① in.)

Faster (b) → Decrease the rebound damping force. (Turn the adjuster ① out.)

Standard setting:

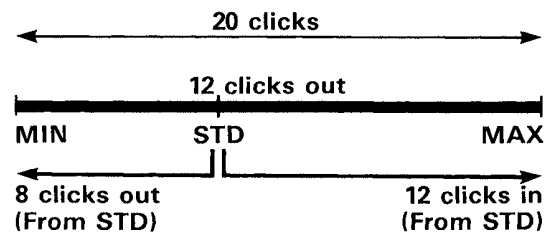
12 clicks turns out (From the fully turned-in position)

Minimum setting:

8 clicks turns out (From standard position)

Maximum setting:

12 clicks turns in (From standard position)

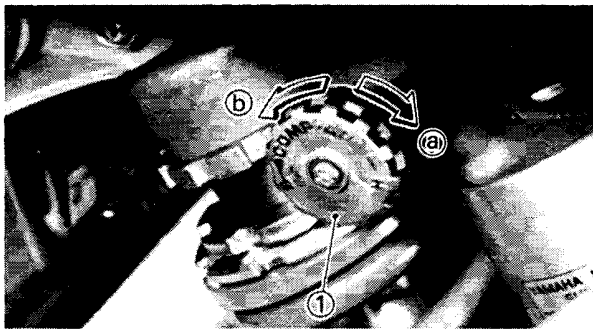


CAUTION:

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

FRONT AND REAR SHOCK ABSORBER ADJUSTMENT

INSP
ADJ



3. Adjust:
- Compression damping force

Compression damping force adjustment steps:

- Turn the adjuster ① 11 clicks back from the fully turned-out position. (It is standard position.)
- Adjust the compression damping force.

Stiffer (a) → Increase the compression damping force. (Turn the adjuster ① clockwise.)

Softer (b) → Decrease the compression damping force. (Turn the adjuster ① counter-clockwise.)

Standard setting:

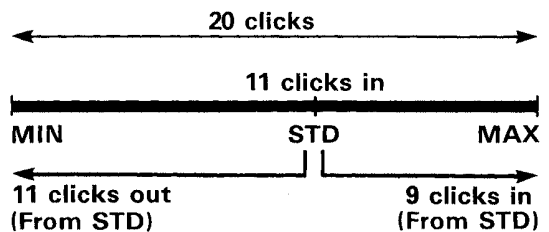
8 clicks turn in (From the fully turned out position)

Minimum setting:

11 clicks out (From standard setting)

Maximum setting:

9 clicks in (From standard setting)



CAUTION:

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

WARNING:

The compression damping adjuster is very hot immediately after a run. Never allow your bare hand or part of your body to touch it.



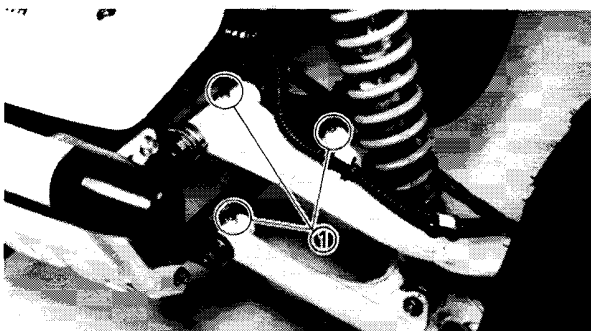
LEVERS, PEDAL, ETC. LUBRICATION/ FRONT ARM AND REAR ARM PIVOTS LUBRICATION

LEVERS, PEDAL, ETC. LUBRICATION

1. Lubricate:
 - Pivot points



**Yamaha Chain and Cable Lube or
SAE 10W30 Motor Oil**

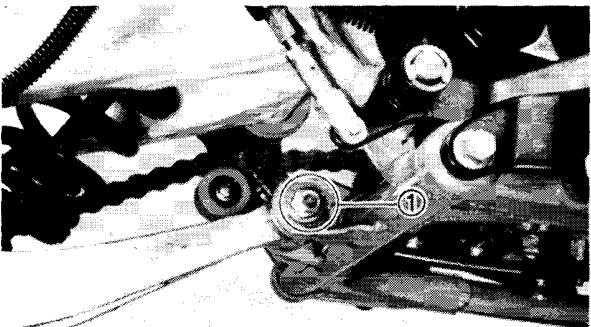
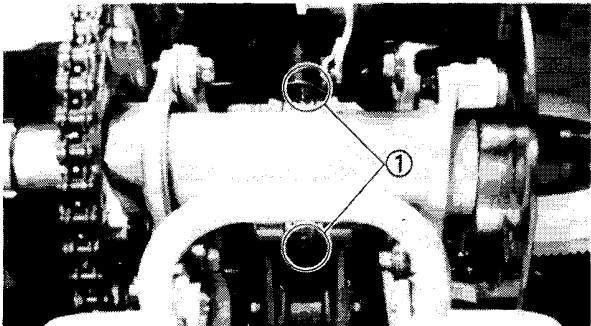
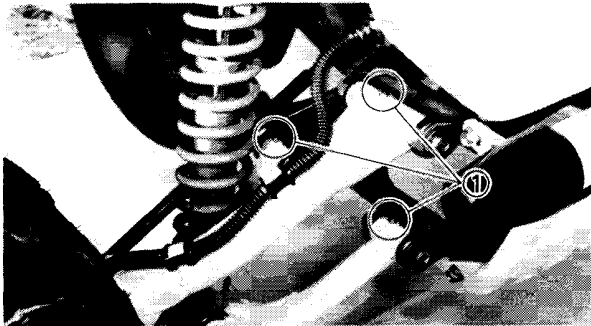


FRONT ARMS AND REAR ARM PIVOTS LUBRICATION

1. Lubricate:
 - Pivot points (font arms and rear arm) ①Use a grease gun.



Lithium Base Grease





TIRES CHECK

WARNING:

This model is equipped with low pressure tires. It is important that they be inflated correctly and maintained at the proper pressures.

•TIRE CHARACTERISTICS

- 1) Tire characteristics influence the handling of ATV's. The tires listed below have been approved by Yamaha Motor Co., Ltd. for this model. If other tire combinations are used, they can adversely affect your machine's handling characteristics and are therefore not recommended.

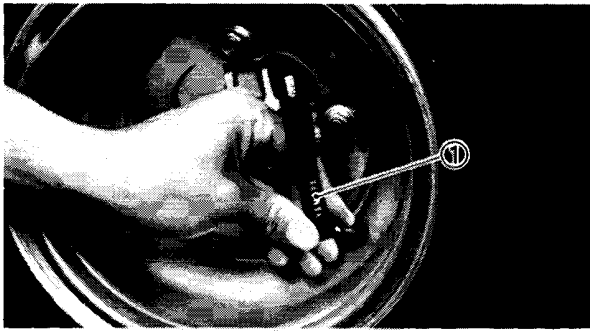
	Manufacturer	Size	Type
Front	DUNLOP	AT21×7-10	KT764
Rear	DUNLOP	AT22×10-9	KT768

•TIRE PRESSURE

- 1) Recommended tire pressure
 - Front 30 kPa (0.30 kg/cm², 4.3 psi)
 - Rear 25 kPa (0.25 kg/cm², 3.6 psi)
- 2) Tire pressure below the minimum specified could cause the tire to dislodge from the rim under severe riding conditions. The following are minimums:
 - Front 27 kPa (0.27 kg/cm², 3.8 psi)
 - Rear 22 kPa (0.22 kg/cm², 3.1 psi)
- 3) Use no more than
 - Front 280 kPa (2.5 kg/cm², 36 psi)
 - Rear 190 kPa (1.9 kg/cm², 27 psi)
 when seating the tire beads. Higher pressures may cause the tire to burst. Inflate the tires very slowly and carefully. Fast inflation could cause the tire to burst.

•MAXIMUM LOADING LIMIT

- 1) Vehicle load limits: 100 kg (220 lb)*
 - *Total weight of cargo, rider, and accessories.



1. Measure:

- Tire pressure (Cold tire pressure)
Out of specification → Adjust.

NOTE:

The low-pressure tire gauge ① is included in the standard equipment.

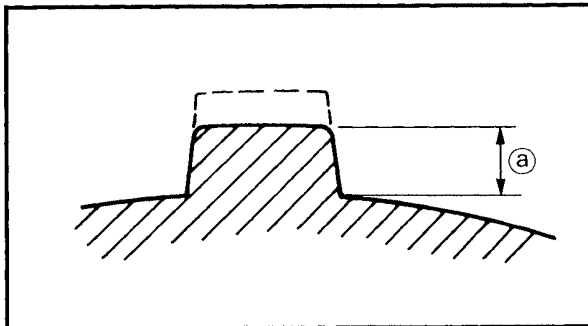
If dust or the like is stuck to this gauge, it does not provide correct readings. Therefore, make two measurements on the tire pressure and get the second reading.

Cold Tire Pressure	Front	Rear
Standard	30 kPa (0.3 kg/cm ² , 4.3 psi)	25 kPa (0.25 kg/cm ² , 3.6 psi)
Minimum	27 kPa (0.27 kg/cm ² , 3.8 psi)	22 kPa (0.22 kg/cm ² , 3.1 psi)
Maximum	33 kPa (0.33 kg/cm ² , 4.7 psi)	28 kPa (0.28 kg/cm ² , 4.0 psi)

WARNING:

Uneven or improper tire pressure may adversely affect the handling of this machine and may cause loss of control.

- Maintain proper tire pressures.
- Set tire pressures when the tires are cold.
- Tire pressures must be equal in both front tires and equal in both rear tires.



2. Inspect:

- Tire surfaces
Wear/Damage → Replace.



Tire Wear Limit ①:
Front and Rear: 3.0 mm (0.12 in)

WARNING:

It is dangerous to ride with a wornout tire. When a tire wear is out of specification, replace the tire immediately.

WHEELS CHECK/IGNITION TIMING CHECK



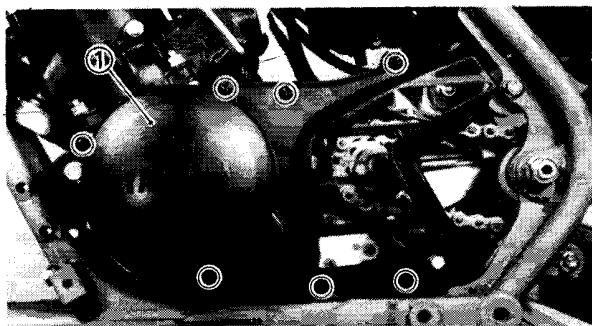
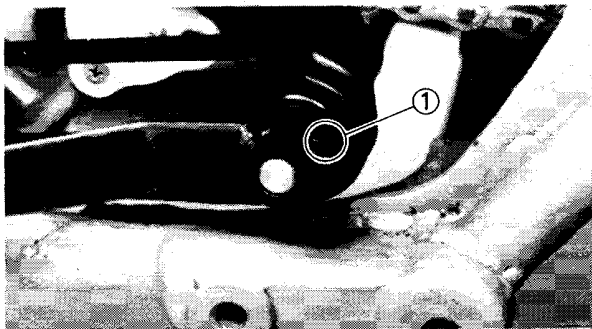
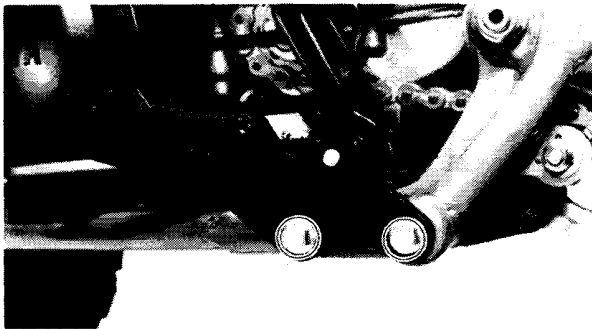
WHEELS CHECK

1. Inspect:

- Wheels
Crack/Bend/Warpage→Replace.

WARNING: _____

Never attempt even small repairs to the wheel.



ELECTRICAL

IGNITION TIMING CHECK

1. Remove:

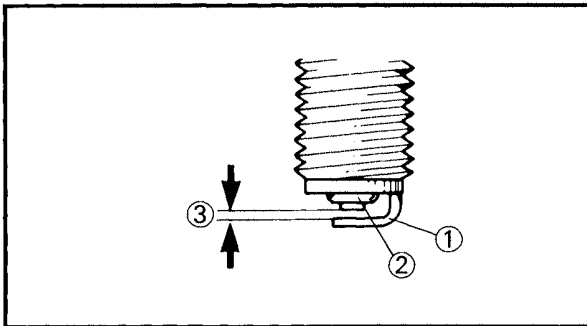
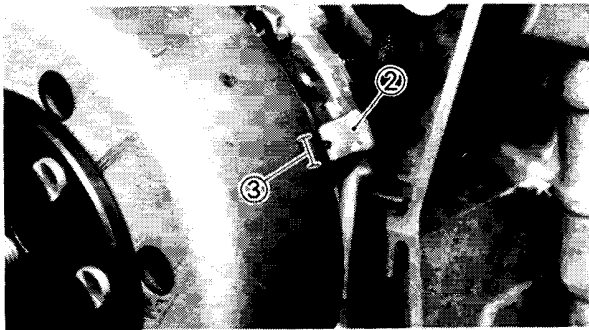
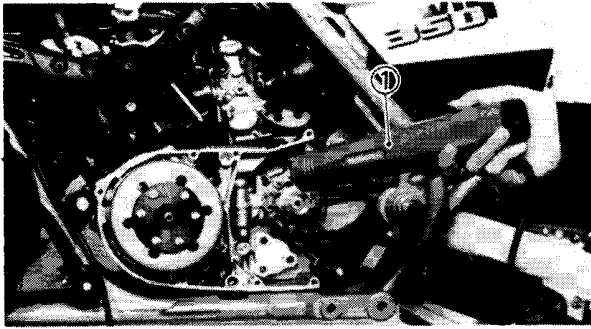
- Footrest (Left)

2. Remove:

- Bolt ①
- Change pedal

3. Remove:

- Crankcase cover (Left) ①



4. Check:
- Ignition timing

Ignition timing check steps:

- Connect the Timing Light ① (YM-33277) to the spark plug lead.
- Warm up the engine and let it idle at the specified idle speed of 1,450 ~ 1,550 r/min.
- Visually check the stationary pointer ② on the crankcase to verify it is within the firing range ③ indicated on the flywheel.
Incorrect → Check flywheel and/or pick-up assembly (tightness and/or damage).
Refer to "CHAPTER 7. ELECTRICAL" for further information.

5. Install:
- Crankcase cover (Left)



Screws (Crankcase Cover):
7 Nm (0.7 m·kg, 5.1 ft·lb)

6. Install:
- Change pedal



Bolt (Change Pedal):
14 Nm (1.4 m·kg, 10 ft·lb)

7. Install:
- Footrest (Left)



Footrest:
55 Nm (5.5 m·kg, 40 ft·lb)

SPARK PLUG INSPECTION

1. Inspect:
- Electrode ①
Wear/Damage → Replace.
 - Insulator color ②
Normal condition is a medium to light tan color.
Distinctly different color → Check the engine condition.
 - ③ Spark plug gap
2. Clean:
- Spark plug
Clean the spark plug with a spark plug cleaner or wire brush.
3. Inspect:
- Spark plug type
Incorrect → Replace.

SPARK PLUG INSPECTION/ HEADLIGHT BULB REPLACEMENT

INSP
ADJ



Standard Spark Plug:
B8ES (N.G.K.)
W24ES (NIPPONDENSO)

4. Measure:
- Spark plug gap
Out of specification → Regap.
Use a wire gauge.



Spark Plug Gap:
0.7 ~ 0.8 mm (0.028 ~ 0.032 in)

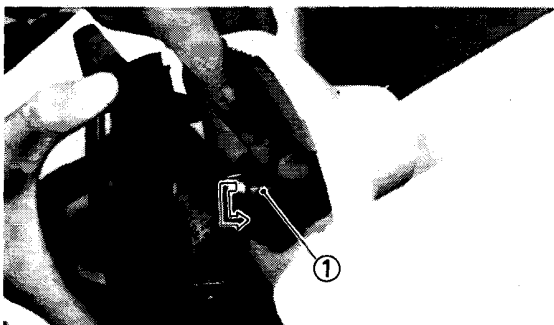
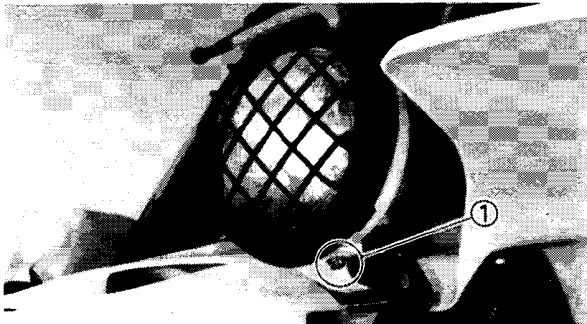
5. Tighten:
- Spark plug

NOTE: _____
Before installing a spark plug, clean the gasket surface and plug surface.



Spark Plug:
20 Nm (2.0 m·kg, 14 ft·lb)

NOTE: _____
If a torque wrench is not available when you are installing a spark plug, a good estimate of the correct torque is 1/4 to 1/2 turns part finger tight. Have the spark plug torqued to the correct value as soon as possible with a torque wrench.



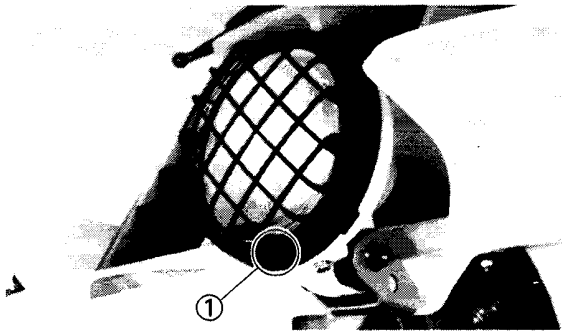
HEADLIGHT BULB REPLACEMENT

1. Remove:
- Screw ①
2. Remove:
- Bulb
Turn the bulb holder ① counterclockwise to release bulb.

WARNING: _____

Keep flammable products or your hands away from the bulb while it is on, it will be hot. Do not touch the bulb until it cools down.

3. Install:
 - Bulb (New)
Secure the new bulb with the bulb holder.
4. Tighten:
 - Screw (Headlight)



HEADLIGHT BEAM ADJUSTMENT

1. Adjust:
 - Headlight beam (Vertically)

Vertical adjustment	
Higher	Turn the adjusting screw ① clockwise.
Lower	Turn the adjusting screw ① counterclockwise.