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## SERVICE INFORMATION

### GENERAL

- Engine oil See page 2-3
- Engine oil filter See page 2-3
- Final drive gear oil See page 2-11

### SPECIFICATIONS

#### <ENGINE>

Spark plugs:

Standard		For cold climate (below 5°C, 41°F)		For extended high speed riding	
NGK	ND	NGK	ND	NGK	ND
DPR8EA-9	X24EPR-U9	DPR7EA-9	X22EPR-U9	DPR9EA-9	X27EPR-U9

Spark plug gap:	0.8–0.9 mm (0.031–0.035 in)
Valve clearance:	IN/EX 0.15 mm (0.006 in)
Ignition timing	
At idle:	15° BTDC
Full advance:	40° BTDC at 3,500 rpm
Idle speed:	1,200 ± 100 rpm
Carburetor synchronization:	Both carburetors within 40 mm (1.6 in) Hg of each other
Cylinder compression:	1,300 ± 200 kPa (13 ± 2 kg/cm <sup>2</sup> , 184 ± 28 psi)
Throttle grip free play:	2–6 mm (1/8–1/4 in)

## MAINTENANCE

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### <CHASSIS>

Rear brake pedal free play: 20–30 mm (3/4–1-1/4 in)

### Tires

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

Tire size		Front	Rear
		100/90–19 57H	150/80–15 70H
Cold tire pressure, kPa (kg/cm <sup>2</sup> , psi)	Up to 90 kg (200 lbs) load	225 (2.25, 32)	225 (2.25, 32)
	90 kg (200 lbs) load to vehicle capacity load	225 (2.25, 32)	280 (2.80, 42)
Tire brand	Bridgestone	L309	G546
	Dunlop	F24	K555

Tire tread depth: Front: 1.5 mm (0.06 in)

Rear: 2.0 mm (0.08 in)

### TOOLS

#### Special

Vacuum gauge set

07404–0020000 or M937B–021–XXXXX (U.S.A. only)

Carburetor adjusting wrench

07908–473000 or 07908–KE70000

Compression gauge attachment

07510–MB00101

#### Common

Valve adjusting wrench

07708–0030200 or EQUIVALENT COMMERCIALY AVAILABLE IN U.S.A.

# MAINTENANCE SCHEDULE

Perform the PRE-RIDE INSPECTION at each scheduled maintenance period.

I: Inspect and Clean, Adjust, Lubricate, or Replace if necessary.

C: Clean, R: Replace

ITEM	FREQUENCY	WHICHEVER COMES FIRST ↓	ODOMETER READING (NOTE 1)							Refer to page
			600 miles (1,000 km)	4,000 miles (6,400 km)	8,000 miles (12,800 km)	12,000 miles (19,200 km)	16,000 miles (25,600 km)	20,000 miles (32,000 km)	24,000 miles (38,400 km)	
EMISSION RELATED ITEMS	* FUEL LINES			I		I		I		3-4
	* THROTTLE OPERATION			I		I		I		3-4
	* CARBURETOR-CHOKE			I		I		I		3-5
	* AIR CLEANER	NOTE 2				R			R	3-5
	SPARK PLUGS			R	R	R	R	R	R	3-6
	* VALVE CLEARANCE		I	I	I	I	I	I	I	3-6
	ENGINE OIL		R		R		R		R	2-3
	ENGINE OIL FILTER		R		R		R		R	2-3
	* CARBURETOR-SYNCHRONIZATION		I		I		I		I	3-9
	* CARBURETOR-IDLE SPEED		I	I	I	I	I	I	I	3-10
	RADIATOR COOLANT	2 YEARS *R			I		I		*R	3-10
	* COOLING SYSTEM				I		I		I	3-10
	* SECONDARY AIR SUPPLY SYSTEM	NOTE 3			I		I		I	3-10
	EVAPORATIVE EMISSION CONTROL SYSTEM	NOTE 3				I			I	3-11
NON-EMISSION RELATED ITEMS	FINAL DRIVE OIL				I		I		R	2-11
	BATTERY	MONTH		I	I	I	I	I	I	3-12
	BRAKE FLUID (FRONT)	2 YEARS *R		I	I	*R	I	I	*R	3-13
	BRAKE SHOE/PAD WEAR			I	I	I	I	I	I	3-13
	BRAKE SYSTEM		I		I		I		I	3-13
	* BRAKE LIGHT SWITCH				I		I		I	3-14
	* HEADLIGHT AIM				I		I		I	3-15
	CLUTCH SYSTEM				I		I		I	3-15
	CLUTCH FLUID	2 YEARS *R		I	I	*R	I	I	*R	3-15
	SIDE/#STAND				I		I		I	3-15
	* SUSPENSION				I		I		I	3-15
	* NUTS, BOLTS, FASTENERS		I		I		I		I	3-17
	** WHEELS/TIRES				I		I		I	3-16
** STEERING HEAD BEARINGS		I		I		I		I	3-17	

\* Should be serviced by an authorized Honda dealer, unless the owner has proper tools and service data and is mechanically qualified.

\*\* In the interest of safety, we recommend these items be serviced only by an authorized Honda dealer.

NOTES: 1. For higher odometer readings, repeat at the frequency interval established here.

2. Service more frequently when riding in dusty areas.

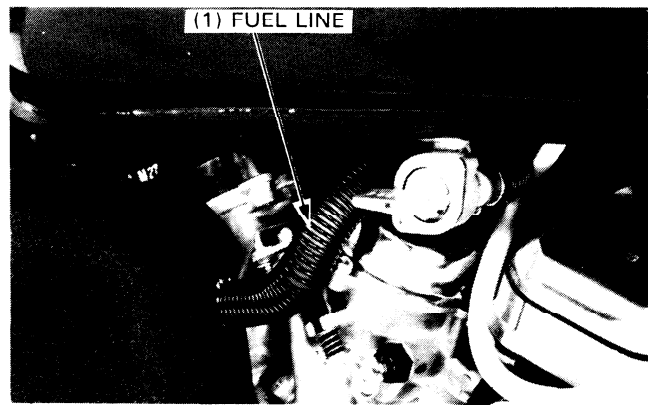
3. California type only.

## MAINTENANCE

### FUEL LINES

Check the fuel lines for deterioration, damage, or leakage.

Replace if necessary.



### THROTTLE OPERATION

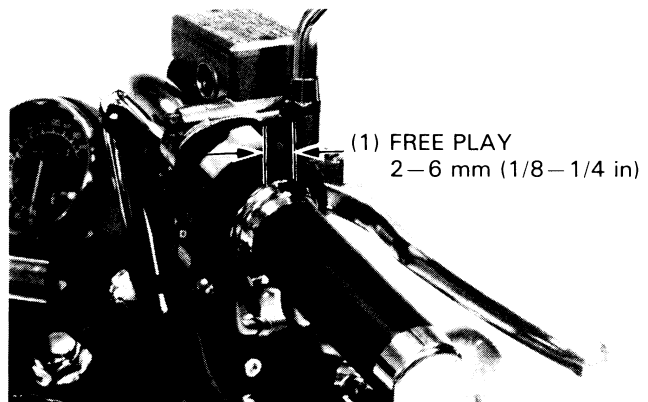
Check for smooth throttle grip operation, with full opening and automatic full closing in all steering positions.

Make sure there is no deterioration, damage, or kinking in the throttle cables. Replace any damaged parts.

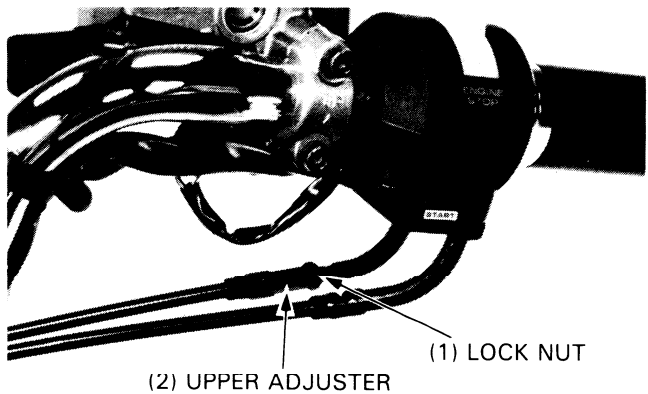
Lubricate the throttle cables (page 2-11), if throttle operation is not smooth.

Measure throttle grip free play at the throttle grip flange.

**FREE PLAY: 2–6 mm (1/8–1/4 in)**



Throttle grip free play can be adjusted at either end of the throttle cable. Minor adjustments are made with the upper adjuster.



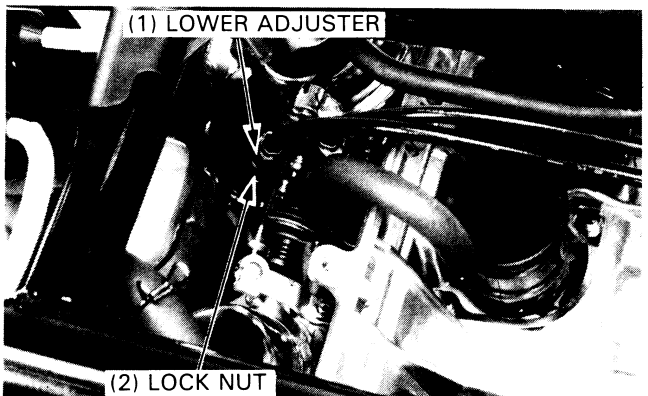
Remove the seat, fuel tank and air cleaner case (page 4-16 to 4-17).

Major adjustments are made with the lower adjuster.

Adjust free play by loosening the lock nut and turning the adjuster. Tighten the lock nut after adjusting.

Install the air cleaner case, fuel tank and seat.

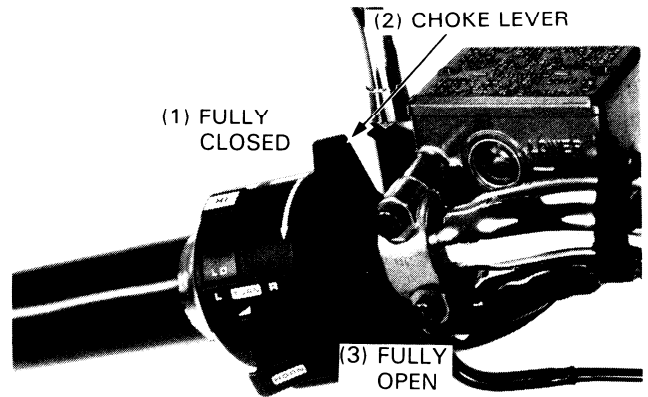
Recheck throttle operation.



## CARBURETOR CHOKE

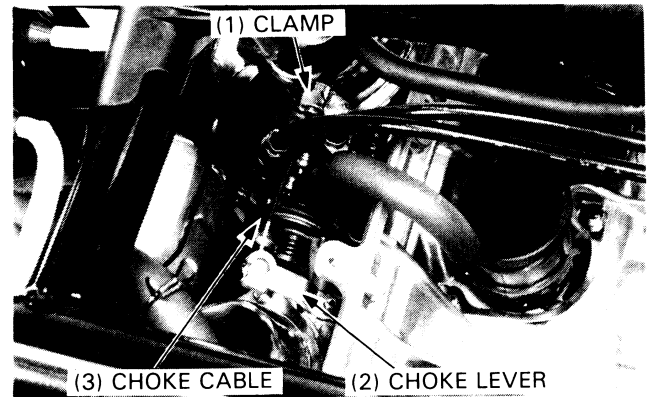
The choke system uses a fuel enriching circuit controlled by a bystarter valve. The bystarter valve opens the enriching circuit via a cable to the choke lever on the handlebar.

Check for smooth upper choke lever operation. Lubricate the choke cable if the operation is not smooth.



Remove the seats, fuel tank and air cleaner case (page 4-16 to 4-17).

Push the choke lever in the handlebar to the fully open position. Make sure the choke valve is open by trying to move the choke lever on the carburetor. There should be no free play. Adjust if necessary, by loosening the choke cable clamp on the carburetor and moving the choke cable casing so the choke lever is fully open. Tighten the clamp.



Pull the choke lever to the fully closed position. Make sure the choke valve is fully closed by checking for free play in the cable between the lever on the carburetor and cable casing.

Reinstall the removed parts in the reverse order of disassembly.



## AIR CLEANER

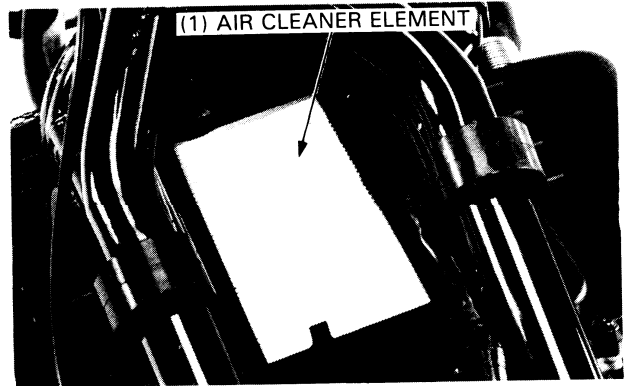
Remove the seats and fuel tank (page 4-17). Remove the front left and right side covers.



Remove the screw and the air cleaner cover (page 4-16).

## MAINTENANCE

Remove the air cleaner element and discard it in accordance with the maintenance schedule (page 3-3). Also, replace the element if it is excessively dirty or damaged. Install a new element and reinstall the removed parts in the reverse order of removal.



## SPARK PLUGS

### RECOMMENDED SPARK PLUGS

	NGK	ND
Standard	DPR8EA-9	X24EPR-U9
For cold climate (Below 5°C, 41°F)	DPR7EA-9	X22EPR-U9
For extended high speed riding	DPR9EA-9	X27EPR-U9

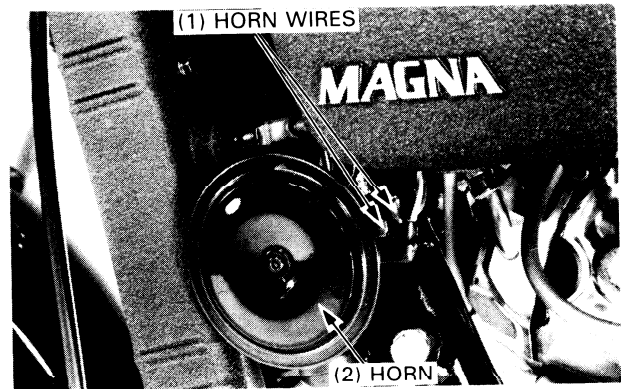
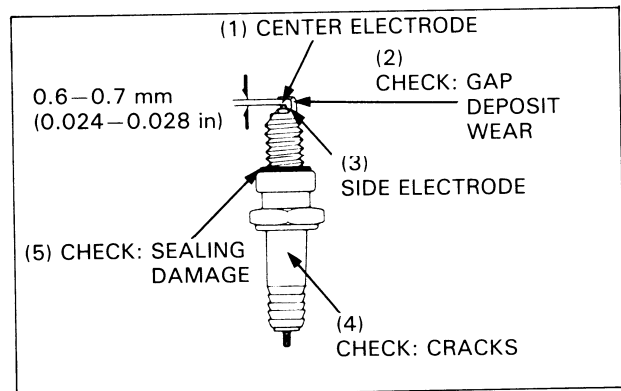
Disconnect the spark plug caps and clean any dirt from around the spark plug bases.

Remove and discard the spark plugs.

Measure the new spark plug gaps using a wire-type feeler gauge.

**SPARK PLUG GAP: 0.8–0.9 mm (0.031–0.035 in)**

Adjust by bending the side electrode carefully. With the plug washer attached, thread each spark plug in by hand to prevent cross threading. Tighten the spark plugs another 1/2 turn with a spark plug wench to compress the plug washer. Connect the spark plug caps.



## VALVE CLEARANCE

### NOTE

- Inspect and adjust valve clearance while the engine is cold. (Below 35°C, 95°F)

On the front cylinder:  
Disconnect the horn wires and remove the horn.

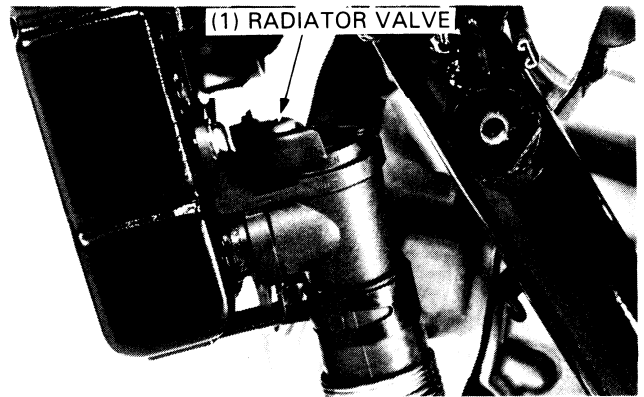
### NOTE

- Disconnect the left side of the radiator to space for servicing.

Remove the radiator left side cover.



With the radiator cap installed, turn the radiator valve to "SHUT" and loosen the coolant drain bolt once to release coolant pressure, then retighten the drain bolt (page 6-3). Loosen the lower radiator hose clamp. Disconnect the radiator hose. Remove the radiator socket bolts.



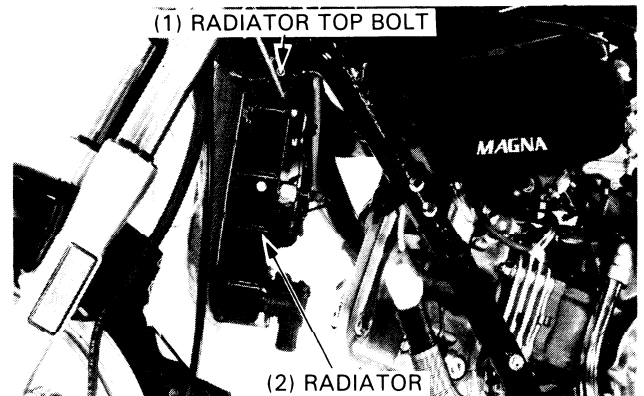
Loosen the radiator top mounting nut, then hang the radiator down with a piece of wire rope from the frame.

**NOTE**

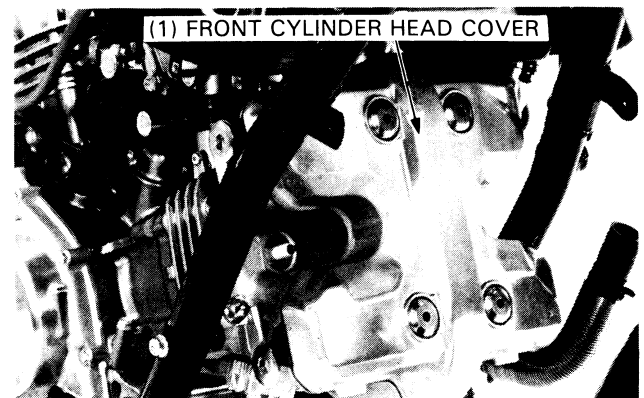
- Secure the radiator against the front fender with a piece of tape.

**CAUTION**

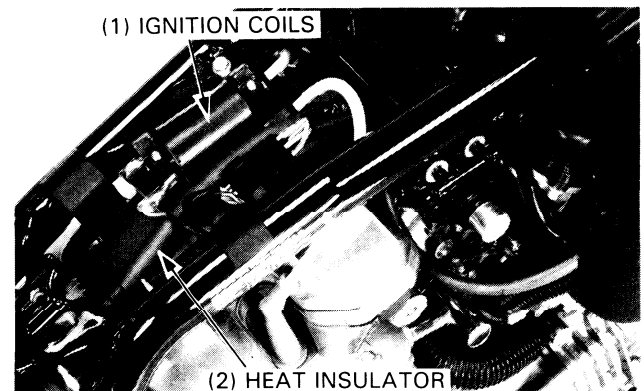
- *Be careful not to damage the radiator fins and front fender.*



Remove the spark plug caps.  
Remove the front cylinder head cover.

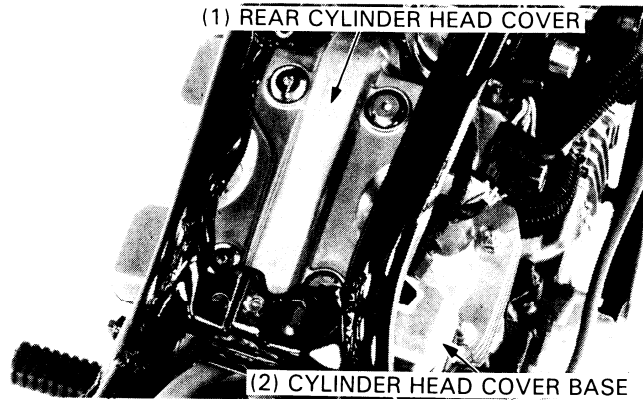


On the rear cylinder:  
Remove the seats and fuel tank (page 4-17).  
Disconnect the ignition coil wires and spark plug wires.  
Remove the ignition coil.  
Remove the heat insulator.



## MAINTENANCE

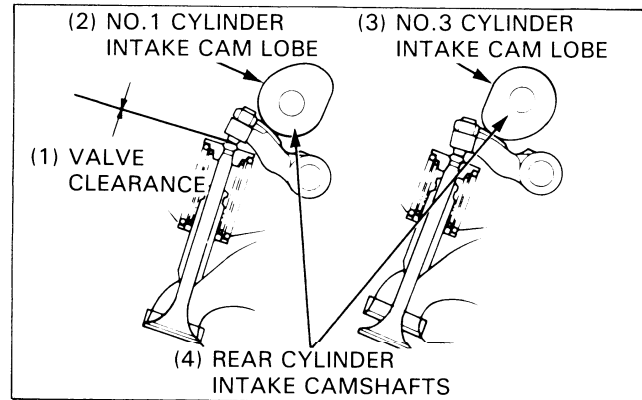
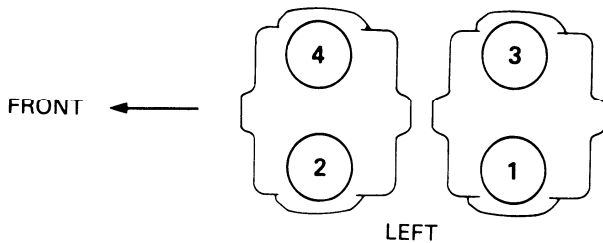
Remove the rear cylinder head cover and cylinder head cover base.



Remove the alternator cover (page 8-2).

### NOTE

- Although the following procedure specifies adjustments for the No. 1 and 3 cylinders, the technique applies to the No. 2 and 4 cylinders also.
- The cylinder numbering is given below:



Bring the intake cam lobe for the No. 3 cylinder to its maximum lift by rotating the crankshaft clockwise.

On that same camshaft, check the clearances for the No. 1 intake valve.

**VALVE CLEARANCE (IN/EX): 0.15 mm (0.006 in)**



If adjustment is needed, loosen the lock nut.

Set the clearances using two feeler gauges, adjusting the screws until there is a slight drag on the feelers.

Hold the adjusting screw and tighten the lock nut using the valve adjuster lock nut wrench and a screwdriver as shown.

### CAUTION

- *The lock nuts will come loose if not tightened to the correct torque value.*

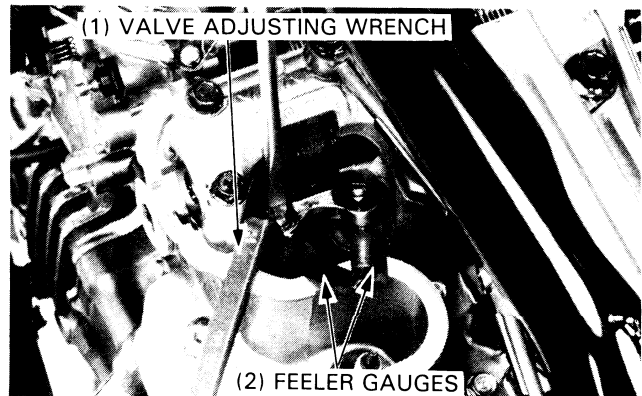
### TOOL:

VALVE ADJUSTING WRENCH

07708-0030200

COMMERCIALLY

AVAILABLE IN U.S.A.



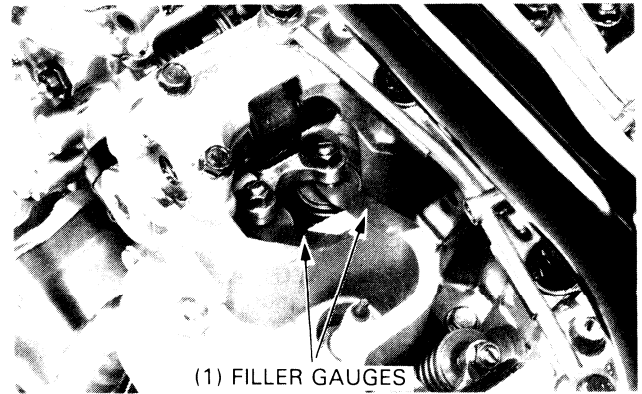


Recheck the valve clearance.

Rotate the crankshaft clockwise until the No. 1 intake lobe is at its maximum lift and check/adjust the No. 3 intake clearance.

Repeat this procedure for the No. 1 and No. 3 exhaust cam, then the No. 2 and No. 4 intake cam and finally the No. 2 and No. 4 exhaust cam.

Install the removed parts in the reverse order of removal. Check the engine oil level. Fill the radiator with clean coolant to the specified level.



## CARBURETOR SYNCHRONIZATION

### NOTE

- Perform this maintenance with the engine at normal operating temperature, transmission in neutral and motorcycle on the stand.

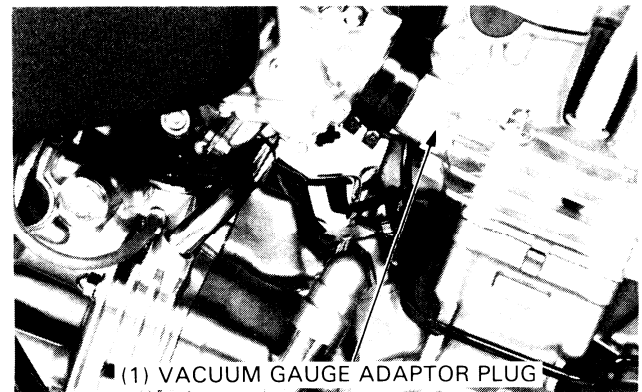
Remove the vacuum gauge adaptor or plugs from the cylinder head intake ports.

Install the vacuum gauge adapters and connect the vacuum gauge.

### TOOL:

VACUUM GAUGE SET

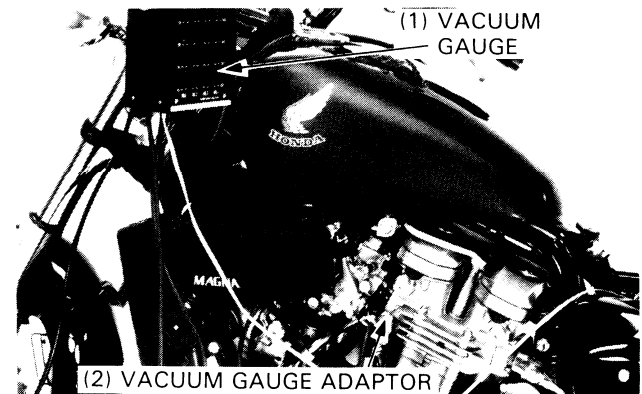
07404-0020000 or  
M937B-021-XXXXX  
(U.S.A. only)



Warm up the engine and adjust the idle speed with the throttle stop screw.

**IDLE SPEED: 1,200 ± 100 rpm**

Check that the difference in vacuum readings is 40 mm (1.6 in) Hg or less.



### NOTE

- The No. 1 carburetor cannot be adjusted.

Adjust within specification by turning the adjusting screw with the following tool:

To adjust the No. 2, 3, 4 carburetor-

### TOOL:

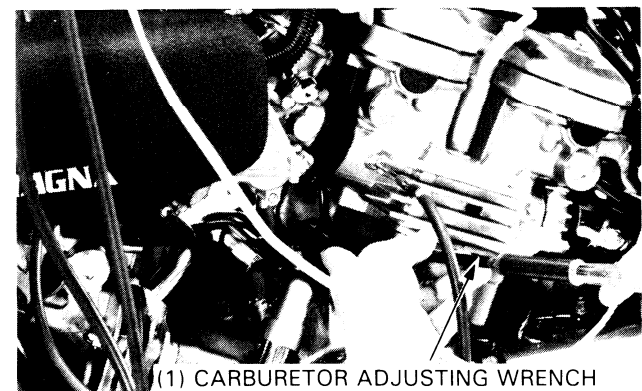
CARBURETOR ADJUSTING WRENCH

07908-473000 or  
07908-KE70000

Recheck the idle speed and synchronization.

Disconnect the gauges and remove the gauge adaptors from the ports.

Install the removed parts in the reverse order of disassembly.



## MAINTENANCE

### CARBURETOR-IDLE SPEED

#### NOTE

- Inspect and adjust idle speed after all other engine adjustments are within specifications.
- The engine must be warm for accurate adjustment. Ten minutes of stop and go riding is sufficient.

Warm up the engine, shift to NEUTRAL.  
Turn the throttle stop screw as required to obtain the specified idle speed.

**IDLE SPEED: 1,200 ± 100 rpm**



### RADIATOR COOLANT

Remove the frame right side cover.  
Check the coolant level of the reserve tank with the engine running at normal operating temperature. The level should be between the "UPPER" and "LOWER" level lines.

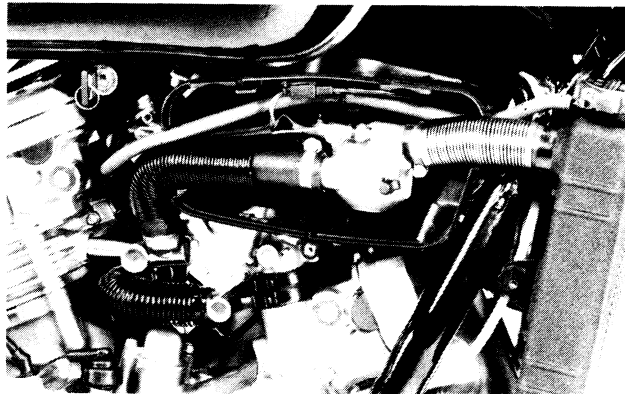
If necessary, remove the reserve tank cap and fill to the "UPPER" level line with a 50/50 mixture of distilled water and anti-freeze.

Reinstall the cap and frame side cover.



### COOLING SYSTEM HOSES & CONNECTIONS

Remove the right air chamber cover.  
Hoses should be in good condition without cracks or damage; replace any hoses that show signs of deterioration.  
Check that all hose clamps are tight.

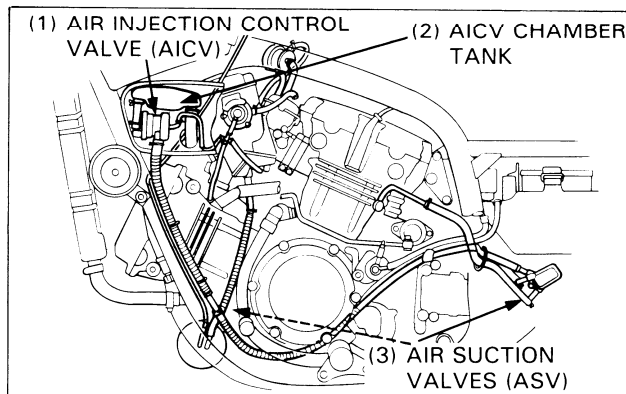


### SECONDARY AIR SUPPLY SYSTEM (California model only)

Check the air supply hose between the air suction valves and cylinders, intake pipe and automatic fuel valve or air injection control valve and intake pipes for deterioration, damage, or loose connections.

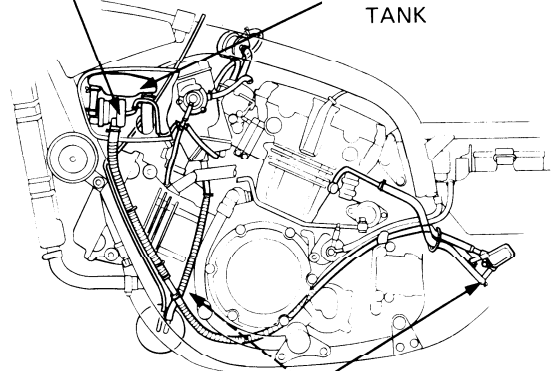
#### NOTE

- If the hoses show any signs of heat damage, remove the reed valves and inspect for damage (See page 4-18).



Check the vacuum hose between the air suction valves and cylinders, air injection control valve and air suction valve for deterioration, damage or loose connections. Make sure the hoses are not kinked or pinched.

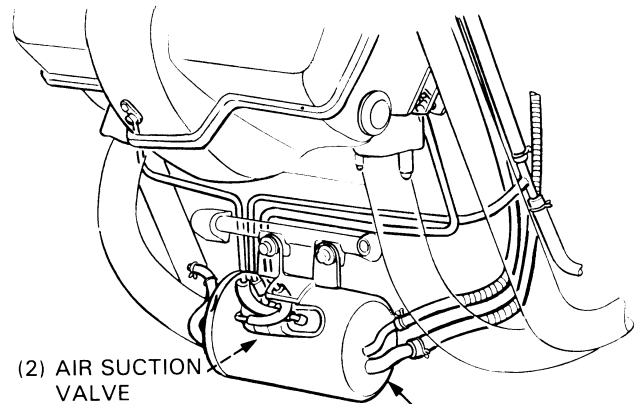
(1) AIR INJECTION CONTROL VALVE (AICV)  
(2) AICV CHAMBER TANK



(3) AIR SUCTION VALVES (ASV)

## EVAPORATIVE EMISSION CONTROL SYSTEMS (California model only)

Check the hoses between the tank cap, canister, purge control valve and carburetors for deterioration, damage or loose connections.



(2) AIR SUCTION VALVE

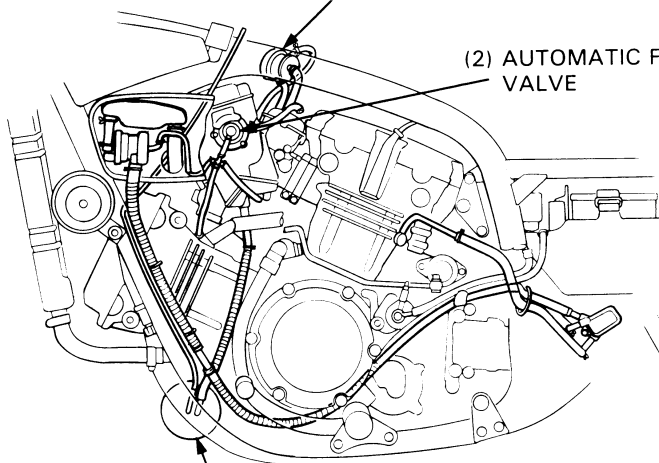
(1) CHARCOAL CANISTER

Check the charcoal canister for cracks or damage.

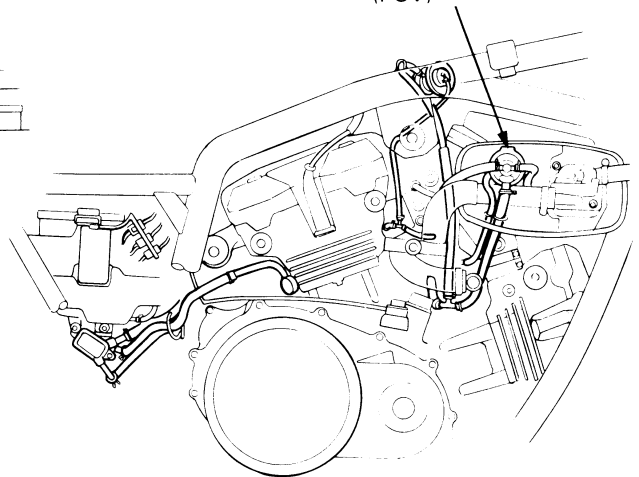
(1) AIR VENT CONTROL VALVE (AVCV)

(2) AUTOMATIC FUEL VALVE

(3) PURGE CONTROL VALVE (PCV)



(4) CHARCOAL CANISTER



## MAINTENANCE

### CYLINDER COMPRESSION

Warm up the engine to normal operating temperature. Stop the engine, disconnect the spark plug caps and remove the spark plug from each cylinder.

Insert the compression gauge. Open the throttle all the way and crank the engine with the starter motor. Crank the engine until the gauge reading stops rising. The maximum reading is usually reached within 4–7 seconds.

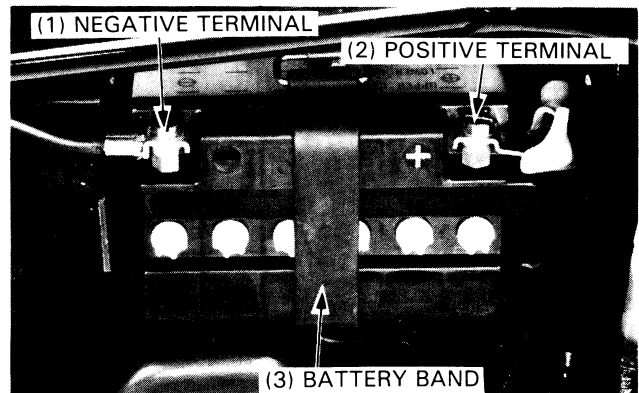
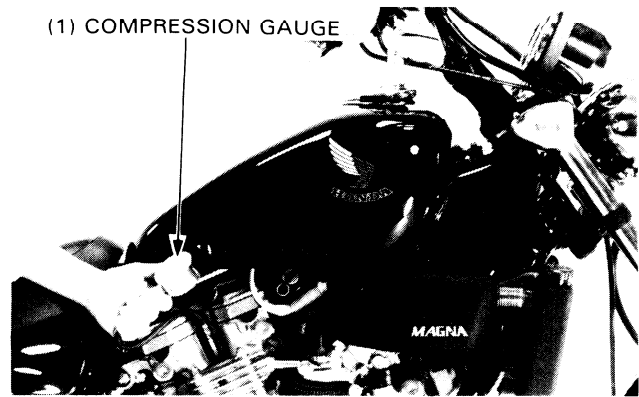
#### TOOL:

COMPRESSION GAUGE ATTACHMENT 07510–MB00101

#### COMPRESSION PRESSURE:

$1,300 \pm 200$  kPa ( $13 \pm 2$  kg/cm<sup>2</sup>,  $184 \pm 28$  psi)

- If compression is low, check for the following:
  - leaky valves
  - leaking cylinder head gasket
  - worn piston/ring/cylinder
- If compression is high, it indicates that carbon deposits have accumulated on the combustion chamber and/or the piston head.



### BATTERY

Remove the seats and right side cover.

When the fluid level nears the lower level line, remove the battery and add distilled water to the upper level line as follows: Remove the battery band.

Disconnect the battery negative terminal first, then disconnect the positive terminal.

Disconnect the battery breather tube, then pull the battery out.

Remove the filler caps and add distilled water to the upper level line.

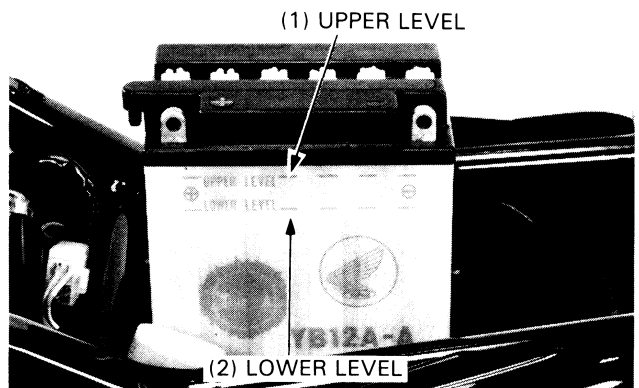
Reinstall the battery in the reverse order of removal.

#### NOTE

- Add only distilled water. Tap water will shorten the service life of the battery.

#### WARNING

- *The battery electrolyte contains sulphuric acid. Protect your eyes, skin, and clothing. If electrolyte gets in your eyes, flush them thoroughly with water and get prompt medical attention.*



## BRAKE FLUID

Check the front brake fluid reservoir level. If the level nears the lower level mark, remove the cover and diaphragm. Fill the reservoir with DOT-3 or DOT-4 Brake Fluid to the upper level mark located inside the reservoir.

Check the entire system for leaks, if the level is low.

### CAUTION

- Do not remove the cover until the handlebar has been turned so that the reservoir is level.
- Avoid operating the brake lever with the cap removed. Brake fluid will squirt out if the lever is pulled.
- Do not mix different types of fluid, as they are not compatible with each other.

Refer to section 15 for brake bleeding procedures.

## BRAKE SHOE/PAD WEAR

### BRAKE PAD WEAR

Check the brake pads for wear by looking through the slot indicated by the arrow mark cast on the caliper assembly. Replace the brake pads if the wear line on the pads reaches the edge of the brake disc (page 15-4).

### CAUTION

- Always replace the brake pads as a set to assure even disc pressure.

### BRAKE SHOE INSPECTION

Replace the brake shoes if the arrow mark on the brake arm aligns with the reference mark "Δ" on full application of the rear brake pedal.

## BRAKE SYSTEM

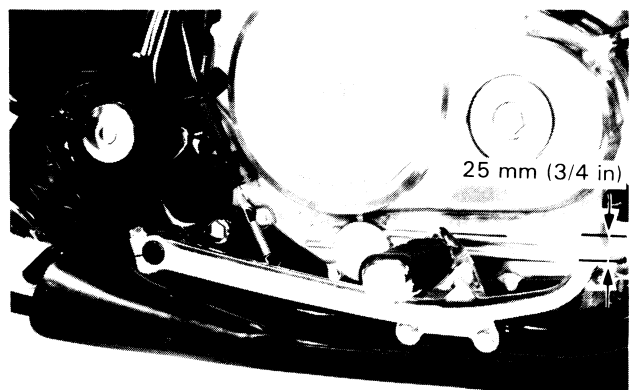
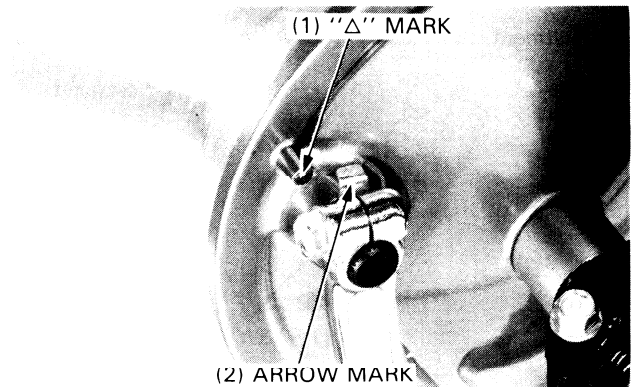
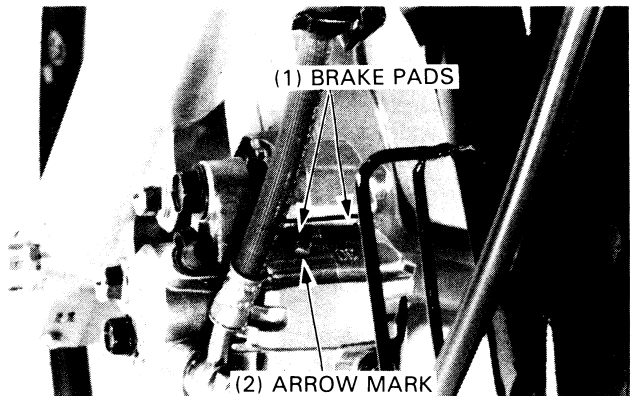
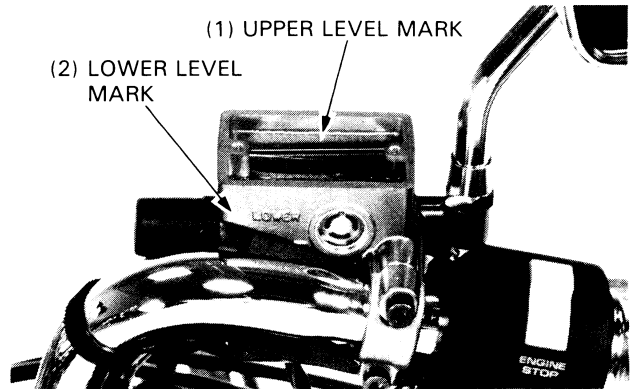
Inspect the brake hoses and fittings for deterioration, cracks and signs of leakage. Tighten any loose fittings. Replace hoses and fittings as required.

### BRAKE PEDAL HEIGHT

Adjust brake pedal height so the pedal is 25 mm (3/4 in) above the top of the foot peg.

### CAUTION

- Incorrect brake pedal height can cause brake drag.



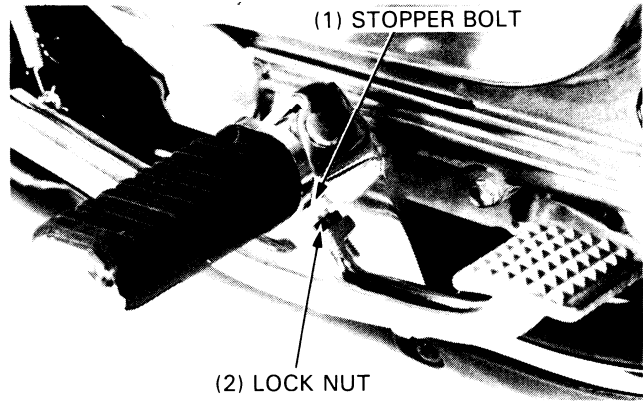
## MAINTENANCE

### To Adjust:

Loosen the stopper bolt lock nut and turn the stopper bolt. Retighten the lock nut.

### NOTE

- After adjusting the brake pedal height, check the rear brake light switch and brake pedal free play and adjust if necessary.



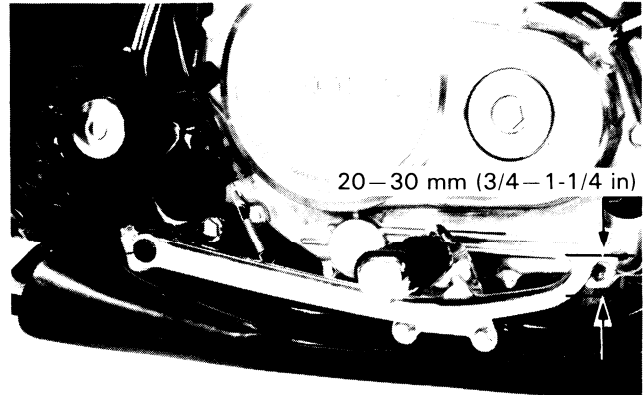
## BRAKE PEDAL FREE PLAY

### NOTE

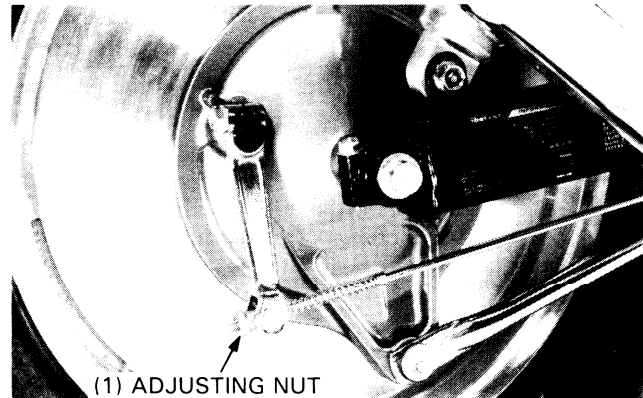
- Perform brake pedal free play adjustment after adjusting brake pedal height.

Check the brake pedal free play.

**FREE PLAY: 20–30 mm (3/4–1-1/4 in)**



If adjustment is necessary, turn the rear brake adjusting nut.

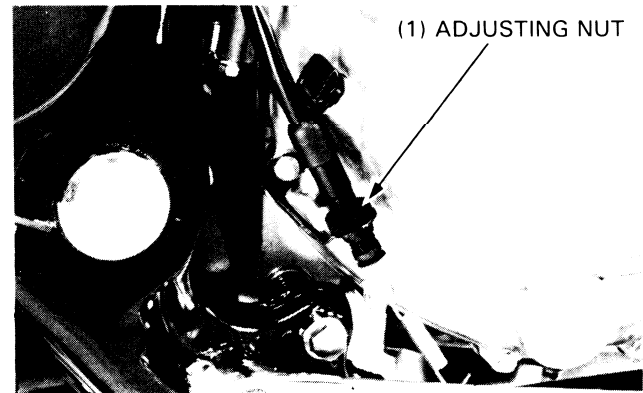


## BRAKE LIGHT SWITCH

### NOTE

- Perform rear brake light switch adjustment after adjusting the brake pedal play and height.
- The front brake light switch does not require adjustment.
- Do not turn the switch body.

Adjust the brake light switch so that the brake light will come on when the brake pedal is depressed 20 mm (3/4 in), and brake engagement begins.



## HEADLIGHT AIM

Adjust vertically by loosening both headlight case mounting screw.

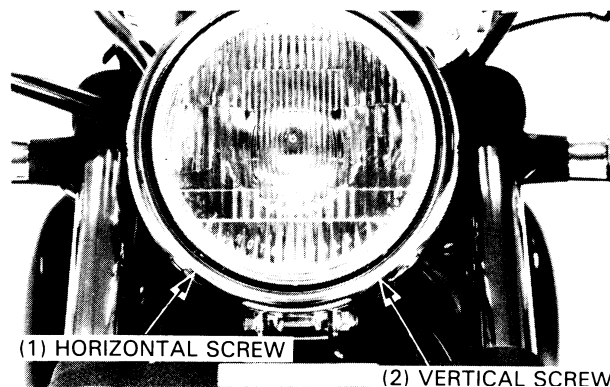
Adjust horizontally by loosening both headlight case mounting screw.

### NOTE

- Adjust the headlight beam as specified by local laws and regulations.

### WARNING

- *An improperly adjusted headlight may blind oncoming drivers, or it may fail to light the road for a safe distance.*



## CLUTCH FLUID

Check the clutch fluid level, with the handlebar so that the reservoir is level.

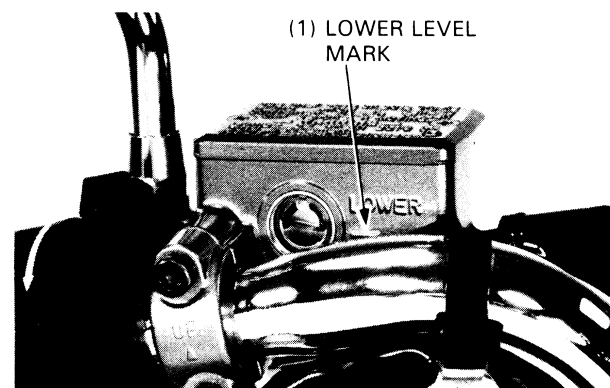
If the fluid nears the lower level mark, check the clutch system for leaks.

Remove the reservoir cap mounting screws and cap.

Fill the reservoir with DOT-3 or DOT-4 BRAKE FLUID.

### CAUTION

- *Do not remove the cover until the handlebar has been turned so that the reservoir is level.*
- *Avoid operating the clutch lever with the cap removed. Fluid will squirt out if the lever is pulled.*
- *Do not mix different types of fluid, as they are not compatible with each other.*



## SIDE STAND

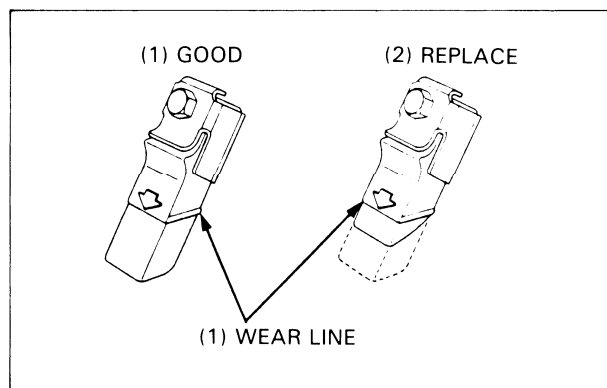
Check the rubber pad for damage or wear.

Replace if any wear extends to any part of wear line as shown.

Check the side stand spring for damage and loss of tension, and the side stand assembly for freedom of movement. Make sure the side stand is not bent.

### NOTE

- When replacing, use a rubber pad with the mark "Over 260 lbs ONLY".
- Spring tension is correct if the measurements fall within 2–3 kg (4.4–6.6 lb), when pulling the side stand lower end with a spring scale.



## SUSPENSION

### WARNING

- *Do not ride a vehicle with faulty suspension. Loose, worn or damaged suspension parts impair vehicle stability and control.*

### FRONT

Check the action of the fork by compressing the front suspension several times.

Check the entire fork assembly for leaks or damage.

Replace damaged components which cannot be repaired.

Tighten all nuts and bolts.

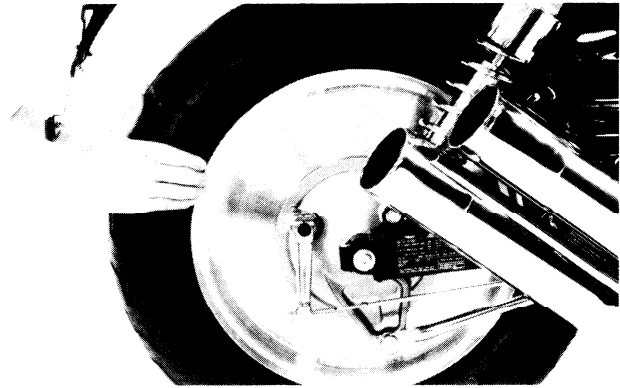


## MAINTENANCE

### REAR

Place a jack or support block under the engine, to raise the rear wheel off the ground.

Move the rear wheel sideways with force to see if the swing-arm bearings are worn. Replace the bearings if there is any looseness (page 14-5).



Check the shock absorbers for leaks or damage.

Tighten all rear suspension nuts and bolts.



### TIRES/WHEELS

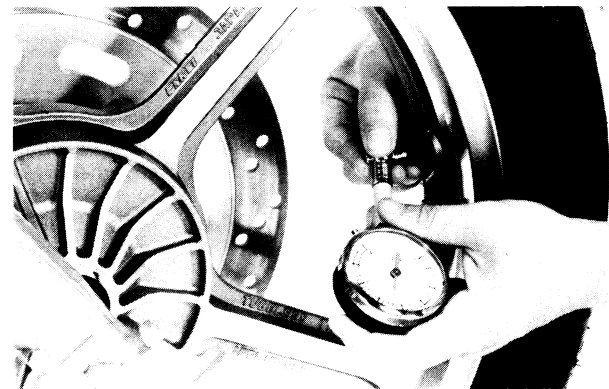
#### NOTE

- Tire pressure should be checked when tires are COLD.

Check the tires for imbedded debris or other damage.

#### RECOMMENDED TIRES AND PRESSURES:

		Front	Rear
Tire sizes		100/90 – 19 57H	150/80 – 15 70H
Cold tire pressures kPa (kg/cm <sup>2</sup> , psi)	Up to 90 kg (200 lbs) load	225 (2.25, 32)	225 (2.25, 32)
	90 kg (200 lbs) load to vehicle capacity load	225 (2.25, 32)	280 (2.80, 42)
Tire brands	BRIDGESTONE	L309	G546
	DUNLOP	F24	K555



Measure the tread depth at the center of the tires.

Replace the tires if the tread depth reaches the following limits:

#### Minimum tread depth:

Front: 1.5 mm (0.06 in)

Rear: 2.0 mm (0.08 in)

Check the front and rear wheels for trueness (pages 13-7 and 14-4).

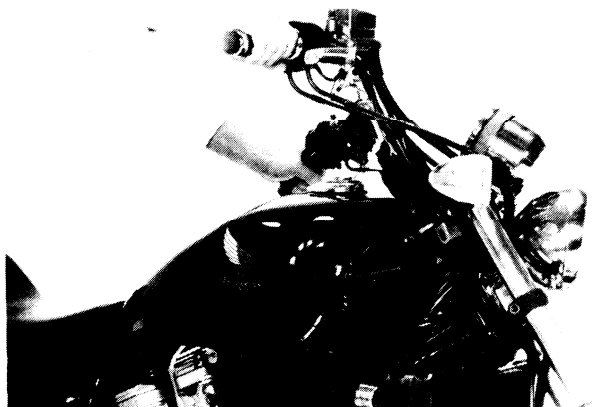


## STEERING HEAD BEARINGS

### NOTE

- Check that the control cables do not interfere with handlebar rotation.

Raise the front wheel off the ground and check that the handlebar rotates freely. If the handlebar moves unevenly, binds, or has vertical movement, adjust the steering head bearings by turning the steering head adjusting nut (page 13-25).



## NUTS, BOLTS, FASTENERS

Check that all chassis nuts and bolts are tightened to their correct torque values (Section 1) at the intervals shown in the Maintenance Schedule (page 3-3).

Check all cotter pins, safety clips, hose clamps and cable stays.