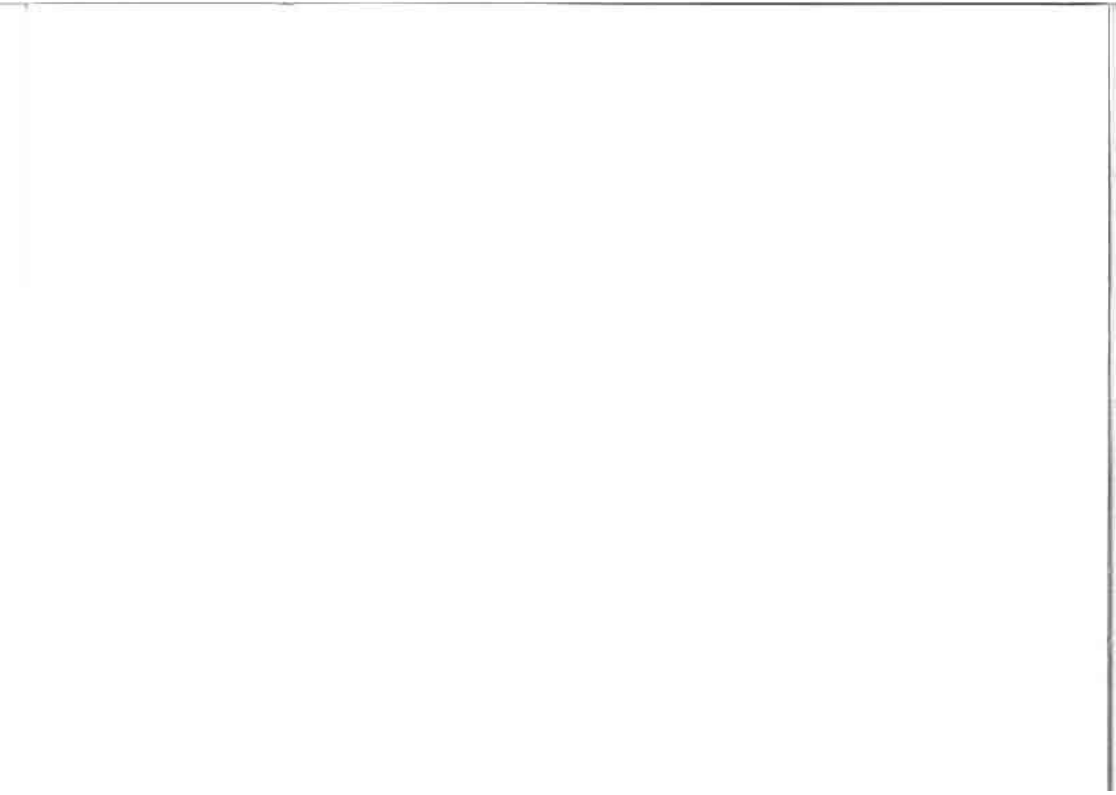




保存版

*Vulcan*

**Motorcycle Owner's Manual**



## EMISSION CONTROL INFORMATION

To protect the environment in which we all live, Kawasaki has incorporated crankcase emission (1) and exhaust emission (2) control systems in compliance with applicable regulations of the United States Environmental Protection Agency and California Air Resources Board. Additionally, Kawasaki has incorporated an evaporative emission control system (3) in compliance with applicable regulations of the California Air Resources Board on vehicle sold in California only.

### **1. Crankcase Emission Control System**

This system eliminates the release of crankcase vapors into the atmosphere. Instead, the vapors are routed through an oil separator to the intake side of the engine. While the engine is operating, the vapors are drawn into the combustion chamber, where they are burned along with the fuel and air supplied by the carburetors.

### **2. Exhaust Emission Control System**

This system reduces the amount of pollutants discharged into the atmosphere by the exhaust of this motorcycle. The fuel and ignition systems of this motorcycle have been carefully designed and constructed to ensure an efficient engine with low exhaust pollutant levels.

### 3. Evaporative Emission Control System

Vapors caused by fuel evaporation in the fuel system are not vented into the atmosphere. Instead, fuel vapors are routed into the running engine to be burned, or stored in a canister when the engine is stopped. Liquid fuel is caught by a vapor separator and returned to the fuel tank.

#### High Altitude Performance Adjustment Information

To improve the EMISSION CONTROL PERFORMANCE of vehicle operated above 4,000 feet, Kawasaki recommends the following Environmental Protection Agency (EPA) approved modification.

#### NOTE

*When properly performed, these specified modifications only are not considered to be emissions system "tampering" and vehicle performance is generally unchanged as a result.*

#### Installation Instructions:

High altitude adjustment requires replacement of certain carburetor components. Installation of these optional parts may be performed by an authorized Kawasaki Dealer, or the consumer, following repair recommendations specified in the appropriate Kawasaki Service Manual

## MAINTENANCE AND WARRANTY

Proper maintenance is necessary to ensure that your motorcycle will continue to have low emission levels. This Owner's Manual contains those maintenance recommendations for your motorcycle. Those items identified by the Periodic Maintenance Chart are necessary to ensure compliance with the applicable standards.

As the owner of this motorcycle, you have the responsibility to make sure that the recommended maintenance is carried out according to the instructions in this Owner's Manual at your own expense.

The Kawasaki Limited Emission Control System Warranty requires that you return your motorcycle to an authorized Kawasaki Dealer for remedy under warranty. Please read the warranty carefully, and keep it valid by complying with the owner's obligations it contains.

You should keep a maintenance record for your motorcycle. To assist you in keeping this record, we have provided space on pages 120 through 122 of this manual where an authorized Kawasaki Dealer, or someone equally competent, can record the maintenance. You should also retain copies of maintenance work orders, bills, etc., as verification of this maintenance.

## **TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED:**

Federal law prohibits the following acts or the causing thereof: (1) the removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use, or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

- \* Replacement of the original exhaust system or muffler with a component not in compliance with Federal regulations.
- \* Removal of the muffler(s) or any internal portion of the muffler(s).
- \* Removal of the air box or air box cover.
- \* Modifications to the muffler(s) or air intake system by cutting, drilling, or other means if such modifications result in increased noise levels.



This warning may apply to any of the following components or any assembly containing one or more of these components:—

Brake Shoes or Pads  
Clutch Friction Material  
Gaskets  
Insulators

#### SAFETY INSTRUCTIONS

- Operate if possible out of doors or in a well ventilated place.
- Preferably use hand tools or low speed tools equipped, if necessary, with an appropriate dust extraction facility. If high speed tools are used, they should always be so equipped.
- If possible, dampen before cutting or drilling.
- Dampen dust and place it in properly closed receptacle and dispose of it safely.

Whenever you see the symbols shown below, heed their instructions! Always follow safe operating and maintenance practices.

**⚠ WARNING**

This warning symbol identifies special instructions or procedures which, if not correctly followed, could result in personal injury, or loss of life.

**⚠ CAUTION**

This caution symbol identifies special instructions or procedures which, if not strictly observed, could result in damage to or destruction of equipment.

**NOTE**

*○ This note symbol indicates points of particular interest for more efficient and convenient operation.*

**NOTICE**

**THIS PRODUCT HAS BEEN MANUFACTURED FOR USE IN A REASONABLE AND PRUDENT MANNER BY A QUALIFIED OPERATOR AND AS A VEHICLE ONLY.**



## FOREWORD

We wish to thank you for choosing this fine Kawasaki Motorcycle. Your new motorcycle is the product of Kawasaki's advanced engineering, exhaustive testing, and continuous striving for superior reliability, safety, and performance.

Read this Owner's Manual before riding so you will be thoroughly familiar with the proper operation of your motorcycle's controls, its features, capabilities and limitations. This manual offers many safe riding tips, but its purpose is not to provide instruction in all the techniques and skills required to ride a motorcycle safely. Kawasaki strongly recommends that all operators of this vehicle enroll in a motorcycle rider training program to attain awareness of the mental and physical requirements necessary for safe motorcycle operation.

To ensure a long, trouble-free life for your motorcycle, give it the proper care and maintenance described in this manual. For those who would like more detailed information on their Kawasaki Motorcycle, a Service Manual is available for purchase from any Kawasaki Dealer. The Service Manual contains detailed disassembly and maintenance information.

Due to improvements in design and performance during production, in some cases there may be minor discrepancies between the actual vehicle and the illustrations and text in this manual.

**KAWASAKI HEAVY INDUSTRIES, LTD.**  
**CONSUMER PRODUCTS & COMPONENTS GROUP**

# ////////////////////// TABLE OF CONTENTS ////////////////////////

<p><b>Specifications</b> . . . . . 8</p> <p><b>Serial Number Locations</b> . . . . . 10</p> <p><b>Consumer Information</b> . . . . . 11</p> <p><b>Location of Parts</b> . . . . . 12</p> <p><b>Location of Labels</b> . . . . . 15</p> <p><b>Loading Information</b> . . . . . 17</p> <p><b>General Information</b> . . . . . 20</p> <p style="padding-left: 20px;">Meter Instruments . . . . . 20</p> <p style="padding-left: 40px;">Speedometer and Tachometer . . . . . 21</p> <p style="padding-left: 40px;">Coolant Temperature Gauge . . . . . 21</p> <p style="padding-left: 40px;">Fuel Gauge . . . . . 22</p> <p style="padding-left: 40px;">Indicator Lights . . . . . 22</p> <p style="padding-left: 40px;">Key . . . . . 23</p> <p style="padding-left: 40px;">Ignition Switch/ Steering Lock . . . . . 23</p> <p style="padding-left: 20px;">Right Handlebar Switches . . . . . 24</p> <p style="padding-left: 40px;">Engine Stop Switch . . . . . 24</p> <p style="padding-left: 40px;">Starter Button . . . . . 25</p> <p style="padding-left: 20px;">Left Handlebar Switches . . . . . 25</p> <p style="padding-left: 40px;">Dimmer Switch . . . . . 25</p> <p style="padding-left: 40px;">Turn Signal Switch . . . . . 26</p> <p style="padding-left: 40px;">Horn Button . . . . . 26</p>	<p style="padding-left: 40px;">Hazard Switch . . . . . 26</p> <p style="padding-left: 20px;">Fuel Tank Cap . . . . . 26</p> <p style="padding-left: 20px;">Fuel Tank . . . . . 27</p> <p style="padding-left: 20px;">Fuel Tap . . . . . 29</p> <p style="padding-left: 20px;">Stands . . . . . 31</p> <p style="padding-left: 20px;">Document/Tool Kit Container . . . . . 32</p> <p style="padding-left: 20px;">Chain Lock . . . . . 32</p> <p style="padding-left: 20px;">Seat . . . . . 33</p> <p style="padding-left: 20px;">Helmet Hooks . . . . . 33</p> <p style="padding-left: 20px;">Electric Accessory Leads . . . . . 34</p> <p><b>Break-In</b> . . . . . 36</p> <p><b>How to Ride the Motorcycle</b> . . . . . 37</p> <p style="padding-left: 20px;">Starting the Engine . . . . . 37</p> <p style="padding-left: 20px;">Jump Starting . . . . . 39</p> <p style="padding-left: 20px;">Moving Off . . . . . 41</p> <p style="padding-left: 20px;">Shifting Gears . . . . . 42</p> <p style="padding-left: 20px;">Braking . . . . . 44</p> <p style="padding-left: 20px;">Stopping the Engine . . . . . 45</p> <p style="padding-left: 20px;">Stopping the Motorcycle in an Emergency . . . . . 45</p> <p style="padding-left: 20px;">Parking . . . . . 46</p>
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<b>Safe Operation</b> . . . . .	48	Rear Shock Absorbers . . . . .	92
Safe Riding Technique . . . . .	48	Wheels . . . . .	96
Daily Safety Checks . . . . .	50	Battery . . . . .	100
Additional Considerations for		Headlight Beam . . . . .	104
High Speed Operation . . . . .	52	Fuses . . . . .	106
<b>Maintenance and Adjustment</b> . . . . .	54	Fuel System . . . . .	107
Periodic Maintenance Chart . . . . .	55	General Lubrication . . . . .	109
Engine Oil . . . . .	58	Bolt and Nut Tightening . . . . .	111
Cooling System . . . . .	62	Cleaning . . . . .	113
Final Gear Case Oil . . . . .	70	<b>Storage</b> . . . . .	115
Spark Plugs . . . . .	73	<b>Troubleshooting Guide</b> . . . . .	117
Valve Clearance . . . . .	74	<b>Owner Satisfaction</b> . . . . .	118
Evaporative Emission		<b>Maintenance Record</b> . . . . .	120
Control System . . . . .	74		
Kawasaki Clean Air System . . . . .	75		
Air Cleaner . . . . .	76		
Throttle Grip . . . . .	78		
Choke Lever . . . . .	79		
Carburetors . . . . .	81		
Clutch . . . . .	83		
Brakes . . . . .	85		
Brake Light Switches . . . . .	90		

## //////////////////// SPECIFICATIONS //////////////////////

### PERFORMANCE

Minimum Turning Radius	2.9 m (114.2 in)
Braking Distance	12.5 m from 50 km/h (41 ft from 31 mph)

### DIMENSIONS

Overall Length	2,295 mm (90.35 in)
Overall Width	850 mm (33.5 in)
Overall Height	1,225 mm (48.23 in)
Wheelbase	1,580 mm (62.20 in)
Road Clearance	150 mm (5.91 in)
Dry Weight	219 kg (483 lb) <sup>(Cal)</sup> 219.5 kg (484 lb)

### ENGINE

Type	DOHC, V-type 2-cylinder, 4-stroke, liquid-cooled
Displacement	749 mL (45.7 cu in)
Bore x Stroke	84.9 x 66.2 mm (3.34 x 2.61 in)
Compression Ratio	10.3 : 1
Starting System	Electric Starter
Cylinder Numbering Method	Front to Rear, 1-2
Firing Order	1-2
Carburetors	Keihin CVK34 x2
Ignition System	Battery and coil (transistorized ignition)
Ignition Timing	5° BTDC @1,100 r/min (rpm) –
(Electronically advanced)	25° BTDC @3,500 r/min (rpm)
Spark Plugs	NGK DP7EA-9 or ND X22EP-U9 <sup>(C)</sup> NGK DPR7EA-9 or ND X22EPR-U9
Lubrication System	Forced lubrication (wet sump)
Engine Oil	SE or SF class SAE 10W40, 10W50, 20W40, or 20W50
Engine Oil Capacity	4.0 L (4.2 US qt)
Coolant Capacity	1.5 L (1.6 US qt)

## TRANSMISSION

Transmission Type	5-speed, constant mesh, return shift
Clutch Type	Wet, multi disc
Driving System	Shaft drive
Primary Reduction Ratio	2.428 (85/35)
Final Reduction Ratio	2.522 (15/22 x 37/10)
Overall Drive Ratio	5.251 (Top gear)
Gear Ratio: 1st	2.250 (36/16)
2nd	1.600 (32/20)
3rd	1.230 (32/26)
4th	1.000 (26/26)
5th	0.857 (24/28)
Final Gear Case Oil	API GL-5 SAE 90 [above 5°C (41°F)] SAE 80 [below 5°C (41°F)]
Final Gear Case Oil Capacity	150 mL (0.16 US qt)

## FRAME

Castor	32°
Trail	127 mm (5.0 in)
Tire Size: Front	100/90-19 57H Tubeless
Rear	150/90-15 M/C 74H Tubeless
Fuel Tank Capacity	13.5 L (3.57 US gal)

## ELECTRICAL EQUIPMENT

Battery	12 V 14 Ah
Headlight	12 V 60/55 W
Tail/Brake Light	12 V 8/27 W x 2

© : Canadian model

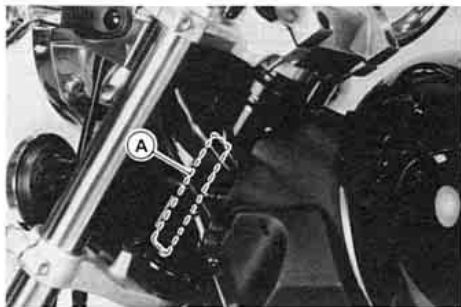
Cal : California model

Specifications subject to change without notice.

## //////////////// SERIAL NUMBER LOCATIONS //////////////////

The engine and frame serial numbers are used to register the motorcycle. They are the only means of identifying your particular machine from others of the same model type. These serial numbers may be needed by your dealer when ordering parts. In the event of theft, the investigating authorities will require both numbers as well as the model type and any peculiar features of your machine that can help them identify it.

**Frame No.**



**A. Frame Number**

**Engine No.**



**A. Engine Number**

////////////////////////////////////// CONSUMER INFORMATION //

### Vehicle Minimum Stopping Distance on Dry Pavement

These figures indicate braking performance that can be met or exceeded by the vehicle to which they apply, without locking the wheels, under different conditions of loading. The information presented represents results obtainable by skilled drivers under controlled road and vehicle conditions, and the information may not be correct under other conditions.

Description of vehicle to which this table applies: Model VN750-A6

#### A. Fully Operational Service Brake

Load: Light



Maximum



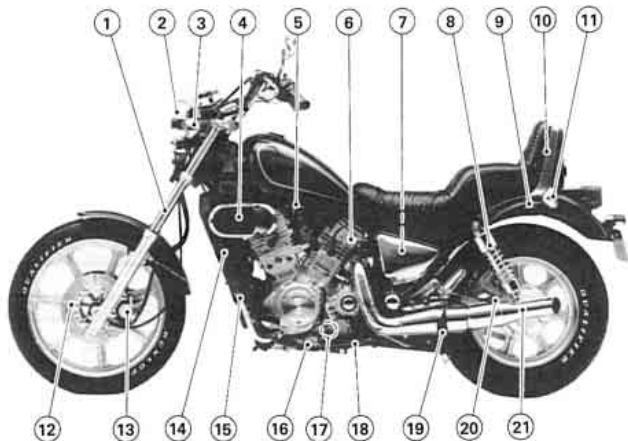
0 50 100 150 200

Stopping distance in feet from 60 mph.

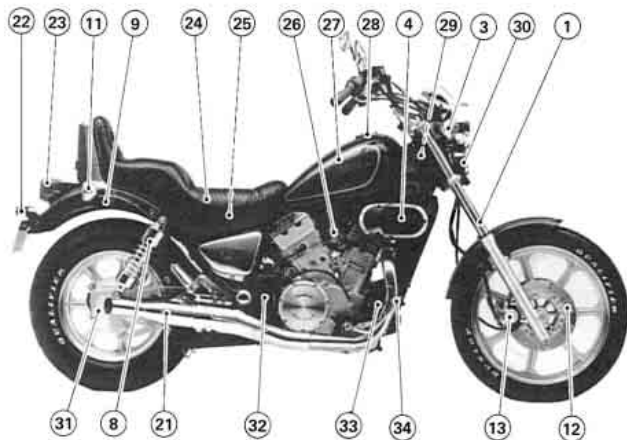
Manufacturer: **Kawasaki Heavy Industries, Ltd.**

## LOCATION OF PARTS

1. Front Fork
2. Headlight
3. Turn Signal/Running Position Light
4. Air Cleaner Element
5. Fuel Tap
6. Air Suction Valve Cover
7. Fuse
8. Rear Shock Absorber
9. Helmet Hook
10. Document/Tool Kit Container
11. Turn Signal Light
12. Brake Disc
13. Brake Caliper
14. Radiator
15. Shift Pedal
16. Side Stand Switch
17. Oil Level Gauge
18. Side Stand
19. Center Stand
20. Final Gear Case
21. Muffler

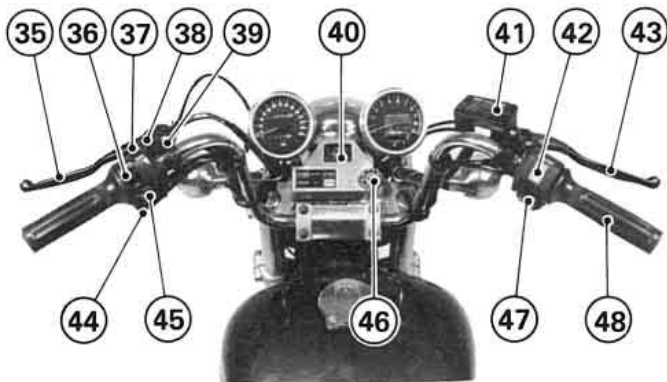




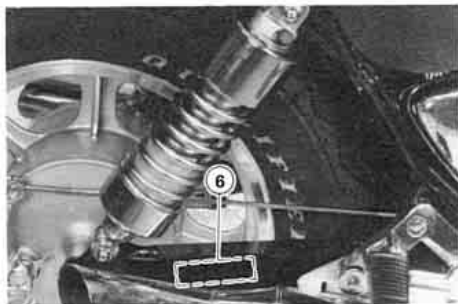
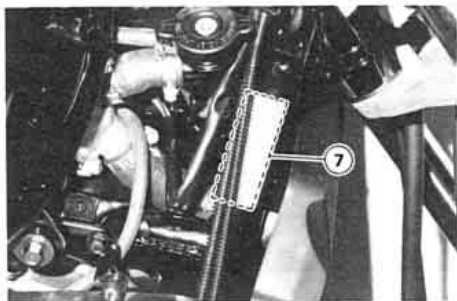
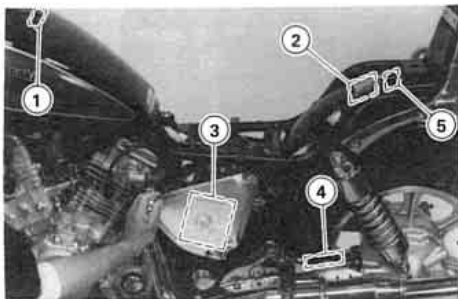


- 22. License Plate Light
- 23. Tail/Brake Light
- 24. Seat
- 25. Battery
- 26. Carburetor
- 27. Fuel Tank
- 28. Fuel Tank Cap
- 29. Radiator Cap
- 30. Horn
- 31. Brake Lining Wear Indicator
- 32. Coolant Reserve Tank
- 33. Rear Brake Light Switch
- 34. Rear Brake Pedal

- 35. Clutch Lever
- 36. Dimmer Switch
- 37. Hazard Switch
- 38. Choke Lever
- 39. Starter Lockout Switch
- 40. Meter Instruments
- 41. Brake Fluid Reservoir (Front)
- 42. Engine Stop Switch
- 43. Front Brake Lever
- 44. Horn Button
- 45. Turn Signal Switch
- 46. Ignition Switch/  
Steering Lock
- 47. Starter Button
- 48. Throttle Grip



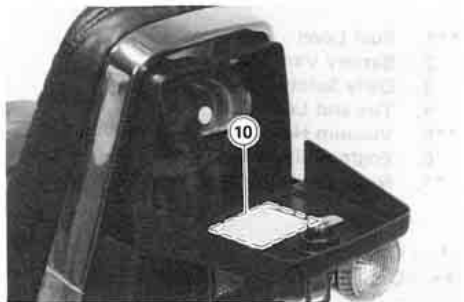
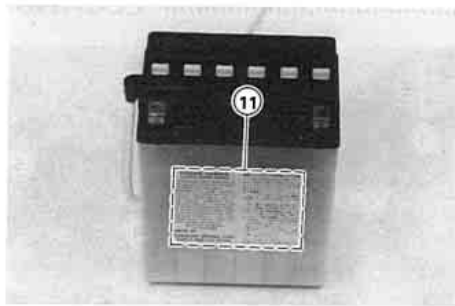
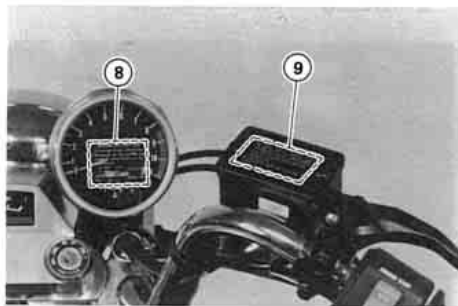
## LOCATION OF LABELS



- \*\*1. Fuel Level
- 2. Battery Vent Hose
- 3. Daily Safety Checks
- 4. Tire and Load Data
- \*\*5. Vacuum Hose Routing Diagram
- 6. Engine Oil and Oil Filter
- \*7. Noise Emission Control Information

\* : Only on US model

\*\* : Only on California model



- \*8. Break-In Caution
- 9. Brake Fluid
- \*10. Vehicle Emission Control Information
- 11. Battery Poison/Danger

\* only on US model

## ////////// LOADING INFORMATION //////////

### **⚠ WARNING**

Incorrect loading, improper installation or use of accessories, or modification of your motorcycle may result in an unsafe riding condition. Before you ride the motorcycle, make sure that the motorcycle is not overloaded (refer to page 97 for maximum load information) and that you have followed these instructions.

With the exception of genuine Kawasaki Parts and Accessories, Kawasaki has no control over the design or application of accessories. In some cases, improper installation or use of accessories, or motorcycle modification, will void the motorcycle warranty. In selecting and using accessories, and in

loading the motorcycle, you are personally responsible for your own safety and the safety of other persons involved.

### **NOTE**

○*Kawasaki Parts and Accessories have been specially designed for use on Kawasaki motorcycles. We strongly recommend that all parts and accessories you add to your motorcycle be genuine Kawasaki components.*

Because a motorcycle is sensitive to changes in weight and aerodynamic forces, you must take extreme care in carrying cargo, passengers and/or in the fitting of additional accessories. The following general guidelines have been prepared to assist you in making your determinations.

1. Any passenger should be thoroughly familiar with motorcycle operation. The passenger can affect control of the motorcycle by improper positioning during cornering and sudden movements. It is important that the passenger sit still while the motorcycle is in motion and not interfere with the operation of the motorcycle. Do not carry animals on your motorcycle.
2. You should instruct any passenger before riding to keep his feet on the passenger footpegs and hold on to the operator, seat strap, or grab rail. Do not carry a passenger unless he or she is tall enough to reach the footpegs and footpegs are provided.
3. All baggage should be carried as low as possible to reduce the effect on the motorcycle center of gravity. Baggage weight should also be distributed equally on both sides of the motorcycle. Avoid carrying baggage that extends beyond the rear of the motorcycle. Do not carry animals on your motorcycle.
4. Baggage should be securely attached. Make sure that the baggage will not move around while you are riding. Recheck baggage security as often as possible (not while the motorcycle is in motion) and adjust as necessary.
5. Do not carry heavy or bulky items on a luggage rack. They are designed for light items, and overloading can affect handling due to changes in weight distribution and aerodynamic forces.
6. Do not install accessories or carry baggage that impairs the performance of the motorcycle. Make sure that you have not adversely affected any

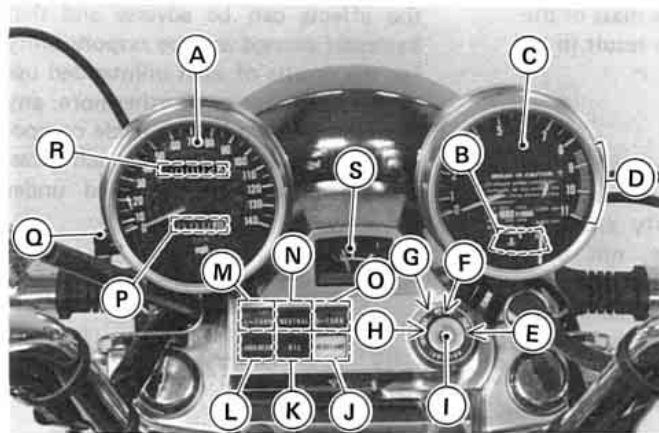
lighting component, road clearance, banking capability (i.e., lean angle), control operation, wheel travel, front fork movement, or any other aspect of the motorcycle's operation.

7. Weight attached to the handlebar or front fork will increase the mass of the steering assembly and can result in an unsafe riding condition.
8. Fairings, windshields, backrests, and other large items have the capability of adversely affecting stability and handling of the motorcycle, not only because of their weight, but also due to the aerodynamic forces acting on these surfaces while the motorcycle is in operation. Poorly designed or installed items can result in an unsafe riding condition.

9. This motorcycle was not intended to be equipped with a sidecar or to be used to tow any trailer or other vehicle. Kawasaki does not manufacture sidecars or trailers for motorcycles and cannot predict the effects of such accessories on handling or stability, but can only warn that the effects can be adverse and that Kawasaki cannot assume responsibility for the results of such unintended use of the motorcycle. Furthermore, any adverse effects on motorcycle components caused by the use of such accessories will not be remedied under warranty.

# GENERAL INFORMATION

## Meter Instruments



- A. Speedometer
- B. Coolant Temperature Gauge
- C. Tachometer
- D. Red Zone
- E. P (Park) position
- F. ON position
- G. OFF position
- H. LOCK position
- I. Ignition Switch/Steering Lock
- J. Headlight Failure Indicator Light
- K. Oil Pressure Warning Light
- L. High Beam Indicator Light
- M. Left Turn Signal Indicator Light
- N. Neutral Indicator Light
- O. Right Turn Signal Indicator Light
- P. Trip Meter
- Q. Reset Knob
- R. Odometer
- S. Fuel Gauge



## Speedometer and Tachometer

The speedometer shows the speed of the vehicle. In the speedometer face are the odometer and trip meter. The odometer shows the total distance that the vehicle has been ridden. The trip meter shows the distance traveled since it was last reset to zero. The trip meter can be reset to zero by turning the reset knob counterclockwise.

The tachometer shows the engine speed in the revolutions per minute (r/min, rpm). On the right side of the tachometer face is a portion called the "red zone". Engine r/min (rpm) in the red zone is above maximum recommended engine speed and is also above the range for good performance.

### CAUTION

Engine r/min (rpm) should not be allowed to enter the red zone; operation

in the red zone will overstress the engine and may cause serious engine damage.

## Coolant Temperature Gauge

The coolant temperature gauge is in the tachometer face. This gauge shows the temperature of coolant. Ordinarily, the needle should stay within the white zone. If the needle reaches the "H" line (red zone), stop the engine and check the coolant level in the reserve tank after the engine cools down.

### CAUTION

Do not let the engine continue running when the gauge needle reaches the "H" line (red zone). Prolonged engine operation will result in severe damage from overheating.

## Fuel Gauge

The fuel gauge shows the amount of fuel in the fuel tank. When the needle comes near the E(empty) position, turn the fuel tap to RES, and refuel at the earliest opportunity.

### NOTE

○*Make certain that the fuel tap is turned to ON (Not RES), after filling up the fuel tank.*

## Indicator Lights

**TURN:** When the turn signal switch is turned to left or right, the corresponding turn signal indicator light flashes on and off.

**NEUTRAL:** When the transmission is in neutral, the neutral indicator light is lit.

**HIGH BEAM:** When the headlight is on high beam, the high beam indicator light is lit.

**OIL:** The oil pressure warning light goes on whenever the oil pressure is dangerously low or the ignition switch is in the ON position with the engine not running, and goes off when the engine oil pressure is high enough. Refer to the Maintenance and Adjustment chapter for more detailed engine oil information.

**HEAD LAMP:** If either the high or low beam burns out, the reserve lighting system switches over to the remaining filament automatically, and lights the headlight failure indicator light to show that the headlight bulb must be replaced.

## Key

This motorcycle has a combination key, which is used for the ignition switch, steering lock, fuel tank cap, document/tool kit container, and helmet hook.

Blank keys are available at your Kawasaki Dealers. Ask your Dealer to make any additional spare keys you may need, using your original key as a master.

## Ignition Switch/Steering Lock

This is a four-position, key-operated switch. The key can be removed from the switch when it is in the OFF, LOCK, or P(PARK) position.

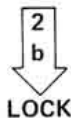
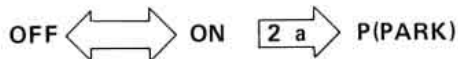
OFF	Engine off. All electrical circuits off.
ON	Engine on. All electrical equipment can be used.
LOCK	Steering locked. Engine off. All electrical circuits off.
P (PARK)	Steering locked. Engine off. Taillight and license plate light on. Turn signal circuit on. All other electrical circuits cut off.

## NOTE

○The tail, running position, and license plate lights are on whenever the ignition switch is in the ON position. The headlight goes on when the starter button is released after starting the engine. To avoid battery discharge, always start the engine immediately after turning the ignition switch to ON.

○If you leave the **PARK** position on for a long time (one hour), the battery may become totally discharged.

**To operate the ignition switch:**



1. Turn the handlebar fully to the left.
2. a. For parking push down the key in the ON position and turn it to P (Park).  
b. For locking push down the key in the OFF position and turn it to LOCK.

## Right Handlebar Switches

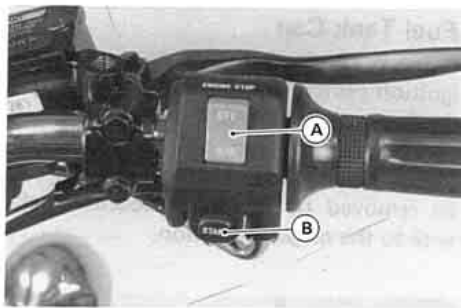
### Engine Stop Switch

In addition to the ignition switch, the engine stop switch must be in the RUN position for the motorcycle to operate.

The engine stop switch is for emergency use. If some emergency requires stopping the engine, move the engine stop switch to the OFF position.

### NOTE

○Although the engine stop switch stops the engine, it does not turn off all the electrical circuits. Ordinarily, the ignition switch should be used to stop the engine.



**A. Engine Stop Switch    B. Starter Button**

### Starter Button

The starter button operates the electric starter when pushed with the clutch lever pulled in or the transmission in neutral.

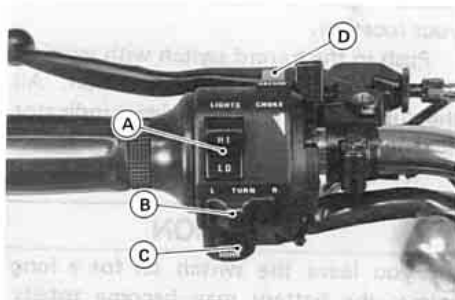
### **▲ CAUTION**

Refer to the Starting the Engine section of the "How to Ride the Motorcycle" chapter to start the engine.

## Left Handlebar Switches

### Dimmer Switch

High or low beam can be selected with the dimmer switch. When the headlight is on high beam (HI), the high beam indicator light is lit.



**A. Dimmer Switch                      C. Horn Button**  
**B. Turn Signal Switch                D. Hazard Switch**

## Turn Signal Switch

When the turn signal switch is turned to L (left) or R (right), the corresponding turn signals flash on and off.

## Horn Button

When the horn button is pushed, the horn sounds.

## Hazard Switch

If an emergency requires you to park on the highway shoulder, turn on the hazard lights to warn other drivers of your location.

Push in the hazard switch with ignition switch in the ON or PARK position. All the turn signals and turn signal indicator lights will flash on and off.

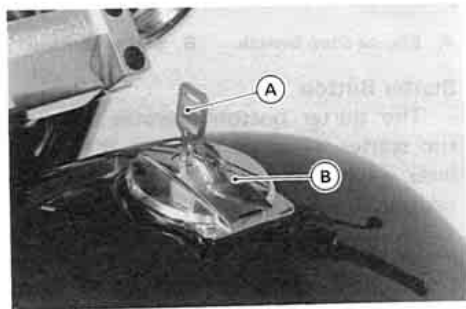
### **▲ CAUTION**

If you leave the switch on for a long time, the battery may become totally discharged. So be careful not to use the hazard lights for more than 30 minutes.

## Fuel Tank Cap

To open the fuel tank cap, insert the ignition switch key into the lock and turn the key to the right.

To close the cap, push it down into place with the key inserted. The key can be removed by turning it counterclockwise to the original position.



A. Ignition Switch Key

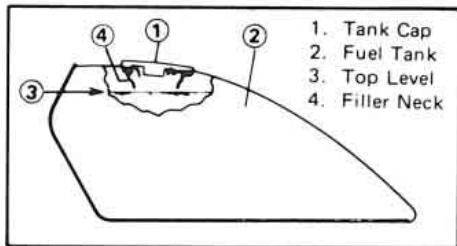
B. Fuel Tank Cap

## NOTE

- *The tank cap cannot be closed without the key inserted, and the key cannot be removed unless the cap is locked properly.*
- *Do not push the cap down with the key, or the cap cannot be locked.*

## Fuel Tank

The following octane rating gasoline is recommended in the fuel tank. Avoid filling the tank in the rain or where heavy dust is blowing so that the fuel does not get contaminated.



## ⚠ WARNING

Gasoline is extremely flammable and can be explosive under certain conditions. Turn the ignition switch OFF. Do not smoke. Make sure the area is well ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light.

Never fill the tank so the fuel level rises into the filler neck. If the tank is overfilled, heat may cause the fuel to expand and overflow through the vents in the tank cap.

After refueling, make sure the tank cap is closed securely.

If gasoline is spilled on the fuel tank, wipe it off immediately.

## ⚠ CAUTION

California models only: Never fill the tank so the fuel level rises into the filler

neck. If the tank is overfilled, heat may cause the fuel to expand and flow into the Evaporative Emission Control System resulting in hard starting and engine hesitation.

#### Fuel Requirement:

##### *Octane Rating*

The octane rating of a gasoline is a measure of its resistance to detonation or "knocking". Use a gasoline with an octane rating equal to or higher than that shown in the table below.

Octane Rating Method	Minimum Rating
Antiknock Index $\frac{(\text{RON} + \text{MON})}{2}$	87
Research Octane No. (RON)	91

The Antiknock Index is an average of the Research Octane No. (RON) and the Motor Octane No. (MON). The Antiknock Index is posted on service station pumps in the U.S.A. Research

Octane No. is a commonly used term describing a gasoline's octane rating.

#### NOTE

*○If "knocking" or "pinging" occurs, use a different brand of gasoline or higher octane rating.*

#### *Gasoline and Alcohol Blends*

Blends of gasoline and alcohol called "gasohol" can be used on an occasional basis, however continued use is not recommended. Switch back immediately to gasoline which does not contain alcohol if you experience any operating irregularities. Any deterioration of fuel system components or degradation of performance resulting from the use of gasohol will not be covered by Kawasaki's Limited Warranty, Emissions Warranties, or Good Times Protection Plan. If you decide to use gasohol, be sure to follow these simple cautions:



## **▲ CAUTION**

Never use gasohol with an octane rating lower than the minimum octane rating specified by Kawasaki for this product.

Never use gasohol containing more than 10% ethanol (grain alcohol).

Never use gasohol containing more than 5% methanol (wood alcohol).

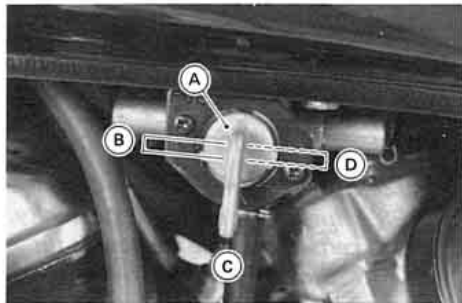
Gasoline containing methanol must also be blended with cosolvents and corrosion inhibitors.

Never use gasohol for extended periods and never store this product with gasohol in the fuel system.

Gasoline containing alcohol can cause paint damage. Be extra careful not to spill gasohol during refueling.

## **Fuel Tap**

The fuel tap has three positions: OFF, ON, and RES (reserve). For normal operation turn the tap to the ON position. If the fuel runs out with the tap in the ON position, the last 1.8 L (0.48 US gal) of fuel can be used by turning the fuel tap to the RES position.



A. Fuel Tap  
B. RES position

C. ON position  
D. OFF position

With the fuel tap in the ON or RES position fuel flows to carburetors only when the engine is started or is running, and fuel supply is shut off when the engine is stopped.

Turn the fuel tap to the OFF position when the fuel tank is removed for maintenance and adjustments or the motorcycle is stored for a long time.

#### NOTE

- *Since riding distance is limited when on RES, refuel at the earliest opportunity.*
- *Make certain that the fuel tap is turned to ON (Not RES) after filling up the fuel tank.*

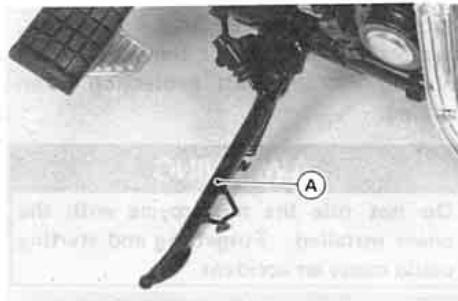
#### **▲ WARNING**

**Practice operating the fuel tap with the motorcycle stopped. To prevent an accident you should be able to operate the fuel tap while riding without taking your eyes off the road.**

**Be careful not to touch the hot engine while operating the fuel tap.**

## Stands

The motorcycle is equipped with two stands: a center stand and a side stand.



A. Side Stand

### NOTE

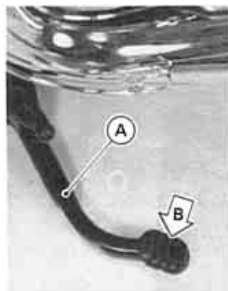
○When using the side stand, turn the handlebar to the left.

Whenever the side or center stand is used, make it a practice to kick the stand fully up before sitting on the motorcycle.

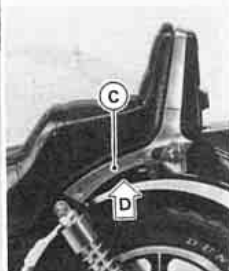
## ⚠WARNING

Forgetting and leaving the side stand down and riding away could cause an accident.

To set the motorcycle up on the center stand, step down firmly on the stand, and then lift the motorcycle up and to the rear using the grab rail as a handhold. Don't pull up on the seat to lift it as this will damage the seat.



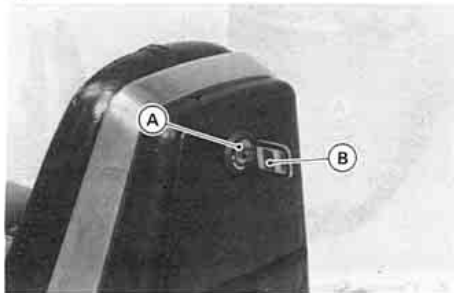
A. Center Stand  
B. Step down



C. Grab Rail  
D. Lift up

## Document/Tool Kit Container

Use this container to keep the owner's manual and any papers or documents which should be kept with the motorcycle, and tool kit with which minor adjustments and replacement of parts explained in this manual can be performed. Also store the chain lock for anti-theft in this container. To open the container, insert the ignition switch key into the container lock and turn it to the right.



A. Container Lock

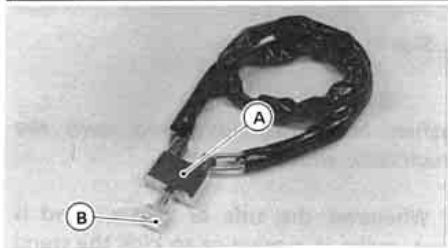
B. Ignition Switch Key

## Chain Lock

The chain lock is stored in the document/tool kit container. Route the chain through the wheel and around the front forks or the rear shock absorbers, then lock it to prevent the wheel from rotating for anti-theft protection when parking.

### **⚠ WARNING**

**Do not ride the motorcycle with the chain installed. Forgetting and starting could cause an accident.**



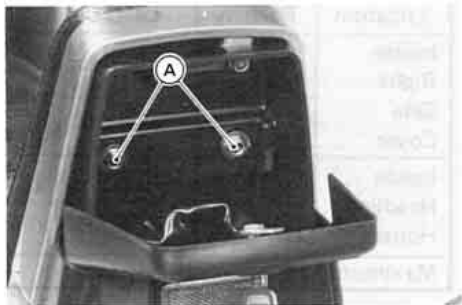
A. Chain Lock

B. Key

## Seat

Seat can be removed as follows.

1. Open the document/tool kit container.
2. Remove the bolts from the seat mounting bracket, and lift the seat up and to the rear.



A. Bolts

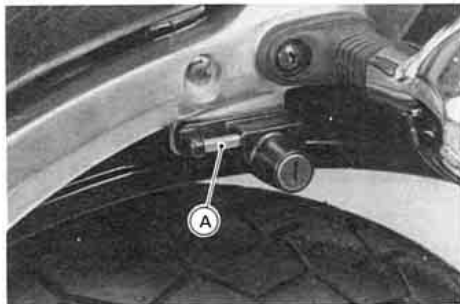
## Helmet Hooks

Helmets can be secured to the motorcycle using the helmet hooks.

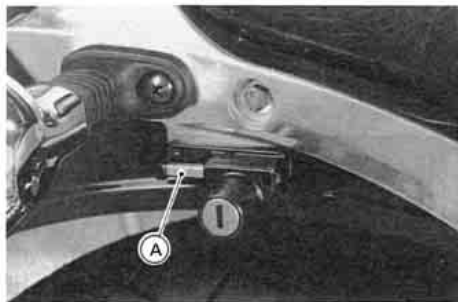
The helmet hook can be unlocked by inserting the ignition switch key into the lock, and turning the key to the right.

### **⚠ WARNING**

Do not ride the motorcycle with helmets attached to the hooks. The helmets could cause an accident by distracting the operator or interfering with normal vehicle operation.



A. Helmet Hook



A. Helmet Hook

## Electric Accessory Leads

The electric power of the battery can be used through the electric accessory leads regardless of ignition switch position. Observe and follow the notes listed below.

### Electric Accessory Leads

Location	Polarity	Lead Color
Inside Right Side Cover	(+)	White/Black
	(-)	Yellow/Black
Inside Headlight Housing	(+)	White/Blue
	(-)	Yellow/Black
Maximum Current:		10A

### **⚠ CAUTION**

Whenever you leave the motorcycle, stop using the electric accessories. Be careful not to discharge the battery

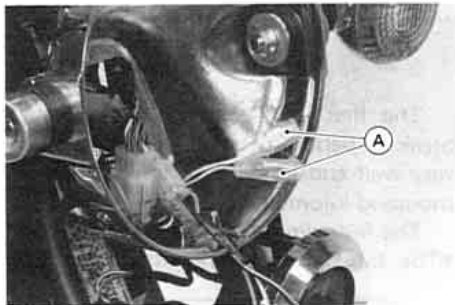
totally. For example, if a current of 20 amperes is continuously taken out with the engine stopped, even an originally-fully-charged battery may become totally discharged in about 20 minutes.

**⚠ WARNING**

Take care not to pinch any lead between the seat and the frame or between other parts to avoid a short circuit.



A. Electric Accessory Leads



A. Electric Accessory Leads

## ////////////////////// BREAK-IN ////////////////////////

The first 1,600 km (1,000 mi) that the motorcycle is ridden is designated as the break-in period. If the motorcycle is not used carefully during this period, you may very well end up with a "broken down" instead of a "broken in" motorcycle after a few thousand kilometers.

The following rules should be observed during the break-in period.

- The table shows maximum recommended engine speed during the break-in period.

Distance traveled	Maximum engine speed
0 ~ 800 km (0 ~ 500 mi)	4,000 r/min (rpm)
800 ~ 1,600 km (500 ~ 1,000 mi)	6,000 r/min (rpm)

- Do not start moving or race the engine immediately after starting it, even if the engine is already warm. Run the engine for two or three minutes at idle speed to give the oil a chance to work up into all the engine parts.
- Do not race the engine while the transmission is in neutral.

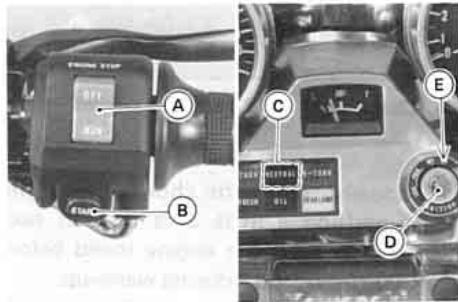
In addition to the above, at 800 km (500 mi) it is extremely important that the owner have the initial maintenance service performed by a competent mechanic following the procedures in the Service Manual.



## //////////////////// HOW TO RIDE THE MOTORCYCLE //////////////////////

### Starting the Engine

- Check that the engine stop switch is in the RUN position.
- Turn the ignition switch on.
- Make certain the transmission is in neutral or the clutch is disengaged.



- A. Engine Stop Switch  
B. Starter Button  
C. Neutral Indicator Light  
D. Ignition Switch  
E. ON position

- If the engine is cold, pull the choke lever all the way.



A. Choke Lever

### NOTE

- When the engine is already warm or on hot days [higher than 35°C (95°F)], open the throttle part way instead of using the choke, and then start the engine.

- Leaving the throttle completely closed, push the starter button with the clutch lever pulled in until the engine starts.

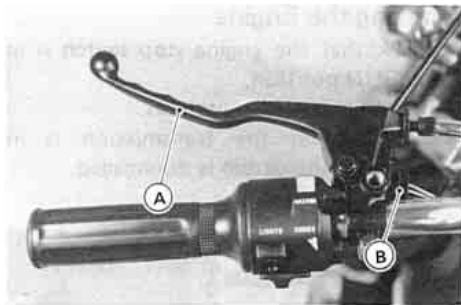
### ⚠CAUTION

Do not operate the starter continuously for more than 5 seconds or the starter will overheat and the battery power will drop temporarily. Wait 15 seconds between each operation of the starter to let it cool and the battery power recover.

### NOTE

- If the engine is flooded, crank the engine over with the throttle fully open until the engine starts.
- This motorcycle is equipped with a starter lockout switch. This switch prevents the electric starter from operat-

*ing when the clutch is engaged and the transmission is not in neutral.*



A. Clutch Lever    B. Starter Lockout Switch

- Gradually return the choke toward the off position a little at a time as necessary to keep the engine speed below 2,000 r/min (rpm) during warm-up.
- When the engine is warmed up enough to idle without using the choke, return the choke to the off position.

## NOTE

*○If you drive the motorcycle before the engine is warmed up, return the choke to the off position after you have driven the motorcycle for 15 seconds.*

### **▲ CAUTION**

Do not let the engine idle longer than five minutes, or engine overheating and damage may occur.

## Jump Starting

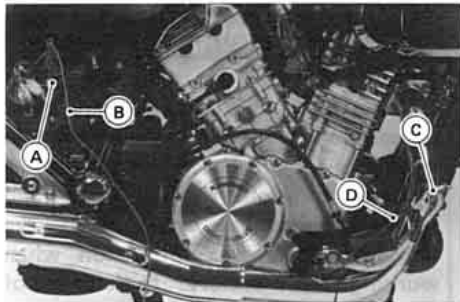
If your motorcycle battery is "run down," it should be removed and charged. If this is not practical, a 12 volt booster battery and jumper cables may be used to start the engine.

### **▲ WARNING**

Battery acid generates hydrogen gas which is flammable and explosive under certain conditions. It is present within a battery at all times, even in a discharged condition. Keep all flames and sparks (cigarettes) away from the battery. Wear eye protection when working with a battery. In the event of battery acid contact with skin, eyes, or clothing, wash the affected areas immediately with water for at least five minutes. Seek medical attention.

### Connecting Jumper Cables

- Make sure the ignition switch is turned "OFF".
- Connect a jumper cable from the positive (+) terminal of the booster battery to the positive (+) battery cable at the starter relay terminal.



- A. Positive (+) Starter Relay Terminal
- B. To Booster Battery Positive (+) Terminal
- C. Unpainted Metal Surface
- D. To Booster Battery Negative (-) Terminal

- Connect another jumper cable from the negative (-) terminal of the booster battery to your motorcycle rear brake pedal or other unpainted metal surface. Do not use the negative (-) terminal of the battery.

### **⚠ WARNING**

Do not make this last connection at the carburetor or battery. Take care that you do not touch the positive and negative cables together, and do not lean over the battery when making this last connection. Do not jump start a frozen battery. It could explode.

Do not reverse polarity by connecting positive (+) to negative (-) or a battery explosion and serious damage to the electrical system may occur.

- Follow the standard engine starting procedure.

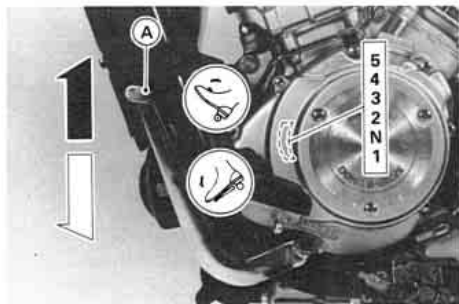
## **⚠ CAUTION**

**Do not operate the starter continuously for more than 5 seconds or the starter will overheat and the battery power will drop temporarily. Wait 15 seconds between each operation of the starter to let it cool and the battery power recover.**

- After the engine starts, disconnect the jumper cables. Disconnect the positive (+) cable from the motorcycle first.

## **Moving Off**

- Check that the side stand is up.
- Pull in the clutch lever.
- Shift into 1st gear.
- Open the throttle a little, and start to let out the clutch lever very slowly.
- As the clutch starts to engage, open the throttle a little more, giving the engine just enough fuel to keep it from stalling.



**A. Shift Pedal**

## NOTE

- *The motorcycle is equipped with a side stand switch. This switch is designed so that the engine stops if the clutch is engaged with the transmission in gear when the side stand has been left down.*

## Shifting Gears

- Close the throttle while pulling in the clutch lever.
- Shift into the next higher or lower gear. For smooth riding, shift up or down when the motorcycle is operated at the speeds shown in the table below.

### **⚠ WARNING**

When shifting down to a lower gear, do not shift at such a high speed that the engine r/min (rpm) jumps excessively. Not only can this cause engine damage, but the rear wheel may skid and cause an accident. Downshifting should be done below 5,000 r/min (rpm) for each gear.

- Open the throttle part way, while releasing the clutch lever.

## NOTE

- *The transmission is equipped with an automatic neutral finder. When the motorcycle is standing still, the transmission cannot be shifted past neutral from 1st gear. To use the automatic neutral finder, shift down to 1st gear, then lift up on the shift pedal while standing still. The transmission will shift only into neutral.*

### Vehicle speed when shifting

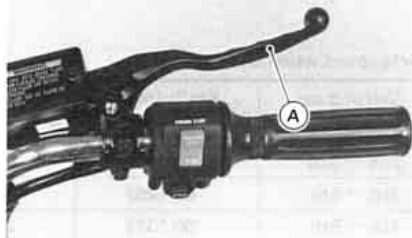
Shifting up	km/h (mph)	Shifting down	km/h (mph)
1st → 2nd	20 (12)	5th → 4th	30 (19)
2nd → 3rd	30 (19)	4th → 3rd	20 (12)
3rd → 4th	40 (25)	3rd → 2nd	15 (9)
4th → 5th	50 (31)	2nd → 1st	15 (9)

## Braking

- Close the throttle completely, leaving the clutch engaged (except when shifting gears) so that the engine will help slow down the motorcycle.
- Shift down one gear at a time so that you are in 1st gear when you come to a complete stop.
- When stopping, always apply both brakes at the same time. Normally the front brake should be applied a little more than the rear. Shift down or fully disengage the clutch as necessary to keep the engine from stalling.
- Never lock the brakes, or it will cause the tires to skid. When turning a corner, it is better not to brake at all; but if this is unavoidable, use only the rear brake.
- For emergency braking, disregard downshifting, and concentrate on applying the brakes as hard as possible without skidding.

### ⚠ CAUTION

In order to protect the emission control parts, do not turn off the ignition switch when the motorcycle is in motion.



A. Front Brake Lever





**A. Rear Brake Pedal**

## **Stopping the Engine**

- Close the throttle completely.
- Shift the transmission into neutral.
- Turn the ignition switch off.
- Support the motorcycle on a firm level surface with the side or center stand.
- Lock the steering.

## **Stopping the Motorcycle in an Emergency**

Your Kawasaki Motorcycle has been designed and manufactured to provide you optimum safety and convenience. However, in order to fully benefit from Kawasaki's safety engineering and craftsmanship, it is essential that you, the owner and operator, properly maintain your motorcycle and become thoroughly familiar with its operation. Improper maintenance and insufficient riding skills can create a dangerous situation known as throttle failure. Two of the most common causes of throttle failure are:

1. During removal of the air cleaner by the owner, dirt is allowed to enter and jam the carburetor.
2. A novice may forget which direction the throttle rotates; then jerk the throttle wide open thinking he has shut it off; panic when the machine accelerates suddenly instead of slowing

down; and “freeze”, holding the throttle wide open.

In an emergency situation such as throttle failure, your motorcycle may be stopped by disengaging the clutch and applying the brakes. Once this stopping procedure is initiated, the engine stop switch may be used to stop the engine. If the engine stop switch is used, turn off the ignition switch after stopping the motorcycle.

## Parking

- Shift the transmission into neutral and turn the ignition switch OFF.
- Support the motorcycle on a firm level surface with the side or center stand.

### CAUTION

**Do not park on a soft or steeply inclined surface or the motorcycle may fall over.**

- If parking inside a garage or other structure, be sure it is well ventilated and the motorcycle is not close to any source of flame or sparks; this includes any appliance with a pilot light.

### WARNING

**Gasoline is extremely flammable and can be explosive under certain conditions.**

- Lock the steering to help prevent theft.

#### NOTE

- *When stopping near traffic at night, you can leave the taillight on for greater visibility by turning the ignition switch to the P (park) position.*
- *Do not leave the switch at P position too long, or the battery will discharge.*

## **Safe Riding Technique**

The points given below are applicable for everyday motorcycle use and should be carefully observed for safe and effective vehicle operation.

For safety, eye protection and a helmet are strongly recommended. Gloves and suitable footwear should also be used for added protection in case of a mishap.

A motorcycle does not provide the impact protection of an automobile, so defensive riding in addition to wearing protective apparel is extremely important. Do not let protective apparel give you a false sense of security.

Before changing lanes, look over your shoulder to make sure the way is clear. Do not rely solely on the rear view mirror; you may misjudge a vehicle's distance and speed, or you may not see it at all.

When going up steep slopes, shift to a lower gear so that there is plenty of power to spare rather than overloading the engine.

When applying the brakes, use both the front and rear brakes. Applying only one brake for sudden braking may cause the motorcycle to skid and lose control.

When going down long slopes, control vehicle speed by closing the throttle. Use the front and rear brakes for auxiliary braking.

On rainy days, rely more on the throttle to control vehicle speed and less on the front and rear brakes. The throttle should also be used judiciously to avoid skidding the rear wheel from too rapid acceleration or deceleration.

Riding at the proper rate of speed and avoiding unnecessarily fast acceleration are important not only for safety and low fuel consumption but also for long vehicle life and quieter operation.

When riding in wet conditions or on loose roadway surfaces, the ability to maneuver will be reduced. All of your actions should be smooth under these conditions. Sudden acceleration, braking or turning may cause loss of control.

On rough roads, exercise caution, slow down, and grip the fuel tank with the knees for better stability.

When quick acceleration is necessary as in passing, shift to a lower gear to obtain the necessary power.

Do not downshift at too high an r/min (rpm) to avoid damage to the engine from overrevving.

Avoiding unnecessary weaving is important to the safety of both the rider and other motorists.

## Daily Safety Checks

Check the following items each day before you ride. The time required is minimal, and habitual performance of these checks will help ensure you a safe, reliable ride.

If any irregularities are found during these checks, refer to the Maintenance and Adjustment chapter or see your dealer for the action required to return the motorcycle to a safe operating condition.

### **⚠ WARNING**

**Failure to perform these checks every day before you ride may result in serious damage or a severe accident.**

- Fuel . . . . . Adequate supply in tank, no leaks.
- Engine oil . . . . . Oil level between level lines.
- Tires . . . . . Air pressure (when cold)

Front	200 kPa (2.0 kg/cm <sup>2</sup> , 28 psi)	
Rear	Up to 97.5 kg (215 lb) load	200 kPa (2.00 kg/cm <sup>2</sup> , 28 psi)
	97.5 ~ 180 kg (215 ~ 397 lb) load	225 kPa (2.25 kg/cm <sup>2</sup> , 32 psi)

Nuts, bolts, fasteners . . . . .	Check that steering and suspension components, axles, and all controls are properly tightened or fastened.
Steering. . . . .	Action smooth but not loose from lock to lock. No binding of control cables.
Brakes. . . . .	No brake fluid leakage. Brake pedal play 20 ~ 30 mm (0.8 ~ 1.2 in). Brake pad wear: Lining thickness more than 1 mm (0.04 in) left. Brake lining wear: Indicator within "USABLE RANGE".
Throttle. . . . .	Throttle grip play 2 ~ 3 mm (0.08 ~ 0.12 in).
Clutch. . . . .	Clutch lever play 2 ~ 3 mm (0.08 ~ 0.12 in). Clutch lever operates smoothly.
Coolant. . . . .	No coolant leakage. Coolant level between level lines (when engine is cold).
Radiator cap. . . . .	Properly installed.
Final gear case . . . . .	No oil leakage.
Electrical equipment . . . . .	All lights and horn work.
Engine stop switch. . . . .	Stops engine.
Side and center stands . . . . .	Return to their fully up positions by spring tension. Return springs not weak or not damaged.

Refer to "Daily Safety Checks" caution label attached to the left side cover.

## **Additional Considerations for High Speed Operation**

**Brakes:** The importance of the brakes, especially during high speed operation, cannot be overemphasized. Check to see that they are correctly adjusted and functioning properly.

**Steering:** Looseness in the steering can cause loss of control. Check to see that the handlebar turns freely but has no play.

**Tires:** High speed operation is hard on tires, and good tires are crucial for riding safety. Examine their overall condition, inflate to the proper pressure, and check the wheel balance.

**Fuel:** Have sufficient fuel for the high fuel consumption during high speed operation.

**Engine Oil:** To avoid seizure and resulting loss of control, make certain the oil level is at the upper level line.

**Spark Plugs:** For demanding operation such as racing, install one heat colder spark plugs – US model: NGK DP8EA-9 or ND X24EP-U9, Canadian model: NGK DPR8EA-9 or ND X24EPR-U9.

**Coolant:** To avoid overheating, check that the coolant level is at the upper level line.

**Final Gear Case Oil:** To avoid seizure and resulting loss of control, make certain the oil level is correct.

**Electrical Equipment:** Make certain that the headlight, tail/brake light, turn signals, horn, etc., all work properly.

**Miscellaneous:** Make certain that all nuts and bolts are tight and that all safety related parts are in good condition.



## **⚠ WARNING**

Handling characteristics of a motorcycle at high speeds may vary from those you are familiar with at legal highway speeds. Do not attempt high speed operation unless you have received sufficient training and have the required skills.

## ////////////////////// MAINTENANCE AND ADJUSTMENT ////////////////////////

The maintenance and adjustments outlined in this chapter are easily carried out and must be done in accordance with the Periodic Maintenance Chart to keep the motorcycle in good running condition. **The initial maintenance is vitally important and must not be neglected.**

If you are in doubt as to any adjustment or vehicle operation, please ask your authorized Kawasaki Dealer to check the motorcycle.

Please note that Kawasaki cannot assume any responsibility for damage resulting from incorrect maintenance or improper adjustment done by the owner.

# Periodic Maintenance Chart

Operation	Frequency	Whichever comes first ↓	*Odometer Reading							See Page
			Every	800 (500)	5,000 (3,000)	10,000 (6,000)	15,000 (9,000)	20,000 (12,000)	25,000 (15,000)	
Emission Related	Carburetor synchronization—check †		•	•	•	•	•	•	•	81
	Idle speed—check †		•	•	•	•	•	•	•	81
	Throttle grip play—check †		•				•		•	78
	Spark plug—clean and gap †			•	•	•	•	•	•	73
	Air suction valve—check †			•	•	•	•	•	•	75
	Air cleaner element—clean		•				•		•	76
	Air cleaner element—replace	5 cleanings					•			76
	Fuel system—check				•		•		•	107
	Evaporative emission control system (c)—check †		•	•	•	•	•	•	•	74
Non-Emissions	Battery electrolyte level—check †	month	•	•	•	•	•	•	•	100
	Brake play—check †		•	•	•	•	•	•	•	88
	Brake light switch—check †		•	•	•	•	•	•	•	90

Operation	Frequency	Whichever comes first ↓	*Odometer Reading							See Page
			800 (500)	5,000 (3,000)	10,000 (6,000)	15,000 (9,000)	20,000 (12,000)	25,000 (15,000)	30,000 (18,000)	
Brake lining or pad wear—check †			•	•	•	•	•	•	85	
Brake fluid level—check †	month	•	•	•	•	•	•	•	86	
<b>K</b> Brake fluid—change	2 years					•			87	
Clutch—adjust		•	•	•	•	•	•	•	83	
<b>K</b> Steering—check †		•	•	•	•	•	•	•	—	
Final gear case oil level—check †				•		•		•	70	
Final gear case oil—change		•						•	70	
<b>K</b> Propeller shaft joint—lubricate				•				•	—	
Nut, bolt, and fastener tightness—check †		•		•		•		•	111	
Tire wear—check †			•	•	•	•	•	•	98	
Engine oil—change	year	•		•		•		•	58	
Oil filter—replace		•		•		•		•	58	
Oil screen—clean		•		•		•		•	58	
General lubrication—perform			•	•	•	•	•	•	109	
<b>K</b> Front fork oil—change								•	—	

Operation	Frequency	Whichever comes first ↓	*Odometer Reading						See Page	
			800 (500)	5,000 (3,000)	10,000 (6,000)	15,000 (9,000)	20,000 (12,000)	25,000 (15,000)		30,000 (18,000)
Non-Emission Related	K Swing arm pivot—lubricate				•				•	—
	K Brake camshaft—lubricate	2 years					•			86
	Coolant—change	2 years							•	63
	Radiator hoses, connections —check †	year	•		•		•		•	65
	K Steering stem bearing—lubricate	2 years					•			—
	K Master cylinder cup and dust seal—replace	2 years								—
	K Caliper piston seal and dust seal—replace	2 years								—
	K Brake cable—replace	2 years								—
	K Brake hose—replace	4 years								—
	K Fuel hose—replace	4 years								—

K : Should be serviced by an authorized Kawasaki Dealer.

\* : For higher odometer readings, repeat at the frequency interval established here.

† : Replace, add, adjust, or torque if necessary.

(C): Californian model only

## Engine Oil

In order for the engine, transmission, and clutch to function properly, maintain the engine oil at the proper level, and change the oil and oil filter and clean the oil screen in accordance with the Periodic Maintenance Chart. Not only do dirt and metal particles collect in the oil, but the oil itself loses its lubricative quality if used too long.

### **⚠ WARNING**

Motorcycle operation with insufficient, deteriorated, or contaminated engine oil will cause accelerated wear and may result in engine or transmission seizure, accident, and injury.

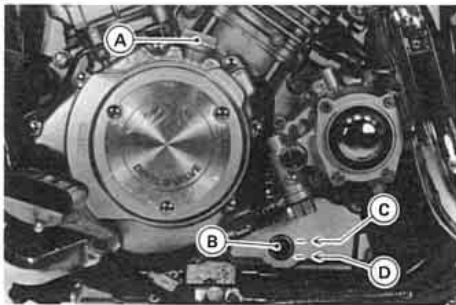
### *Oil Level Inspection*

- If the oil has just been changed, start the engine and run it for several minutes at idle speed. This fills the oil filter with oil. Stop the engine, then wait several minutes until the oil settles.

### **⚠ CAUTION**

Racing the engine before the oil reaches every part can cause engine seizure.

- If the motorcycle has just been used, wait several minutes for all the oil to drain down.
- Check the engine oil level through the oil level gauge. With the motorcycle held level, the oil level should come up between the lines next to the gauge.



A. Oil Filler Cap  
B. Oil Level Gauge

C. High Level  
D. Low Level

- If the oil level is too high, remove the excess oil, using a syringe or some other suitable device.
- If the oil level is too low, add the correct amount of oil through the oil filler opening. Use the same type and brand of oil that is already in the engine.

## ⚠ CAUTION

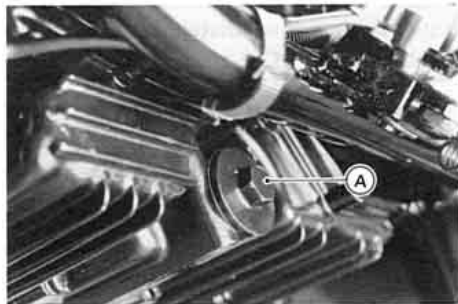
If the engine oil gets extremely low or if the oil pump or oil passages clog up or otherwise do not function properly, the oil pressure warning light will light. If the light stays on when the engine speed is above 1,400 r/min (rpm), stop the engine immediately and find the cause.



A. Oil Pressure Warning Light

*Oil and/or Oil Filter Change,  
Oil Screen Cleaning*

- Warm up the engine thoroughly, and then stop the engine.
- Place an oil pan beneath the engine drain plug.
- Remove the engine drain plug.



**A. Drain Plug**

- With the motorcycle held level, let the oil completely drain.

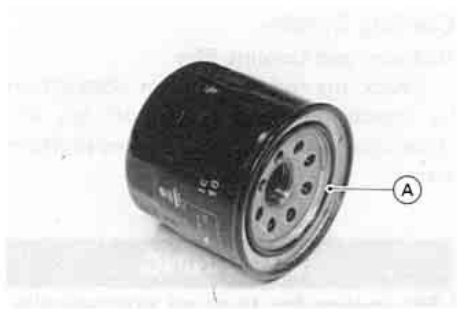
- If the oil filter is to be changed, remove the cartridge and replace it with a new one.



**A. Cartridge**

- Apply a thin film of oil on the gasket and tighten the cartridge to the specified torque.





A. Gasket



A. Oil Screen

- If the oil screen is to be cleaned, clean it in a bath of a high flash-point solvent. The oil screen is taken out when the drain plug is removed.

- Install the engine drain plug with its gasket and tighten it to the specified torque.

#### NOTE

- *Replace the damaged gasket with a new one.*

- Fill the engine up to the upper level with good quality motor oil specified in the table.
- Check the oil level.
- Start the engine and check for oil leakage.

#### Tightening Torque

##### Cartridge:

15 ~ 20 N·m

(1.5 ~ 2.0 kg·m, 11.0 ~ 14.5 ft·lb)

##### Engine Oil Drain Plug:

15 ~ 20 N·m

(1.5 ~ 2.0 kg·m, 11.0 ~ 14.5 ft·lb)

#### Engine Oil

Grade: SE or SF class

Viscosity: SAE 10W40, 10W50,  
20W40, or 20W50

Capacity: 3.6 L (3.8 US qt)  
[when filter is not removed]  
4.0 L (4.2 US qt)  
[when filter is removed]

## Cooling System

### Radiator and Cooling Fan

Check the radiator fins for obstruction by insects or mud. Clean off any obstructions with a stream of low-pressure water.

#### WARNING

The cooling fan turns on automatically, even with the ignition switch off. Keep your hands and clothing away from the fan blades at all times.

#### CAUTION

Using high-pressure water, as from a car wash facility, could damage the radiator fins and impair the radiator's effectiveness.

Do not obstruct or deflect airflow through the radiator by installing

**Unauthorized accessories in front of the radiator or behind the cooling fan. Interference with the radiator airflow can lead to overheating and consequent engine damage.**

## Coolant

Coolant absorbs excessive heat from the engine and transfers it to the air at the radiator. If the coolant level becomes low, the engine overheats and may suffer severe damage. Check the coolant level each day before riding the motorcycle, and replenish coolant if the level is low. Change the coolant in accordance with the Periodic Maintenance Chart.

### *Information for Coolant:*

To protect the cooling system (consisting of the aluminum engine and radiator)

from rust and corrosion, the use of corrosion and rust inhibitor chemicals in the coolant is essential. If coolant containing corrosion and rust inhibitor chemicals is not used, over a period of time, the cooling system accumulates rust and scale in the water jacket and radiator. This will clog up the coolant passages, and considerably reduce the efficiency of the cooling system.

## **▲WARNING**

**Use coolant containing corrosion inhibitors made specifically for aluminum engines and radiators in accordance with the instructions of the manufacturer. Chemicals are harmful to the human body.**

Soft or distilled water must be used with the antifreeze (see below for antifreeze) in the cooling system.

### ⚠CAUTION

If hard water is used in the system, it causes scale accumulation in the water passages, and considerably reduces the efficiency of the cooling system.

If the lowest ambient temperature encountered falls below the freezing point of water, use permanent antifreeze in the coolant to protect the cooling system against engine and radiator freeze-up, as well as from rust and corrosion.

Use a permanent type of antifreeze (soft water and ethylene glycol plus corrosion and rust inhibitor chemicals for aluminum engines and radiators) in the cooling system. On the mixture ratio of coolant, choose the suitable one referring to the relation between freezing point and strength directed on the container.

### ⚠CAUTION

Permanent types of antifreeze on the market have anti-corrosion and anti-rust properties. When it is diluted excessively, it loses its anti-corrosion property. Dilute a permanent type of antifreeze in accordance with the instructions of manufacturer.

### NOTE

- A permanent type of antifreeze is installed in the cooling system when shipped. It is colored green, contains a 50% solution of ethylene glycol, and has the freezing point of  $-35^{\circ}\text{C}$  ( $-31^{\circ}\text{F}$ ).

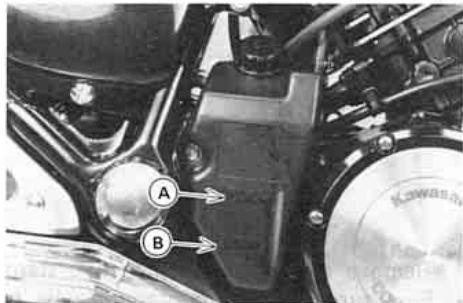
#### *Coolant Level Inspection*

- Situate the motorcycle so that it is perpendicular to the ground (on its center stand).

- Check the coolant level through the coolant level gauge. The coolant level should be between the FULL and LOW marks.

#### NOTE

- Check the level when the engine is cold (room or atmospheric temperature).



A. FULL Mark

B. LOW Mark

- If the amount of coolant is insufficient, unscrew the cap from the reserve tank, and add coolant through the filler opening to the FULL mark. Install the cap.

#### NOTE

- In an emergency you can add water alone to the coolant reserve tank, however it must be returned to the correct mixture ratio by the addition of antifreeze concentrate as soon as possible.

#### ⚠ CAUTION

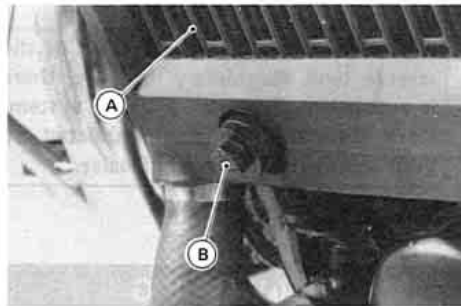
If coolant must be added often, or the reserve tank completely runs dry, there is probably leakage in the system. Have the cooling system inspected by your authorized Kawasaki Dealer.

#### Coolant Change

#### ⚠ WARNING

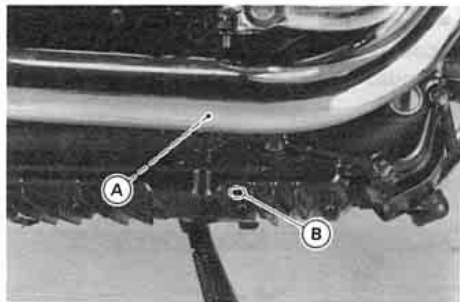
To avoid burns, do not remove the radiator cap or try to change the coolant when the engine is still hot. Wait until it cools down.

- Set the motorcycle up on its center stand.
- Remove the right front side cover.
- Place a container under the radiator drain plug, and drain the coolant from the radiator by removing the drain plug at the bottom of the radiator. Coolant begins to flow out when the plug is loosened several turns.



**A. Radiator**                      **B. Drain Plug**

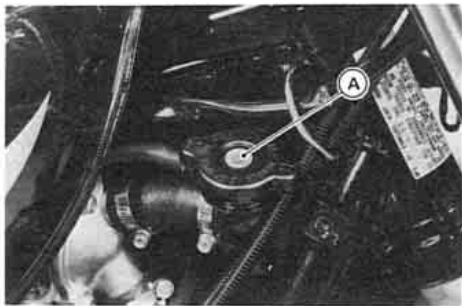
- Place a container under the water pump.
- Remove the drain plug at the bottom of the water pump.



**A. Water Pump**

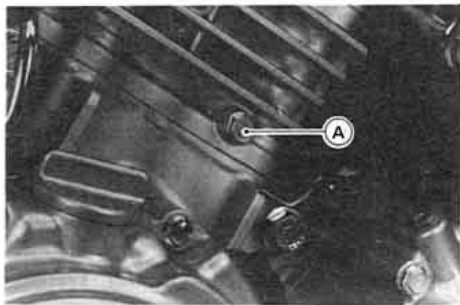
**B. Drain Plug**

- Remove the radiator cap in two steps. First turn the cap counterclockwise to the first stop and wait there for a few seconds. Then push and turn it further in the same direction and remove the cap. This helps the coolant flow out more smoothly.



**A. Radiator Cap**

- Place a container under the drain plug on each cylinder and drain the coolant by removing the drain plugs respectively.



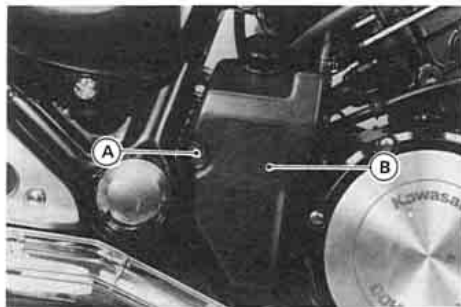
**A. Drain Plug**

- Coolant is drained from the radiator and engine. Immediately wipe off or wash out any spilled coolant on the frame, engine, or wheels.

**⚠WARNING**

**Coolant on tires will make them slippery and can cause an accident and injury.**

- Visually inspect the old coolant. If whitish cotton-like wafts are observed, aluminum parts in the cooling system are corroded. A brownish color of the coolant indicates rusting of iron parts. If the coolant gives off an abnormal smell when changing, it may be caused by exhaust gas leaking into the cooling system (coolant leaks into engine). In this case, have the cooling system checked by your authorized Kawasaki Dealer.
- Pull off the air vent hose and unscrew the mounting bolt and remove the reserve tank from the grommet with lower hose attached.



**A. Bolt**

**B. Reserve Tank**

- Unscrew the cap off the reserve tank, and pour the coolant into a container. Install the reserve tank and its cap.



- Install the radiator, water pump, and cylinder drain plugs with the specified torques shown in the table. Always replace the O-ring and the gasket with new ones, if it is damaged.

#### Tighten Torque

<b>Radiator Drain Plug:</b>
-----------------------------

2.9 N-m (0.3 kg-m, 26 in-lb)
------------------------------

<b>Water Pump Drain Plug:</b>
-------------------------------

8.8 N-m (0.9 kg-m, 78 in-lb)
------------------------------

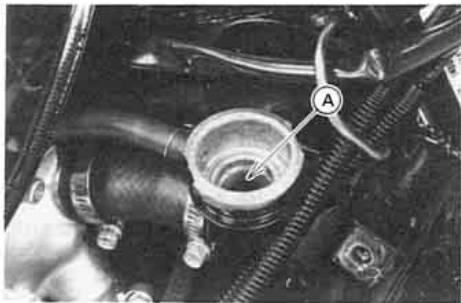
<b>Cylinder Drain Plug:</b>
-----------------------------

8.8 N-m (0.9 kg-m, 78 in-lb)
------------------------------

- Fill the radiator up to the bottom of the radiator filler neck with coolant, and install the cap, turning it clockwise by about  $\frac{1}{4}$  turn.

#### NOTE

- *Pour in the coolant slowly so that it can expel the air from the engine and radiator.*



A. Radiator Filler Neck

- Unscrew the cap off the reserve tank and fill it up to the FULL mark with coolant, and install the cap. Total refill will take about 1.5 L (1.6 US qt) after the air inside the system is expelled.
- Start the engine and warm it up by running it at idle speed, and then stop the engine.

- Remove the radiator cap and refill the radiator up to the bottom of the filler neck with coolant, if the coolant level has gone down.
- Check the coolant level in the reserve tank. Add coolant up to the FULL mark if the level has gone down.
- Inspect the drain plugs and the radiator cap for leaks.

## Final Gear Case Oil

In order for the pinion and ring gears in the final gear case to function properly, check the oil level, and change the oil in accordance with the Periodic Maintenance Chart.

### **⚠ WARNING**

Motorcycle operation with insufficient, deteriorated, or contaminated oil causes accelerated wear and may result in seizure of the pinion and ring gears. Seizure can lock the rear wheel and skid the rear tire, with consequent loss of control.

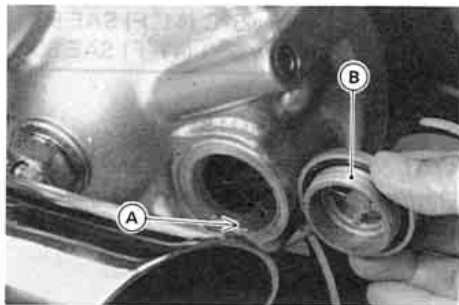
#### *Oil Level Inspection*

- Put the motorcycle on its center stand.
- Remove the filler cap.

## **⚠ CAUTION**

**Be careful not to allow any dirt or foreign materials to enter the gear case.**

- Check the oil level. If it is insufficient, add oil as necessary. The oil level should come to the bottom thread of the filler opening.



**A. Bottom Thread**

**B. Filler Cap**

## **NOTE**

- Use the same type and brand of oil that is already in the final gear case.

### *Oil Change*

## **NOTE**

- Final gear case oil drains easily and picks up any sediment when the oil is warmed up by running the motorcycle.

- Put the motorcycle on its center stand.
- Place an oil pan beneath the gear case.
- Remove the filler cap and the drain plug.



A. Drain Plug

### **⚠ WARNING**

When draining or filling the gear case, be careful that no oil gets on the tire and rim. Clean off any oil that inadvertently gets on them with soap and water.

- After the oil has completely drained out, install the drain plug and gasket.

Replace the damaged gasket with a new one.

- Fill the gear case up to the bottom thread of the filler opening with the oil specified below.

#### Final Gear Case Oil

Oil Capacity	about 150 mL (0.16 US qt)
Oil Type	API "GL-5" Hypoid gear oil above 5°C (41°F) SAE 90 below 5°C (41°F) SAE 80

#### NOTE

○ "GL-5" indicates a quality and additive rating. "GL-6" rated hypoid gear oils can also be used.

- Install the filler cap.

## Spark Plugs

The standard spark plug is shown in the table. The spark plugs should be taken out periodically in accordance with the Periodic Maintenance Chart for cleaning, inspection, and resetting of the plug gap.

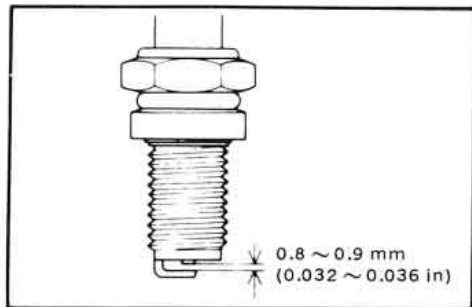
### Maintenance

If the plug is oily or has carbon built up on it, have it cleaned, preferably in a sand-blasting device, and then clean off any abrasive particles. The plug may also be cleaned using a high flash-point solvent and a wire brush or other suitable tool. Measure the gap with a wire-type thickness gauge, and adjust the gap if incorrect by bending the outer electrode. If the spark plug electrodes are corroded or damaged, or if the insulator is cracked, replace the plug. Use the standard plug or its equivalent.

### Spark Plug

Standard Plug	NGK DP7EA-9 or ND X22EP-U9
	© NGK DPR7EA-9 or ND X22EPR-U9
Plug Gap	0.8 ~ 0.9 mm (0.032 ~ 0.036 in)
Tightening Torque	14 N·m (1.4 kg·m, 10.0 ft·lb)

© : Canadian model



## Valve Clearance

Valve and valve seat wear is automatically compensated for the valve clearance. So inspection and adjustment of the valve clearance are not necessary on this motorcycle.

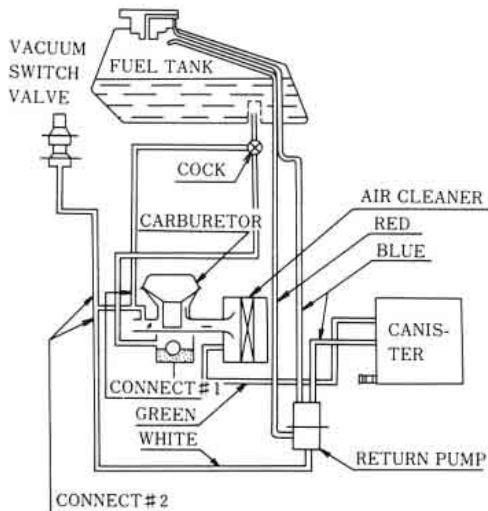
## Evaporative Emission Control System (California model only)

This system routes fuel vapors from the fuel system into the running engine or stores the vapors in a canister when the engine is stopped. Although no adjustments are required, a thorough visual inspection must be made at the intervals specified by the Periodic Maintenance Chart.

### Inspection

- Check that the hoses are securely connected.
- Replace any kinked, deteriorated, or damaged hoses.

VACUUM HOSE ROUTING DIAGRAM



## **Kawasaki Clean Air System**

The Kawasaki Clean Air System (KCA) is a secondary air suction system that helps the exhaust gases to burn more completely. When the spent fuel charge is released into the exhaust system, it is still hot enough to burn. The KCA System allows extra air into the exhaust system so that the spent fuel charge can continue to burn. This continued burning action tends to burn up a great deal of the normally unburned gases, as well as changing a significant portion of the poisonous carbon monoxide into harmless carbon dioxide.

### **Air Suction Valves:**

The air suction valve is essentially a check valve which allows fresh air to flow only from the air cleaner into the exhaust port. Any air that has passed the air suction valve is prevented from returning.

Inspect the air suction valves in accordance with the Periodic Maintenance Chart. Also, inspect the air suction valves whenever stable idling cannot be obtained, engine power is greatly reduced, or there are abnormal engine noises.

Air suction valve removal and inspection should be done only by a competent mechanic following the instructions in the Service Manual.

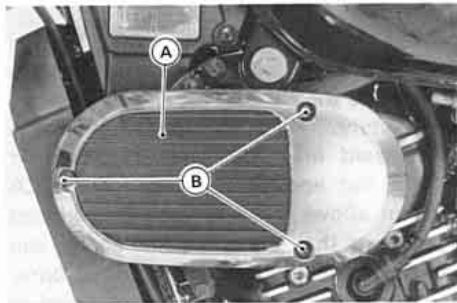
## Air Cleaner

A clogged air cleaner restricts the engine's air intake, increasing fuel consumption, reducing engine power, and causing spark plug fouling.

The air cleaner element must be cleaned and replaced in accordance with the Periodic Maintenance Chart. In dusty areas, the element should be cleaned more frequently than the recommended interval. After riding through rain or on muddy roads, the element should be cleaned immediately. The element should be replaced if it is damaged.

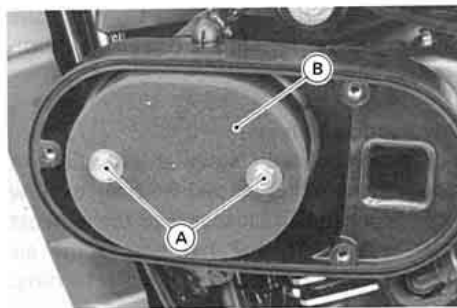
### *Element Removal*

- Remove the screws on the left and right air cleaner covers and then remove both the covers.
- Remove the bolts and pull out the element from both the air cleaner housings.



A. Air Cleaner Cover

B. Screws



A. Bolts

B. Element



- Remove the element from the frame.
- Push a clean, lint-free towel into the air cleaner housing to keep dirt or other foreign material from entering.
- Inspect the element material and sponge gasket for damage. If any part of the element is damaged, the element must be replaced.

### **▲WARNING**

If dirt or dust is allowed to pass through into the carburetors, the throttle may become stuck, possibly causing accident.

### **▲CAUTION**

If dirt gets through into the engine, excessive engine wear and possibly engine damage will occur.

### **NOTE**

○ *Element installation is performed in the reverse order of removal.*

### *Element Cleaning*

- Clean the element in a bath of a high flash-point solvent.
- Dry the element with compressed air or squeeze it.
- After cleaning, saturate the element with SE class SAE 30 motor oil, squeeze out the excess, then wrap it in a clean rag and squeeze it as dry as possible. Be careful not to tear the element.

### **▲WARNING**

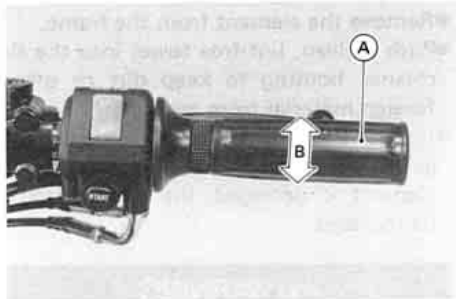
Clean the element in a well ventilated area, and take care that there are no sparks or flame anywhere near the working area; this includes any appliance with a pilot light. Do not use gasoline or a low flash-point solvent to clean the element. A fire or explosion could result.

## Throttle Grip

The throttle grip controls the throttle valves. If the throttle grip has excessive play due to either cable stretch or maladjustment, it will cause a delay in throttle response, especially at low engine speed. Also, the throttle valves may not open fully at full throttle. On the other hand, if the throttle grip has no play, the throttle will be hard to control, and the idle speed will be erratic. Check the throttle grip play periodically in accordance with the Periodic Maintenance Chart, and adjust the play if necessary.

### *Inspection*

- Check that there is 2 ~ 3 mm (0.08 ~ 0.12 in) throttle grip play when lightly turning the throttle grip back and forth.
- If there is improper play, adjust it.

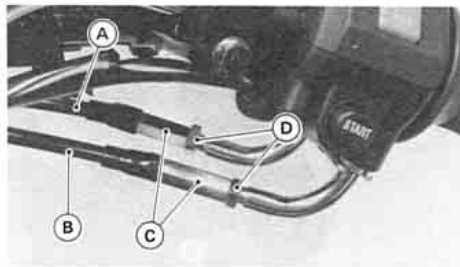


### **A. Throttle Grip**

**B. 2 ~ 3 mm (0.08 ~ 0.12 in)**

### *Adjustment*

- Loosen the locknuts, and screw both throttle cable adjusters in completely at the upper end of the throttle cables so as to give the throttle grip plenty of play.
- Turn out the decelerator cable adjuster until there is no play when the throttle grip is completely closed. Tighten the locknut.



A. Accelerator Cable  
B. Decelerator Cable

C. Adjusters  
D. Locknuts

- Turn the accelerator cable adjuster until 2 ~ 3 mm (0.08 ~ 0.12 in) of throttle grip play is obtained. Tighten the locknut.

#### NOTE

○ If the throttle cables cannot be adjusted by using the cable adjusters at the upper end of the throttle cables, have them adjusted by a competent mechanic following the instructions in the Service Manual.

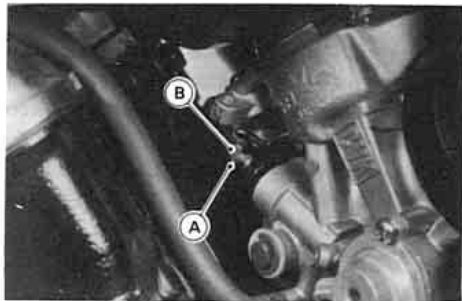
## Choke Lever

By pulling the choke lever, the carburetor provides a rich starting mixture that is necessary to enable easy starting when the engine is cold.

If starting difficulty or rich fuel mixture trouble occurs, inspect the choke lever, and adjust it if necessary.

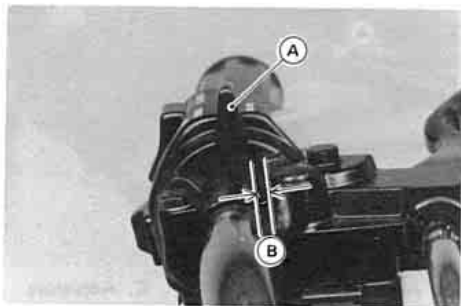
### Inspection

- Check that the choke lever returns properly and that the inner cable slides smoothly. If there is any irregularity, have the choke cable checked by an authorized Kawasaki Dealer.
- Push the choke lever back all the way to its released position.
- Determine the amount of choke cable play at the choke lever. Pull the choke lever until the starter plunger lever at the carburetor touches the starter plunger; the amount of choke lever travel is the amount of choke cable play.



A. Starter Plunger Lever    B. Starter Plunger

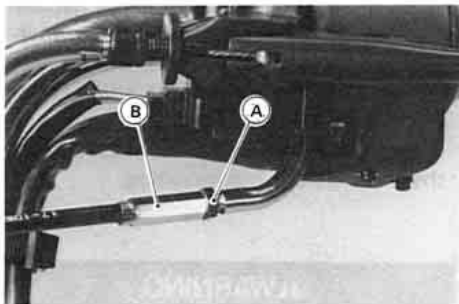
- The proper amount of play is 2 ~ 3 mm (0.08 ~ 0.12 in) at the bottom of the choke lever. If there is too much or too little play, adjust the choke cable.



A. Choke Lever  
B. 2 ~ 3 mm (0.08 ~ 0.12 in)

#### *Adjustment*

- Loosen the locknut at the upper end of the choke cable, and turn the adjuster until the cable has the proper amount of play.



A. Locknut

B. Adjuster

- Tighten the locknut after adjustment.

## Carburetors

The carburetor adjustments, idle speed and synchronization, should be performed in accordance with the Periodic Maintenance Chart or whenever the idle speed is disturbed.

The following procedure covers the idle speed adjustment. Carburetor synchronization should be done only by a competent mechanic using vacuum gauges, following the instructions in the Service Manual.

### NOTE

○*Poor carburetor synchronization will cause unstable idling, sluggish throttle response, and reduced engine power and performance.*

### Adjustment

- Start the engine, and warm it up thoroughly.
- Adjust the idle speed to 1,050 ~ 1,150 r/min (rpm) by turning the idle adjusting screw.



A. Idle Adjusting Screw

- Open and close the throttle a few times to make sure that the idle speed does not change. Readjust if necessary.

- With the engine idling, turn the handlebar to each side. If handlebar movement changes the idle speed, the throttle cables may be improperly adjusted or incorrectly routed, or they may be damaged. Be sure to correct any of these conditions before riding.

### **⚠ WARNING**

Operation with damaged cables could result in an unsafe riding condition.

## Clutch

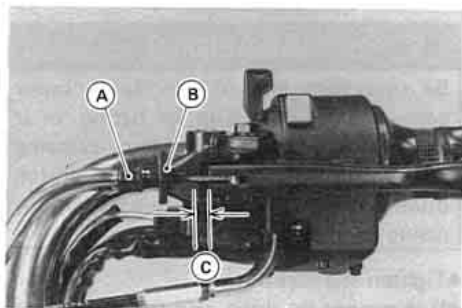
Due to friction plate wear and clutch cable stretch over a long period of use, the clutch must be adjusted in accordance with the Periodic Maintenance Chart.

### **⚠ WARNING**

To avoid a serious burn, never touch a hot engine or an exhaust pipe during clutch adjustment.

#### *Inspection*

- Check that the clutch lever has 2 ~ 3 mm (0.08 ~ 0.12 in) of play as shown in the figure.



- A. Adjuster
- B. Locknut
- C. 2 ~ 3 mm (0.08 ~ 0.12 in)

If it does not, adjust the lever play as follows.

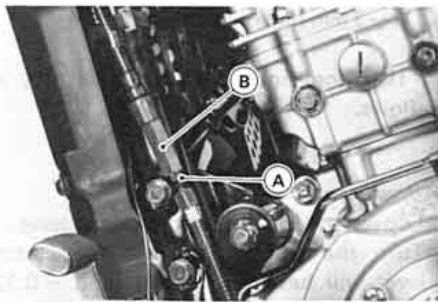
#### *Adjustment*

- Loosen the locknut at the clutch lever.
- Turn the adjuster so that the clutch lever will have 2 ~ 3 mm (0.08 ~ 0.12 in) of play.

## **⚠WARNING**

Be sure each end of the clutch outer cable is fully seated in its fitting, or it could slip into place later, creating enough cable play to prevent clutch disengagement, resulting in a hazardous riding condition.

- Tighten the locknut.
- If it cannot be done, use the adjuster at the middle of the cable.



**A. Locknut**

**B. Adjuster**

## **NOTE**

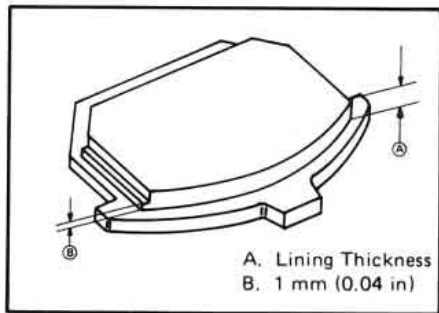
- After the adjustment is made, start the engine and check that the clutch does not slip and that it releases properly.
- For minor corrections, use the adjuster at the clutch lever.



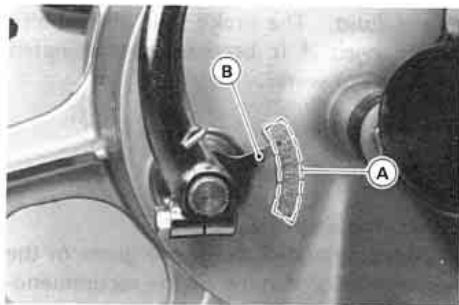
## Brakes

### *Brake Wear Inspection*

In accordance with the Periodic Maintenance Chart, inspect the brakes for wear. For the front disc brake caliper, if the thickness of either pad is less than 1 mm (0.04 in), replace both pads in the caliper as a set. Pad replacement should be done by an authorized Kawasaki Dealer.



On the rear brake panel is a brake lining wear indicator. If the brake lining wear indicator does not point within the **USABLE RANGE** when the brake is fully applied, the brake shoe linings have worn past the service limit. In this case, the brake shoes must be replaced and the drum and other brake parts examined by an authorized Kawasaki Dealer.



**A. USABLE RANGE**  
**B. Brake Lining Indicator**

### *Lubrication*

In accordance with the Periodic Maintenance Chart, the brake camshaft should be lubricated by an authorized Kawasaki Dealer.

### **Disc Brake Fluid:**

In accordance with the Periodic Maintenance Chart, inspect the brake fluid level in the reservoir and change the brake fluid. The brake fluid should also be changed if it becomes contaminated with dirt or water.

### *Fluid Requirement*

Recommended fluids are given in the table below. If none of the recommended brake fluids are available, use extra heavy-duty brake fluid only from a container marked D.O.T.3.

### Recommended Disc Brake Fluid

Atlas Extra Heavy Duty
Shell Super Heavy Duty
Texaco Super Heavy Duty
Wagner Lockheed Heavy Duty
Castrol Girling-Universal
Castrol GT (LMA)
Castrol Disc Brake Fluid

### CAUTION

Do not spill brake fluid onto any painted surface.

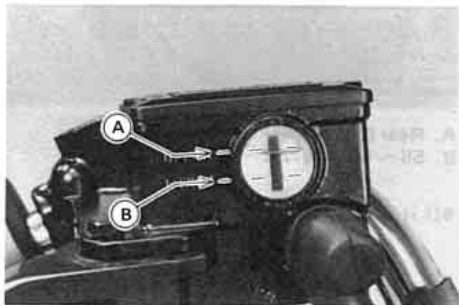
Do not use fluid from a container that has been left open or that has been unsealed for a long time.

Check for fluid leakage around the fittings.

Check for brake hose damage.

### *Fluid Level Inspection*

- The brake fluid level in the reservoir must be kept between the upper and lower level lines (reservoir held horizontal).



A. Upper Level

B. Lower Level

- Fill the reservoir to the upper level line.

### **⚠ WARNING**

Do not mix two brands of fluid. Change the brake fluid in the brake line completely if the brake fluid must be refilled but the type and brand of the brake fluid that is already in the reservoir are unidentified.

### *Fluid Change*

Have the brake fluid changed by an authorized Kawasaki Dealer.

### **Front Brake:**

Disc and disc pad wear is automatically compensated for and has no effect on the brake lever action. So there are no parts that require adjustment on the front brake.

## **⚠ WARNING**

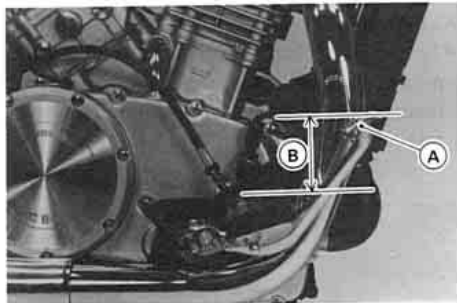
If the brake lever feels mushy when it is applied, there might be air in the brake lines or the brake may be defective. Since it is dangerous to operate the motorcycle under such conditions, have the brake checked immediately by an authorized Kawasaki Dealer.

### **Rear Brake:**

Brake pedal position can be adjusted to suit you. In accordance with the Periodic Maintenance Chart, inspect the brake pedal play.

#### *Pedal Position Inspection*

- When the brake pedal is in its rest position, it should be 55 ~ 65 mm (2.2 ~ 2.6 in) higher than the top of the footpeg.



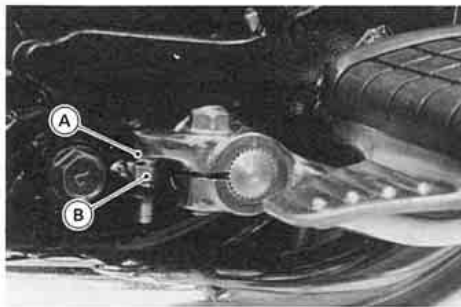
**A. Rear Brake Pedal**

**B. 55 ~ 65 mm (2.2 ~ 2.6 in)**

- If it is not, adjust the pedal position.

#### *Pedal Position Adjustment*

- Loosen the locknut, and turn the adjusting bolt to adjust the pedal position.
- Tighten the locknut.



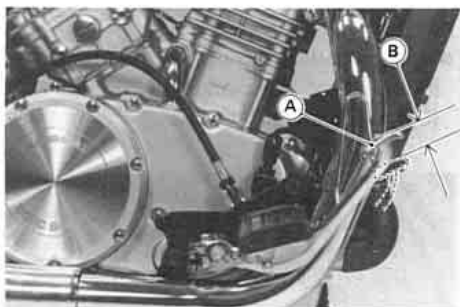
A. Adjusting Bolt

B. Locknut

- Check the brake pedal play and operation of the rear brake light switch.

#### *Pedal Play Inspection*

- The brake pedal should have 20 ~ 30 mm (0.8 ~ 1.2 in) of play when the pedal is pushed down lightly by hand.



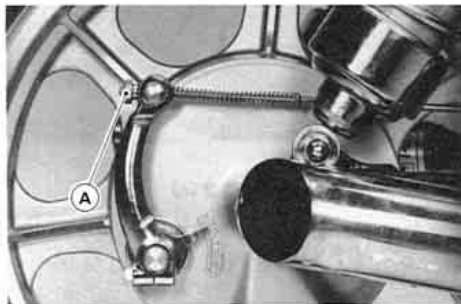
A. Rear Brake Pedal

B. 20 ~ 30 mm (0.8 ~ 1.2 in)

- Rotate the wheel to check for brake drag.
- Operate the pedal a few times to see that it returns to its rest position immediately upon release.
- Check braking effectiveness.
- If the pedal has improper play, adjust it.

### *Pedal Play Adjustment*

- Turn the adjusting nut at the brake cam lever so that the pedal has 20 ~ 30 mm (0.8 ~ 1.2 in) of play.



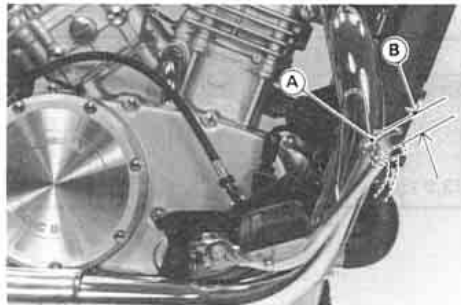
**A. Adjusting Nut**

### **Brake Light Switches**

When either the front or rear brake is applied, the brake light goes on. The front brake light switch requires no adjustment, but the rear brake light switch should be adjusted in accordance with the Periodic Maintenance Chart.

#### *Inspection*

- Turn on the ignition switch.
- The brake light should go on when the front brake is applied.
- If it does not, ask your authorized Kawasaki Dealer to inspect the front brake light switch.
- Check the operation of the rear brake light switch by depressing the brake pedal. The brake light should go on after about 15 mm (0.6 in) of pedal travel.



A. Rear Brake Pedal      B. 15 mm (0.6 in)

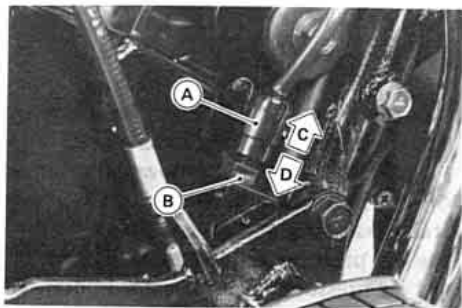
- If it does not, adjust the rear brake light switch.

#### *Adjustment*

- Adjust the rear brake light switch by moving the switch up or down. To change the switch position, turn the adjusting nut.

### **⚠ CAUTION**

To avoid damaging the electrical connections inside the switch, be sure that the switch body does not turn during adjustment.



A. Rear Brake Light Switch      C. Lights sooner  
B. Adjusting Nut                      D. Lights later

## Rear Shock Absorbers

The rear shock absorbers can be adjusted by changing the air pressure and damping force to suit various riding and loading conditions.

Before making any adjustments, however, read the following procedures:

### *Air Pressure*

The air pressure in the rear shock absorbers can be adjusted for different road and loading conditions.

The following table shows an example of air pressure adjustment. To obtain stable handling and a suitable ride, adjust the air pressure as indicated. The standard air pressure for an average-build rider of 68 kg (150 lb) with no passenger and no accessories is atmospheric pressure. Ordinarily, the heavier the total load becomes, the higher the air pressure should be set.

### Air Pressure Adjustment

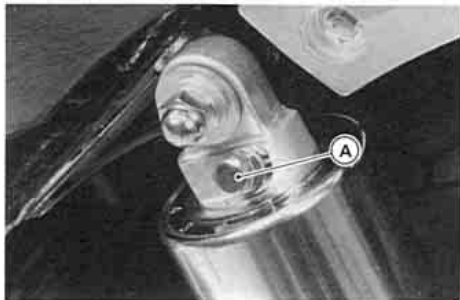
Air Pressure	Setting	Load	Road
Atmospheric Pressure	Soft	Light	Good
↕	↕	↕	↕
300 kPa (3.0 kg/cm <sup>2</sup> , 43 psi)	Hard	Heavy	Bad

**To adjust the air pressure:**

### NOTE

- *Check and adjust the air pressure when the rear shock absorbers are cold (room temperature).*
- Put the motorcycle up on its center stand to raise the rear wheel off the ground.
- Take off the air valve caps on the left and right shock absorbers.





**A. Air Valve**

- Check the air pressure with the air pressure gauge.

#### **NOTE**

- *Do not use tire gauges for checking air pressure. They may not indicate the correct air pressure because of air leaks that occur when the gauge is applied to the valve.*

- To lower the air pressure, push the valve core in slightly. To raise the pressure, inject air through the valve with a tire pump. Change the air pressure within the range specified in the preceding table to suit various riding conditions.

#### **▲ CAUTION**

Inject air little by little so that air pressure does not rise rapidly. Air pressure exceeding 500 kPa (5.0 kg/cm<sup>2</sup>, 71 psi) may damage the oil seal.

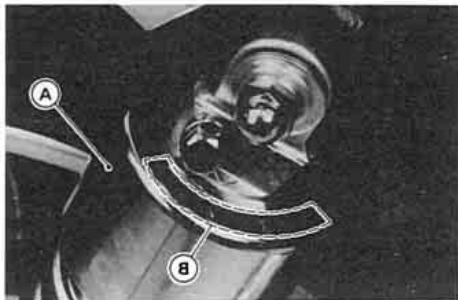
Try to set the air pressure of the left and right shock absorbers as equally as possible.

## **⚠ WARNING**

Be sure to adjust the air pressure within the usable range. Pressure too high can produce a hazardous riding condition. Only air or nitrogen gas can be used. Never inject oxygen or any kind of explosive gas.  
Do not incinerate the rear shock absorber.

### *Damping Force*

The adjuster on each rear shock absorber has 4 positions so that the rebound damping force can be adjusted for different road and loading conditions. The numbers on the adjuster show the setting position.



A. Damping Adjuster

B. Number

The following table shows an example of damping force adjustment. To obtain stable handling and a suitable ride, adjust the damping force as indicated. The damping force can be left soft for average riding. But it should be adjusted harder for high speed riding or riding with a passenger. If the damping feels too soft or too stiff, adjust it in accordance with the following table.

The standard setting position under the same conditions as in air pressure adjustment is No. 2.

**To adjust the damping force:**

- Turn the adjusters to the desired position until you feel a click.
- Check to see that both adjusters are turned to the same relative position.

**⚠ WARNING**

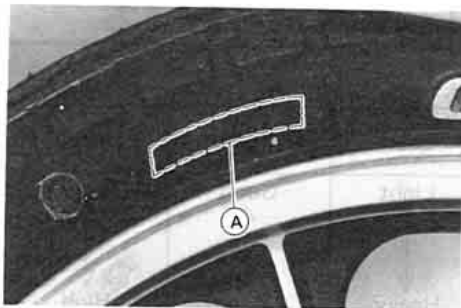
If both damping adjusters are not adjusted equally, handling may be impaired and a hazardous condition may result.

**Rebound Damping Adjustment**

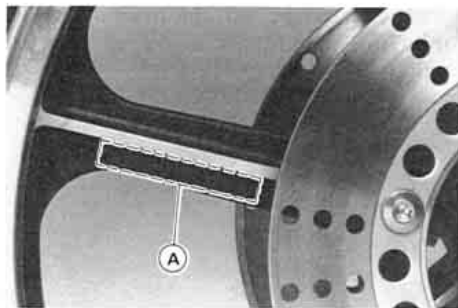
Adjuster Position	Damping Force	Setting	Load	Road	Speed
1	↓	Soft	Light	Good	Low
2		↑	↑	↑	↑
3		↓	↓	↓	↓
4		Hard	Heavy	Bad	High

## Wheels

Tubeless tires are installed on the wheels of this motorcycle. The indications of TUBELESS on the tire side wall and the rim show that the tire and rim are specially designed for tubeless use.



A. TUBELESS Mark



A. TUBELESS Mark

The tire and rim form a leakproof unit by making airtight contacts at the tire chafers and the rim flanges instead of using an inner tube.

### **▲WARNING**

The tires, rims, and air valves on this motorcycle are designed only for

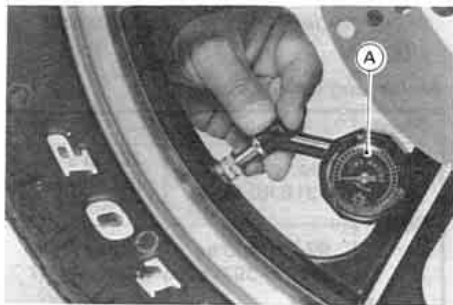
tubeless type wheels. The recommended standard tires, rims, and air valves must be used for replacement. Do not install tube-type tires on tubeless rims. The beads may not seat properly on the rim causing tire deflation. Do not install a tube inside a tubeless tire. Excessive heat build-up may damage the tube causing tire deflation.

### Tires:

#### *Payload and Tire Pressure*

Failure to maintain proper inflation pressures or observe payload limits for your tires may adversely affect handling and performance of your motorcycle and can result in loss of control. The maximum recommended load in addition to vehicle weight is 180 kg (397 lb), including rider, passenger, baggage, and accessories.

- Check the tire pressure often, using an accurate gauge.



A. Tire Pressure Gauge

### NOTE

- Measure the tire pressure when the tires are cold (that is, when the motorcycle has not been ridden more than a mile during the past 3 hours).

○ *Tire pressure is affected by changes in ambient temperature and altitude, and so the tire pressure should be checked and adjusted when your riding involves wide variations in temperature or altitude.*

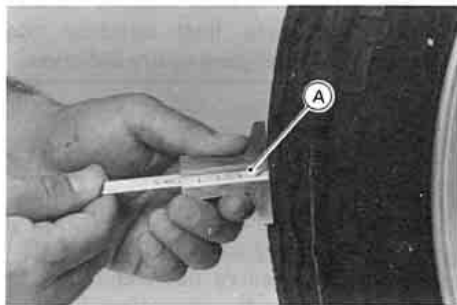
Air Pressure (when cold)

Front	200 kPa (2.0 kg/cm <sup>2</sup> , 28 psi)	
Rear	Up to 97.5 kg (215 lb) load	200 kPa (2.0 kg/cm <sup>2</sup> , 28 psi)
	97.5 ~ 180 kg (215 ~ 397 lb) load	225 kPa (2.25 kg/cm <sup>2</sup> , 32 psi)

### Tire Wear, Damage

As the tire tread wears down, the tire becomes more susceptible to puncture and failure. An accepted estimate is that 90% of all tire failures occur during the last 10% of tread life (90% worn). So it is false economy and unsafe to use the tires until they are bald.

● In accordance with the Periodic Maintenance Chart, measure the depth of the tread with a depth gauge, and replace any tire that has worn down to the minimum allowable tread depth.



A. Tire Depth Gauge

### Minimum Tread Depth

Front	1 mm (0.04 in)
Rear	2 mm (0.08 in)

- Visually inspect the tire for cracks and cuts, replacing the tire in case of bad damage. Swelling or high spots indicate internal damage, requiring tire replacement.
- Remove any imbedded stones or other foreign particles from the tread.

#### NOTE

- *Have the wheel balance inspected whenever a new tire is installed.*

exceed 100 km/h (60 mph) within 24 hours after repair, and 180 km/h (110 mph) at any time after that.

#### Standard Tire

Front	100/90-19 57H DUNLOP F11A Tubeless
Rear	150/90-15 M/C 74H DUNLOP K425 Tubeless

#### **⚠ WARNING**

To ensure safe handling and stability, use only the recommended standard tires for replacement, inflated to the standard pressure.

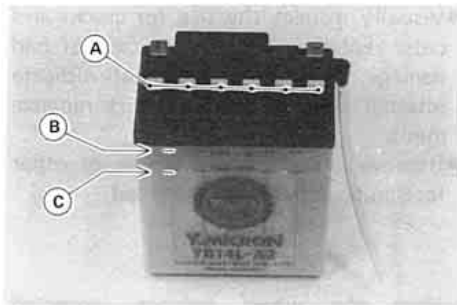
Tires that have been punctured and repaired do not have the same capabilities as undamaged tires. Do not

## Battery

### Battery Electrolyte Level Inspection

The battery electrolyte level must be kept between the upper and lower level lines. Check the electrolyte level in each cell in accordance with the Periodic Maintenance Chart.

- Remove the battery from the motorcycle (see *Battery Removal*).
- Check that the electrolyte level in each cell is between the upper and lower level lines.



- A. Filler Cap                      C. Lower Level  
B. Upper Level

- If the electrolyte level is low in any cell, fill with distilled water as follows.
- Remove the battery filler caps and fill with distilled water until the electrolyte level in each cell reaches the upper level line.

### **⚠ CAUTION**

Add only distilled water to the battery.  
Ordinary tap water is not a substitute



for distilled water and will shorten the life of the battery.

- Remove the caps from all the cells, and connect the battery charger leads to the battery terminals (red to +, black to -).

### *Battery Charging*

- Remove the battery from the motorcycle (see *Battery Removal*).

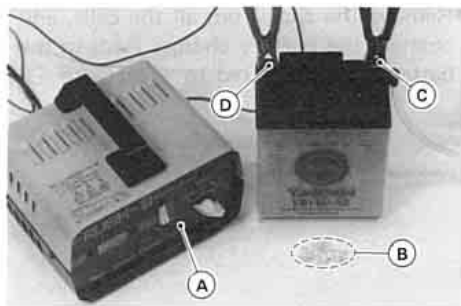
#### **▲ CAUTION**

Always remove the battery from the motorcycle for charging. If the battery is charged while still installed, battery electrolyte may spill and corrode the frame or other parts of the motorcycle.

- Before charging, check the electrolyte level in each cell. If the electrolyte level is low in any cell, fill to above the lower level line but not up to the upper level line since the level rises during charging.

#### **▲ WARNING**

Because the battery gives off an explosive gas mixture of hydrogen and oxygen, keep any sparks or open flame away from the battery during charging. When using a battery charger, connect the battery to the charger before turning on the charger. This procedure prevents sparks at the battery terminals which could ignite any battery gases.



- A. Battery Charger      C. (-) Terminal  
B. Filler Caps          D. (+) Terminal

- Charge the battery at a rate that is 1/10th of the battery capacity. For example, the charging rate for a 10AH battery would be 1.0 ampere.

### **⚠ CAUTION**

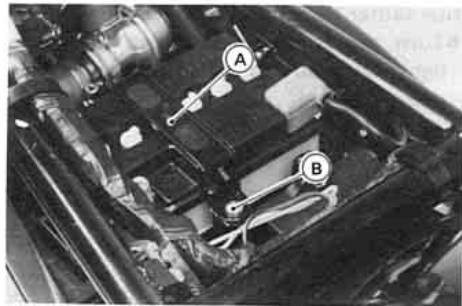
Do not use a high rate battery charger, as is typically employed at automotive

service stations, unless the charging rate can be reduced to the level required for motorcycle batteries. Charging the battery at a rate higher than specified may ruin the battery. Charging at a high rate causes excess heat which can warp the plates and cause internal shorting. Higher-than-normal charging rates also cause the plates to shed active material. Deposits will accumulate, and can cause internal shorting. If the temperature of the electrolyte rises above 45°C (115°F) during charging, reduce the charging rate to lower the temperature, and increase charging time proportionately.

- After charging, check the electrolyte level in each cell. If the level has fallen, add distilled water to bring it back up to the upper level line.
- Install the caps on the cells.
- Install the battery.

### *Battery Removal*

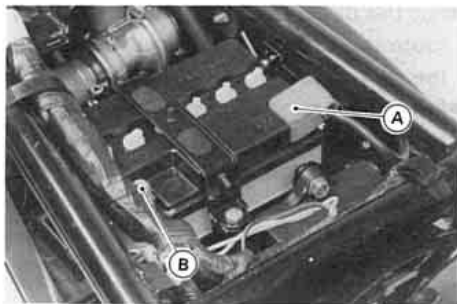
- Remove the seat.
- Unscrew the battery holder.



A. Battery Holder

B. Screw

- Disconnect the leads from the battery, first from the (-) terminal and then the (+) terminal.



A. (+) Terminal

B. (-) Terminal

- Take the battery out of the case.
- Clean the battery using a solution of baking soda and water. Be sure that the lead connections are clean.

### *Battery Installation*

- Check that the battery case rubber dampers are properly in place.

- Put the battery in the battery case, and route the battery vent hose as shown on the caution label.
- Put a light coat of grease on the terminals to prevent corrosion.
- Connect the capped lead to the (+) terminal, and then connect the black lead to the (-) terminal.
- Cover the (+) terminal with its protective cap.

### **▲CAUTION**

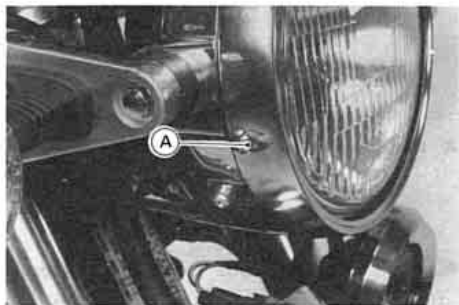
Make sure the battery vent hose is kept away from the drive system and exhaust system. Battery electrolyte can corrode and dangerously weaken the drive system. Do not let the vent hose become folded, pinched, or melted by the exhaust system. An unvented battery will not keep a charge and it may crack from built-up gas pressure.

## **Headlight Beam**

### *Horizontal Adjustment*

The headlight beam is adjustable horizontally. If not properly adjusted horizontally, the beam will point to one side rather than straight ahead.

- Turn the adjusting screw on the headlight rim in or out until the beam points straight ahead.



A. Adjusting Screw

### *Vertical Adjustment*

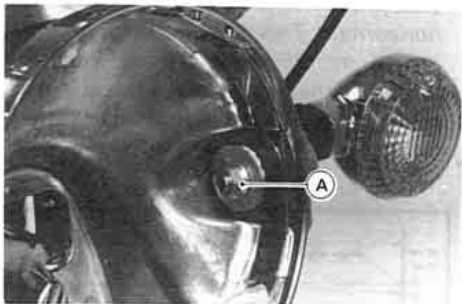
The headlight beam is adjustable vertically. If adjusted too low, neither low nor high beam will illuminate the road far enough ahead. If adjusted too high, the high beam will fail to illuminate the road close ahead, and the low beam will blind oncoming drivers.

- Push the head light up or down to adjust the headlight vertically.
- If it is difficult, remove the mounting screws, and drop out the headlight unit.



**A. Mounting Screw**

- Loosen the headlight housing mounting nuts, and adjust the headlight vertically.

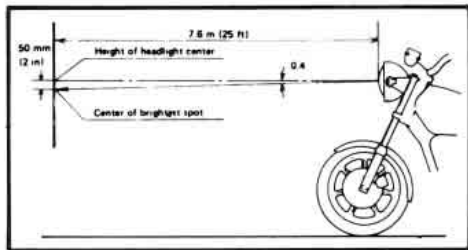


**A. Mounting Nut**

- Tighten the headlight housing mounting nuts.
- Install the headlight unit, and tighten the mounting screws.

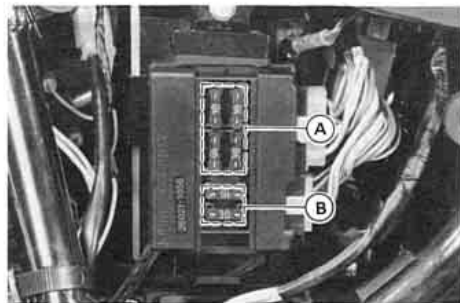
## NOTE

On high beam, the brightest point should be slightly below horizontal. The proper angle is 0.4 degrees below horizontal. This is a 50 mm (2 in) drop at 7.6 m (25 ft) measured from the center of the headlight, with the motorcycle on its wheels and the rider seated.



## Fuses

Fuses are located inside the left side cover. If a fuse fails during operation, inspect the electrical system to determine the cause, and then replace it with a new fuse of proper amperage.



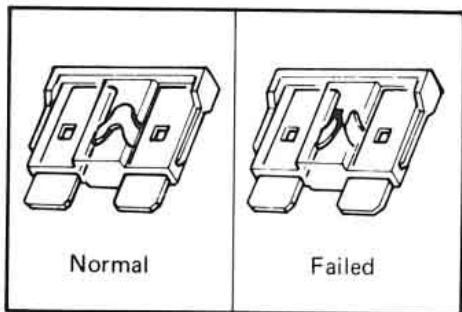
A. Fuses

B. Spare Fuses

## **⚠ WARNING**

Do not use any substitute for the standard fuse.

Replace the blown fuse with a new one of the correct capacity, as specified on the fuse case.



## **Fuel System**

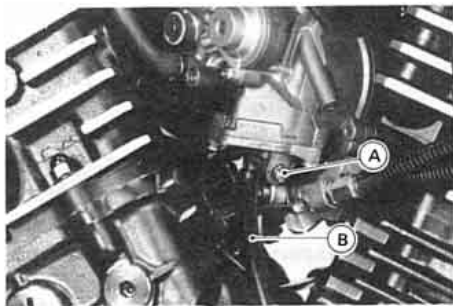
Accumulation of moisture or sediment in the fuel system will restrict the flow of fuel and cause carburetor malfunction. The system should be checked in accordance with the Periodic Maintenance Chart.

## **⚠ WARNING**

Gasoline is extremely flammable and can be explosive under certain conditions. Turn the ignition switch OFF. Do not smoke. Make sure the area is well ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light. Make sure the engine is cold before working. Wipe any fuel off the engine before starting it.

### *Inspection*

- Turn the fuel tap to the PRI position.
- Connect a suitable hose to the fitting at the bottom of each carburetor float bowl.



A. Drain Screw

B. Suitable Hose

- Run the lower ends of the hoses into a suitable container.

- Turn out each drain screw a few turns to drain the carburetors, and check to see if water or dirt has accumulated in the carburetors.
- Tighten the drain screws.

### NOTE

- *If any water or dirt appeared during the above operation, have the fuel system checked by a competent mechanic following the procedure in the Service Manual.*



## General Lubrication

Lubricate the points shown below, with either motor oil or regular grease, in accordance with the Periodic Maintenance Chart or whenever the vehicle has been operated under wet or rainy conditions.

Before lubricating each part, clean off any rusty spots with rust remover and wipe off any grease, oil, dirt, or grime.

### NOTE

○A few drops of oil are effective to keep bolts and nuts from rusting and sticking. This makes removal easier. Badly rusted nuts, bolts, etc., should be replaced with new ones.

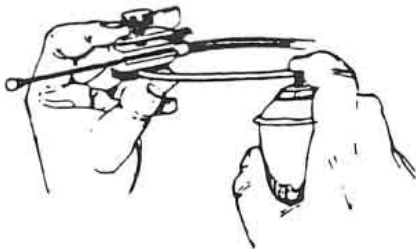
**Apply Motor Oil to the following Pivots:**

- Side Stand
- Center Stand
- Clutch Lever
- Front Brake Lever

- Rear Brake Pedal
- Rear Brake Rod Joint
- Rear Brake Cam Lever

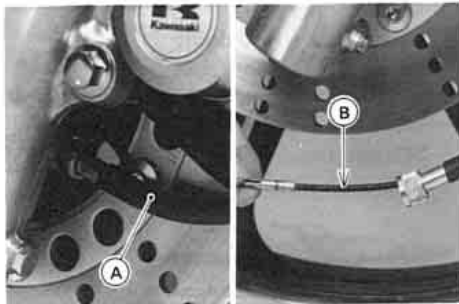
**Lubricate the following Cables with a Pressure Cable Luber:**

- Clutch Inner Cable
- Throttle Inner Cable



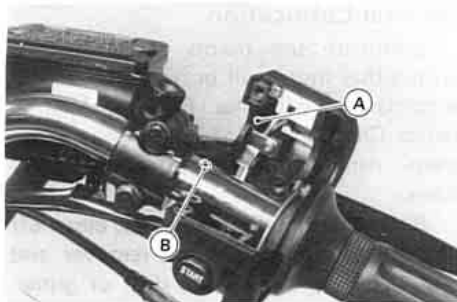
**Apply Grease to the following Points:**

- Clutch Inner Cable Upper End
  - Throttle Inner Cable Upper End
  - \*○Speedometer Inner Cable
- \*Grease the lower part of the inner cable sparingly.



A. Speedometer Cable

B. Grease



A. Projection

B. Hole

### NOTE

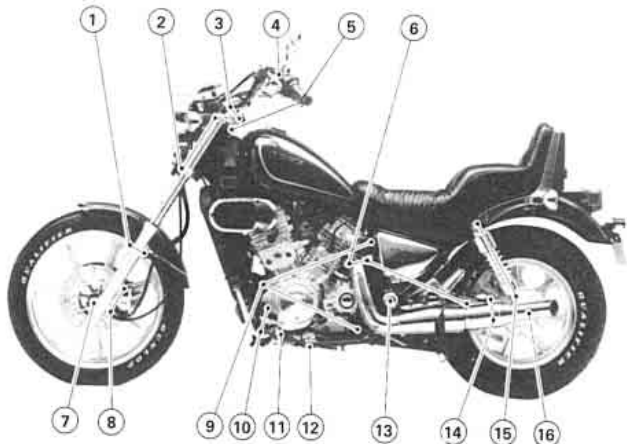
- After connecting the cables, adjust them.
- Making sure that the projection in the switch housing fits into the hole in the handlebar, assemble the switch housing. And after installing the switch housing, check the throttle grip play and adjust it if necessary.

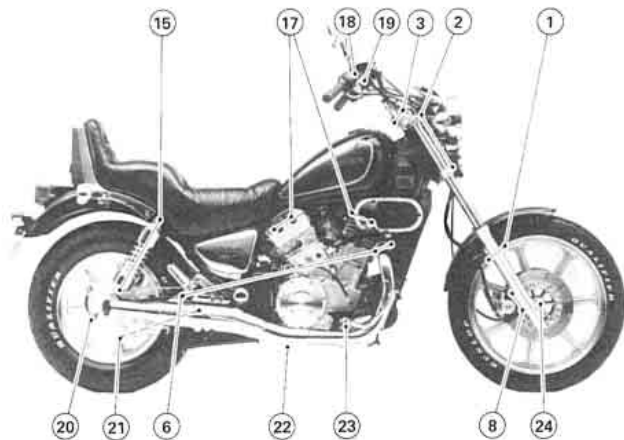
- Insert the speedometer inner cable into the speedometer gear housing while turning the wheel so that the slot in the end of the cable will seat in the tongue of the speedometer pinion.

## Bolt and Nut Tightening

In accordance with the Periodic Maintenance Chart, it is very important to check the tightness of the bolts and nuts listed here. Also, check to see that each cotter pin is in place and in good condition. Please ask your authorized Kawasaki Dealer for torque values.

1. Front Fender Mounting Bolts
2. Front Fork Clamp Bolts
3. Handlebar Clamp Bolts
4. Clutch Lever Pivot Bolt
5. Stem Head Bolt
6. Muffler Mounting Bolts and Nuts
7. Front Axle Nut
8. Caliper Mounting Bolts
9. Engine Mounting Bolts and Nuts
10. Footpeg Mounting Bracket Bolt
11. Shift Pedal Bolt
12. Side Stand Bolt
13. Pivot Shaft Nut
14. Final Gear Case Mounting Nuts
15. Rear Shock Absorber Mounting Nuts
16. Rear Axle Nut





- 17. Cylinder Head Bolts
- 18. Brake Master Cylinder  
Clamp Bolts
- 19. Brake Lever Pivot Bolt
- 20. Brake Cam Lever Bolt
- 21. Torque Link Nuts
- 22. Muffler Connecting Pipe  
Clamp Bolts
- 23. Brake Pedal Bolt
- 24. Front Axle Clamp Bolt

## Cleaning

For the prolonged life of your motorcycle, wash it down immediately after it has been splashed with seawater or exposed to the sea breeze; operated on rainy days, rough roads, or in dusty areas; or operated on roads on which salt has been scattered for ice removal.

### *Preparation for Washing*

Before washing, precautions must be taken to keep water off the following places:

- Rear openings of each muffler; Cover with plastic bags secured with rubber bands.
- Clutch and brake levers, switch housings on the handlebar; Cover with plastic bags.
- Ignition switch; Cover the keyhole with tape.
- Air cleaner intake; Close up the intake with tape, or stuff with rags.

### *Where to be Careful*

Avoid spraying water with any great force near the following places:

- Speedometer and tachometer
- Disc brake master cylinder and caliper
- Rear hub; If water gets inside the hub, the rear brake will not function until it dries out.
- Under the fuel tank; If water gets into the ignition coils or into the spark plug caps, the spark will jump through the water and be grounded out. When this happens, the motorcycle will not start and the affected parts must be wiped dry.
- Front wheel hub
- Steering pivot (steering stem head pipe)
- Swing arm pivot

## NOTE

○Coin operated, high pressure spray washers are not recommended. The water may be forced into bearings and other components causing eventual failure from rust and corrosion. Some of the soaps which are highly alkaline leave a residue or cause spotting.

### *After Washing*

- Remove the plastic bags and tape, and clean the air cleaner intake.
- Lubricate the points listed in the General Lubrication section.
- Test the brakes before motorcycle operation.
- Start the engine and run it for 5 minutes.

## WARNING

Never wax or lubricate the brake disc. Loss of braking and an accident could result. Clean the disc with an oilless solvent such as trichloroethylene or acetone. Observe the solvent manufacturer's warnings.

## STORAGE

### Preparation for Storage:

- Clean the entire vehicle thoroughly.
- Empty the fuel from the fuel tank, and empty the carburetors by unscrewing the drain screw at each float bowl. (If left in for a long time, the fuel will break down and could clog the carburetors.)
- Remove the empty fuel tank, pour about 250 mL (½ pint) of motor oil into the tank, roll the tank around to coat the inner surfaces thoroughly, and pour out the excess oil.

### **⚠ WARNING**

Gasoline is extremely flammable and can be explosive under certain conditions. Turn the ignition switch OFF. Do not smoke. Make sure the area is well ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light.

- Remove the spark plugs and put several drops of SE class SAE 30 oil into each cylinder. Push the starter button for a few seconds to coat the cylinder walls with oil, and install the spark plugs.
- Reduce tire pressure by about 20%.

- Set the motorcycle on a box or stand so that both wheels are raised off the ground. (If this cannot be done, put boards under the front and rear wheels to keep dampness away from the tire rubber.)
- Spray oil on all unpainted metal surfaces to prevent rusting. Avoid getting oil on rubber parts or in the brakes.
- Lubricate all the cables.
- Remove the battery, and store it where it will not be exposed to direct sunlight, moisture, or freezing temperatures. During storage it should be given a slow charge (one ampere or less) about once a month. Keep the battery well charged during cold weather so that the electrolyte does not freeze and crack open the battery. The more discharged the battery becomes, the more easily it freezes.
- Tie plastic bags over the exhaust pipes to prevent moisture from entering.
- Put a cover over the motorcycle to keep dust and dirt from collecting on it.

#### **Preparation after Storage:**

- Check the electrolyte level in the battery, charge the battery if necessary, and install it in the motorcycle. Be careful that the battery vent hose is not pinched and that it is kept away from the driving system and other frame parts.
- Make sure the spark plugs are tight.
- Fill the fuel tank with fuel.
- Change the engine oil.
- Check all the points listed in the Daily Safety Checks section.
- Lubricate the points listed in the General Lubrication section.



**Engine Does Not Start:**

*Starter Motor Not Rotating*

- Engine stop switch off
- Clutch lever not pulled in and transmission not in neutral
- Fuse blown
- Battery leads do not make good electrical contact with battery terminals
- Battery discharged

*Engine Cranks Over But Does Not Start*

- No fuel in tank
- Fuel line clogged
- Fuel broken down
- Choke is not used when engine is cold
- Engine flooded
- Spark plugs not in good contact
- Spark plugs fouled or wet

- Incorrect spark plug gap
- Battery discharged

**Engine Stalls:**

*Just When Shifting Into 1st Gear*

- Side stand has been left down
- Clutch does not properly disengage

*While Riding*

- Choke is used too long after moving off
- No fuel in tank
- Fuel tank air vent is obstructed
- Overheating
- Battery discharged

## ////////////////////// OWNER SATISFACTION ////////////////////////

Your satisfaction is important to your authorized Kawasaki dealer and to Kawasaki Motors Corp., U.S.A. If you have a problem concerning warranty or service, please take the following action:

Contact the owner and/or service manager of your authorized Kawasaki dealer. Fully explain your problem and ask for assistance in resolving the situation. The OWNER of the dealership is concerned with your satisfaction and your future business. For this reason the owner is in the best position to assist you. Also, all warranty and service matters are handled and resolved through the authorized Kawasaki dealer network.

If you are unsatisfied after working with your Kawasaki dealer and feel you still require further assistance, WRITE to the address below. Please be certain to provide the model, product identification number, mileage or hours of use, accessories, dates that events occurred and what action has been taken by both you and your dealer. Include the name and address of the dealership. To assist us in resolving your inquiry, please include copies of related receipts and any other pertinent information including the names of the dealership personnel with whom you have been working in the resolution of your problem.

Upon receipt of your WRITTEN correspondence we will contact the dealership and work with them in resolving your problem.

In order to provide a permanent record, all warranty and service resolutions take place only through WRITTEN correspondence.

Please send your correspondence to:

CONSUMER RELATIONS  
KAWASAKI MOTORS CORP., U.S.A.  
P. O. Box 25252  
SANTA ANA, CA. 92799-5252

////////////////////// **MAINTENANCE RECORD** ////////////////////////

Vehicle Identification No. \_\_\_\_\_

Owner Name \_\_\_\_\_

Warranty Start Date \_\_\_\_\_

Engine Displacement \_\_\_\_\_

**Note:** Keep this information and a spare key in a secure location.

Date	Odometer Reading	Maintenance Performed	Dealer Name	Dealer Address

Date	Odometer Reading	Maintenance Performed	Dealer Name	Dealer Address

Date	Odometer Reading	Maintenance Performed	Dealer Name	Dealer Address



**VN750-A6**

**KAWASAKI**  
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