



## CHAPTER 3 REGULAR INSPECTION AND ADJUSTMENTS

3



## 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. If you are a doubt as to what intervals to follow in maintaining and lubricating your machine, consult your Yamaha dealer.

Item	After break-in	Every race	Every 500 km <i>310 MILES</i>	Every 1,000 km <i>620 MILES</i>	As required	Recommend lubricant
PISTON Inspect and clean Replace	●	●	●		●	Inspect crack Remove carbon
PISTON PIN, SMALL END BEARING Inspect Replace	●	●	(Piston pin) ●	(Bearing) ●		
PISTON RING Inspect Replace	●	●	●		●	Check ring end gap
CYLINDER HEAD Inspect and clean Retighten	● ●	● ●				Remove carbon Check O-ring
CYLINDER Inspect and clean Replace	●	●			●	Seizure Wear
Y.P.V.S Inspect Retighten	● ●	● ●				
CLUTCH Inspect and adjust Replace	●	●			●	
TRANSMISSION Replace oil Inspect transmission	●		●		●	Castrol R-30
OIL PUMP STRAINER Clean	●		●			
SHIFT FORK, SHIFT CAM Inspect					●	Inspect wear
ROTOR NUT Retighten				●		
MUFFLER Inspect Clean	●	●			●	Inspect crack
CRANK Inspect and replace				● <i>930 MILES (1,500 km)</i>	●	
CARBURETOR Inspect, adjust and clean	●	●				
SPARK PLUG Inspect and clean Replace	●	●			●	
PLUG CAP Inspect and replace				● <i>(1,500 km)</i>	●	

# MAINTENANCE INTERVALS

INSP  
ADJ



3

Item	After break- in	Every race	Every 500 km	Every 1,000 km	As re- quired	Recommend lubricant
<b>DRIVE CHAIN</b> Lubricate, slack, alignment Replace	●	●			●	Use chain lube Chain slack: 30 ~ 40 mm (1.2 ~ 1.6 in)
<b>DRIVE SPROCKET</b> Inspect and replace					●	Wear
<b>COOLING SYSTEM</b> Check cooling level and leakage Check radiator cap operation Replace cooling water Replace hoses	●	●			● ● ●	
<b>OUTSIDE NUTS AND BOLTS</b> Retighten	●	●				Refer to the "STARTING AND BREAK-IN" in CHAPTER 1. GENERAL INFORMATION.
<b>FRAME</b> Clean and inspect	●	●				Inspect crack
<b>FUEL TANK, COCK</b> Clean and inspect	●	●				
<b>BRAKES</b> Check free play Check brake disc surface Check brake fluid level and leakage Retighten brake disc bolts, caliper bolts and master cylinder bolts Replace pads Replace brake fluid	● ● ● ●	● ● ● ●			● ●	Every one year
<b>FRONT FORKS</b> Inspect Replace oil Replace oil seal	●	●		●	●	Suspension oil "01"
<b>REAR SHOCK ABSORBER</b> Inspect and adjust Lube Retighten	● ●	●	●		(After rain race) ●	Lithium base grease
<b>SWINGARM</b> Inspect and retighten Lube	●	●			●	Lithium base grease
<b>RELAY ARM, CONNECTING ROD</b> Inspect and retighten Lube	●	●			●	Lithium base grease
<b>CHAIN GUARD</b> Replace					●	
<b>STEERING HEAD</b> Inspect free play and retighten Clean and lube Replace bearings	●	●		●	●	Lithium base grease

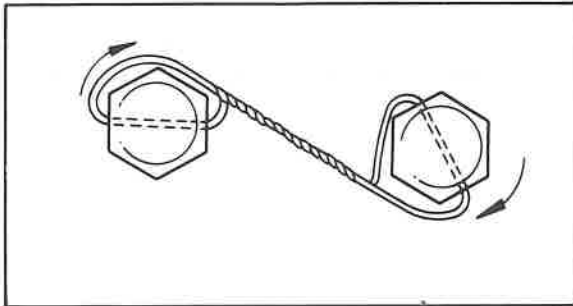
# MAINTENANCE INTERVALS



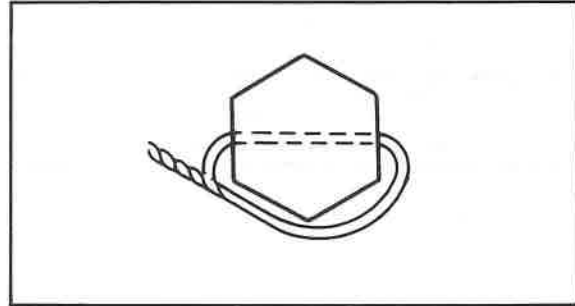
Item	After break- in	Every race	Every 500 km	Every 1,000 km	As re- quired	Recommend lubricant
<b>TIRE, WHEELS</b> Inspect air pressure, wheel run-out and tire wear Inspect bearings and sprocket damper Clean and lube Retighten sprocket damper Replace bearings, sprocket and sprocket damper	●	●	● ●		●	Lithium base grease
<b>THROTTLE, CONTROL CABLE</b> Check routing and connection Lubricate	● ●	● ●				Yamaha cable lube or SAE 10W30 motor oil

3

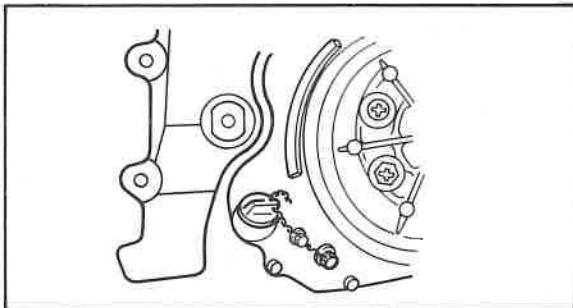
## LOCKING WIRE INSTALLATION GUIDE



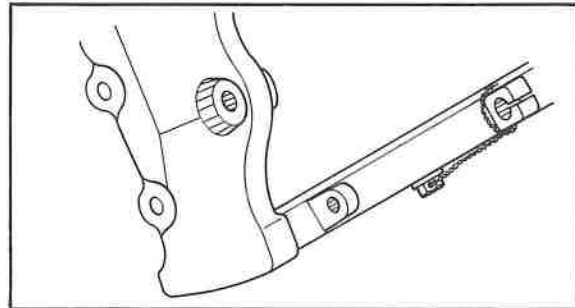
Bolt to bolt



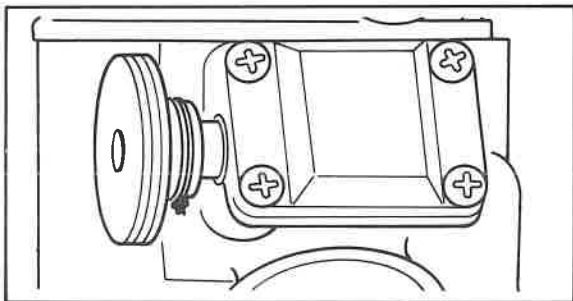
Bolt



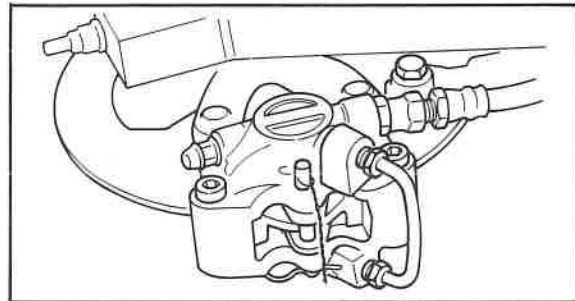
Oil filler cap, check bolt and drain bolt



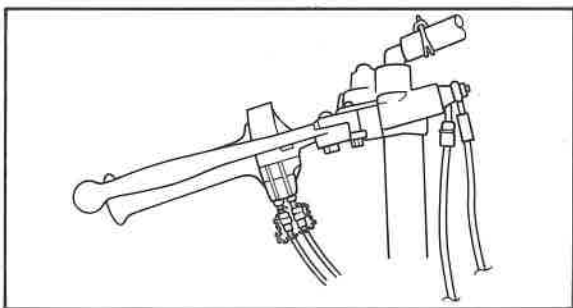
Oil drain bolt



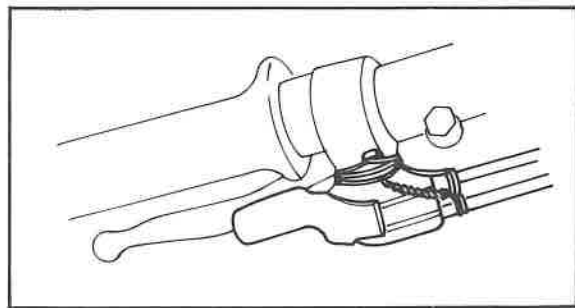
YPVS pulley



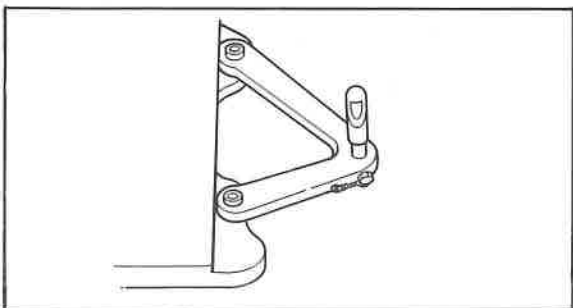
Rear brake pad pin



Throttle cable adjuster

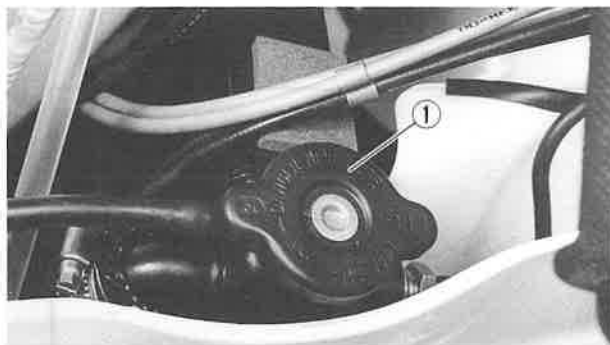


Starter cable



Footrest

3



## COOLING WATER LEVEL INSPECTION

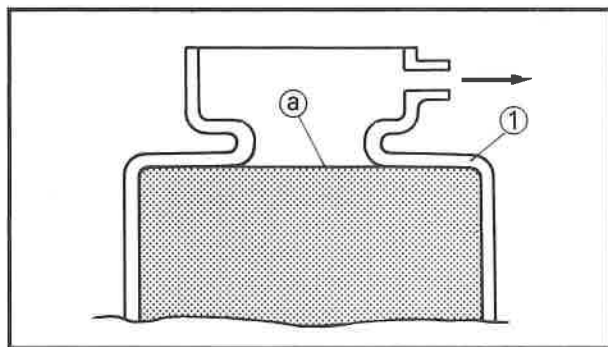
### CAUTION:

- The cooling system is filled with coolant at the factory to prevent rusting. Be sure to replace coolant with soft water before riding.
- Hard water or salt water is harmful to the engine parts. You may use distilled water, if you can't get soft water.

### ⚠ WARNING

Do not remove the radiator cap ①, drain bolt and hoses 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, place a thick 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.

**3**

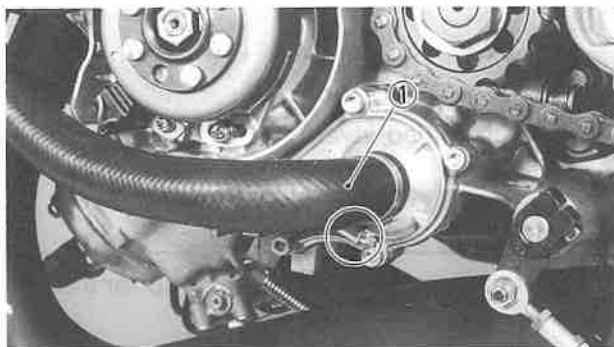
1. Place the machine on a level place, and hold it in an upright position.
2. Remove:
  - Radiator cap
3. Check:
  - Cooling water level (a)Cooling water level low → Add cooling water.

① Radiator

## COOLING WATER REPLACEMENT

### ⚠ WARNING

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



## CAUTION:

Take care so that cooling water does not splash on painted surfaces. If it splashes wash it away with water.

1. Remove the lower cowl.
2. Place a container under the radiator hose.
3. Disconnect:
  - Radiator hose 2 ①
4. Remove:
  - Radiator cap
 Drain the cooling water completely.
5. Clean:
  - Cooling system
 Thoroughly flush the cooling system with clean tap water.
6. Connect:
  - Radiator hose 2



**Radiator Hose Joint:**  
2 Nm (0.2 m•kg, 1.4 ft•lb)

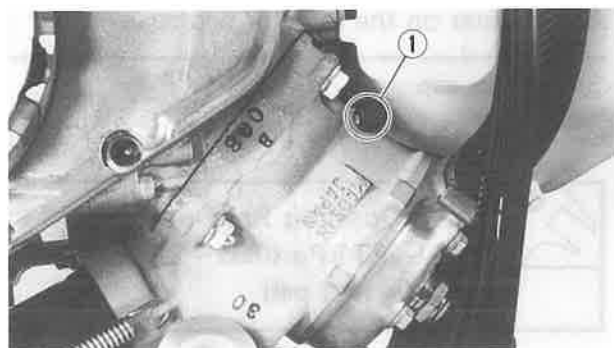
7. Fill:
  - Radiator
  - Engine
 To specified level.



**Recommended Cooling Water:**  
Soft Water  
**Cooling Water Capacity:**  
1.5 L (1.32 Imp qt, 1.59 US qt)

## CAUTION:

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



8. Remove:
  - Air bleeding bolt (right cylinder) ①
 Bleed the air until coming out the cooling water.
9. Install:
  - Air bleeding bolt (right cylinder) ①



**Air Bleeding Bolt:**  
8 Nm (0.8 m•kg, 5.8 ft•lb)

3

**10. Fill:**

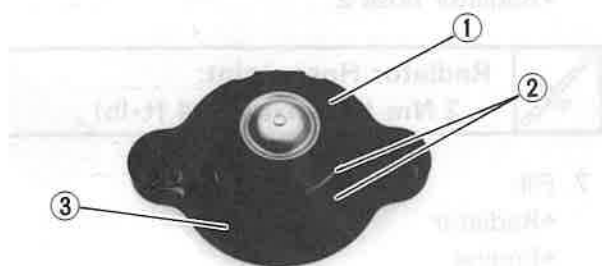
- Radiator
  - Engine
- To specified level.

**11. Install:**

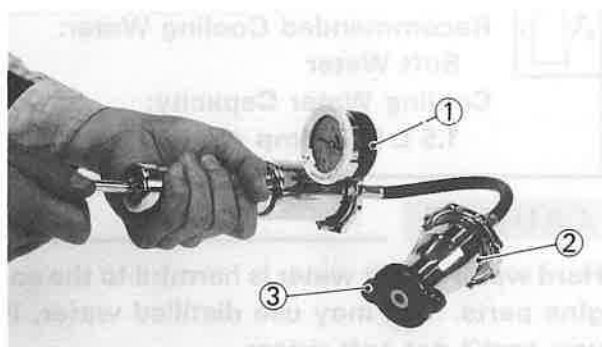
- Radiator cap
- Start the engine and warm it up for a several minute.

**12. Check:**

- Cooling water level
- Cooling water level low → Add cooling water.

**13. Install the lower cowl.****3****RADIATOR CAP INSPECTION****1. Inspect:**

- Seal (radiator cap) ①
  - Valve and valve seat ②
- Crack/Damage → Replace.
- Exist fur deposits ③ → Clean or replace.

**RADIATOR CAP OPENING PRESSURE  
INSPECTION****1. Attach:**

- Radiator cap tester ① and adapter ②



**Radiator Cap Tester:**  
YU-24460-01/90890-01325

**Adapter:**  
YU-33984/90890-01352

**NOTE:**

Apply water on the radiator cap seal.

**③ Radiator cap****2. Apply the specified pressure.**

**Valve Opening Pressure:**  
95 ~ 125 kPa (0.95 ~ 1.25 kg/cm<sup>2</sup>,  
13.5 ~ 17.8 psi)

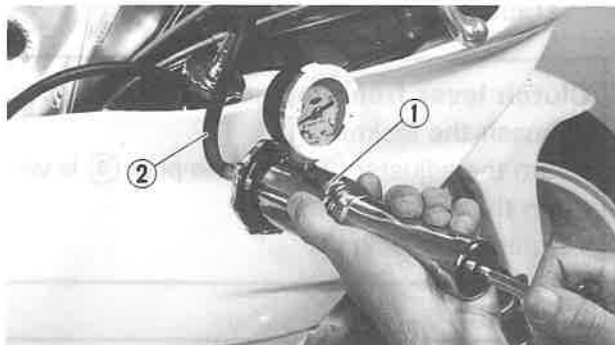




### 3. Inspect:

- Pressure

Impossible to maintain the specified pressure  
for 10 seconds→ Replace.



## COOLING SYSTEM INSPECTION

### 1. Inspect:

- Coolant level

### 2. Attach:

- Radiator cap tester ① and adapter ②



### Radiator Cap Tester:

YU-24460-01/90890-01325

### Adapter:

YU-33984/90890-01352

### 3. Apply the specified pressure.

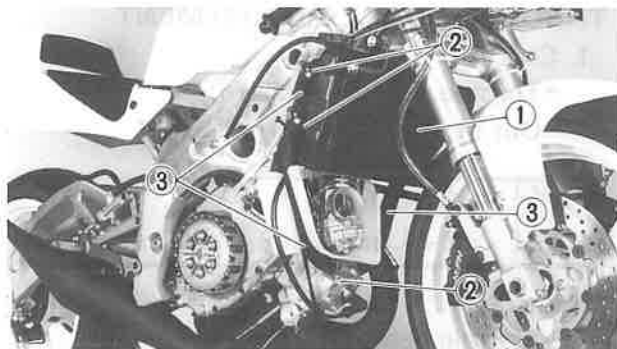


### Standard Pressure:

180 kPa (1.8 kg/cm<sup>2</sup>, 25.6 psi)

### NOTE:

- Do not apply pressure more than specified pressure.
- Radiator should be filled fully.

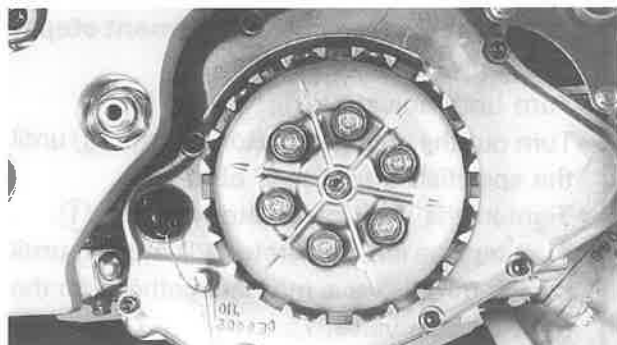
**3**

### 4. Inspect:

- Pressure

Impossible to maintain the specified pressure  
for 10 seconds→ Repair.

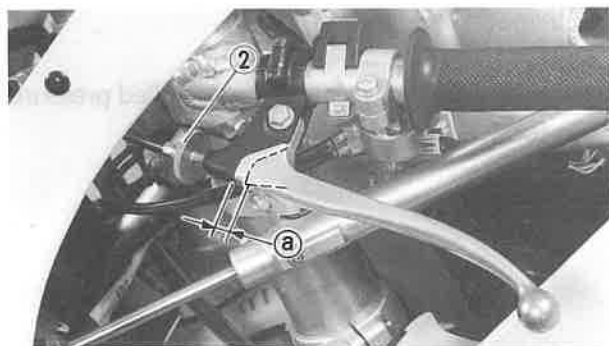
- Radiator ①
  - Radiator hose joint ②
  - Radiator hoses ③
- Swelling→ Replace.



## CLUTCH CARE

### NOTE:

This machine is equipped with a dry type clutch.  
Be sure to clean with solvent or replace if grease  
or oil contacts either clutch or friction plates.



## CLUTCH ADJUSTMENT

### 1. Check:

- Clutch lever free play (a)  
Out of specification → Adjust



**Clutch Lever Free Play (a):**  
2 ~ 3 mm (0.08 ~ 0.12 in)

### 2. Adjust:

- Clutch lever free play

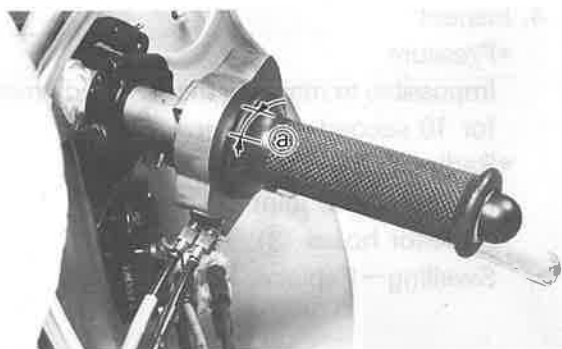
### Clutch lever free play adjustment steps:

- Loosen the locknut (1).
- Turn the adjuster (2) until free play (a) is within the specified limits.
- Tighten the locknut.

### NOTE:

After adjustment, check proper operation of clutch lever.

3



## THROTTLE CABLE ADJUSTMENT

### 1. Check:

- Throttle grip free play (a)  
Out of specification → Adjust.



**Free play (a):**  
2 ~ 4 mm (0.08 ~ 0.16 in)

### 2. Adjust:

- Throttle cable free play (a)

### Throttle cable free play adjustment steps:

- Loosen both locknuts (1), (2).
- Turn both adjuster (3), (4) fully in.
- Turn out the right carburetor adjuster (3) until the specified free play is obtained.
- Tighten the right carburetor locknut (1).
- Turn out the left carburetor adjuster (4) until the left throttle valve moves together with the right throttle valve.



## NOTE:

- When adjusting left throttle cable, watch the right throttle valve and touch the left throttle valve.
- After adjusting the throttle cables, open the throttle grip and check that both throttle valves are completely open.

- Tighten the left carburetor locknut ②.

## ⚠ WARNING

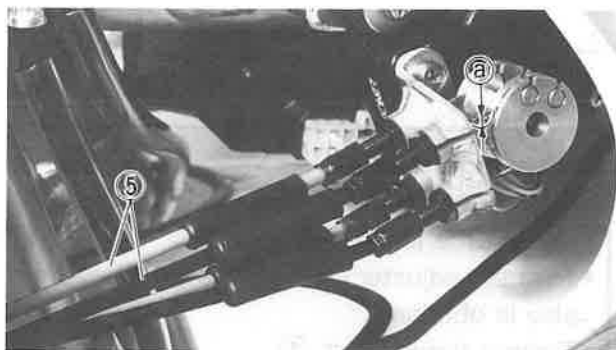
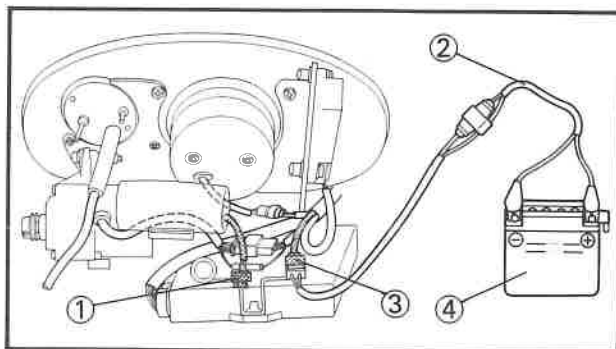
After adjusting, turn the handlebar to right and left and make sure that the engine idling does not run faster.

3

## YPVS OPEN SIDE CABLE ADJUSTMENT

### 1. Check:

- YPVS open side cable free play



### Checking steps:

- Disconnect the condenser lead ①.
- Connect the checking lead (with packing parts) ② between the wire harness ③ and battery (12V) ④.
- The servomotor will be fully opened.

### NOTE:

After the battery is connected, the servomotor operated as follows.

1. Full close the servomotor about 1 second.
2. And then, full open the servomotor and keep it.

- Check the free play ⑤ for the YPVS open side cable ⑤.

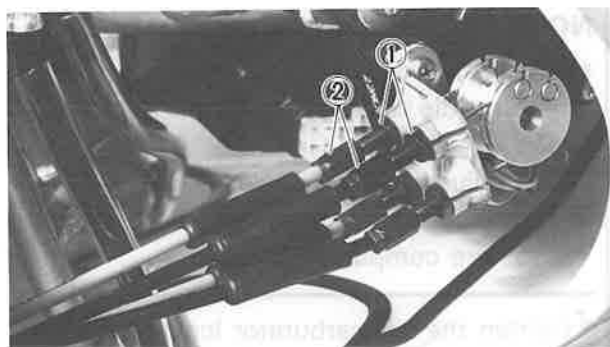
Out of specification → Adjust.



### YPVS Open Side Cable

#### Free Play ⑤:

2~3 mm (0.08~0.12 in)

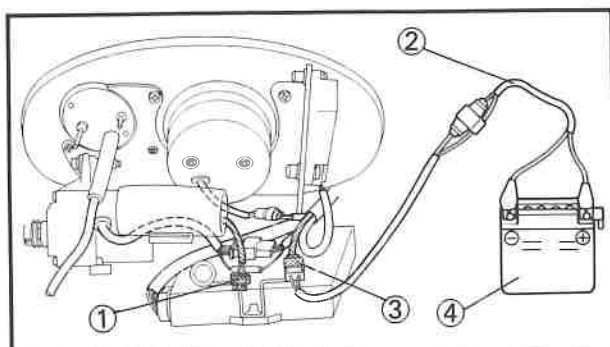


## 2. Adjust:

- YPVS open side cable free play

### Adjusting steps:

- Fully open the servomotor.
- Loosen the locknut ①.
- Turn the adjuster ② until the specified free play is obtained.
- Tighten the locknut ①.



## YPVS CLOSE SIDE CABLE ADJUSTMENT

### 1. Check:

- YPVS close side cable free play

### Checking steps:

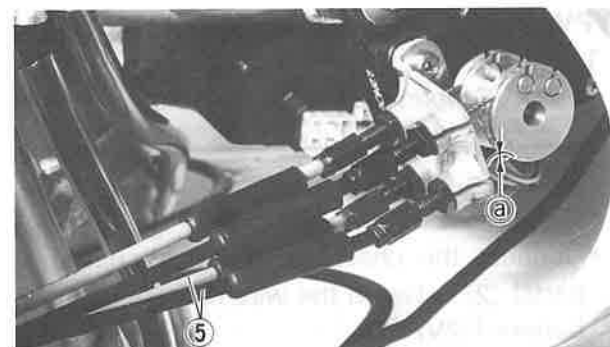
- Disconnect the condenser lead ①.
  - Connect the checking lead (with packing parts) ② between the wire harness ③ and battery (12V) ④.
  - Full close servomotor about 1 second.
  - This time, disconnect the battery.
  - The servomotor will be kept full close position.
  - Check the free play ⑤ for YPVS close side cable ⑤.
- Out of specification → Adjust.



### YPVS Close Side Cable

#### Free Play ⑤:

2 ~ 3 mm (0.08 ~ 0.12 in)

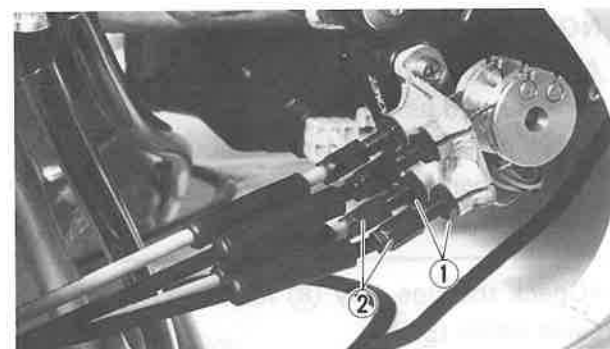


## 2. Adjust:

- YPVS close side cable free play

### Adjusting steps:

- Fully close the servomotor.
- Loosen the locknut ①.
- Turn the adjuster ② until the specified free play is obtained.
- Tighten the locknut ①.





## YPVS COMPONENTS RETIGHTENING

### NOTE:

Before riding the machine, retighten all YPVS components.

#### 1. Retighten:

- Valve cover ①
- Pulley ②
- Cable stay ③



#### Screw (Valve Cover):

4 Nm (0.4 m•kg, 2.9 ft•lb)

#### Screw (Pulley):

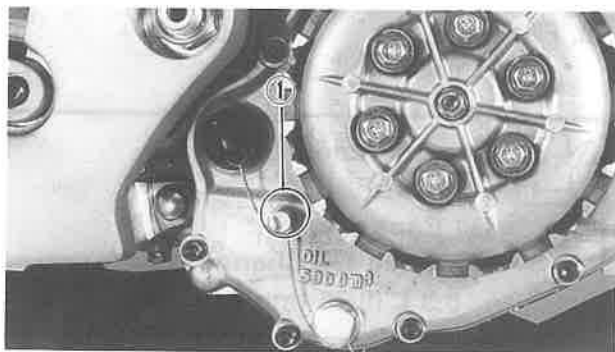
4 Nm (0.4 m•kg, 2.9 ft•lb)

#### Bolt (Cable Stay):

7 Nm (0.7 m•kg, 5.1 ft•lb)

## TRANSMISSION OIL LEVEL CHECK

1. Start the engine, warm it up for several minutes and wait for five minutes.
2. Place the machine on a level place and hold it up on upright position by placing the suitable stand.

**3**

#### 3. Check:

- Transmission oil level

#### Transmission oil level checking steps:

- Remove the checking bolt ①.
- Inspect the oil level.

### NOTE:

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

### **⚠ WARNING**

Never attempt to remove the checking bolt just after high speed operation. The heated oil could spout out, causing danger. Wait until the oil cools down.



Oil flows out → Oil level is correct.  
 Oil does not flow out → Oil level is low.  
 Add transmission oil until oil flows out.

- Inspect the gasket (oil check bolt), replace if damaged.
- Tighten the oil check bolt.



**Oil Check Bolt:**  
 9 Nm (0.9 m•kg, 6.5 ft•lb)

## TRANSMISSION OIL REPLACEMENT

1. Start the engine and warm it up for several minutes and wait for five minute.
2. Place the machine on a level place and hold it on upright position by placing the suitable stand.
3. Place a suitable container under the engine.
4. Remove:
  - Drain bolt ①
  - Oil filler cap ②
 Drain the transmissin oil.
5. Install:
  - Drain bolt ①



**Drain Bolt:**  
 20 Nm (2.0 m•kg, 14 ft•lb)

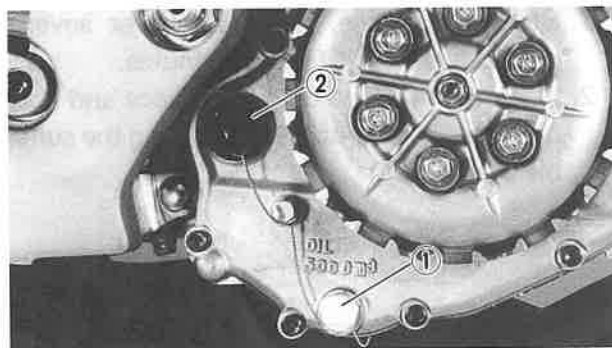
6. Fill:
  - Transmission oil

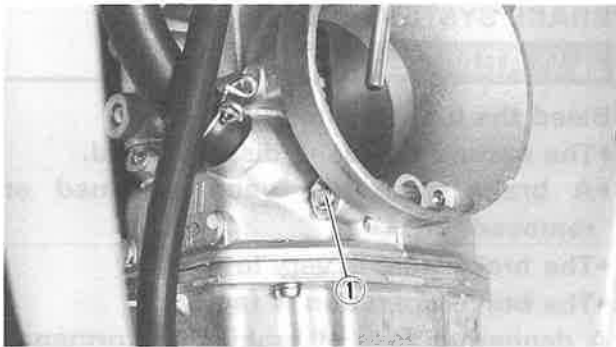


**Recommended Oil:**  
 • Castrol R30  
**Oil Capacity**  
**(Periodic Oil Change):**  
 0.3 L (0.26 Imp qt, 0.32 US qt)

7. Check:
  - Oil leakage
8. Check:
  - Transmission oil level
9. Install:
  - Oil filler cap ②

3





## AIR SCREW ADJUSTMENT

1. Adjust:

- Air screw ①

### Adjusting steps:

- Screw in the pilot air screw ① until it is lightly seated.
- Back out by the specified number of turns.

### Pilot Screw:

1-1/2 turns out



## BRAKE SYSTEM AIR BLEEDING

**⚠ WARNING**

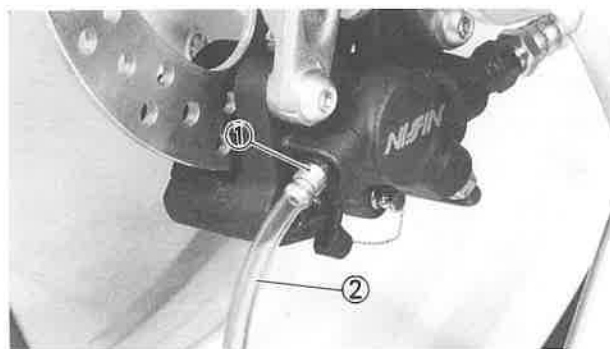
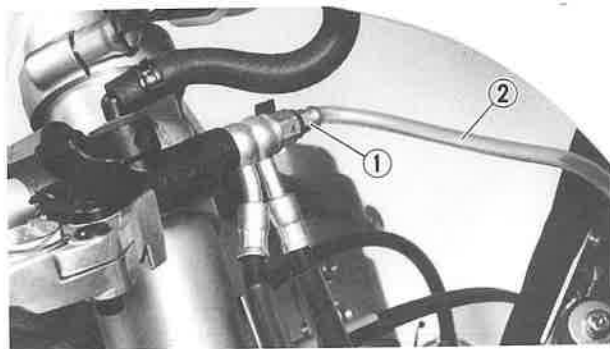
Bleed the brake system if:

- 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.

1. Bleed:

- Brake fluid


**Air bleeding steps:**

- a. Add proper brake fluid to the reservoir.
- b. Install the diaphragm. Be careful not to spill any fluid or allow the reservoir to overflow.
- c. Connect the clear plastic tube (2) tightly to the caliper bleed screw (1).
- d. Place the other end of the tube into a container.
- e. Slowly apply the brake lever or pedal several times.
- f. Pull the lever in or push down on the pedal. Hold the lever or pedal in position.
- g. Loosen the bleed screw and allow the lever or pedal to travel towards its limit.
- h. Tighten the bleed screw when the lever or pedal limit has been reached; then release the lever or pedal.


**Bleed Screw:**

**6 Nm (0.6 m•kg, 4.3 ft•lb)**

- i. Repeat steps (e) to (h) until the air bubbles have been removed from the system.

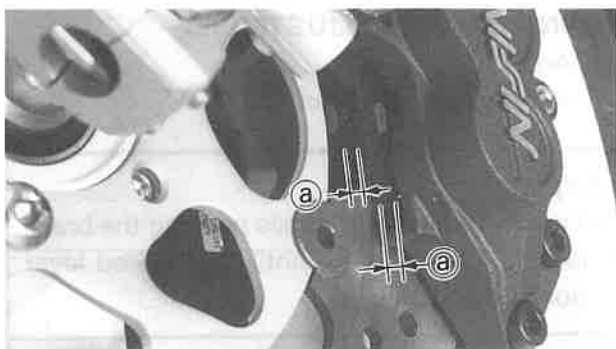
**NOTE:**

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 the system have disappeared.

- j. Add brake fluid to the level line on the reservoir.





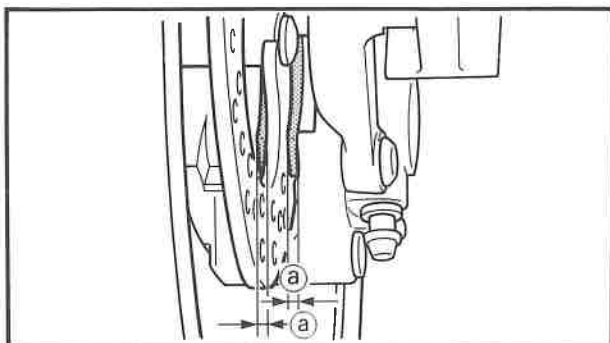
## BRAKE PAD INSPECTION

1. Inspect:
  - Front brake pad thickness (a)
 Out of specification → Replace as a set.



### Front brake pad thickness (a):

Standard	< Limit >
5.3 mm (0.21 in)	1.0 mm (0.04 in)

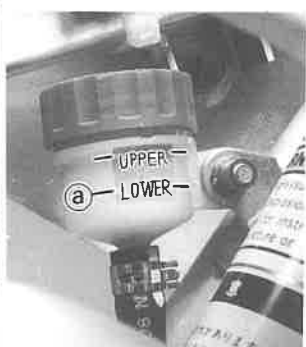


2. Inspect:
  - Rear brake pad thickness (a)
 Out of specification → Replace as a set.



### Rear brake pad thickness (a):

Standard	< Limit >
4.0 mm (0.16 in)	1.0 mm (0.04 in)



## BRAKE FLUID LEVEL INSPECTION

1. Place the master cylinder so that its top is in a horizontal position.
  2. Inspect:
    - Brake fluid level
 Fluid at lower level → Fill up.
- (a) Lower level



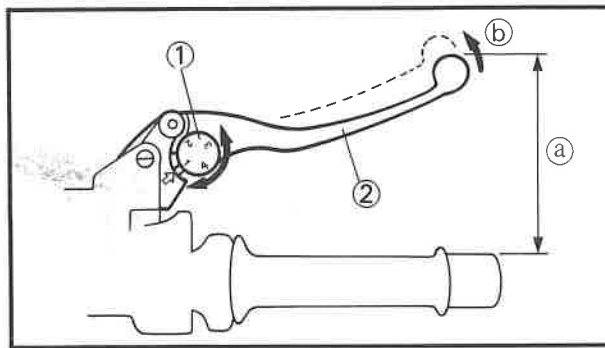
### Recommended Brake Fluid: DOT #4

**NOTE:** \_\_\_\_\_  
 If DOT #4 is not available, #3 can be used.



## 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.



## FRONT BRAKE ADJUSTMENT

### 1. Adjust:

- Brake lever position (a)

### Adjustment steps:

- Turn the adjuster (1) while pushing the brake lever (2) forward (b) until the desired lever position is obtained.

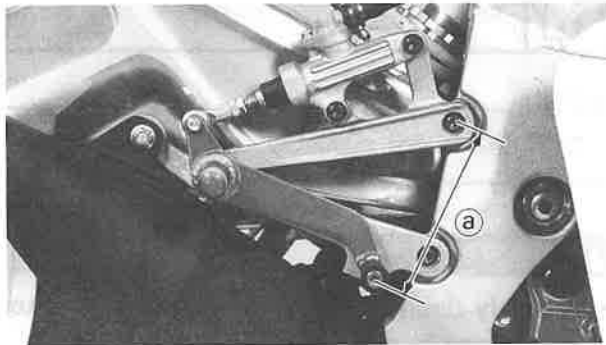
Adjuster position #1 → Brake lever position (a) is the largest.

Adjuster position #4 → Brake lever position (a) is the smallest.

### ⚠ WARNING

After adjusting the brake lever position, make sure the pin on the brake lever holder is firmly inserted in the hole in the adjuster (1).

3



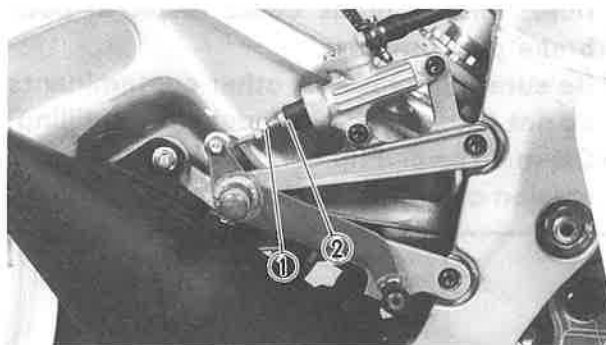
## REAR BRAKE ADJUSTMENT

### 1. Check:

- Brake pedal height (a)  
Out of specification → Adjust.



**Brake Pedal Height (a):**  
109 ~ 113 mm (4.29 ~ 4.45 in)

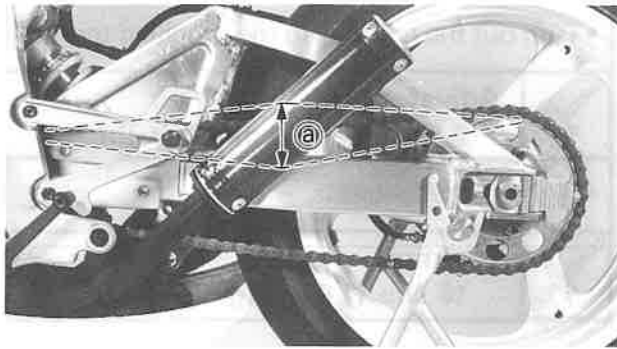


### 2. Adjust:

- Brake pedal height

### Pedal height adjustment steps:

- Loosen the locknut (1).
- Turn the adjusting nut (2) until the pedal height (a) is within specified height.
- Tighten the locknut (1).



## DRIVE CHAIN SLACK ADJUSTMENT

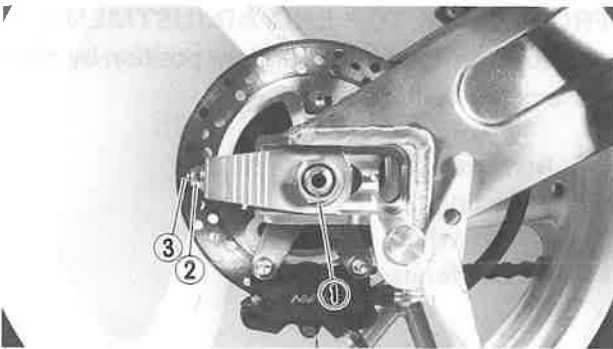
1. Hold the machine on upright position by placing the suitable stand.
2. Check:
  - Drive chain slack (a)
 Out of specification → Adjust.



**Drive Chain Slack:**  
30 ~ 40 mm (1.2 ~ 1.6 in)

### NOTE:

Before checking and/or adjusting, rotate the rear wheel through several revolutions and check the slack several times to find the tightest point. Check and/or adjust chain slack with rear wheel in this "tight chain" position.



2. Adjust:
  - Drive chain slack

### Drive chain slack adjustment steps:

- Loosen the axle nut (1) and locknut (2).
- Adjust chain slack by turning the adjuster (3).

**To Tighten** → Turn adjuster (3) counter-clockwise.

**To Loosen** → Turn adjuster (3) clockwise.

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

### NOTE:

Turn the adjuster so that the chain is in line with the sprocket, as viewed from the rear.

### CAUTION:

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

- Tighten the axle nut while pushing down the drive chain.



**Axle Nut:**  
115 Nm (11.5 m•kg, 85 ft•lb)

# FRONT FORK INSPECTION/ FRONT FORK TOP END ADJUSTMENT

**INSP  
ADJ**



- Turn out the adjuster to the specified torque.



**Adjuster:**  
**2 Nm (0.2 m•kg, 1.4 ft•lb)**

- Tighten the locknuts.



**Locknut:**  
**16 Nm (1.6 m•kg, 11 ft•lb)**



**3**

## FRONT FORK INSPECTION

### 1. Inspect:

- Front fork smooth action  
Operate the front brake and stroke the front fork.  
Unsmooth action/oil leakage → Repair or replace.

## FRONT FORK TOP END ADJUSTMENT

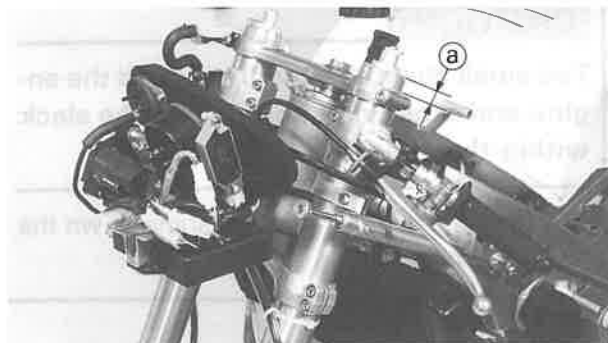
### 1. Hold the machine on upright position by placing the suitable stand.

### 2. Remove:

- Cowling
- Front wheel
- Front fender

### 3. Adjust:

- Front fork top end



### Adjustment steps:

- Loosen the pinch bolts (handlebar and steering damper stay).
- Loosen the pinch bolts (handle crown and under bracket).
- Adjust the front fork top end ②.

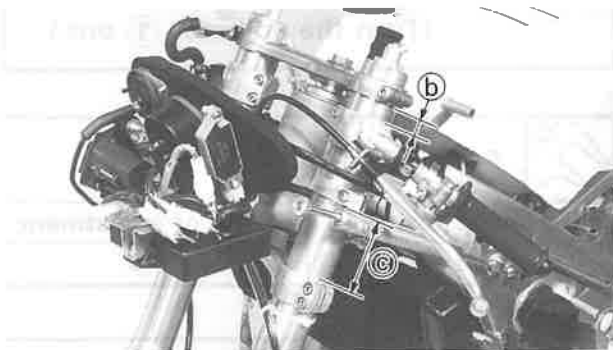


**Front Fork Top End ②:**

Standard	Extent of adjustment
13 mm (0.51 in)	Zero ~ 16 mm (Zero ~ 0.63 in)

### CAUTION:

Never attempt to install the front fork beyond the maximum or minimum setting.



## ⚠ WARNING

Always adjust each front fork to the same setting. Uneven adjustment can cause poor handling and loss of stability.

- Tighten the pinch bolts (handle crown and under bracket).



**Pinch Bolt (Handle Crown):**  
**18 Nm (1.8 m•kg, 13 ft•lb)**  
**Pinch Bolt (Under Bracket):**  
**18 Nm (1.8 m•kg, 13 ft•lb)**

- Adjust the handlebar position (b) and steering damper stay position (c).



**Handlebar Position (b):**  
**20 mm (0.79 in)**  
**Steering Damper Stay Position**  
**(c):**  
**85 mm (3.35 in)**

- Tighten the pinch bolts (handlebar and steering damper stay).



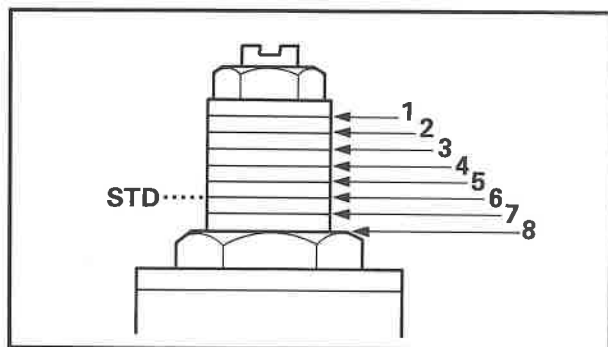
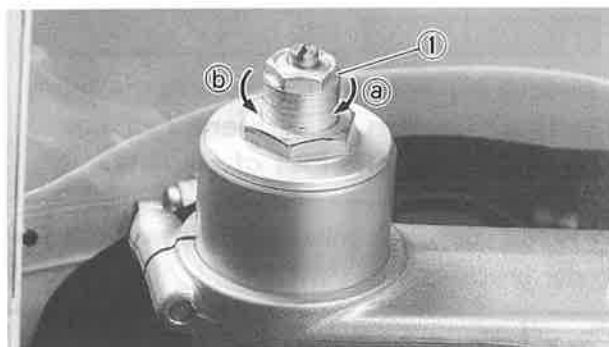
**Pinch Bolt (Handlebar):**  
**7 Nm (0.7 m•kg, 5.1 ft•lb)**  
**Pinch Bolt (Steering Damper Stay):**  
**7 Nm (0.7 m•kg, 5.1 ft•lb)**

## CAUTION:

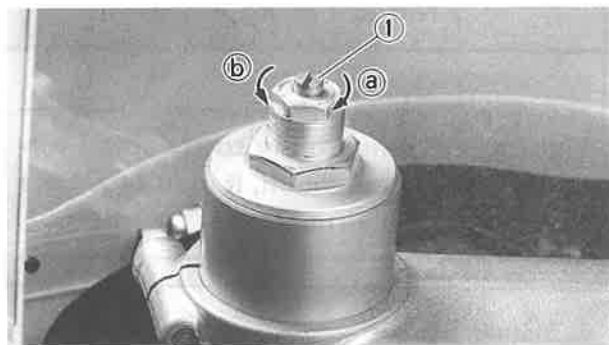
Tighten the pinch bolts to specified torque. If torque too much, it may cause the front fork to malfunction.

### 4. Install:

- Front fender
- Front wheel
- Cowling



3



## FRONT FORK SPRING PRELOAD ADJUSTMENT

### 1. Adjust

- Spring preload  
By turning the adjuster ①.

**Stiffer ①** → Increase the spring preload.  
(Turn the adjuster ① in.)  
**Softer ②** → Decrease the spring preload.  
(Turn the adjuster ① out.)



### Spring Preload:

Standard position	Extent of adjustment
6	1~8

### CAUTION:

- Grooves are provided to show the adjusting level.
- Never attempt to turn the adjuster beyond the maximum or minimum setting.

### ⚠ WARNING

Always adjust each front fork to the same setting. Uneven adjustment can cause poor handling and loss of stability.

## FRONT FORK REBOUND DAMPING FORCE ADJUSTMENT

### 1. Adjust:

- Rebound damping force  
By turning the adjuster ①.

**Stiffer ①** → Increase the rebound damping force. (Turn the adjuster ① in.)  
**Softer ②** → Decrease the rebound damping force. (Turn the adjuster ① out.)



### Extent of Adjustment:

Maximum	Minimum
Fully turned in position	12 clicks out (From maximum position)

**•STANDARD POSITION:**

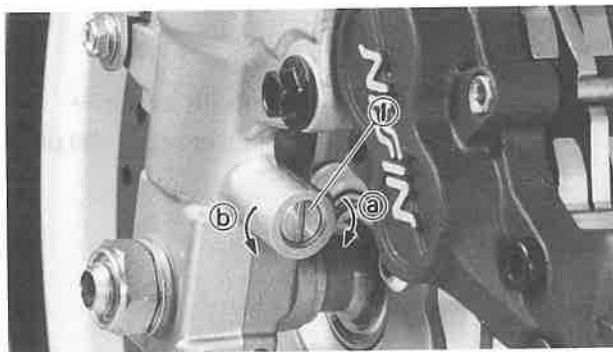
This is the position which is back by the specific number of clicks from the fully turned-in position.

**STANDARD POSITION:**  
**6 Clicks Out****CAUTION:**

Do not force the adjuster past the minimum or maximum extent of adjustment.  
The adjuster may be damaged.

**⚠ WARNING**

Always adjust each front fork to the same setting. Uneven adjustment can cause poor handling and loss of stability.

**3****FRONT FORK COMPRESSION DAMPING  
FORCE ADJUSTMENT****1. Adjust:**

- Compression damping force  
By turning the adjuster ①.

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

**Softer (b) → Decrease the compression damping force. (Turn the adjuster ① out.)**



## Extent of Adjustment:

Maximum	Minimum
Fully turned in position	10 clicks out (From maximum position)

### •STANDARD POSITION:

This is the position which is back by the specific number of clicks from the fully turned-in position.



### STANDARD POSITION:

6 Clicks Out

### CAUTION:

Do not force the adjuster past the minimum or maximum extent of adjustment.  
The adjuster may be damaged.

### ⚠ WARNING

Always adjust each front fork to the same setting. Uneven adjustment can cause poor handling and loss of stability.



## REAR SHOCK ABSORBER INSPECTION

### 1. Inspect:

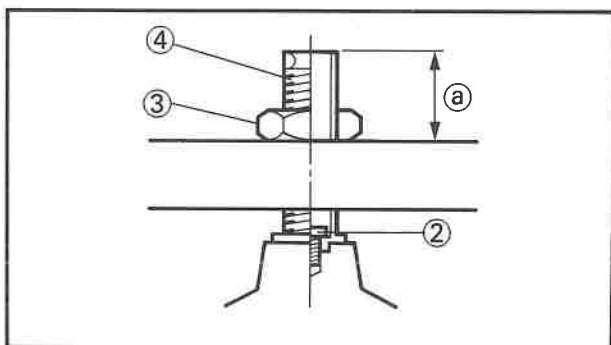
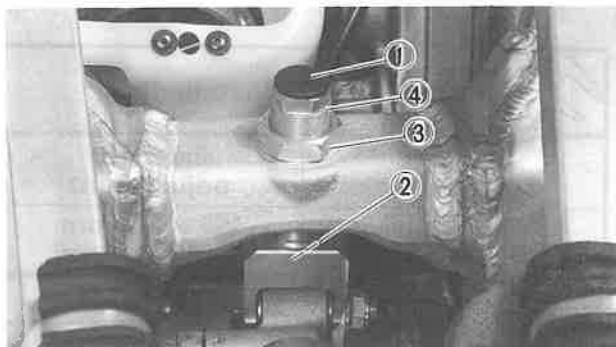
- Swingarm smooth action  
Abnormal noise/Unsmooth action→  
Grease the pivoting points or repair the pivoting points.  
Damage/Oil leakage→Replace.





## SEAT HEIGHT ADJUSTMENT

1. Remove:
  - Fuel tank
2. Adjust:
  - Seat height



### Seat height adjustment steps:

- Remove the cap ①.
- Loosen the lock bolt ② and locknut ③.
- Turn the adjuster ④ in or out.



### Seat Height ①:

Standard length	Extent of adjustment
24 mm (0.94 in)	17 ~ 35 mm (0.67 ~ 1.38 in)

### CAUTION:

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

- Tighten the lock bolt ② and lock nut ③.



**Lock Bolt:**  
35 Nm (3.5 m•kg, 25 ft•lb)  
**Lock Nut:**  
38 Nm (3.8 m•kg, 27 ft•lb)

- Install the cap ①.

3

3. Install:
  - Fuel tank



## REAR SHOCK ABSORBER SPRING PRELOAD ADJUSTMENT

1. Hold the machine on upright position by placing the suitable stand.
2. Loosen:
  - Locknut ①

# REAR SHOCK ABSORBER REBOUND DAMPING FORCE ADJUSTMENT

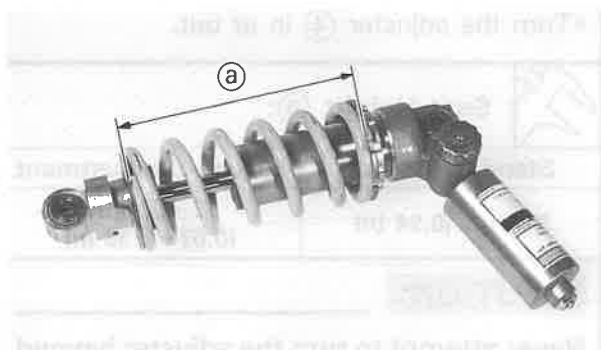
INSP  
ADJ



## 3. Adjust:

- Spring preload  
By turning the adjuster ②.

**Stiffer**→Increase the spring preload.  
(Turn the adjuster ② in.)  
**Softer**→Decrease the spring preload.  
(Turn the adjuster ② out.)



## Spring Length (Installed):

Standard length ①	Extent of adjustment
158.5 mm (6.24 in)	150 ~ 163 mm (5.91 ~ 6.42 in)

## NOTE:

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

## CAUTION:

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

## 4. Tighten

- Locknut



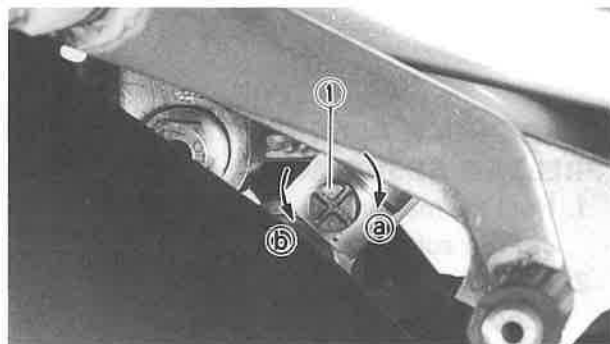
## Locknut:

40 Nm (4.0 m•kg, 29 ft•lb)

## REAR SHOCK ABSORBER REBOUND DAMPING FORCE ADJUSTMENT

## 1. Adjust:

- Rebound damping force  
By turning the adjuster ①.



**Stiffer** ①→Increase the rebound damping force. (Turn the adjuster ① in.)  
**Softer** ②→Decrease the rebound damping force. (Turn the adjuster ① out.)

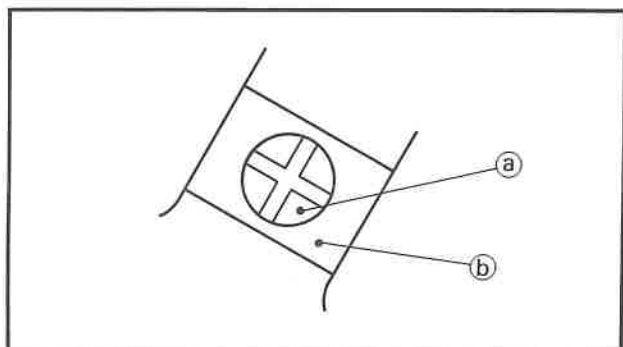
# REAR SHOCK ABSORBER COMPRESSION DAMPING FORCE ADJUSTMENT

**INSP**  
**ADJ**



**Extent of Adjustment:**

Maximum	Minimum
Fully turned in position	26 clicks out (From maximum position)



## •STANDARD POSITION:

This is the position which align the punch mark (a) on adjuster with punch mark (b) on the bracket. (Which is back by the specific number of clicks from the fully turned-in position.)

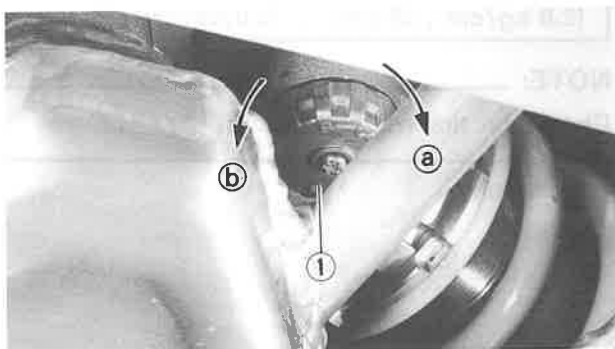


**STANDARD POSITION:**  
**About 15 Clicks Out**

## CAUTION:

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

**3**



## REAR SHOCK ABSORBER COMPRESSION DAMPING FORCE ADJUSTMENT

### 1. Adjust:

- Compression damping force  
By turning the adjuster ①.

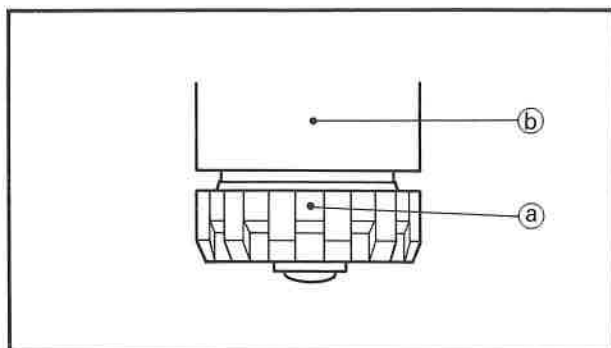
**Stiffer ① → Increase the compression damping force. (Turn the adjuster ① in.)**

**Softer ② → Decrease the compression damping force. (Turn the adjuster ① out.)**



**Extent of Adjustment:**

Maximum	Minimum
20 clicks in (From minimum position)	Fully turned out position



## •STANDARD POSITION

This is the position which is back by the specific number of clicks from the fully turned-out position. (Which align the punch mark (a) on adjuster with punch mark (b) on the bracket.)

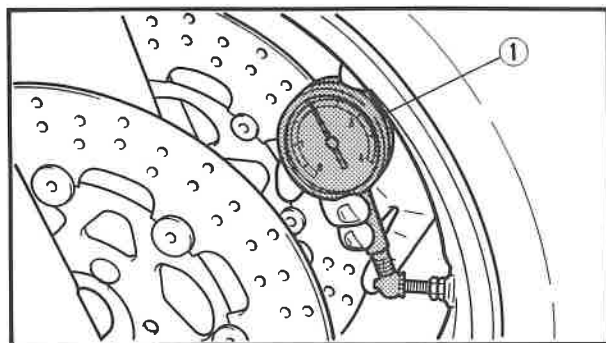


**STANDARD POSITION:**  
About 10 Clicks In

## CAUTION:

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

3



## TIRE PRESSURE CHECK

### 1. Measure:

- Tire pressure
- Out of specification → Adjust.



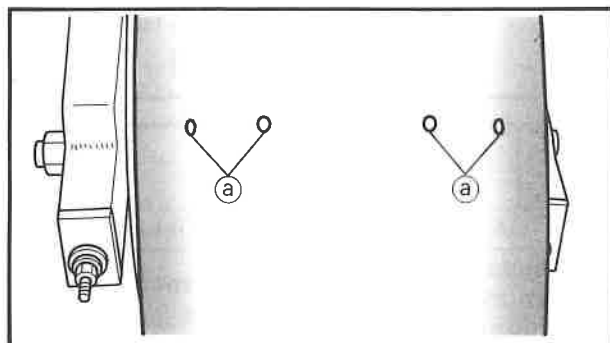
## Standard Tire Pressure:

Front	Rear
200 kpa (2.0 kg/cm <sup>2</sup> , 29 psi)	200 kpa (2.0 kg/cm <sup>2</sup> , 29 psi)

## NOTE:

Check the tire while it is cold.

① Air gauge



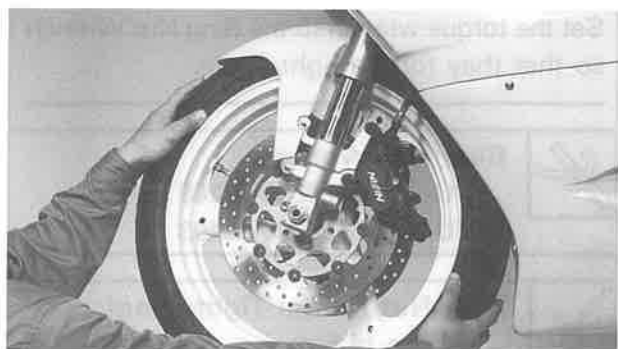
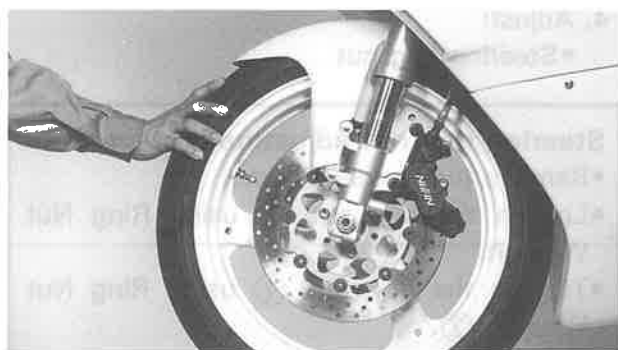
## TIRE INSPECTION

### 1. Inspect:

- Tire surfaces
- Wear/Damage → Replace.



**Minimum Tire Tread Depth (a):**  
2 mm (0.08 in)



## WHEEL INSPECTION

1. Inspect:
  - Wheel runout  
Elevate the wheel and turn it.  
Abnormal runout→Replace.
2. Inspect:
  - Bearing free play  
Exist play→Replace.

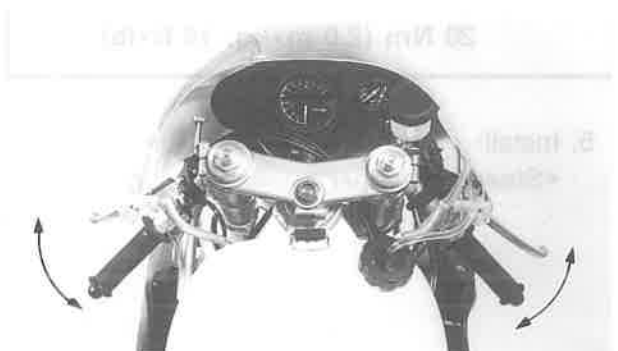
# 3

## STEERING HEAD INSPECTION AND ADJUSTMENT

1. Remove the steering damper at front fork side.
2. Elevate the front wheel by placing a suitable stand.



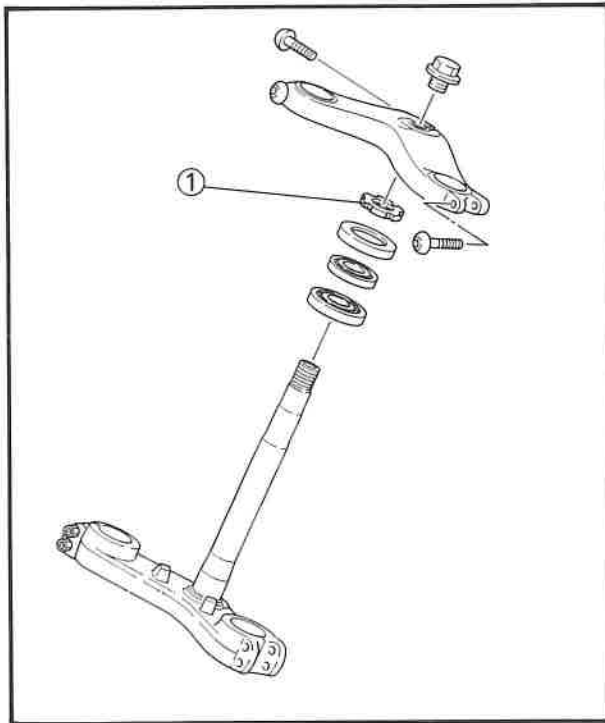
3. Check:
  - Steering stem  
Grasp the bottom of the forks and gently rock the fork assembly back and forth.  
Free play→Adjust steering head.



4. Check:
  - Steering smooth action  
Turn the handlebar lock to lock.  
Unsmooth action→Adjust steering ring nut.

## STEERING HEAD INSPECTION AND ADJUSTMENT

INSP  
ADJ



4. Adjust:
- Steering ring nut

### Steering ring nut adjustment steps:

- Remove the handle crown.
- Loosen the ring nut ① using Ring Nut Wrench.
- Tighten the ring nut ① using Ring Nut Wrench ②.

### NOTE:

Set the torque wrench to the Ring Nut Wrench so that they form a right angle.



### Ring Nut Wrench:

YU-01268/90890-01268

YU-33975/90890-01403



### Ring Nut (Initial Tightening):

46 Nm (4.6 m•kg, 33 ft•lb)

- Loosen the ring nut one turn.
- Retighten the ring nut using the Ring Nut Wrench.

### ⚠ WARNING

Avoid over-tightening.



### Ring Nut (Final Tightening):

3 Nm (0.3 m•kg, 2.2 ft•lb)

- Check the steering shaft by turning it lock to lock. If there is any binding, remove the steering shaft assembly and inspect the steering bearings.
- Install the handle crown.



### Steering Shaft Bolt:

54 Nm (5.4 m•kg, 39 ft•lb)

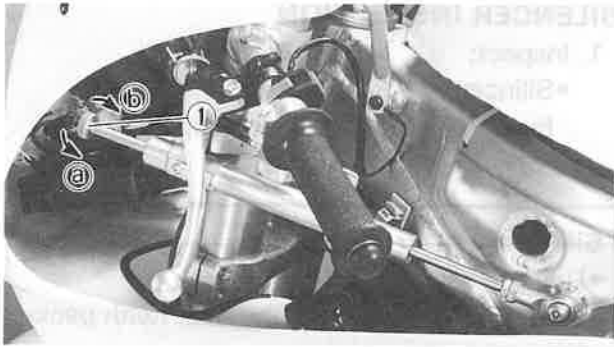
### Pinch Bolt (Steering Shaft):

20 Nm (2.0 m•kg, 14 ft•lb)

### Pinch Bolt (Front Fork):

20 Nm (2.0 m•kg, 14 ft•lb)

5. Install:
- Steering damper



## STEERING DAMPER ADJUSTMENT

1. Adjust:
  - Damping force
 By turning the adjuster ①.

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

**Softer (b) → Decrease the compression damping force. (Turn the adjuster ① out.)**



### Extent of Adjustment:

Maximum	Minimum
Fully turned in position	7 clicks out (From maximum position)

### •STANDARD POSITION

This is the position which is back by the specific number of clicks from the fully turned-in position.



**STANDARD POSITION:**  
About 4 Clicks Out

### CAUTION:

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

**3**



## MUFFLER INSPECTION

1. Inspect:
  - O-ring ①
 Damage → Replace.

# SILENCER INSPECTION/ COWLING INSTALLATION INSPECTION

INSP  
ADJ



## SILENCER INSPECTION

### 1. Inspect:

- Silencer

Inside of silencer loose → Repair.

### Silencer repair steps:

- Drill the silencer for rivetting.
- Rivet the silencer using the rivet (with packing parts).

### NOTE:

Rivet the silencer in a different area than previously riveted.

3



## COWLING INSTALLATION INSPECTION

### 1. Inspect:

- Cowling

Loosen → Tighten.

Stroke the front fork to make sure no parts are being contacted with others.

Contact → Repair or replace.

- Screen

Scratches/fogging → Clean or replace.



**LUBRICATION**

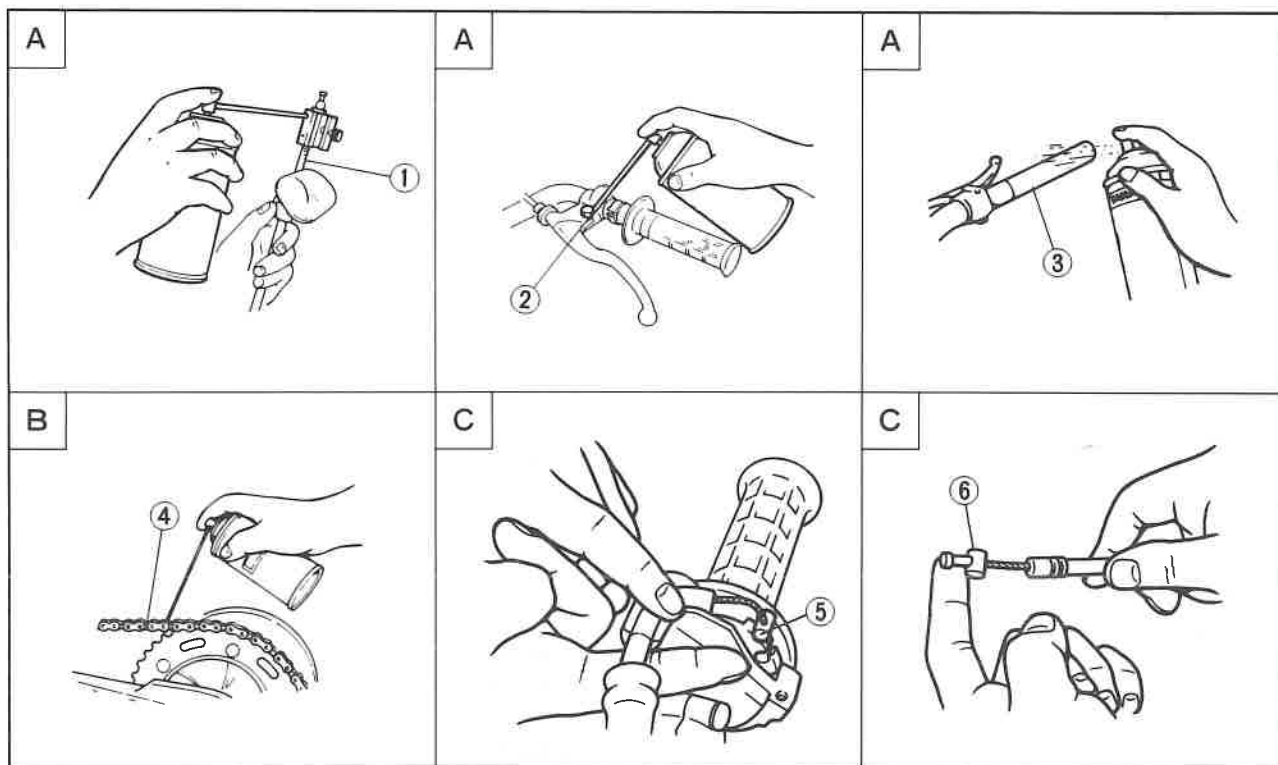
To ensure smooth operation of all components lubricate your machine during setup, after break-in, and after every race.

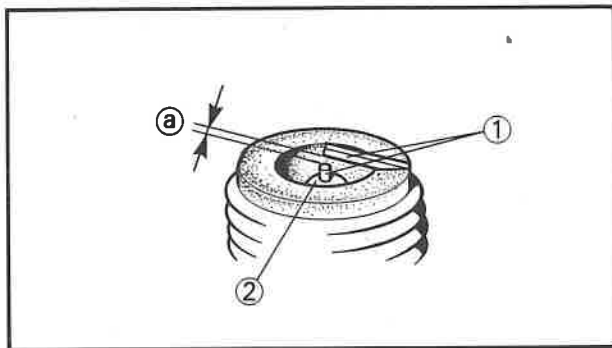
- ① All control cable
- ② Brake and clutch lever pivots
- ③ Throttle-to-handlebar contact
- ④ Drive chain
- ⑤ Throttle guide and cable end
- ⑥ Clutch cable end

- A** Use Yamaha cable lube or equivalent on these areas.
- B** Use Yamaha chain lube or equivalent.
- C** Lubricate the following areas with highquality, lightweight lithium-soap base grease.

**CAUTION:**

Wipe off any excess grease, and avoid getting grease on the brake discs.





## SPARK PLUG INSPECTION

### 1. Remove:

- Spark plug

### 2. 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.

### NOTE:

When the engine runs for many hours at low speeds, the spark plug insulator will become sooty, even if the engine and carburetor are in good operating condition.

### 3. Measure:

- Plug gap (a)

Use a Wire Gauge or Thickness Gauge.

Out of specification → Regap.



### Spark Plug Gap:

0.5 ~ 0.6 mm (0.020 ~ 0.024 in)

### Standard Spark Plug:

R5184-105 (NGK)

### 4. Clean the plug with a spark plug cleaner if necessary.

### 5. Tighten:

- Spark plug



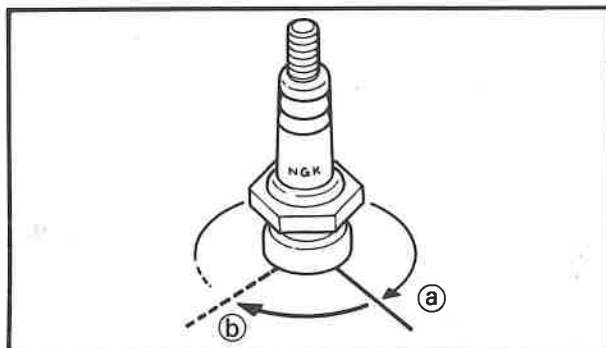
### Spark Plug:

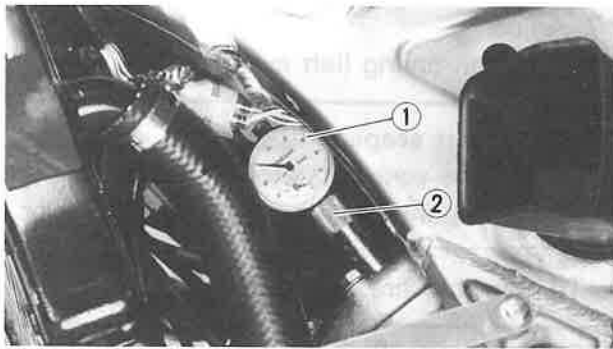
25 Nm (2.5 m•kg, 18 ft•lb)

### NOTE:

- Before installing a spark plug, clean the gasket surface and plug surface.

- Finger-tighten (a) the spark plug before torquing to specification (b).



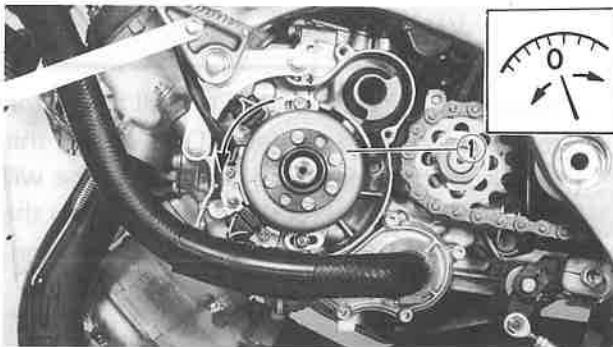


## IGNITION TIMING CHECK

1. Remove:
  - Spark plugs (left and right)
2. Attach:
  - Dial gauge (1)
  - Dial gauge stand (2)
 To left cylinder head.



**Dial Gauge:**  
YU-03097/90890-01252  
**Stand:**  
YU-01256



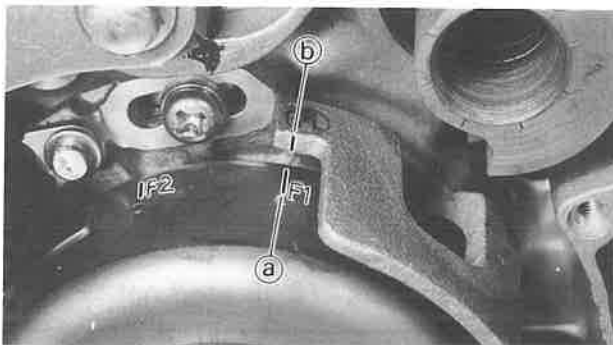
3. Rotate the magneto rotor (1) until the piston reaches top dead center (TDC). When this happens, the needle on the dial gauge will stop and reverse directions even though the rotor is being turned in the same direction.
4. Set the dial gauge to zero at TDC.
5. From TDC, rotate the rotor clockwise until the dial gauge indicates that the piston is at a specified distance from TDC.



**Ignition Timing:**  
1.5 mm (0.059 in)

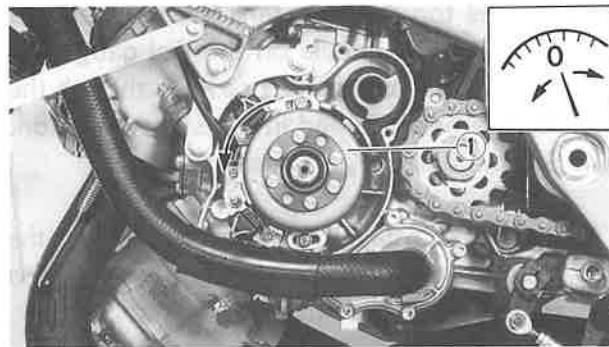
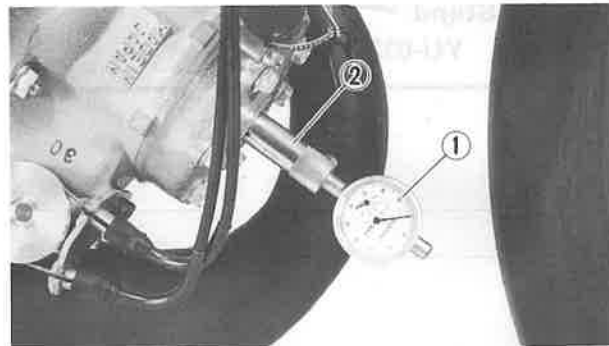
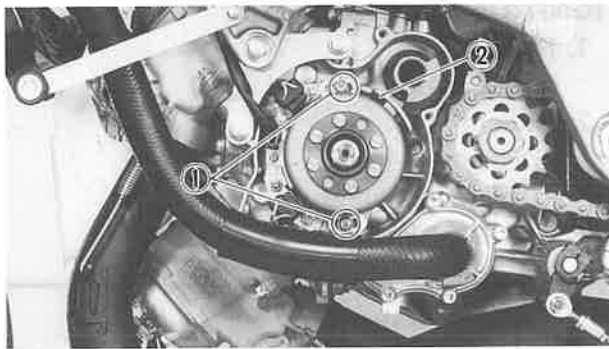
1.7 Lower

1.5 Upper



6. Check:
  - Ignition timing (left cylinder)
 Punch mark (a) on rotor should be aligned with punch mark (b) on stator.  
Not aligned → Adjust.

**NOTE:** \_\_\_\_\_  
Be sure punch mark "F1" is used not "F2".



7. Adjust:
- Ignition timing (left cylinder)

## Adjustment steps:

- Loosen the screws (stator) ①.
- Align the punch marks by turning the stator ②.
- Tighten the screws (stator) ①.



**Screw (Stator):**  
7 Nm (0.7 m•kg, 5.1 ft•lb)

8. Attach:
- Dial gauge ①
  - Dial gauge stand ②
- To right cylinder head.



**Dial Gauge:**  
YU-03097/90890-01252  
**Stand:**  
YU-01256

9. Rotate the magneto rotor ① until the piston reaches top dead center (TDC). When this happens, the needle on the dial gauge will stop and reverse directions even though the rotor is being turned in the same direction.
10. Set the dial gauge to zero at TDC.
11. From TDC, rotate the rotor clockwise until the dial gauge indicates that the piston is at a specified distance from TDC.



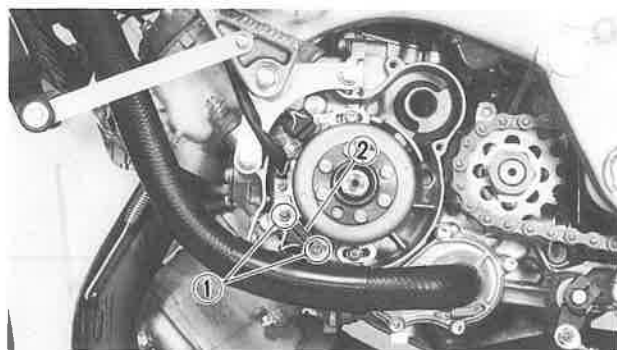
**Ignition Timing:**  
1.5 mm (0.059 in)



12. Check:
- Ignition timing (right cylinder)
- Punch mark (a) on rotor should be aligned with punch mark (b) on stator.
- Not aligned → Adjust.

## NOTE:

Be sure punch mark "F2" is used not "F1".



## 13. Adjust:

- Ignition timing (right cylinder)

### Adjusting steps:

- Loosen the screws (right pick-up coil) ①.
- Align the punch marks by turning the right pick-up coil ②.
- Tighten the screws.



### Screw (Pick-Up Coil):

2 Nm (0.2 m•kg, 1.4 ft•lb)

---

MEMO

3