



**Includes:**

- Important Safety Information
- Operating Instructions
- Maintenance and Storage

# **VULCAN 900 CLASSIC LT** **Motorcycle**

# OWNER'S MANUAL

# Quick Reference Guide

This Quick Reference Guide will assist you in finding the information you're looking for.

**GENERAL INFORMATION**

**HOW TO RIDE THE MOTORCYCLE**

**SAFE OPERATION**

**MAINTENANCE AND ADJUSTMENT**

**STORAGE**

**TROUBLESHOOTING GUIDE**

A Table of Contents is included after the Foreword.



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

 **DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

***NOTICE***

**NOTICE** is used to address practices not related to personal injury.

**NOTE**

- *NOTE* indicates information that may help or guide you in the operation or service of the vehicle.

 **WARNING**

Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

***NOTICE***

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

## FOREWORD

Congratulations on your purchase of a new Kawasaki Motorcycle. Your new motorcycle is the product of Kawasaki's advanced engineering, exhaustive testing, and continuous striving for superior reliability, safety and performance.

**Please read this Owner's Manual carefully before riding** so that 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 authorized Kawasaki motorcycle dealer. The Service Manual contains detailed disassembly and maintenance information. Those who plan to do their own work should, of course, be competent mechanics and possess the special tools described in the Service Manual.

Keep this Owner's Manual aboard your motorcycle at all times so that you can refer to it whenever you need information.

This manual should be considered a permanent part of the motorcycle and should remain with the motorcycle when it is sold.

All rights reserved. No part of this publication may be reproduced without our prior written permission.

This publication includes the latest information available at the time of printing. However, there may be minor differences between the actual product and illustrations and text in this manual.

All products are subject to change without prior notice or obligation.

**KAWASAKI HEAVY INDUSTRIES, LTD.**  
**Motorcycle & Engine Company**

© 2013 Kawasaki Heavy Industries, Ltd.

May. 15, 2013. (1)

---

## TABLE OF CONTENTS

---

<b>SPECIFICATIONS</b> .....	9	Horn Button: .....	34
<b>SERIAL NUMBER LOCATIONS</b> .....	13	Brake Lever Adjusters.....	35
<b>LOCATION OF PARTS</b> .....	14	Fuel Tank Cap.....	36
<b>LOCATION OF LABELS</b> .....	17	Fuel Tank .....	37
<b>LOADING INFORMATION</b> .....	21	Side Stand .....	41
<b>GENERAL INFORMATION</b> .....	24	Seat.....	42
Meter Instruments .....	24	Tool Kit Case.....	44
Speedometer: .....	25	Helmet-Hook .....	44
Digital Display .....	25	Windshield.....	45
Fuel Gauge:.....	28	Special Warning on the Use of	
RESET Button/MODE Button: .....	28	Saddlebags.....	46
Warning/Indicator Lights: .....	28	Saddlebags .....	48
Keys .....	30	Steering Lock .....	50
Ignition Switch .....	31	Electric Accessory Connectors .....	51
Right Handlebar Switches.....	33	Rear View Mirror .....	53
Engine Stop Switch: .....	33	<b>BREAK-IN</b> .....	55
Starter Button: .....	33	<b>HOW TO RIDE THE MOTORCYCLE</b> .	57
Left Handlebar Switches .....	34	Starting the Engine .....	57
Dimmer Switch: .....	34	Jump Starting.....	60
Turn Signal Switch:.....	34	Moving Off.....	64



Shifting Gears .....	65	Air Cleaner .....	118
Braking .....	68	Throttle Control System .....	120
Stopping the Engine.....	69	Idle Speed.....	122
Stopping the Motorcycle in an Emergency .....	70	Clutch.....	123
Parking.....	71	Brakes.....	125
Catalytic Converter.....	73	Brake Light Switches.....	129
<b>SAFE OPERATION</b> .....	75	Rear Shock Absorber.....	131
Safe Riding Technique .....	75	Wheels .....	134
Daily Checks .....	78	Battery.....	138
Additional Considerations for High Speed Operation .....	81	Headlight Beam.....	145
<b>MAINTENANCE AND ADJUSTMENT</b> .....	83	Fuses .....	146
Periodic Maintenance Chart.....	88	General Lubrication.....	150
Engine Oil .....	100	Cleaning Your Motorcycle .....	151
Cooling System.....	107	Bolt and Nut Tightening.....	158
Drive Belt.....	113	<b>STORAGE</b> .....	160
Spark Plugs.....	114	<b>TROUBLESHOOTING GUIDE</b> .....	163
Evaporative Emission Control System (California model only) ....	115	<b>YOUR WARRANTY/OWNER</b> <b>SATISFACTION</b> .....	164
Valve Clearance .....	116	<b>Reporting Safety Defects</b> .....	170
Kawasaki Clean Air System.....	117	<b>ENVIRONMENTAL PROTECTION</b> ....	171
		<b>MAINTENANCE RECORD</b> .....	172
		<b>LABEL INFORMATION</b> .....	178

---

## SPECIFICATIONS

---

### PERFORMANCE

Minimum Turning Radius 2.9 m (114 in.)

### DIMENSIONS

Overall Length 2 465 mm (97.0 in.)

Overall Width 1 005 mm (39.6 in.)

Overall Height 1 480 mm (58.3 in.)

Wheelbase 1 645 mm (64.8 in.)

Road Clearance 135 mm (5.31 in.)

Curb Mass 298 kg (657 lb)

### ENGINE

Type SOHC, V-type 2-cylinder, 4-stroke, liquid-cooled

Displacement 903 cm<sup>3</sup> (55.1 cu in.)

Bore × Stroke 88.0 × 74.2 mm (3.5 × 2.9 in.)

Compression Ratio 9.5 : 1

Starting System Electric starter

## 10 SPECIFICATIONS

Cylinder Numbering Method		Front to rear, 1-2
Firing Order		1-2
Fuel System		Digital fuel injection system (DFI)
Ignition System		Battery and coil (transistorized ignition)
Ignition Timing		3° BTDC @1 000 r/min (rpm) ~
(Electronically advanced)		39° BTDC @5 400 r/min (rpm)
Spark Plugs		NGK CPR7EA-9
Lubrication System		Forced lubrication (wet sump)
Engine Oil:	Type	API SG, SH, SJ, SL or SM with JASO MA, MA1 or MA2
	Viscosity	SAE 10W-40
	Capacity	3.7 L (3.9 US qt)
Coolant Capacity		2.2 L (2.3 US qt)

## TRANSMISSION

Transmission Type	5-speed, constant mesh, return shift
Clutch Type	Wet, multi disc
Driving System	Belt drive

Primary Reduction Ratio		2.184 (83/38)
Final Reduction Ratio		2.063 (66/32)
Overall Drive Ratio		4.338 (Top gear)
Gear Ratio	1st	2.786 (39/14)
	2nd	1.889 (34/18)
	3rd	1.360 (34/25)
	4th	1.107 (31/28)
	5th	0.963 (26/27)

**FRAME**

Castor		32°
Trail		160 mm (6.3 in.)
Tire Size:	Front	130/90-16 M/C 67H
	Rear	180/70-15 M/C 76H
Rim Size:	Front	J16 M/C × MT3.00
	Rear	J15 M/C × MT4.50
Fuel Tank Capacity		20 L (5.3 US gal)

## 12 SPECIFICATIONS

### ELECTRICAL EQUIPMENT

Battery	12 V 10 Ah
Headlight	12 V 60/55 W
Tail/Brake Light	12 V 5/21 W

Specifications are subject to change without notice.

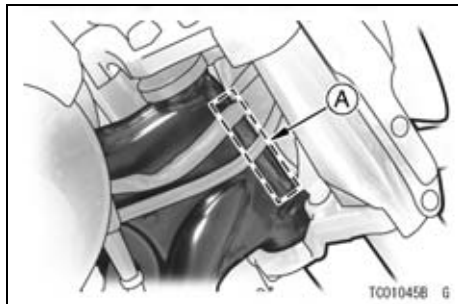
---

## SERIAL NUMBER LOCATIONS

---

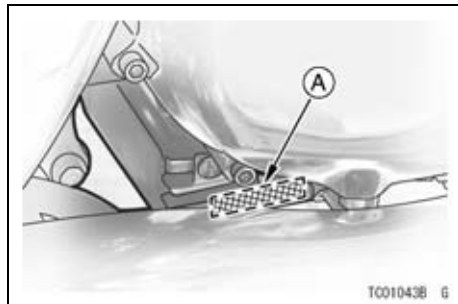
The engine and frame serial numbers are used to register the motorcycle. They are the only means of identifying your particular machine from others of the same model type. These serial numbers may be needed by your dealer when ordering parts. In the event of theft, the investigating authorities will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

### Frame No.



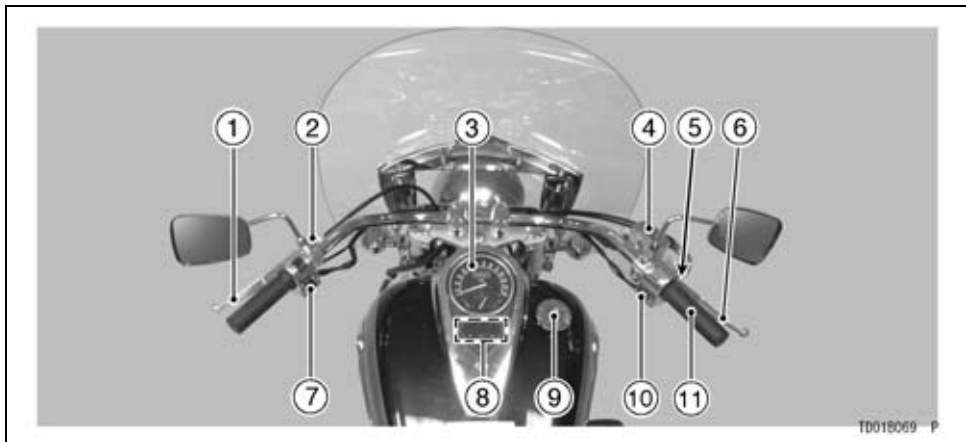
A. Frame Number

### Engine No.



A. Engine Number

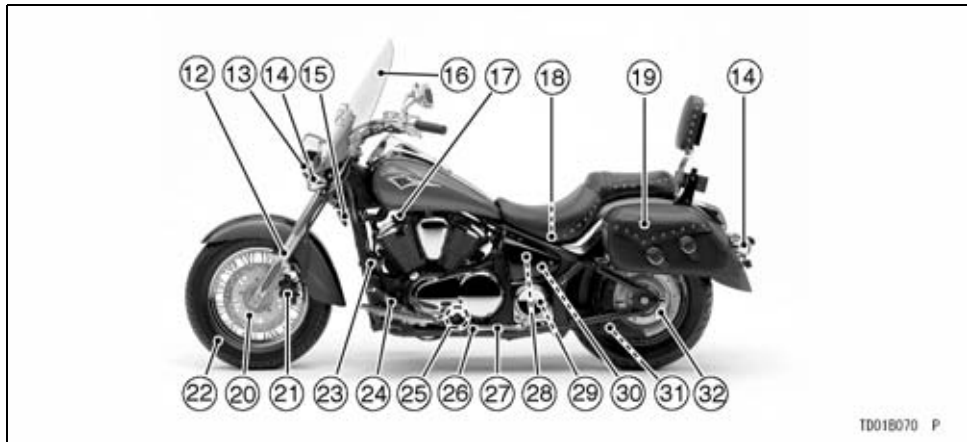
## LOCATION OF PARTS



1. Clutch Lever
2. Clutch Lever Adjuster
3. Meter Instruments
4. Brake Fluid Reservoir (Front)

5. Brake Lever Adjuster
6. Front Brake Lever
7. Left Handlebar
8. Indicator Lights

9. Fuel Tank Cap
10. Right Handlebar
11. Throttle Grip



TD018070 P

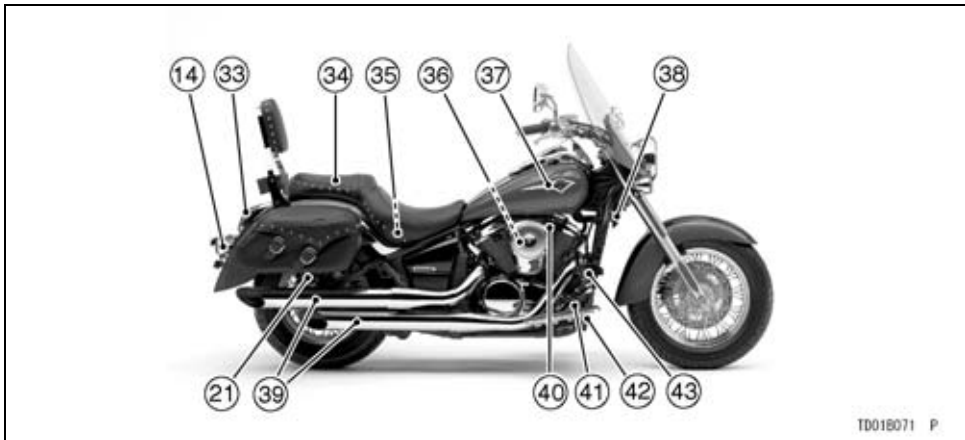
- 12. Front Fork
- 13. Headlight
- 14. Turn Signal Light
- 15. Horn
- 16. Windshield
- 17. Spark Plugs
- 18. Battery
- 19. Saddlebag

- 20. Brake Disc
- 21. Brake Caliper
- 22. Wheel
- 23. Radiator
- 24. Shift Pedal
- 25. Oil Level Inspection Window
- 26. Side Stand Switch

- 27. Side Stand
- 28. Fuse Box
- 29. Coolant Reserve Tank
- 30. Rear Shock Absorber
- 31. Belt
- 32. Belt Pulley



## 16 LOCATION OF PARTS



- 33. Tail/Brake Light
- 34. Seat
- 35. Tool Kit Case/Tool Kit
- 36. Air Cleaner Element
- 37. Fuel Tank

- 38. Steering Lock
- 39. Mufflers
- 40. Idle Speed Adjusting Screw
- 41. Rear Brake Pedal

- 42. Rear Brake Light Switch
- 43. Brake Fluid Reservoir (Rear)

---

## LOCATION OF LABELS

---

All warning labels which are on your vehicle are repeated here. Read labels on your vehicle and understand them thoroughly. They contain information which is important for your safety and the safety of anyone else who may operate your vehicle. Therefore, it is very important that all warning labels be on your vehicle in the locations shown. If any label is missing, damaged, or worn, get a replacement from your Kawasaki dealer and install it in the correct position.

### NOTE

- *The sample warning labels in this section have part numbers to help you and your dealer obtain the correct replacement.*

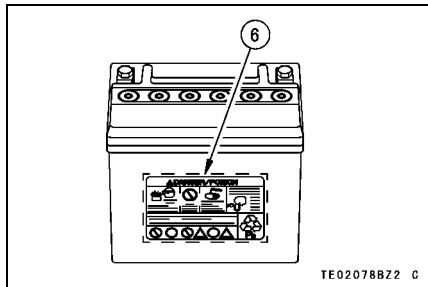
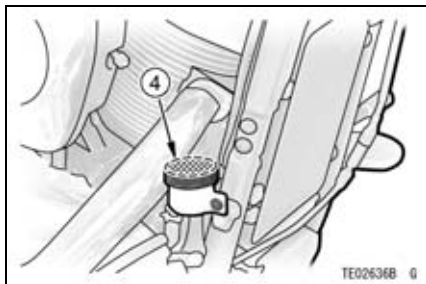
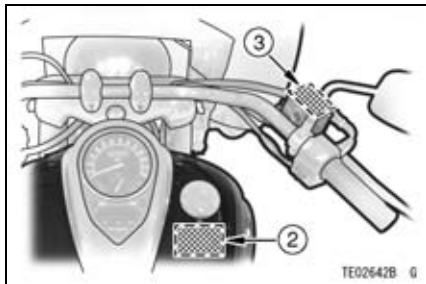
- *Refer to the actual vehicle label for model specific data grayed out in the illustration.*



1. Radiator Cap Danger

(For further information of label, refer to the “LABEL INFORMATION” chapter.)

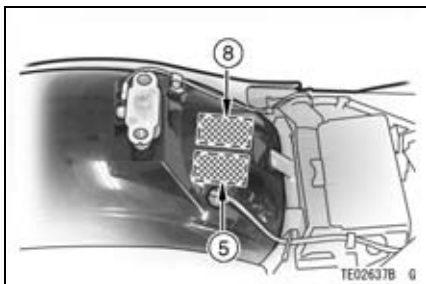
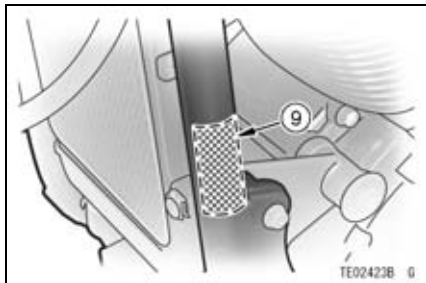
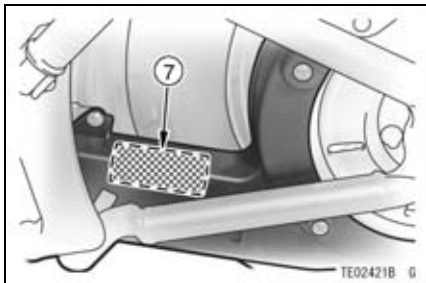
## 18 LOCATION OF LABELS



- \*2. Fuel Level
- 3. Brake Fluid (Front)
- 4. Brake Fluid (Rear)
- 6. Battery Position/Danger

(For further information of label, refer to the "LABEL INFORMATION" chapter.)

\*: only on California model

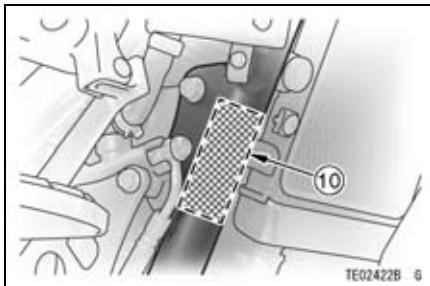


- \*5. Vacuum Hose Routing Diagram
- 7. Tire and Load Data
- 8. Vehicle Emission Control Information
- 9. Noise Emission Control Information

(For further information of label, refer to the "LABEL INFORMATION" chapter.)

\*: only on California model

## 20 LOCATION OF LABELS



### 10. Weight and Manufacture

(For further information of label, refer to the “LABEL INFORMATION” chapter.)

---

## 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 it is not overloaded 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

## 22 LOADING INFORMATION

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 or seat strap. 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.
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 components, 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.

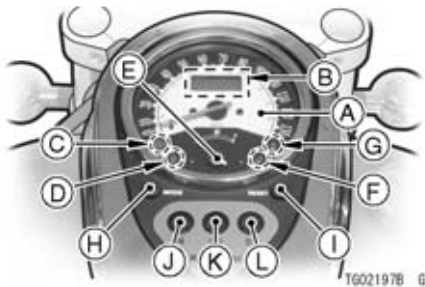
#### **Maximum Load**

Weight of rider, passenger, baggage, and accessories must not exceed 180 kg (397 lb).
---



## Meter Instruments

- A. Speedometer
- B. Digital Display
- C. Fuel Level Warning Indicator Light
- D. Coolant Temperature Warning Indicator Light
- E. Fuel Gauge
- F. Oil Pressure Warning Indicator Light
- G. Fuel Injection Warning Indicator Light
- H. MODE Button
- I. RESET Button
- J. Neutral Indicator Light
- K. Turn Signal Indicator Light
- L. High Beam Indicator Light



**Speedometer:**

The speedometer shows the speed of the vehicle.

**Digital Display**

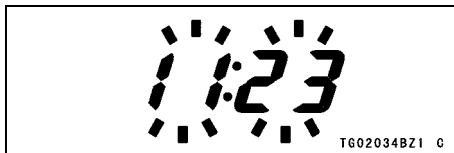
The digital display located in the speedometer face is used to display the odometer, trip meter, and clock. Pushing the MODE button shifts the display through the following three modes: ODO, TRIP and CLOCK. When the ignition key is turned to "ON", all the segments are displayed for a few seconds, then the clock or meters operates normally depending on the mode selected.

**Clock -**

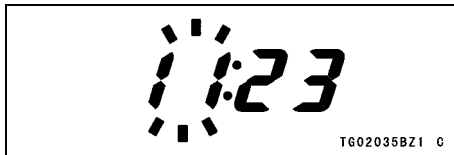
To adjust hours and minutes:

- Turn the ignition key to "ON".
- Push the MODE button to display the clock.

- Push the RESET button for more than two seconds. Both the hour and minute displays start flashing.



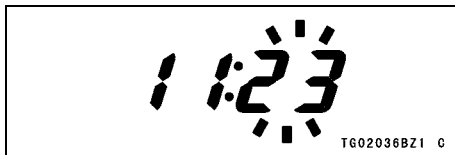
- Again push the RESET button. When only the hour display flashes, push the MODE button to advance the hours.



- Push the RESET button. The hour display stops flashing and the minute

## 26 GENERAL INFORMATION

display starts flashing. Push the MODE button to advance the minutes.



- Push the RESET button. Both the hour and minute displays start flashing again.
- Push the MODE button. The displays stop flashing and the clock starts working.

## NOTE

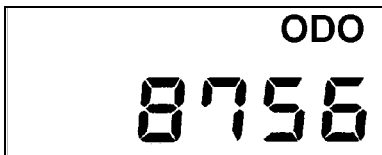
- *Pushing the MODE button momentarily advances the hour or minute step by step. Pushing and holding the button advance the hour or minute continuously.*
- *The clock works normally from the back-up power while the ignition switch is turned off.*
- *When the battery is disconnected, the clock resets to 1:00, and starts working again when the battery is connected.*

**Odometer -**

The odometer shows the total distance in kilometers (miles) that the vehicle has been ridden. This meter cannot be reset.

**NOTE**

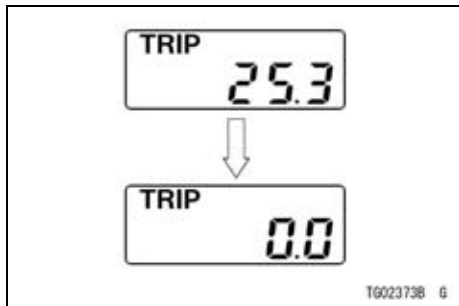
- *The data is maintained even if the battery is disconnected.*
- *When the figures come to 999999, they are stopped and locked.*

**Trip Meters -**

The trip meter shows the distance in kilometers (miles) traveled since it was last reset to zero.

To reset a trip meter:

- Push the MODE button to display the trip meter.
- Push the RESET button and hold it in.
- After two seconds, the figure display turns to 0.0, and then starts counting when the vehicle is operated. The meter counts until it is next reset.



### NOTE

- *The data is maintained by the back-up power if the ignition key is turned to "OFF".*
- *When the trip meter reaches 999.9 while riding, the meter resets to 0.0 and continue counting.*
- *When the battery is disconnected, the meter display resets to 0.0.*

### Fuel Gauge:

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


When vehicle stands with side stand, fuel gauge cannot show the amount of fuel in the fuel tank exactly. Stand upright the vehicle to check the fuel level.


### RESET Button/MODE Button:


The RESET button is used to reset the trip meter and to adjust the clock. The MODE button is used to shift through the digital display modes and to adjust the clock.


### Warning/Indicator Lights:

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


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

 : When the turn signal switch is pushed to left or right, the turn signal indicator light flashes on and off.

 : The oil pressure warning indicator 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.

 : The warning indicator light goes on whenever the coolant temperature rises to 120°C (248°F) or higher when the motorcycle is in operation. If it stays on, stop the engine and check the coolant level in the reserve tank after the engine cools down.

**FI:** The fuel injection (FI) warning indicator light goes on when the ignition key is turned to “ON” and goes off soon after ensuring that its circuit functions properly. The warning indicator light also goes on whenever the troubles occur in digital fuel injection system (DFI). If the warning indicator light comes on, have the DFI system checked by an authorized Kawasaki dealer.

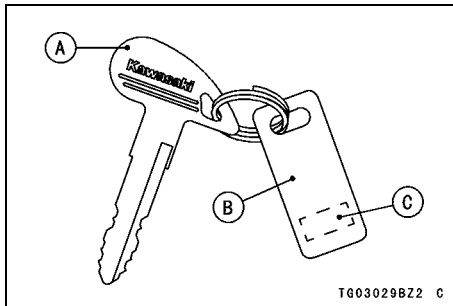
 : The fuel level warning indicator light goes on when approximately 4.0 L (1.0 US gal) of usable fuel remains. Refuel at the earliest opportunity when the fuel level warning indicator light comes on with the engine running.

When vehicle stands with side stand, fuel level warning indicator light cannot show the amount of fuel in the fuel tank exactly. Stand upright the vehicle to check the fuel level.

## 30 GENERAL INFORMATION

### Keys

This motorcycle has a combination key, which is used for the ignition switch, steering lock, and fuel tank cap. Included with the key is a key number, which is stamped on the separate tag. Record the key number in the space provided and store the number in a safe place. If your keys came with a tag, store it in a safe place as well.



- A. Ignition Key
- B. Tag
- C. Key Number

**Write your key number here.**

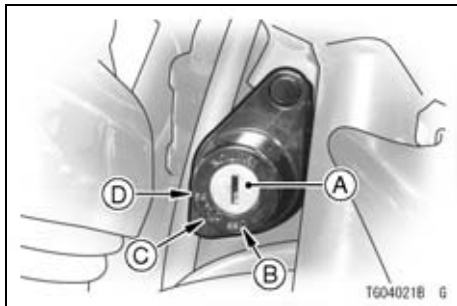
In the event you lose your keys, you will need the key number to have a duplicate made. If you cannot locate your key number, contact the dealer where you purchased your Kawasaki motorcycle. It's possible the dealer may have

the number in its records. If the key number is lost completely, you will need to replace the ignition switch and all other locks operated by that key.

Contact your Kawasaki dealer to purchase additional spare keys either using your original key as a master or using the key code on the tag or your key. Store one key at home and keep another spare in your wallet or riding gear, in case the original is lost.

## Ignition Switch

The ignition switch is located at the left side behind the rear cylinder. This is a three-position, key-operated switch. The key can be removed from the switch when it is in the OFF or P (Park) position.



**A. Ignition Switch**

**B. OFF**

**C. ON**

**D. P (Park)**



## 32 GENERAL INFORMATION

<b>OFF</b>	Engine off. All electrical circuits off.
<b>ON</b>	Engine on. All electrical equipment can be used.
<b>P (Park)</b>	Engine off. Taillight and licence plate light on. All other electrical circuits cut off.


*without the motorcycle running for a long time (one hour), the battery may become totally discharged.*


### NOTE

- *Tail 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 key to ON.*
- *If you leave the motorcycle in the P (Park) position or in the ON position*

## Right Handlebar Switches

### Engine Stop Switch:

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

The engine stop switch is for emergency use. If required, move the engine stop switch to the  position.

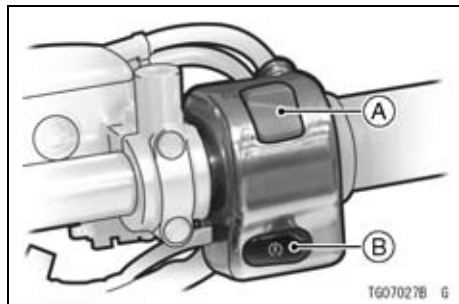
### NOTE

○ *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.*

### Starter Button:

The starter button operates the electric starter when the transmission is in neutral.

Refer to the Starting the Engine section of the “How to Ride the Motorcycle” chapter for starting instructions.




A. Engine Stop Switch


B. Starter Button


## 34 GENERAL INFORMATION

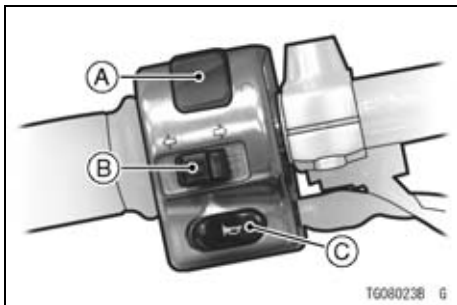
### Left Handlebar Switches

#### Dimmer Switch:

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



High beam.....(  )

Low beam.....(  )



- A. Dimmer Switch
- B. Turn Signal Switch
- C. Horn Button

#### Turn Signal Switch:

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

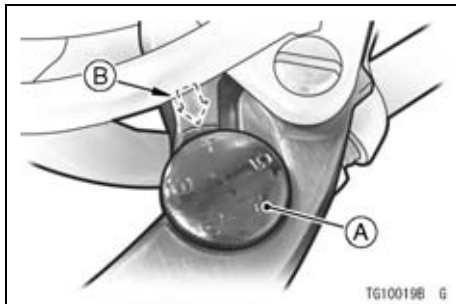
To stop flashing, push the switch in.

#### Horn Button:

When the horn button is pushed, the horn sounds.

## Brake Lever Adjusters

There is an adjuster on the brake lever. The adjuster has 5 positions so that the released lever position can be adjusted to suit the operator's hands. Push the lever forward and turn the adjuster to align the number with the arrow mark on the lever holder. The distance from the grip to the released lever is minimum at Number 5 and maximum at Number 1.



- A. Adjuster
- B. Arrow Mark

## 36 GENERAL INFORMATION

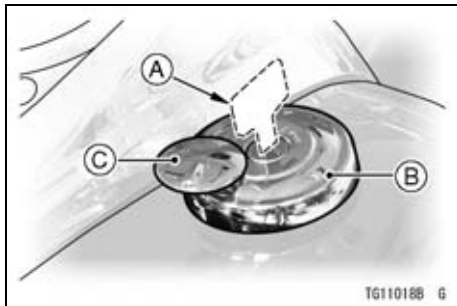
### Fuel Tank Cap

To open the fuel tank cap, insert the ignition key into the fuel tank cap 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 to the left to the original position. Close the key hole cover.

#### NOTE

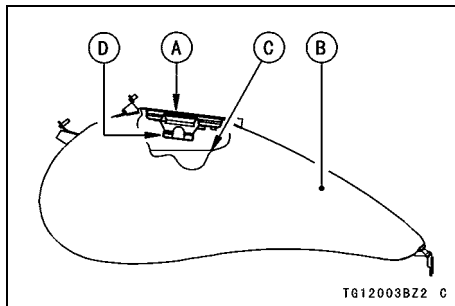
- *The fuel tank cap cannot be closed without the key inserted, and the key cannot be removed unless the cap is locked properly.*
- *Do not push on the key to close the cap or the cap cannot be locked.*



- A. Ignition Key
- B. Fuel Tank Cap
- C. Key Hole Cover

## Fuel Tank

Avoid filling the tank in the rain or where heavy dust is blowing so that the fuel does not get contaminated.



- A. Tank Cap
- B. Fuel Tank
- C. Top Level
- D. Filler Neck

## **⚠** WARNING

**Gasoline is extremely flammable and can be explosive under certain conditions, creating the potential for serious burns. Turn the ignition switch to "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 completely to the top. If the tank is filled completely to the top, 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.**

**NOTICE**

**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 and in compliance with the emission regulation.**

**Fuel Requirement:***Fuel Type*

Use clean, fresh unleaded gasoline with a minimum Antiknock Index of 87.

The Antiknock Index is posted on service station pumps. The octane rating of a gasoline is a measure of its resistance to detonation or “knocking”. The Antiknock Index is an average of the Research Octane Number (RON) and the Motor Octane Number (MON) as shown in the table.

Octane Rating Method	Minimum Rating
Antiknock Index $\frac{(\text{RON} + \text{MON})}{2}$	87

**NOTICE**

**If engine “knocking” or “pinging” occurs, use a different brand of gasoline of a higher octane rating. If this condition is allowed to continue it can lead to severe engine damage.**

**Gasoline quality is important. Fuels of low quality or not meeting standard industry specifications may result in unsatisfactory performance. Operating problems that result from the use of poor quality or nonrecommended fuel may not be covered under your warranty.**

*Fuels Containing Oxygenates*

Gasoline frequently contains oxygenates (alcohols and ethers) especially in areas of the U.S. and Canada which are required to sell such reformulated fuels as part of a strategy to reduce exhaust emissions.

The types and volume of fuel oxygenates approved for use in unleaded gasoline by the U.S. Environmental Protection Agency include a broad range of alcohols and ethers, but only two components have seen any significant level of commercial use.

Gasoline/Alcohol Blends - Gasoline containing up to 10% ethanol (alcohol produced from agricultural products such as corn), also known as “gasohol” is approved for use.



## **NOTICE**

**Avoid using blends of unleaded gasoline and methanol (wood alcohol) whenever possible, and never use “gasohol” containing more than 5% methanol. Fuel system damage and performance problems may result.**

Gasoline/Ether Blends - The most common ether is methyl tertiary butyl ether (MTBE). You may use gasoline containing up to 15% MTBE.

## **NOTE**

- *Other oxygenates approved for use in unleaded gasoline include TAME (up to 16.7%) and ETBE (up to 17.2%). Fuel containing these oxygenates can also be used in your Kawasaki.*

## **NOTICE**

**Never use gasoline with an octane rating lower than the minimum specified by Kawasaki. Never use “gasohol” with more than 10% ethanol, or more than 5% methanol. Gasoline containing methanol must also be blended with cosolvents and corrosion inhibitors.**

**Certain ingredients of gasoline may cause paint fading or damage. Be extra careful not to spill gasoline or gasoline oxygenate blends during refueling.**

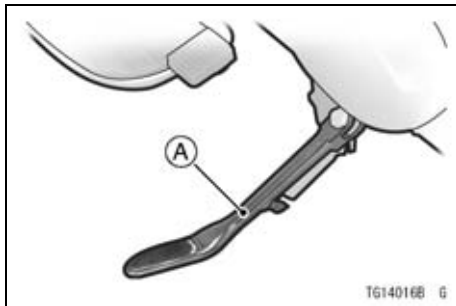
**When not operating your Kawasaki for 30 to 60 days, mix a fuel stabilizer (such as STA-BIL) with the gasoline in the fuel tank. Fuel stabilizer additives inhibit oxidation of the fuel which minimizes gummy deposits.**

**NOTICE**

Never store this product with “gasohol” in the fuel system. Before storage it is recommended that you drain all fuel from the fuel system. See the Storage section in this manual.

**Side Stand**

The motorcycle is equipped with a side stand.



A. Side Stand

**NOTE**

- *When using the side stand, turn the handlebar to the left.*

Do not sit on the motorcycle while it is on its side stand. Always kick the stand fully up before sitting on the motorcycle.

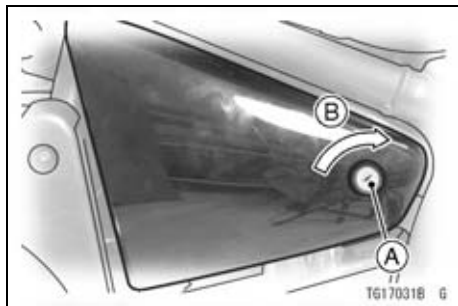
## NOTE

- *The motorcycle is equipped with a side stand switch. This switch is designed so that the engine does not start if the transmission is in gear and the side stand is down.*

## Seat

### Seat Removal

- To remove the seat, insert the ignition key into the seat lock, and turn the key to the right.



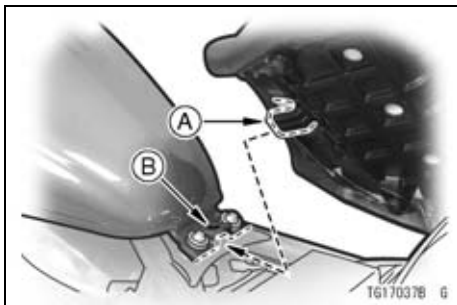
**A. Seat Lock**

**B. Turn Key to Right**

- Pull the seat to the rear with raising the rear of the seat.

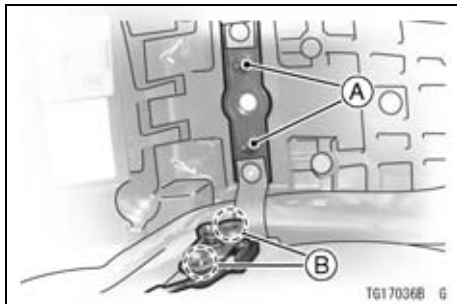
**Seat Installation**

- To install the seat, insert the projection of the front on the seat into the receptacle on the frame.



- A. Projection**
- B. Receptacle**

- Insert the hook of the middle on the seat into the holder on the frame.



- A. Hook**
- B. Holder**

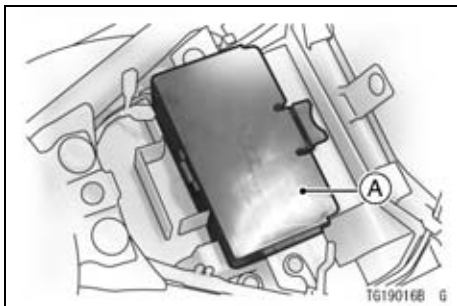
- Pull the front and rear ends of the seat to make sure they are securely locked.

## 44 GENERAL INFORMATION

### Tool Kit Case

The tool kit case is located under the seat. The kit contains tools that can be helpful in making roadside repairs, adjustments, and some maintenance procedures explained in this manual. Keep the tool kit in this case.

- Remove the seat.
- Open the tool kit case cover by pulling the knob.



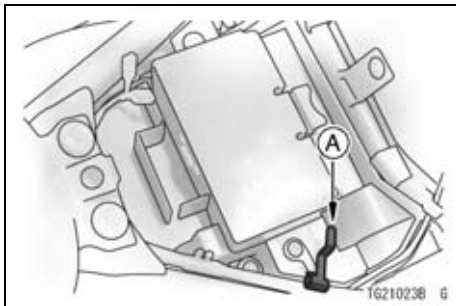
A. Tool Kit Case

### Helmet-Hook

Helmet can be secured to the motorcycle using the helmet-hook. The helmet hook is located under the seat.

#### **⚠ WARNING**

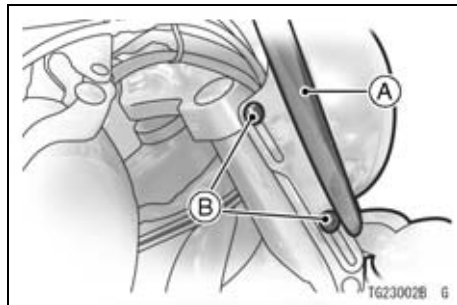
**Riding with helmet attached to the hook could cause an accident by distracting the operator or interfering with normal vehicle operation. Do not ride the motorcycle with helmet attached to the hook.**



**A. Helmet-Hook**

## Windshield

The windshield can be adjusted within 50 mm (1.9 in.) in height to suit the rider's preference. Loosen both the upper and lower bolts on each lower side of the windshield and move it up or down. After adjusting, tighten all the bolts securely.



**A. Windshield**

**B. Bolts**

## **Special Warning on the Use of Saddlebags**

When preparing to ride this motorcycle, always check the saddlebags for secure mounting in their respective brackets. Be certain the saddlebags are securely bolted on their brackets by attempting to pull them from the brackets. Make sure the buckles of the saddlebag covers are securely locked.

 **WARNING**

The sudden detachment or loss of a saddlebag could distract or alarm the motorcycle rider, and the consequent loss of attention to road and traffic conditions could cause loss of control and a serious accident. Also the sudden change of vehicle balance resulting from the loss of a saddlebag could cause loss of control and a serious accident. A dislodged saddlebag could physically obstruct the motorcycle's path, or interfere in the path of a following motorcycle or other vehicle. This could cause a loss of control by one of the motorcycle riders or another vehicle driver with a consequent accident. Be sure the saddlebags are securely fastened to the motorcycle before each ride.

 **WARNING**

Riding with an open saddlebag lid could allow clothing or other objects to fall into the rear wheel, resulting in rear wheel lockup and loss of control. Keep both saddlebag covers securely locked when riding.



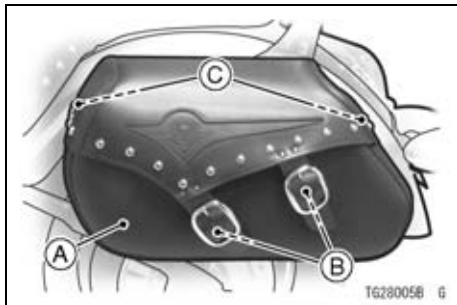
## Saddlebags

The saddlebags are provided at both sides of the rear wheel to carry baggage.

### To open/close the saddlebag:

To open the saddlebag, grasp the lever of the buckle, and disconnect the buckle and then disattach the hook buttons.

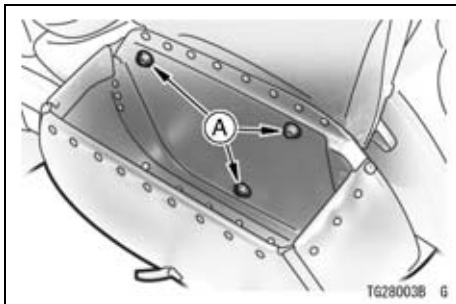
To close the saddlebag, connect the buckle with a click and attach the hook buttons.



- A. Saddlebag
- B. Buckle
- C. Hook Button

**To remove the saddlebag:**

Open the saddlebag and take off the bolts inside the saddlebag.



A. Bolts

**⚠ WARNING**

Overloading the motorcycle with cargo and/or passengers, and/or not balancing the weight of items carried in each saddlebag may cause adverse handling, loss of control and an accident resulting in serious injury or death. Do not carry loads of more than 2 kg (5 lb) in each saddlebag. Distribute the load equally on both sides of the motorcycle to minimize imbalance. Do not exceed the total payload limit of 180 kg (397 lb), including rider, passenger, baggage, and accessories. Do not exceed the vehicle speed of 130 km/h (80 mph) when carrying a passenger and/or cargo.

 **WARNING**

**Also reduce speed according to road or weather condition, etc. Failure to adjust the speed to compensate for added weight and other conditions may result in a loss of control and subsequent accident.**

## **Steering Lock**

The motorcycle is equipped with the steering lock at the right side of the head pipe.

### **To lock the steering:**

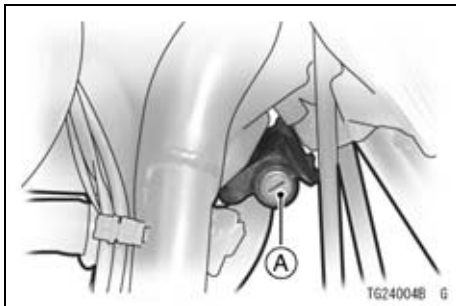
- Turn the handlebar to the left.
- Insert the ignition key.
- Turn the key half a turn to the left.
- Pull the key out.

### **NOTE**

- *If the steering is hard to lock, turn the handlebar slightly to the left or the right.*
- *When unlocking the steering lock, turn the handlebar slightly to the right.*

## **⚠ WARNING**

**Attempting to ride with the steering locked could cause an accident. Unlock the steering before starting the engine.**



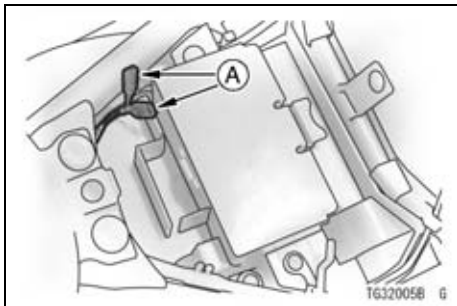
**A. Steering Lock**

## **Electric Accessory Connectors**

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

### **Electric Accessory Connectors**

Location	Polarity	Wire Color
Under Rider's Seat	(+)	White/Blue
	(-)	Black/Yellow
Under Fuel Tank	(+)	White/Blue
	(-)	Black/Yellow
Maximum Current:		10 A



**A. Electric Accessory Connectors**

- When using the electric accessory connectors under the fuel tank, the electric accessory connection to the connectors should be done by an authorized Kawasaki dealer.

**NOTICE**

The vehicle has an electrical accessory circuit (10 A) fuse for the connectors.

Always install a fuse 10 A or less in the electrical accessory circuit.

Do not connect more than 70 W of total load to the vehicle's electrical system or the battery may become discharged, even with the engine running.

**⚠ WARNING**

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

## Rear View Mirror

### Rear View Mirror Adjustment

- Adjust the rear view mirror by slightly moving only the mirror portion of the assembly.
- If the rear visibility can not be assured by moving the mirror, loosen the upper hexagonal area and turn the stay by hand.

### Tightening Torque

Lowering Hexagonal Area:

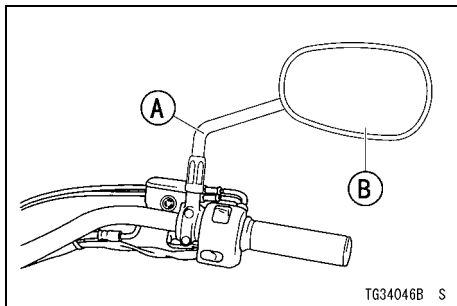
30 N·m (3.1 kgf·m, 22 ft·lb)

Upper Hexagonal Area:

18 N·m (1.8 kgf·m, 13 ft·lb)

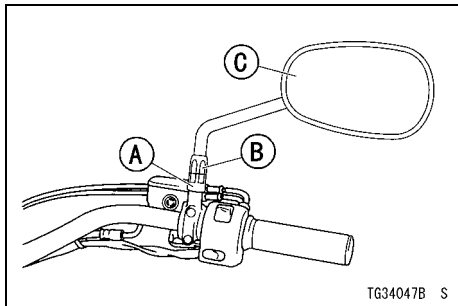
## NOTE

- *The upper hexagonal area (locknut) has left hand threads.*



- A. Stay
- B. Rear View Mirror

## 54 GENERAL INFORMATION



- A. Lower Hexagonal Area for Tightening
- B. Upper Hexagonal Area
- C. Rear View Mirror

## NOTE

- If a torque wrench is not available, this item should be serviced by a Kawasaki dealer.

---

## 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 speed in km/h (mph) during the break-in period.

Distance traveled	Gear position	km/h (mph)				
		1st	2nd	3rd	4th	5th
0 ~ 800 km (0 ~ 500 mi)		32	50	65	80	95
		(20)	(30)	(40)	(50)	(60)
800 ~ 1 600 km (500 ~ 1 000 mi)		40	65	90	100	130
		(25)	(40)	(55)	(70)	(80)



## NOTE

- *When operating on public roadways, keep maximum speed under traffic law limits.*
- 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.

## WARNING

**New tires are slippery and may cause loss of control and injury. A break-in period of 160 km (100 mi) is necessary to establish normal tire traction. During break-in, avoid sudden and maximum braking and acceleration, and hard cornering.**


In addition to the above, at 1 000 km (600 mi) it is extremely important that the owner has the initial maintenance service performed by a competent mechanic following the procedures in the Service Manual.

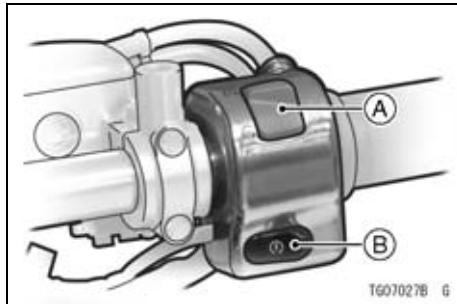
---

## HOW TO RIDE THE MOTORCYCLE

---

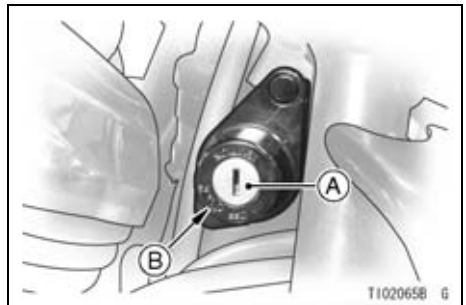
### Starting the Engine

- Check that the engine stop switch is in the  position.



- A. Engine Stop Switch
- B. Starter Button

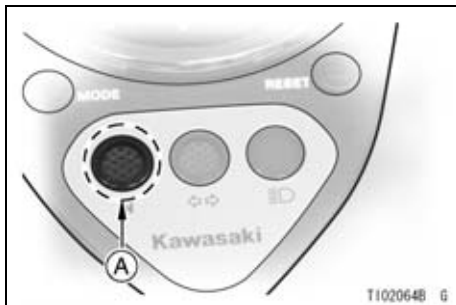
- Turn the ignition key to ON.



- A. Ignition Switch
- B. ON Position

## 58 HOW TO RIDE THE MOTORCYCLE

- Make sure the transmission is in neutral.



A. Neutral Indicator Light

### NOTE

- *The motorcycle is equipped with a vehicle-down sensor, which causes the engine to stop automatically when the motorcycle falls down. After righting the motorcycle, first turn the ignition key to “OFF” and then*

*back to “ON” before starting the engine.*

- Without holding the throttle grip, push the starter button to start the engine.

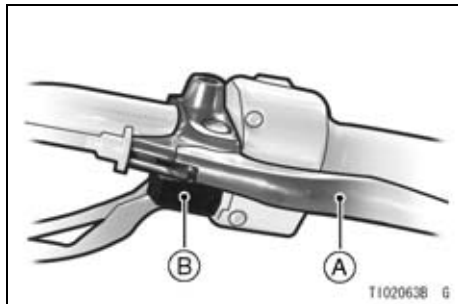
### NOTICE

**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

- *The motorcycle is equipped with a starter lockout switch. This switch is designed so that the engine does not start if the transmission is in gear and the side stand is down. However, the*

*engine can be started if the clutch lever is pulled and the side stand is fully up.*



- A. Clutch Lever
- B. Starter Lockout Switch

## ***NOTICE***

**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.

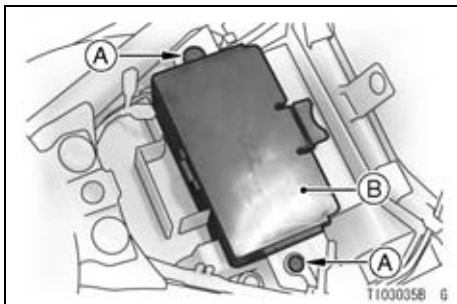
### DANGER

**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*

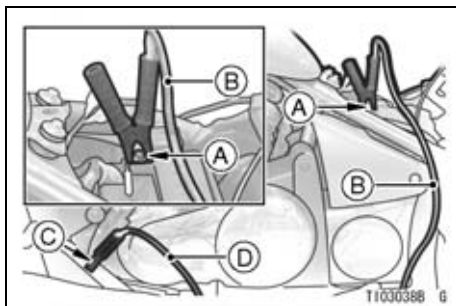
- Make sure the ignition key is turned to “OFF”.
- Remove the seat.

- Remove the tool kit case by unscrewing the helmet-hook mounting screws.



- A. Screw
- B. Tool Kit Case

- Connect a jumper cable from the positive (+) terminal of the booster battery to the positive (+) terminal of the motorcycle battery.



- A. Motorcycle Battery Positive (+) Terminal
- B. From Booster Battery Positive (+) Terminal
- C. Unpainted Metal Surface
- D. From Booster Battery Negative (-) Terminal

## 62 HOW TO RIDE THE MOTORCYCLE

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

### **DANGER**

**Batteries contain sulfuric acid that can cause burns and produce hydrogen gas which is highly explosive. Do not make this last connection at the fuel system or battery. Take care not to touch the positive and negative cables together, and do not lean over the battery when making this last connection. Do not connect to 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.

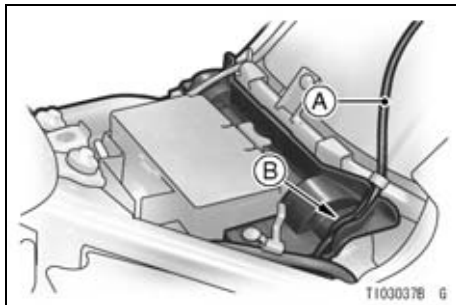
**NOTICE**

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 has started, disconnect the jumper cables. Disconnect the negative (-) cable from the motorcycle first. Reinstall the parts removed.

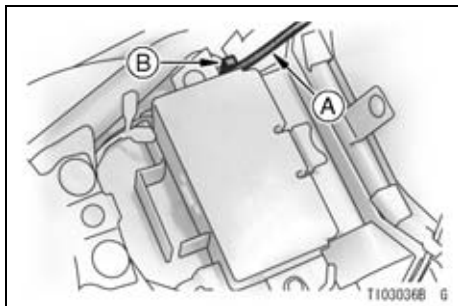
**NOTE**

- *After installing the tool kit case, run the seat lock cable and wires along the guide.*



- A. Seat Lock Cable
- B. Guide



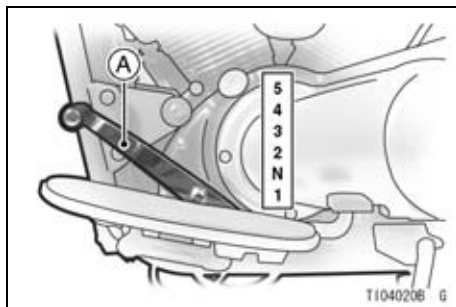


A. Harness

B. Guide

## 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 does not start if the transmission is in gear and the side stand is 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 the speeds shown in the table below.

### **WARNING**

**Downshifting at high speed can make the rear wheel skid and cause an accident resulting in severe injury or death, as well as cause the engine to overrev and damage it. When shifting down to a lower gear, do not shift at such a high speed that engine rpm jumps excessively. Downshift at the vehicle speeds shown in the table in this section.**

## 66 HOW TO RIDE THE MOTORCYCLE

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

### NOTE

- *The transmission is equipped with a positive neutral finder. When the motorcycle is standing still, the transmission cannot be shifted past neutral from 1st gear. To use the positive 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	40 (25)
2nd → 3rd	30 (19)	4th → 3rd	30 (19)
3rd → 4th	40 (25)	3rd → 2nd	20 (12)
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. Reduce your speed before you get into the corner.

- For emergency braking, disregard downshifting, and concentrate on applying the brakes as hard as possible without skidding.



A. Front Brake Lever



A. Rear Brake Pedal

## Stopping the Engine

- Close the throttle completely.
- Shift the transmission into neutral.
- Turn the ignition key to “OFF”.
- Support the motorcycle on a firm, level surface with the side stand.
- Lock the steering.

## NOTE

- *The motorcycle is equipped with a vehicle-down sensor, which causes the engine to stop automatically when the motorcycle falls down. After righting the motorcycle, first turn the ignition key to “OFF” and then back to “ON” before starting the engine.*

### 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 can create a dangerous situation known as throttle failure.

Two of the most common causes of throttle failure are:

1. An improperly serviced or clogged air cleaner may allow dirt and dust to enter the throttle body and stick the throttle open.

2. During removal of the air cleaner, dirt is allowed to enter and jam the throttle body.

In an emergency situation such as throttle failure, your vehicle may be stopped by applying the brakes and disengaging the clutch. 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

### **WARNING**

Operating or parking the vehicle near flammable materials can cause a fire, and can result in property damage or severe personal injury.

Do not idle or park your vehicle in an area where tall or dry vegetation, or other flammable materials could come into contact with the muffler or exhaust pipe.

### **WARNING**

The engine and exhaust system get extremely hot during normal operation and can cause serious burns.

Never touch a hot engine, exhaust pipe, or muffler during operation or after stopping the engine.

- Shift the transmission into neutral and turn the ignition key to “OFF”.
- Support the motorcycle on a firm, level surface with the side stand.

### **NOTICE**

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, creating the potential for serious burns. Turn the ignition switch to “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.**

- Lock the steering to help prevent theft.

### **NOTE**

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

## Catalytic Converter

This motorcycle is equipped with a catalytic converter in the exhaust system. The converter reacts with carbon monoxide, hydrocarbons and nitrogen oxides to convert them into carbon dioxide, water, nitrogen and oxygen resulting in much cleaner exhaust gases to be discharged into the atmosphere.

For proper operation of the catalytic converter, the following cautions must be observed.

### WARNING

**Operating or parking the vehicle near flammable materials can cause a fire, and can result in property damage or severe personal injury.**

**Do not idle or park your vehicle in an area where tall or dry vegetation, or other flammable materials could come into contact with the muffler or exhaust pipe.**

### WARNING

**The engine and exhaust system get extremely hot during normal operation and can cause serious burns.**

**Never touch a hot engine, exhaust pipe, or muffler during operation or after stopping the engine.**

## 74 HOW TO RIDE THE MOTORCYCLE

- Use only unleaded gasoline. Never use leaded gasoline. Leaded gasoline significantly reduces the capability of the catalytic converter.
- Do not operate the vehicle with the engine or any one cylinder misfiring. Under these conditions unburned

air/fuel mixture flowing out of engine excessively accelerates reaction in the converter allowing the converter to overheat and become damaged when the engine is hot, or reduces converter performance when the engine is cold.

---

## SAFE OPERATION

---

### 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. You should be aware of and verify the applicable safety regulations in force prior to riding your motorcycle. 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.

When riding always keep both hands on the handlebars and both feet on the footpegs. Removing your hands from the handlebars or feet from the footpegs while riding can be hazardous. If you remove even one hand or foot, you can reduce your ability to control the motorcycle.

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.

In general your actions should be smooth as sudden acceleration, braking or turning may cause loss of control, especially when riding in wet conditions or on loose roadway surfaces, when the ability to maneuver will be reduced.

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.

In wet conditions, 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.

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 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 before operation may result in serious damage or an accident. Always perform daily checks before operation.**

### **DANGER**

**Exhaust gas contains carbon monoxide, a colorless, odorless poisonous gas.**

**Inhaling carbon monoxide can cause serious brain injury or death.**

**Do not run the engine in enclosed areas. Operate only in a well-ventilated area.**

Fuel ..... Adequate supply in tank, no leaks.

Engine oil ..... Oil level between level lines.

Tires ..... Air pressure (when cold):

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

Install the air valve cap.

- 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 ..... Brake pad wear: Lining thickness more than 1 mm (0.04 in.) left.  
No brake fluid leakage.
- 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).
- Electrical equipment ... All lights (Headlight, Tail/Brake Lights, Turn Signal Lights Warning/Indicator Lights) and horn work.
- Engine stop switch ..... Stops engine.



## 80 SAFE OPERATION

Side stand ..... Returns to its fully up position by spring tension.  
Return spring not weak or not damaged.

## Additional Considerations for High Speed Operation

### **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.**

**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 them to the proper pressure, and check the wheel balance.

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

**Spark Plugs:** For demanding operation such as racing, install spark plugs with one heat colder range NGK CPR8EA-9.

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

## 82 SAFE OPERATION

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

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

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

---

## MAINTENANCE AND ADJUSTMENT

---

The maintenance and adjustments outlined in this chapter must be 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.**

With a basic knowledge of mechanics and the proper use of tools, you should be able to carry out many of the maintenance items described in this chapter. If you lack proper experience or doubt your ability, all adjustments, maintenance, and repair work should be completed by a qualified technician.

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

## 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 United States Environmental Protection Agency and California Air Resources Board.

### 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 fuel injection system.

### 2. Exhaust Emission Control System

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

### **3. Evaporative Emission Control System**

The evaporative emission control system for this vehicle consists of low permeation fuel hoses and a fuel tank.

### **3. Evaporative Emission Control System (California)**

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**

High altitude adjustment is not required.

## **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.

## 86 MAINTENANCE AND ADJUSTMENT

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 172 through 177 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.



## 88 MAINTENANCE AND ADJUSTMENT

### Periodic Maintenance Chart

K : Should be serviced by an authorized Kawasaki dealer.

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

# : Service more frequently when operating in severe conditions: dusty, wet, muddy, high speed, or frequent starting/stopping.

(e) : Emission Related Item

## 1. Periodic Inspection (Engine Related Items)

Operation (Engine Items)	Frequency	Whichever comes first → ↓ *Odometer Reading km × 1 000 (mile × 1 000)							See Page
		Every	1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)	
Valve clearance - inspect (e)						●			116
Throttle control system (play, smooth return, no drag) - inspect (e)	year	●		●		●		●	120
Idle speed - inspect (e)		●		●		●		●	122
<sup>K</sup> Fuel leak (fuel hose and pipe) - inspect	year	●		●		●		●	—
<sup>K</sup> Fuel hoses damage - inspect	year	●		●		●		●	—

## 90 MAINTENANCE AND ADJUSTMENT

Frequency	Whichever comes first ↓ Every	*Odometer Reading km × 1 000 (mile × 1 000)							See Page
		1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)	36 (22.5)	
Fuel hoses Installation condition - inspect	year	●		●		●		●	–
Coolant level - inspect		●		●		●		●	109
Coolant leak - inspect	year	●		●		●		●	–
Radiator hose damage - inspect	year	●		●		●		●	107
Radiator hoses installation condition - inspect	year	●		●		●		●	107



## 92 MAINTENANCE AND ADJUSTMENT

### 2. Periodic Inspection (Chassis Related Items)

Operation (Chassis Items)	Frequency	Whichever comes first → ↓ *Odometer Reading km × 1 000 (mile × 1 000)							See Page
	Every	1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)	36 (22.5)	
<b>Clutch and drive train:</b>									
Clutch operation (play, engagement, disengagement) - inspect		•		•		•		•	123
<b>K</b> Drive belt deflection - inspect		•	•	•	•	•	•	•	113
<b>K</b> Drive belt wear - inspect		•	•	•	•	•	•	•	113
<b>Wheels and tires:</b>									
Tire air pressure - inspect	year			•		•		•	134





Frequency	Whichever comes first →							*Odometer Reading km × 1 000 (mile × 1 000)	See Page
	↓	1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)		
Operation (Chassis Items)	Every								
<b>Suspensions:</b>									
<b>K</b> Front forks/rear shock absorber operation (damping and smooth stroke) - inspect				•		•		•	—
<b>K</b> Front forks/rear shock absorber oil leak - inspect	year			•		•		•	—
<b>K</b> Swing arm pivot - lubricate						•			—
<b>K</b> Uni-trak rocker arm operation - inspect				•		•		•	—
<b>K</b> Uni-trak tie rods operation - inspect				•		•		•	—



## 96 MAINTENANCE AND ADJUSTMENT

Frequency	Whichever comes first →							*Odometer Reading km × 1 000 (mile × 1 000)	See Page
	↓	1	6	12	18	24	30		
Operation (Chassis Items)	Every	(0.6)	(3.75)	(7.5)	(11.25)	(15)	(18.75)	(22.5)	
K Uni-trak rocker arm bearings - lubricate						●			–
K Uni-trak tie rods bearings - lubricate						●			–
<b>Steering system:</b>									
K Steering play - inspect	year	●		●		●		●	–
K Steering stem bearings - lubricate	2 years					●			–
<b>Electrical system:</b>									
Lights and switches operation - inspect	year			●		●		●	–
Headlight aiming - inspect	year			●		●		●	145

Frequency	Operation (Chassis Items)	Whichever comes first → ↓ *Odometer Reading km × 1 000 (mile × 1 000)							See Page	
		Every	1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)		36 (22.5)
	Side stand switch operation - inspect	year			•		•		•	–
	Engine stop switch operation - inspect	year			•		•		•	–
<b>Chassis:</b>										
	Chassis parts - lubricate	year			•		•		•	150
	Bolts and nuts tightness - inspect		•		•		•		•	158

## 98 MAINTENANCE AND ADJUSTMENT

### 3. Periodic Replacement

Operation (Chassis Items)	Frequency	Whichever comes first → *Odometer Reading km × 1 000 (mile × 1 000)					See Page
	Every	1 (0.6)	12 (7.5)	24 (15)	36 (22.5)	48 (30)	
<b>K</b> Air cleaner element # (e) - replace	every 18 000 km (12 000 mile)					118	
Engine oil # - change	year	●	●	●	●	●	102
<b>K</b> Oil filter - replace	year	●	●	●	●	●	102
<b>K</b> Fuel hoses - replace	5 years						–
<b>K</b> Coolant - change	3 years				●		113
<b>K</b> Radiator hoses and O-rings - replace	3 years				●		–
<b>K</b> Brake hoses - replace	4 years					●	–
<b>K</b> Brake fluid (front and rear) - change	2 years			●		●	129

Operation (Chassis Items)	Frequency	Whichever comes first → *Odometer Reading km × 1 000 (mile × 1 000)					See Page
	Every	1 (0.6)	12 (7.5)	24 (15)	36 (22.5)	48 (30)	
<b>K</b> Rubber parts of master cylinder and caliper - replace	4 years					●	—
<b>K</b> Spark plug (e) - replace			●	●	●	●	114

## 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 replace the oil filter 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. Check the oil level before each ride and change the oil according to the periodic maintenance chart in the Owner's Manual.**

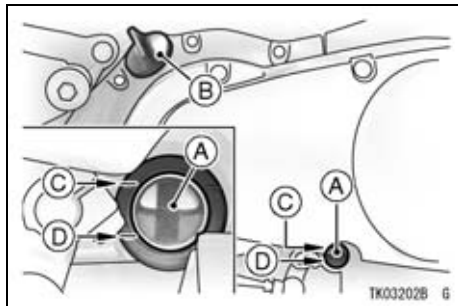
### *Oil Level Inspection*

- 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.

### ***NOTICE***

**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 inspection window. With the motorcycle held level, the oil level should come up between the upper and lower level lines next to the oil level inspection window.

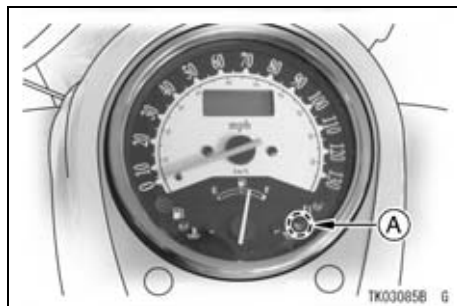


- A. Oil Level Inspection Window**  
**B. Oil Filler Cap**  
**C. Upper Level Line**  
**D. Low Level Line**

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

## NOTICE

If the engine oil gets extremely low or if the oil pump does not function properly or oil passages are clogged, the warning indicator light in the speedometer will light. If this light stays on when the engine speed is above the idle speed, stop the engine immediately and find the cause.

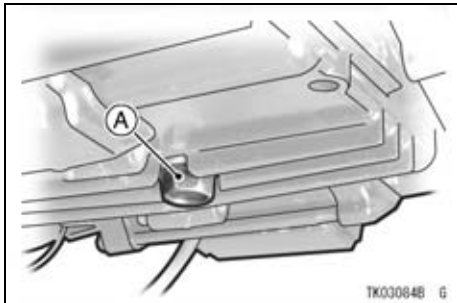


**A. Oil Pressure Warning Indicator Light**

## 102 MAINTENANCE AND ADJUSTMENT

### *Oil and/or Oil Filter Change*

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



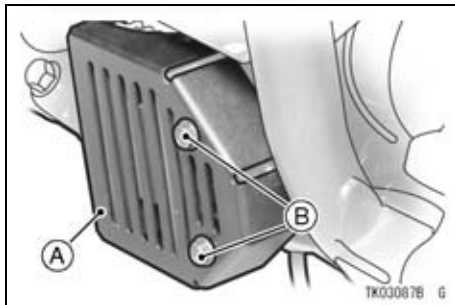
#### **A. Engine Oil Drain Plug**

- Let the oil completely drain with the motorcycle perpendicular to the ground.

## **⚠ WARNING**

**Engine oil is a toxic substance. Dispose of used oil properly. Contact your local authorities for approved disposal methods or possible recycling.**

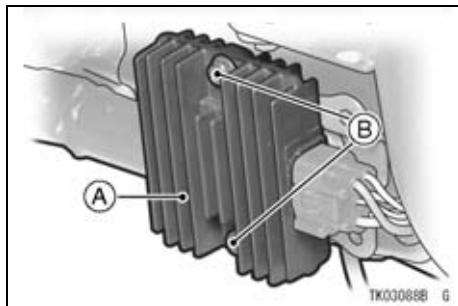
- Remove the cover.



#### **A. Cover**

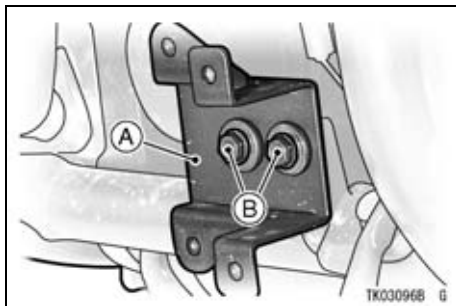
#### **B. Bolt**

- Remove the regulator/rectifier bolt.



A. Regulator/Rectifier  
B. Bolt

- Remove the bracket.



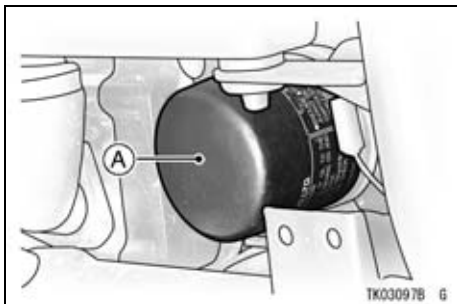
A. Bracket  
B. Bolt

- Remove the oil filter cartridge and replace it with a new one.



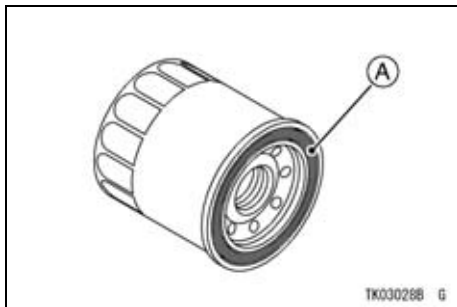
**NOTE**

- *If a torque wrench or required Kawasaki special tool is not available, this item should be serviced by an authorized Kawasaki dealer.*



**A. Cartridge**

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



**A. Packing**

- Install the engine oil drain plug with a new gasket and tighten it to the specified torque.

**NOTE**

- *Replace any gasket with a new one.*
- Fill the engine up to the upper level line with a good quality engine oil specified in the table.
- Start the engine.

- Check the oil level and for oil leakage.
- Be sure to install the parts removed.

### Tightening Torque

Engine Drain Plug:

20 N·m (2.0 kgf·m, 14.5 ft·lb)

Cartridge:

18 N·m (1.8 kgf·m, 13 ft·lb)

Regulator/Rectifier Bolts:

6.9 N·m (0.7 kgf·m, 61 in·lb)

### Recommended Engine Oil

Type: Kawasaki Performance  
4-Stroke Motorcycle Oil\*  
Kawasaki Performance  
4-Stroke Semi-Synthetic Oil\*  
Kawasaki Performance  
4-Stroke Full Synthetic Oil\*  
or other 4-stroke oils with  
API SG, SH, SJ, SL, SM and  
JASO MA, MA1, MA2 rating

Viscosity: SAE 10W-40

\*Kawasaki Performance Oils and Lubricants have been specifically engineered for your vehicle. Consistent use of these products meets or exceeds warranty and service requirements and can help to extend the life of your Kawasaki.

**NOTE**

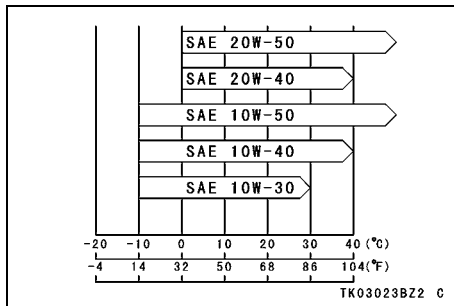
- Do not add any chemical additive to the oil. Oils fulfilling the above requirements are fully formulated and provide adequate lubrication for both the engine and the clutch.

**Engine Oil Capacity**

Capacity:	3.0 L (3.2 US qt)
	[when filter is not removed]
	3.2 L (3.4 US qt)
	[when filter is removed]
	3.7 L (3.9 US qt)
	[when engine is completely dry]

Although 10W-40 engine oil is the recommended oil for most conditions, the oil viscosity may need to

be changed to accommodate atmospheric conditions in your riding area.



## 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 spins at high speed and can cause serious injuries. Keep your hands and clothing away from the cooling fan blades at all times.

## **NOTICE**

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.

### Radiator Hoses -

Check the radiator hoses for leakage, cracks or deterioration, and connections for leakage, or looseness each day before riding the motorcycle, and in accordance with the Periodic Maintenance Chart.

### 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, also in accordance with the periodic maintenance chart 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 are 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**

**Coolant containing corrosion inhibitors for aluminum engines and radiators include harmful chemicals for human body. Drinking coolant can result in serious injury or death. Use coolant in accordance with the instructions of the manufacturer.**

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

**NOTICE**

**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.

**NOTICE**

**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 the manufacturer.**

**NOTE**

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

*Coolant Level Inspection*

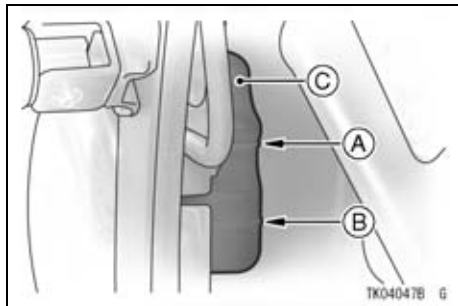
- Situate the motorcycle so that it is perpendicular to the ground.

## 110 MAINTENANCE AND ADJUSTMENT

- Check the coolant level through the coolant level gauge. The coolant level should be between the F (Full) and L (Low) marks.

### NOTE

- See the reserve tank at the inside of the reserve tank cover under the left side cover.
- Check the level when the engine is cold (room or atmospheric temperature).



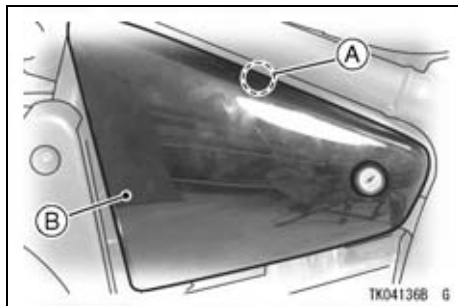
- A. F (Full) Level Line
- B. L (Low) Level Line
- C. Reserve Tank

- If the amount of coolant is insufficient, add coolant.

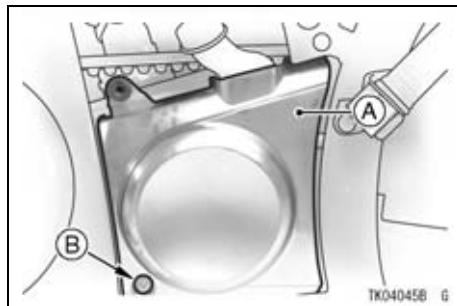
### Coolant Filling

- Remove the seat.
- Remove the left side cover by removing the screw.

- Remove the reserve tank cover.



- A. Screw
- B. Left Side Cover

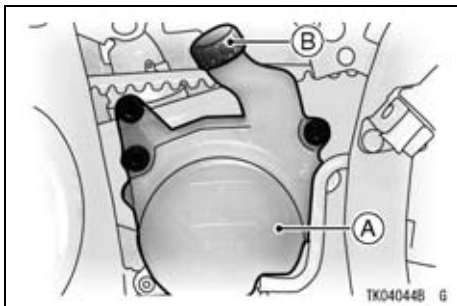


- A. Reserve Tank Cover
- B. Bolt



## 112 MAINTENANCE AND ADJUSTMENT

- Open the cap from the reserve tank, and add coolant through the filler opening to the F (Full) mark.

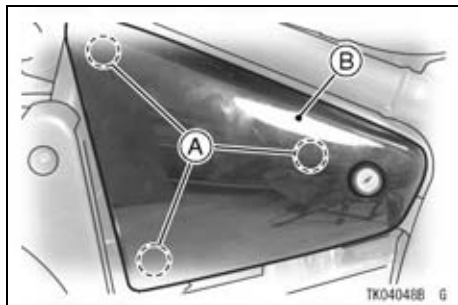


- A. Reserve Tank
- B. Reserve Tank Cap

- Install the cap after filling coolant.
- Install the parts removed.

## NOTE

- *When installing the left side cover, be sure to insert the projections of the left side cover to each holes.*



- A. Projections
- B. Left Side Cover

## 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.*

### **NOTICE**

**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*

Have the coolant changed by an authorized Kawasaki dealer.

### **Drive Belt**

In order for the belt and belt pulleys to function properly, check the drive belt in accordance with the Periodic Maintenance Chart.

Belt check and adjustment should be done by an authorized Kawasaki dealer.

### **NOTICE**

**Improper drive belt deflection can result in belt damage.**

### Spark Plugs

The standard spark plug is shown in the table. The spark plugs should be replaced in accordance with the Periodic Maintenance Chart.

Spark plug removal should be done by a competent mechanic following the instructions in the Service Manual.

### Spark Plug

Standard Plug	NGK CPR7EA-9
Plug Gap	0.8 ~ 0.9 mm (0.032 ~ 0.036 in.)
Tightening Torque	18 N·m (1.8 kgf·m, 13 ft·lb)

### NOTE

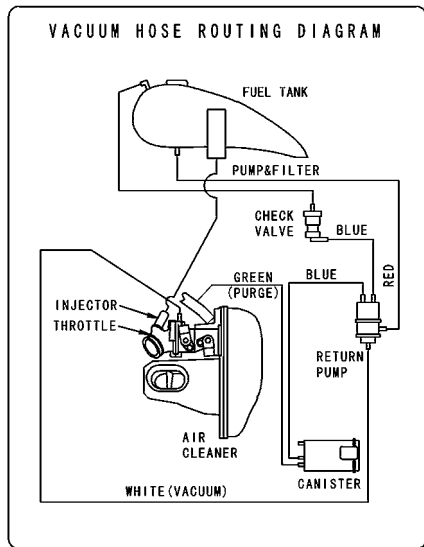
- *Fit the plug cap securely onto the spark plug, and pull the cap lightly to make sure that it is properly installed.*

## 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.



## Valve Clearance

Valve and valve seat wear decreases valve clearance, upsetting valve timing.

### ***NOTICE***

**If valve clearance is left unadjusted, wear will eventually cause the valves to remain partly open; which lowers performance, burns the valves and valve seats, and may cause serious engine damage.**

Valve clearance for each valve should be checked and adjusted in accordance with the Periodic Maintenance Chart.

Inspection and adjustment should be done by a competent mechanic following the instructions in the Service Manual.

## **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 carbon monoxide into 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 noise.

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

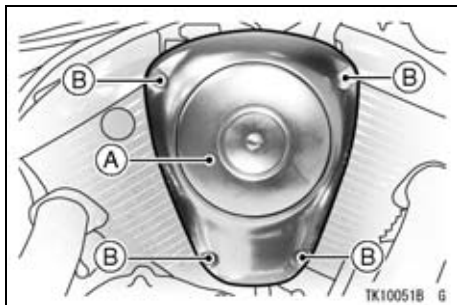
### Air Cleaner

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 replaced in accordance with the Periodic Maintenance Chart. This motorcycle's air cleaner element consists of a wet paper filter, which cannot be cleaned. In dusty, rainy, or on muddy conditions, the air cleaner element should be serviced more frequently than the recommended interval.

### Element Removal

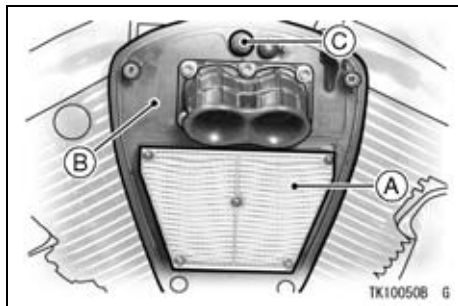
- Remove the bolts of the air cleaner cover located on the right-side of the engine.



**A. Air Cleaner Cover**

**B. Bolt**

- Remove the air cleaner screw and the air cleaner. If any part of the element is damaged, the element must be replaced.



- A. Air Cleaner Element
- B. Air Cleaner
- C. Screw

## **⚠ WARNING**

If dirt or dust is allowed to pass through into the fuel injection system, the throttle may stick or become inoperable resulting in a hazardous operating condition.

## **NOTICE**

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.*



### Throttle Control System

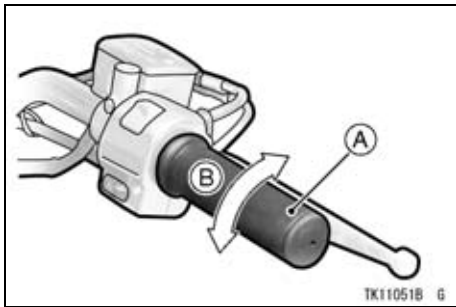
Check the throttle grip play, in accordance with the Periodic Maintenance Chart, and adjust the throttle grip play.

#### Throttle Grip -

The throttle grip controls the butterfly valves in the throttle body. 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 valve 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 idle speed will be erratic.

#### 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.



#### A. Throttle Grip

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

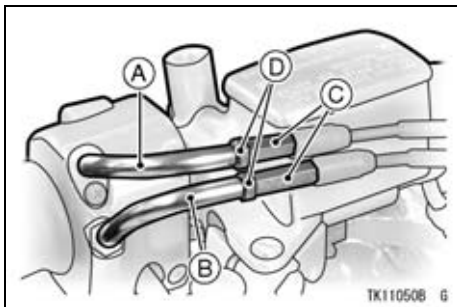
- If there is improper play, adjust it.

#### Adjustment

- Loosen the locknuts at the upper ends of the throttle cables, and screw

both throttle cable adjusting nuts in completely so as to give the throttle grip plenty of play.

- Turn out the decelerator cable adjusting nut until there is no play when the throttle grip is completely closed. Tighten the locknut.



- A. Accelerator Cable
- B. Decelerator Cable
- C. Adjusting Nuts
- D. Locknuts

- Turn the accelerator cable adjusting nut until 2 ~ 3 mm (0.08 ~ 0.12 in.) of throttle grip play is obtained. Tighten the locknut.
- If the throttle cables cannot be adjusted by using the cable adjusting nuts at the upper ends of the throttle cables, further adjustment of the throttle cables should be done by a competent mechanic following the instructions in the Service Manual.

### **⚠ WARNING**

**Operation with improperly adjusted, incorrectly routed, or damaged cables could result in an unsafe riding condition. Be sure the control cables are adjusted and routed correctly, and are free from damage.**

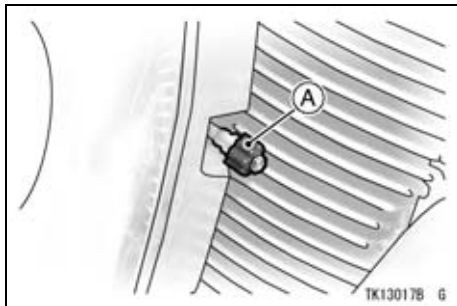
## 122 MAINTENANCE AND ADJUSTMENT

### Idle Speed

The idle adjustment should be performed in accordance with the Periodic Maintenance Chart or whenever the idle speed is disturbed.

### Adjustment

- Start the engine, and warm it up thoroughly.
- Wait until the idle speed drops before making the following adjustment.
- Adjust the idle speed to 950 ~ 1 050 r/min (rpm) by turning the idle adjusting screw located at the right front cylinder.



A. Idle Speed 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. Replace damaged control cables before operation.**

## 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.

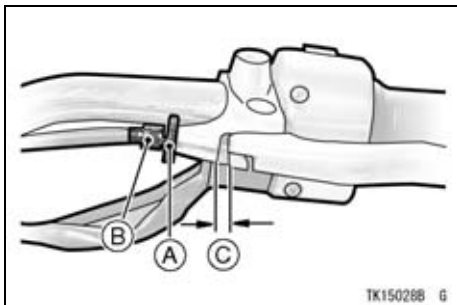
 **WARNING**

**The engine and exhaust system get extremely hot during normal operation and can cause serious burns. Never touch a hot engine or an exhaust pipe during clutch adjustment.**

## 124 MAINTENANCE AND ADJUSTMENT

### Inspection

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



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

If the play is incorrect, adjust the lever play as follows.

### Adjustment

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

## **⚠ WARNING**

Too much cable play can prevent clutch disengagement and cause an accident resulting in serious injury or death. When adjusting the clutch or replacing the cable, be sure the upper 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.

- If it cannot be done, have the clutch cable adjusted by an authorized Kawasaki dealer.

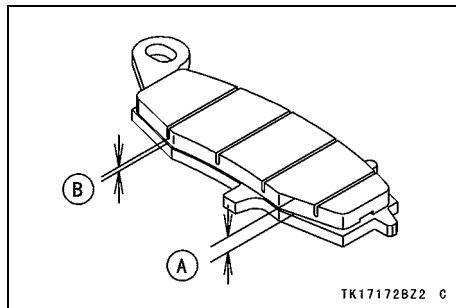
## NOTE

- *After the adjustment is made, start the engine and check that the clutch does not slip and that it releases properly.*

## Brakes

### *Brake Wear Inspection*

Inspect the brakes for wear. For each front and rear 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.



**A. Lining Thickness**

**B. 1 mm (0.04 in.)**

**Brake Fluid -**

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

*Fluid Requirement*

Use heavy-duty brake fluid only from a container marked DOT4 .

**NOTICE**

**Do not spill brake fluid onto any painted surface.**

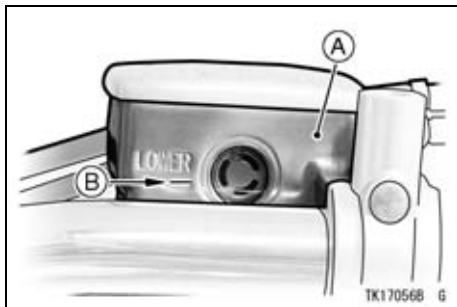
**Do not use fluid from a container that has been left open or that has been unsealed for a long time.**

**Check for fluid leakage around the fittings.**

**Check brake hose for damage.**

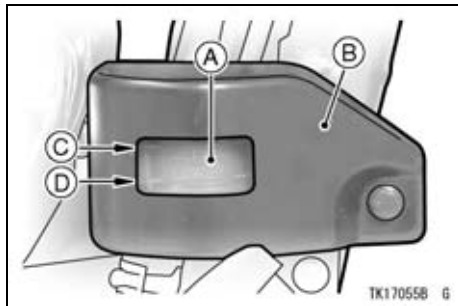
*Fluid Level Inspection*

- The brake fluid level in the front brake fluid reservoir must be kept above the line (lower level line) next to the gauge and that in the rear brake fluid reservoir (located near the brake pedal) must be kept between the upper and lower level lines (reservoirs held horizontal).



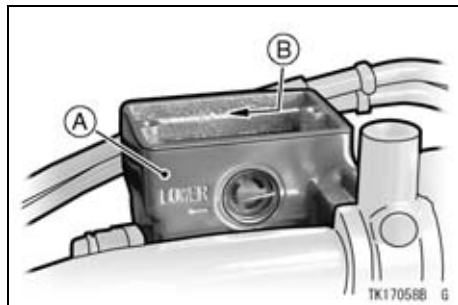
**A. Front Brake Fluid Reservoir**

**B. Lower Level Line**



- A. Rear Brake Fluid Reservoir**
- B. Cover**
- C. Upper Level Line**
- D. Lower Level Line**

- If the fluid level in either reservoir is lower than the lower level line, check for fluid leaks in the brake lines, and fill the reservoir to the upper level line. Inside the front brake fluid reservoir is a stepped line showing the upper level line. For the rear reservoir, take off the bolt and remove the cover from the reservoir.



- A. Front Brake Fluid Reservoir**
- B. Upper Level Line**



## **⚠ WARNING**

Mixing brands and types of brake fluid can reduce the brake system's effectiveness and cause an accident resulting in injury or death. Do not mix two brands of brake 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.

## **NOTE**

- *First, tighten until slight resistance is felt indicating that the cap is seated on the reservoir body; then, tighten*

*the cap an additional 1/6 turn while holding the brake fluid reservoir body.*



- A. Reservoir
- B. Cap
- C. Clockwise
- D. 1/6 turn

### *Fluid Change*

Have the brake fluid changed by an authorized Kawasaki dealer.

### **Front and Rear Brakes -**

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

 **WARNING**

**Air in the brake lines diminish braking performance and can cause an accident resulting in injury or death. If the brake lever or pedal feels mushy when it is applied, there might be air in the brake lines or the brake may be defective. Have the brake checked immediately by an authorized Kawasaki dealer.**

## **Brake Light Switches**

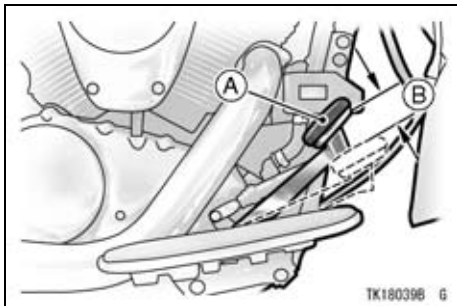
When either the front or rear brake is applied, the brake light goes on. The front brake light switch requires no adjustment, but the rear brake light switch should be adjusted in accordance with the Periodic Maintenance Chart.

### *Inspection*

- Turn the ignition key to “ON”.
- 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.

## 130 MAINTENANCE AND ADJUSTMENT

- Check the operation of the rear brake light switch by depressing the brake pedal. The brake light should go on after about 10 mm (0.4 in.) of pedal travel.



- A. Brake Pedal  
B. 10 mm (0.4 in.)

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

### *Adjustment*

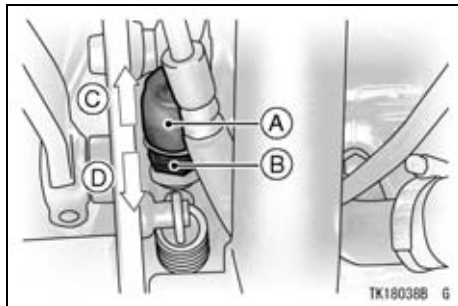
- To adjust the rear brake light switch, move the switch up or down by turning the adjusting nut.

### **NOTICE**

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

## Rear Shock Absorber

The rear shock absorber can be adjusted by changing the spring preload for various riding and loading conditions.



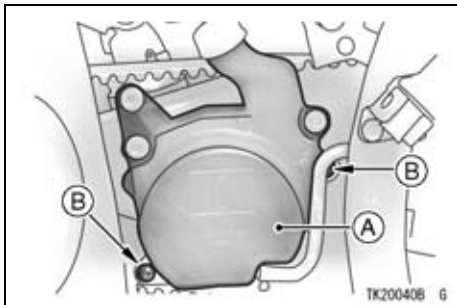
- A. Rear Brake Light Switch
- B. Adjusting Nut
- C. Lights sooner.
- D. Lights later.

## 132 MAINTENANCE AND ADJUSTMENT

### Spring Preload Adjustment

The rear shock absorber spring preload adjuster has 7 positions.

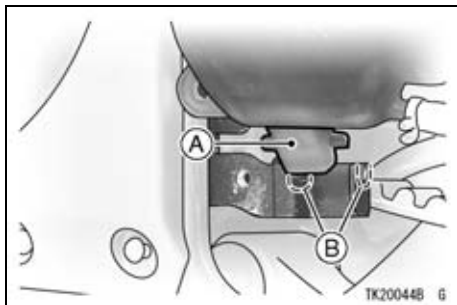
- Remove the left side cover and reserve tank cover (see “Cooling System” section in this chapter).
- Remove the reserve tank.



- A. Reserve Tank
- B. Bolt

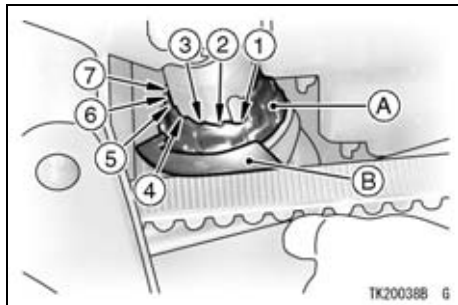
### NOTE

- When removing the reserve tank, hook the under part of the reserve tank to the holder of the frame as shown in the figure.



- A. Under Part of Reserve Tank
- B. Holder

- In accordance with the following table, turn the preload adjuster with the wrench from the tool kit.

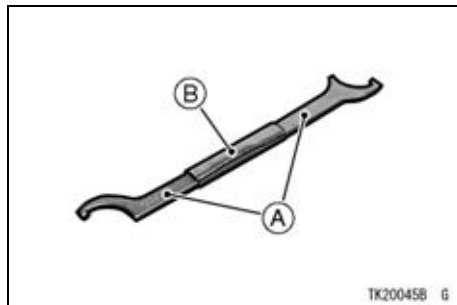

**A. Spring Preload Adjuster**
**B. Wrench**

Position	1	2	3	4	5	6	7
Spring Action	←						→ Strong

The standard setting position for an average-build rider of 68 kg (150 lb) with no passenger and no accessories is No. 4.

## NOTE

- This motorcycle has two hook wrenches in the tool kit. When changing the spring preload of the rear shock absorber, turn the adjuster by using the suitable hook wrenches.


**A. Hook Wrench**
**B. Extension Bar**

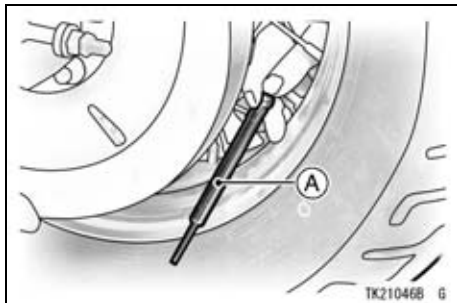
### Wheels

#### 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.

- Remove the air valve cap.
- Check the tire pressure often, using an accurate gauge.
- Make sure that the air valve cap is securely installed.



**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.*

**Tire Air Pressure (when cold)**

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

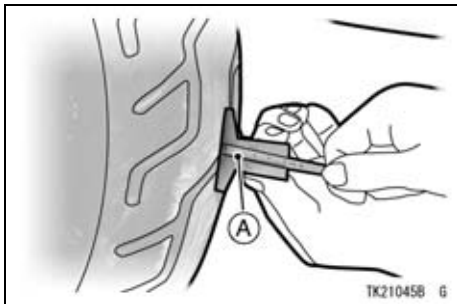
*Tire Wear, Damage*

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.



## 136 MAINTENANCE AND ADJUSTMENT

- 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	Under 130 km/h (80 mph)	2 mm (0.08 in.)
	Over 130 km/h (80 mph)	3 mm (0.12 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.*

**⚠ WARNING**

Tires that have been punctured and repaired do not have the same capabilities as undamaged tires and can suddenly fail, causing an accident resulting in serious injury or death. Replace damaged tires as soon as possible. To ensure safe handling and stability, use only the recommended standard tires for replacement, inflated to the standard pressure. If it is necessary to ride on a repaired tire, do not exceed 100 km/h (60 mph) until the tire is replaced.

**NOTE**

- *When operating on public roadways, keep maximum speed under traffic law limits.*

**Standard Tire**

Front	130/90-16 M/C 67H • DUNLOP "D404FP"
Rear	180/70-15 M/C 76H • DUNLOP "D404"

**⚠ WARNING**

Mixing tire brands and types can adversely affect handling and cause an accident resulting in injury or death. Always use the same manufacturer's tires on both front and rear wheels.

 **WARNING**

**New tires are slippery and may cause loss of control and injury. A break-in period of 160 km (100 miles) is necessary to establish normal tire traction. During break-in, avoid sudden and maximum braking and acceleration, and hard cornering.**

**Battery**

The battery installed in this vehicle is a sealed type, and the sealing strip should not be removed at any time after the specified electrolyte has been installed in the battery for initial service. It is not necessary to check the battery electrolyte level or add distilled water.

However, in order to maximize battery life and ensure that it will provide the power needed to start the motorcycle you must properly maintain the battery's charge. When used regularly, the charging system in the motorcycle helps keep the battery fully charged. If the motorcycle is only used occasionally or for short periods of time, the battery is more likely to discharge.

Due to their internal composition, batteries continually self discharge. The discharge rate depends on the type of battery and ambient temperature. As temperatures rise, so does

the discharge rate. Every 15°C (59°F) doubles the rate.

Electrical accessories, such as digital clocks and computer memory, also draw current from the battery even when the key is switched off. Combine such “key-off” draws with hot temperature, and a battery can go from fully charged to completely discharged in a matter of days.

Self-discharge		
Temperature	Approx. Number of Days From 100% Charged to 100% discharged	
	Lead -Antimony	Lead -Calcium
	Battery	Battery
40°C (104°F)	100 Days	300 Days
25°C (77°F)	200 Days	600 Days
0°C (32°F)	550 Days	950 Days

## 140 MAINTENANCE AND ADJUSTMENT

Current Drain		
Dis-charging Ampere	Days from 100% Charged to 50% Discharged	Days from 100 % Charged to 100 % Discharged
7 mA	60 Days	119 Days
10 mA	42 Days	83 Days
15 mA	28 Days	56 Days
20 mA	21 Days	42 Days
30 mA	14 Days	28 Days

In extremely cold weather the fluid in an inadequately charged battery can easily freeze, which can crack the case and buckle the plates. A fully charged battery can withstand sub-freezing temperatures with no damage.

### Battery Sulfation

A common cause of battery failure is sulfation.

Sulfation occurs when the battery is left in a discharged condition for an extended time. Sulfate is a normal by product of the chemical reactions within a battery. But when continuous discharge allows the sulfate to crystallize in the cells, the battery plates become permanently damaged and will not hold a charge. Battery failure due to sulfation is not warrantable.

### Battery Maintenance

It is the owner's responsibility to keep the battery fully charged. Failure to do so can lead to battery failure and leave you stranded.

If you are riding your vehicle infrequently, inspect the battery voltage weekly using a voltmeter. If it drops below 12.6 volts, the battery should be

charged using an appropriate charger (check with your Kawasaki dealer). If you will not be using the motorcycle for longer than two weeks, the battery should be charged using an appropriate charger. Do not use an automotive-type quick charger that may overcharge the battery and damage it.

### NOTE

○ *Leaving the battery connected causes the electrical components (clock etc) to make the battery discharged, resulting the over discharge of the battery. In this case, the repair or replacement of the battery is not included in the warranty. If you do not drive for four weeks or more, disconnect the battery from the vehicle.*

**Kawasaki-recommended chargers are**

Battery Mate 150-9

OptiMate 4

Yuasa MB-2040/2060

Christie C10122S

If the above chargers are not available, use equivalent one.

For more details, ask your Kawasaki dealer.

### Battery Charging

- Remove the battery from the motorcycle (see Battery Removal).
- Attach the leads from the charger and charge the battery at a rate (amperage × hours) that is indicated on the battery. If it is not possible to read the rate, charge the battery at an amperage that is about 1/10th of the battery capacity.
- The charger will keep the battery fully charged until you are ready to re-install the battery in the motorcycle (see Battery Installation).

**NOTICE**

Never remove the sealing strip, or the battery can be damaged. Do not install a conventional battery in this vehicle, or the electrical system cannot work properly.

Make	Yuasa Battery
Type	YTX12-BS

**NOTE**

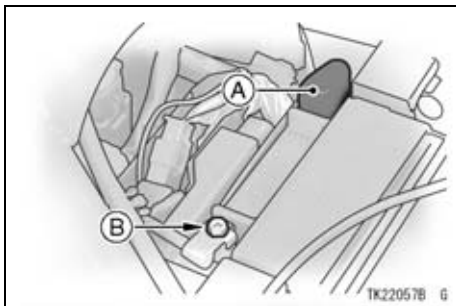
- *If you charge the sealed battery, never fail to observe the instructions shown on the label on the battery.*

** WARNING**

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

### Battery Removal

- Remove the seat and tool kit case (see “Jump Starting” section in the “How to Ride the Motorcycle” chapter).
- Disconnect the cables from the battery, first from the (-) terminal and then the (+) terminal.



- A. (+) Terminal
- B. (-) Terminal

- Pull the battery out of the motorcycle.

- Clean the battery using a solution of baking soda and water. Be sure that the cable connections are clean.

### Battery Installation

- Connect the capped (red) cable to the (+) terminal, and then connect the black cable to the (-) terminal.

### NOTE

- Install the battery in the reverse order of the Battery Removal.

### NOTICE

Installing the (-) cable to the (+) terminal of the battery or the (+) cable to the (-) terminal of the battery can seriously damage the electrical system.

- Put a light coat of grease on the terminals to prevent corrosion.

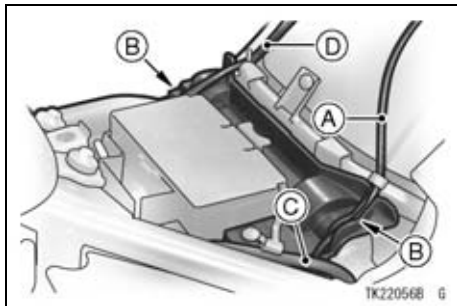


## 144 MAINTENANCE AND ADJUSTMENT

- Cover the (+) terminal with its protective cap.
- Reinstall the parts removed.

### NOTE

- *When installing the seat, or tool kit case, be sure not to pinch the hose, or wires. The hose or wires should be routed as shown in the figure.*
- *After installing the tool kit case, run the seat lock cable or wire along the guide.*



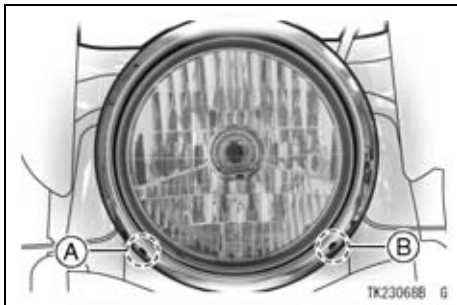
- A. Seat Lock Cable
- B. Guide
- C. Hose
- D. Wires

## 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 horizontal adjusting screw on the headlight rim in or out until the beam points straight ahead.



- A. Vertical Adjusting Screw**  
**B. Horizontal Adjusting Screw**

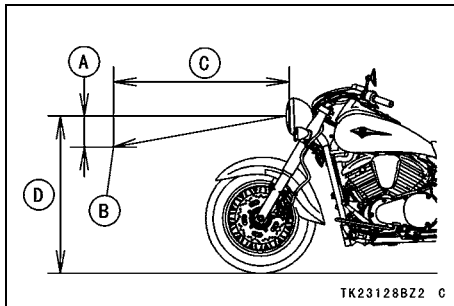
### Vertical Adjustment

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.

- Turn the vertical adjusting screw on the headlight rim in or out to adjust the headlight vertically.

### 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 (2.0 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.*



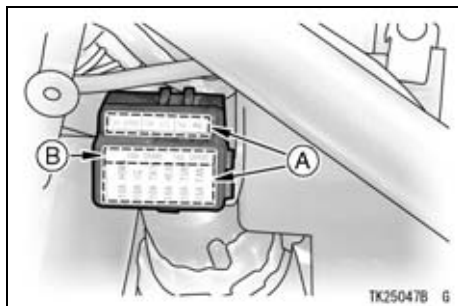
- A. 50 mm (2.0 in.)
- B. Center of Brightest Spot
- C. 7.6 m (25 ft)
- D. Height of Headlight Center

### Fuses

The fuses are arranged in the fuse box located behind left side cover.

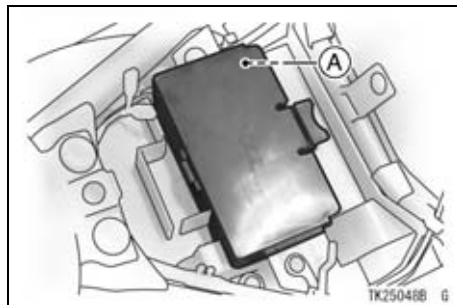
The main fuse is mounted on the starter relay behind right side cover. If a fuse fails during operation, inspect the electrical system to determine the cause, and then replace it with a new fuse of proper amperage.

- Remove the seat.
- Remove the left side cover (see “Cooling System” section in this chapter).



- A. Fuse Box**
- B. Spare Fuse**

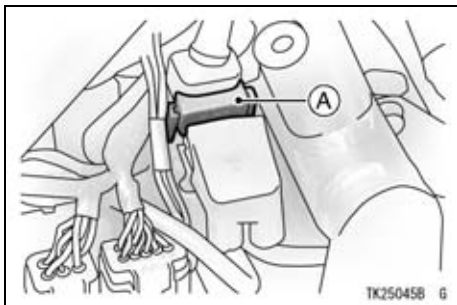
- Remove the screw



- A. Screw**

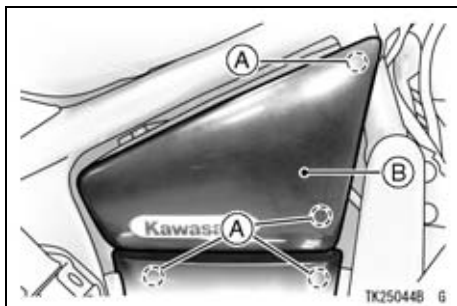
## 148 MAINTENANCE AND ADJUSTMENT

- Pull out the right side cover and then inspect the main fuse.



**A. Main Fuse**

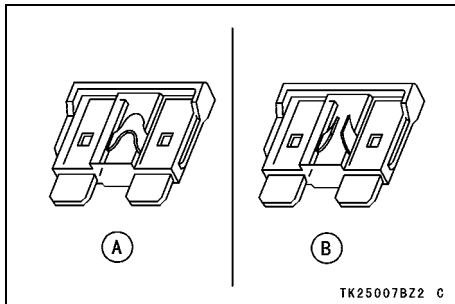
- When installing the right side cover, be sure to insert the projections of the right side cover.



**A. Projections**  
**B. Right Side Cover**

**⚠ WARNING**

Substituting fuses can cause wiring to overheat, catch fire and/or fail. 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 junction box and main fuse.



- A. Normal  
B. Failed

## 150 MAINTENANCE AND ADJUSTMENT

### 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.*

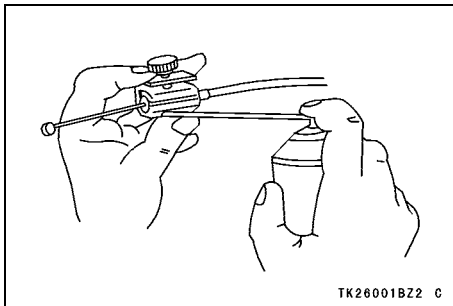
**Apply motor oil to the following pivots -**

- Side Stand
- Clutch Lever

- Front Brake Lever
- Rear Brake Pedal

**Lubricate the following cables with a pressure cable luber -**

- (K) Clutch Inner Cables
- (K) Throttle Inner Cables



**Apply grease to the following points -**

- (K) Clutch Inner Cable Upper Ends

- **(K)** Throttle Inner Cable Upper Ends

**(K):** Should be serviced by an authorized Kawasaki dealer.

**NOTE**

- *After connecting the cables, adjust them.*

## **Cleaning Your Motorcycle**

### *General Precautions*

Frequent and proper care of your Kawasaki motorcycle will enhance its appearance, optimize overall performance, and extend its useful life. Covering your motorcycle with a high quality, breathable motorcycle cover will help protect its finish from harmful UV rays, pollutants, and reduce the amount of dust reaching its surfaces.



 **WARNING**

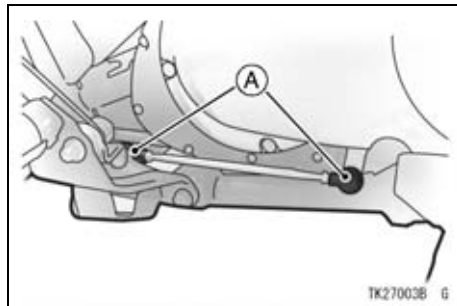
**Build-up of debris or flammable material in and around the vehicle chassis, engine, and exhaust can cause mechanical problems and increase the risk of fire.**

**When operating the vehicle in conditions that allow debris or flammable material to collect in and around the vehicle, inspect the engine, electrical component and exhaust areas frequently. If debris or flammable materials have collected, park the vehicle outside and stop the engine. Allow the engine to cool, then remove any collected debris. Do not park or store the vehicle in an enclosed space prior to inspecting for build-up of debris or flammable materials.**

- Be sure the engine and exhaust are cool before washing.
- Avoid applying degreaser to seals, brake pads, and tires.
- Always use non-abrasive wax and cleaner/polisher.
- Avoid all harsh chemicals, solvents, detergents, and household cleaning products such as ammonia-based window cleaners.
- Gasoline, brake fluid, and coolant will damage the finish of painted and plastic surfaces: wash them off immediately.
- Avoid wire brushes, steel wool, and all other abrasive pads or brushes.
- Use care when washing the windshield, the headlight lens and the plastic parts as they can easily be scratched.
- Avoid using pressure washers; water can penetrate seals and electrical

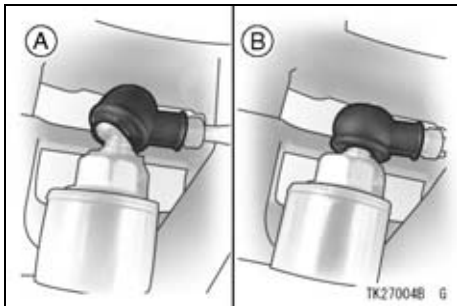
components and damage your motorcycle.

- Avoid spraying water in delicate areas such as in air intakes, fuel system, brake components, electrical components, muffler outlets, and fuel tank openings.
- After cleaning your motorcycle, check the rubber boot covering the shift pedal ball joint for correct installation. Be sure the sealing lip of the rubber boot fits into the groove of the ball joint.



#### A. Rubber Boot

- If the boot is damaged, replace it with a new one. If the boot is not positioned in the groove correctly, replace it in the correct position.



- A. Not position**  
**B. Correct position**

### *Washing Your Motorcycle*

- Rinse your bike with cold water from a garden hose to remove any loose dirt.
- Mix a mild neutral detergent (designed for motorcycles or automobiles) and water in bucket. Use a soft cloth or sponge to wash your

motorcycle. If needed, use a mild degreaser to remove any oil or grease build up.

- After washing, rinse your motorcycle thoroughly with clean water to remove any residue (residue from the detergent can damage parts of your motorcycle).
- Use a soft cloth to dry your motorcycle. As you dry, inspect your motorcycle for chips and scratches. Do not let the water air dry as this can damage the painted surfaces.
- Start the engine and let it idle for several minutes. The heat from the engine will help dry moist areas.
- Carefully ride your motorcycle at a slow speed and apply the brakes several times. This helps dry the brakes and restores them to normal operating performance.

**NOTE**

- *After riding in an area where the roads are salted or near the ocean, immediately wash your motorcycle with cold water. Do not use warm water as it accelerates the chemical reaction of the salt. After drying, apply a corrosion protection spray on all metal and chrome surfaces to prevent corrosion.*
- *Condensation may form on the inside of the headlight lens after riding in the rain, washing the motorcycle or humid weather. To remove the moisture, start the engine and turn on the headlight. Gradually the condensation on the inside of the lens will clear off.*

**Semi-gloss Finish**

To clean the semi-gloss finish;

- When washing the motorcycle, always use a mild neutral detergent and water.
- The semi-gloss finish effect may be lost when the finish is excessively rubbed.
- If any doubt, consult an authorized Kawasaki dealer.

**Painted Surfaces**

After washing your motorcycle, coat painted surfaces, both metal and plastic, with a commercially available motorcycle/automotive wax. Wax should be applied once every three months or as conditions require. Avoid surfaces with “satin” or “flat” finishes. Always use nonabrasive products and apply them according to the instructions on the container.

## 156 MAINTENANCE AND ADJUSTMENT

### *Windshield and Other Plastic Parts*

After washing use a soft cloth to gently dry plastic parts. When dry, treat the windshield, the headlight lens and non-painted plastic parts with an approved plastic cleaner/polisher product.

### **NOTICE**

**Plastic parts may deteriorate and break if they come in contact with chemical substances or household cleaning products such as gasoline, brake fluid, window cleaners, thread-locking agents, or other harsh chemicals. If a plastic part comes in contact with any harsh chemical substance, wash it off immediately with water and a mild neutral detergent, and then inspect for damage. Avoid using abrasive pads or brushes to clean plastic parts, as they will damage the part's finish.**

### *Chrome and Aluminum*

Chrome and uncoated aluminum parts can be treated with a chrome/aluminum polish. Coated aluminum should be washed with a mild neutral detergent and finished with a spray polish. Aluminum wheels, both painted and unpainted can be cleaned with special non-acid based wheel spray cleaners.

### *Leather, Vinyl, and Rubber*

If your motorcycle has leather accessories, special care must be taken. Use a leather cleaner/treatment to clean and care for leather accessories. Washing leather parts with detergent and water will damage them, shortening their life.

Vinyl parts should be washed with the rest of the motorcycle, then treated with a vinyl treatment.

The sidewalls of tires and other rubber components should be treated with a rubber protectant to help prolong their useful life.

**WARNING**

**Rubber protectants can be slippery and, if used on the tread area, cause loss of traction resulting in accident causing injury or death. Do not apply rubber protectant to any tread area.**

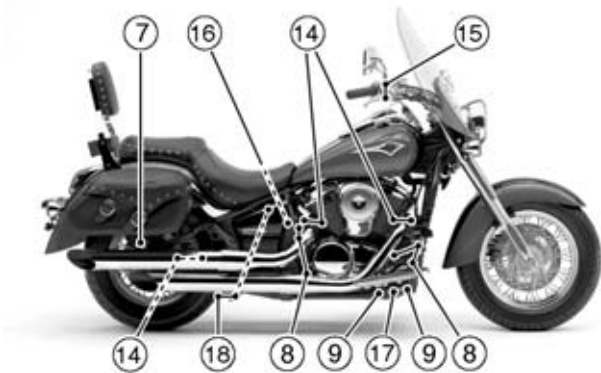
## Bolt and Nut Tightening

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 and Nuts
2. Front Fork Clamp Bolts
3. Handlebar Mounting Nuts
4. Stem Head Bolt
5. Clutch Lever Holder Clamp Bolts
6. Front Axle Nut
7. Caliper Mounting Bolts
8. Engine Mounting Bolts and Nuts
9. Footpeg Mounting Bracket Bolts
10. Shift Pedal Bolt
11. Side Stand Bolt
12. Rear Pulley Nuts
13. Rear Axle Nut



- 14. Muffler Mounting Bolts
- 15. Brake Lever Holder Clamp Bolts
- 16. Pivot Shaft Bolt
- 17. Brake Pedal Mounting Bolts
- 18. Rear Shock Absorber Mounting Nuts





---

## STORAGE

---

### Preparation for Storage:

- Clean the entire vehicle thoroughly.
- Run the engine for about five minutes to warm the oil, shut it off and drain the engine oil.



### **WARNING**

**Engine oil is a toxic substance. Dispose of used oil properly. Contact your local authorities for approved disposal methods or possible recycling.**

- Put in fresh engine oil.
- Empty the fuel from the fuel tank by the pump or siphon.

** WARNING**

**Gasoline is extremely flammable and can be explosive under certain conditions, creating the potential for serious burns. Turn the ignition key to “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. Gasoline is a toxic substance. Dispose of gasoline properly. Contact your local authorities for approved disposal methods.**

- Empty the fuel system by running the engine at idle speed until all fuel in the fuel system is used up (If left in for a long time, the fuel will break down and clog the fuel system).

** WARNING**

**An air/oil mist may be forcibly ejected from the spark plug holes and could get into your eyes. Do not lean over the engine when performing this procedure. If you do get oil in your eyes, wash them immediately with liberal amounts of clean, fresh water and consult a physician as soon as possible.**

- Reduce tire pressure by about 20%.

## 162 STORAGE

- 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 especially during cold weather.
- Tie plastic bags over the mufflers to prevent moisture from entering.
- Put a cover over the motorcycle to keep dust and dirt from collecting on it.

### **Preparation after Storage:**

- Remove the plastic bags from the mufflers.
- Install the battery in the motorcycle and charge the battery if necessary.
- Fill the fuel tank with fuel.
- Check all the points listed in the Daily Checks section.
- Lubricate the points listed in the General Lubrication section.

---

## TROUBLESHOOTING GUIDE

---

### Engine Does Not Start:

#### *Starter Motor Won't Turn*

- Engine stop switch off
- Transmission not in neutral
- Fuse blown
- Battery leads do not make good electrical contact with battery terminals
- Battery discharged

#### *Engine Cranks, But Won't Start*

- No fuel in tank
- Fuel line clogged
- Fuel broken down
- Engine flooded
- Spark plugs not in good contact
- Spark plugs fouled or wet

- Incorrect spark plug gap
- No first turning the ignition key to "OFF" when the motorcycle falls down.

### Engine Stalls:

#### *Just When Shifting Into 1st Gear*

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

#### *While Riding*

- No fuel in tank
- Fuel tank air vent is obstructed
- Overheating
- Battery discharged

---

## YOUR WARRANTY/OWNER SATISFACTION

---

Welcome to the Kawasaki family!

Congratulations on buying your Kawasaki vehicle. You've chosen a great, high-quality product with state-of-the-art features and built to Kawasaki's high standards. Your satisfaction is important to your authorized Kawasaki dealer and to Kawasaki Motors Corp., U.S.A. Here is some important information regarding your vehicle's limited warranty.

Frequently Asked Questions

### **What is a Limited Warranty?**

The most important thing to know about your warranty is that it protects you from manufacturing defects in material or workmanship during the warranty period. You can find the warranty period in the Kawasaki Limited Warranty Certificate your Kawasaki dealer provided to you at the time of sale. The warranty does not cover the cost of regularly-scheduled maintenance. The warranty also does not apply to the normal wear of items such as tires, brake pads, transmission drive belts, chains, sprockets, etc.

## **What is the Good Times Protection Plan?**

Much of the warranty coverage offered by the limited warranty can be extended by purchasing Kawasaki's Good Time™ Protection Plan (GTPP). See your Kawasaki dealer or go to [Kawasaki.com](http://Kawasaki.com) for more information if you don't already have the GTPP.

## **What Am I Responsible For?**

You are responsible for maintaining your vehicle according to the maintenance schedule shown in this owner's manual.

You are responsible for notifying your dealer immediately if there is a problem, and you, as the owner, will need to authorize the dealer to inspect the unit.

You will be responsible for paying for routine maintenance, including the first scheduled service. You can have the required servicing done by your Kawasaki dealer (recommended) or an equally-qualified service facility. You can also do your own maintenance work if you have the proper tools, service references, and mechanical skills. However, if a failure is found to be caused by improper servicing, it would not be covered by the limited warranty.

## **166 YOUR WARRANTY/OWNER SATISFACTION**

You may purchase a Kawasaki Service Manual and any necessary special tools directly from your Kawasaki dealer.

You will be responsible for paying for repairs needed because of an accident, to replace worn parts such as tires, chains, brakes, and for repairs needed because of a lack of maintenance, misuse or racing.

Whether you do it yourself or take your vehicle to a Kawasaki dealer, be sure to record your service in the Maintenance Record section of this Owner's Manual. Keep all receipts for the service and/or items necessary to perform the maintenance so that in the event of a failure you can document the service history.

### **What Are The Dealership's Responsibilities?**

Your Kawasaki dealer offers a wide range of services, parts, accessories, and information on your product and on Kawasaki.

Each dealer is independently owned and operated and is responsible for the dealership's operations, its repair, warranty, and service work, and its personnel.

Your dealer is responsible for completing the set up and pre-delivery service of your new Kawasaki vehicle. The dealership should also explain its operation, maintenance, and warranty provisions so you understand them at the time of purchase or at any other time you have questions.

The dealership is responsible for inspecting your Kawasaki vehicle if there is a failure, investigating the cause of the problem, and getting any needed authorization from Kawasaki if the repair is one that will be covered by the limited warranty. The dealership will also file all necessary paperwork. The dealership is responsible for correctly completing any necessary repairs, whether they are covered by the limited warranty or not.

### **How Do I Get Warranty Service?**

If there is a problem with your vehicle within the limited warranty period, you will need to schedule a service appointment and provide any maintenance records to an authorized Kawasaki dealer for inspection and diagnosis. You can go to any Kawasaki dealer for warranty repairs. Your Kawasaki dealer will inspect your vehicle and give you the results of the inspection. The dealer will perform the repairs at no cost to you if it is determined that the problem is covered by the warranty.



## **168 YOUR WARRANTY/OWNER SATISFACTION**

Kawasaki will work with your dealer to resolve any warranty issues. No authorization for warranty work can be given until your vehicle has been inspected by a Kawasaki dealer.

### **What if I am not Satisfied With My Warranty Service?**

If you aren't satisfied with your dealership's repair work or operations, it is best to discuss the situation with the appropriate dealership manager. If you have already done this, then contact the dealership's owner or general manager to request a review of the issue.

If you are unable to resolve a problem after consulting with the dealership management and need further assistance, contact Kawasaki Motors Corp., U.S.A. at the address below. Please be certain to provide the model, vehicle identification number (VIN), 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 name of the dealership personnel with whom you have been working. Upon receipt of your correspondence, Kawasaki Motors Corp., U.S.A. will contact the dealership and work with it in resolving your problem.

## **Want to Contact Kawasaki?**

This owner's manual should answer most of your questions about your Kawasaki. Your Kawasaki dealer should either be able to answer any other questions you might have immediately or be able to find the answer for you.

Please send your correspondence to:

Consumer Services

Kawasaki Motors Corp., U.S.A.

P.O. Box 25252

Santa Ana, CA 92799-5252

(949) 460-5688

---

## Reporting Safety Defects

---

**(For Products Sold in the United States of America, District of Columbia, and U.S. Territories Only)**

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Kawasaki Motors Corporation, U.S.A.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Kawasaki Motors Corporation, U.S.A.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in Washington, D.C. area) or write to: NHTSA, U.S. Department of Transportation, Washington, D.C. 20590. You can also obtain other information about motor vehicle safety from the Hotline.

---

## ENVIRONMENTAL PROTECTION

---

To help preserve the environment, properly discard used batteries, tires, oils and fluids, or other vehicle components that you might dispose of in the future. Consult your authorized Kawasaki dealer or local environmental waste agency for their proper disposal procedure. This also applies to disposal of the entire vehicle at the end of its life.

---

**MAINTENANCE RECORD**

---

**Owner Name**.....**Address** .....**Phone Number** .....**Engine Number** .....**Vehicle Number**.....**Selling Dealer Name** .....**Phone Number** .....**Warranty Start Date** .....**Note:** Keep this information and a spare key in a secure location.

Date	Odometer Reading	Maintenance Performed	Dealer Name	Dealer Address







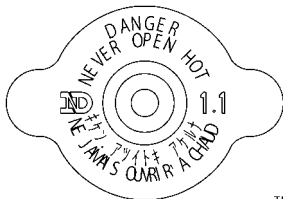






## LABEL INFORMATION

(1)



TE03353D S

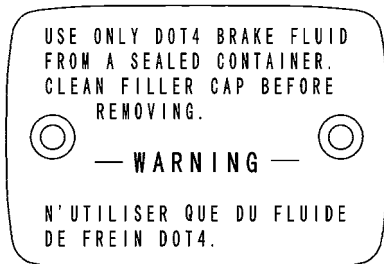
(2) only on California model



56071-0158

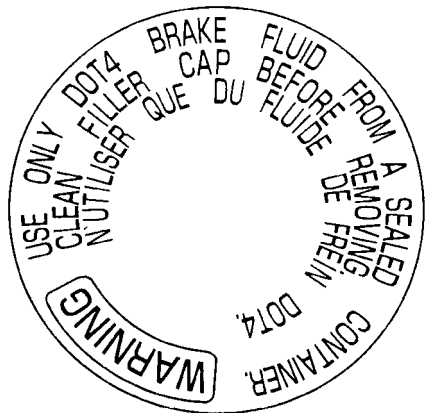
TE03142C S

(3)



TE03825DZ2 C

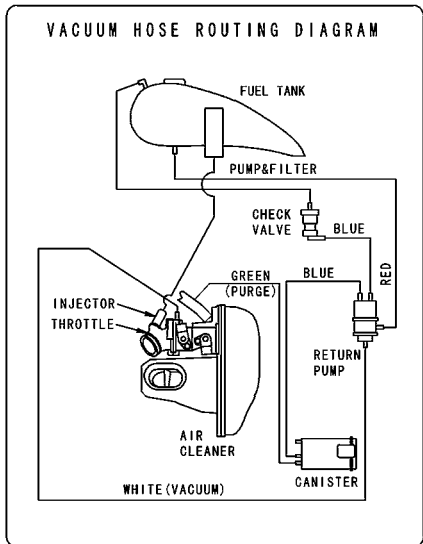
(4)



TE03097B S











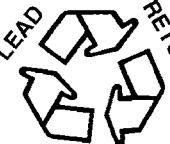
## 180 LABEL INFORMATION

### (5) only on California model



TE03469BN7 C

(6)

<b>⚠ DANGER/POISON</b>						
 <p><b>SHIELD EYES</b></p> <p>EXPLOSIVE GASES CAN CAUSE BLINDNESS OR INJURY!</p>	 <p><b>NO</b></p> <ul style="list-style-type: none"> <li>• SPARKS</li> <li>• FLAMES</li> <li>• SMOKING</li> </ul>	 <p><b>SULFURIC ACID</b></p> <p>CAN CAUSE BLINDNESS OR SEVERE BURNS</p>	<p><b>FLUSH EYES IMMEDIATELY WITH WATER</b></p> <p><b>GET MEDICAL HELP FAST</b></p> 			
<b>KEEP OUT OF REACH OF CHILDREN</b>						
<p>IN U.S.A.,</p> <p>SERVICED BY :</p>		<p><b>YUASA BATTERY, INC.</b></p> <p>READING, PA. 19605</p>				
						<p>LEAD</p>  <p>RETURN</p> <p><b>RECYCLE Pb</b></p>

## 182 LABEL INFORMATION

(7)

### TIRE AND LOAD DATA

The stability and handling characteristics of this motorcycle could become unsafe by the use of improper tire inflation pressures, overworn tires, unsuitable replacement tires, or overloading. When tire tread wears down to the limit, replace the tire with only the standard tire. Maintain the inflation pressure specified.

	Air Pressure(Cold)		Size & Make Type		Minimum Tread Depth	
Front	Up to 180kg Load (397lbs)	200 kPa (2.00kg/cm <sup>2</sup> , 28psi)	DUNLOP 130/90-16M/C 67H D404FP		1 mm(0.04in)	
Rear	Up to 97.5kg Load (215lbs)	200 kPa (2.00kg/cm <sup>2</sup> , 28psi)	DUNLOP 180/70-15M/C 76H D404		Up to 130 km/h(80MPH)	2 mm(0.08in)
	97.5-180 kg Load (215-397lbs)	225 kPa (2.25kg/cm <sup>2</sup> , 32psi)			Over 130 km/h(80MPH)	3 mm(0.12in)

TE03477B S

(8)

VEHICLE EMISSION CONTROL INFORMATION	
ENGINE FAMILY CODE --- [REDACTED]	PERMEATION FAMILY --- [REDACTED]
MODEL(S) --- [REDACTED]	[REDACTED]
EXHAUST EMISSION CONTROL SYSTEM --- [REDACTED]	[REDACTED]
DISPLACEMENT --- [REDACTED]	[REDACTED]
TUNE UP SPECIFICATIONS	
IGNITION TIMING [REDACTED] INCHES AT [REDACTED] RPM	[REDACTED]
IDLE SPEED [REDACTED] RPM	[REDACTED]
VALVE CLEARANCE [REDACTED]	[REDACTED]
WAX USE SETTING [REDACTED]	[REDACTED]
VALVE CLEARANCE [REDACTED]	[REDACTED]
SPARK PLUG [REDACTED]	[REDACTED]
FUEL [REDACTED]	[REDACTED]
ENGINE OIL [REDACTED]	[REDACTED]
THIS VEHICLE CONFORMS TO U.S. EPA REGULATIONS APPLICABLE TO [REDACTED] MODEL YEAR NEW MOTORCYCLES AND IS CERTIFIED TO EXCEED THE EMISSION STANDARD OF [REDACTED] KAWASAKI HEAVY INDUSTRIES, LTD.	

TE03345D S

(8) only on California model

VEHICLE EMISSION CONTROL INFORMATION	
ENGINE FAMILY CODE --- [REDACTED]	PERMEATION FAMILY --- [REDACTED]
MODEL(S) --- [REDACTED]	[REDACTED]
EXHAUST EMISSION CONTROL SYSTEM --- [REDACTED]	[REDACTED]
DISPLACEMENT --- [REDACTED]	[REDACTED]
TUNE UP SPECIFICATIONS	
IGNITION TIMING [REDACTED] INCHES AT [REDACTED] RPM	[REDACTED]
IDLE SPEED [REDACTED] RPM	[REDACTED]
VALVE CLEARANCE [REDACTED]	[REDACTED]
SPARK PLUG [REDACTED]	[REDACTED]
FUEL [REDACTED]	[REDACTED]
ENGINE OIL [REDACTED]	[REDACTED]
THIS VEHICLE CONFORMS TO U.S. EPA REGULATIONS APPLICABLE TO [REDACTED] MODEL YEAR NEW MOTORCYCLES AND IS CERTIFIED TO EXCEED THE EMISSION STANDARD OF [REDACTED] KAWASAKI HEAVY INDUSTRIES, LTD.	

TE03346D S

(9)

<b>MOTORCYCLE NOISE EMISSION CONTROL INF.</b>
THIS [REDACTED] MOTORCYCLE MEETS EPA NOISE EMISSION REQUIREMENTS BY THE FEDERAL TEST PROCEDURE. MODIFICATIONS WHICH CAUSE THIS MOTORCYCLE TO EXCEED FEDERAL NOISE STANDARDS ARE PROHIBITED BY FEDERAL LAW. SEE OWNER'S MANUAL. ([REDACTED])
MODEL SPECIFIC CODE: [REDACTED]
SEE VEHICLE IDENTIFICATION NUMBER ON STEERING HEAD NOISE LIMIT/CLOSING RPM: [REDACTED]DBA/[REDACTED]RPM

(10)

MFD. BY KAWASAKI HEAVY INDUSTRIES, LTD.
DATE: [REDACTED]
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE. GVWR [REDACTED] LBS.
GVWR F [REDACTED] LBS. WITH [REDACTED]
TIRE, [REDACTED] RIM, AT [REDACTED] PSI. COLD.
GVWR R [REDACTED] LBS. WITH [REDACTED]
TIRE, [REDACTED] RIM, AT [REDACTED] PSI. COLD.
[REDACTED]
MOTOR CYCLE ([REDACTED]) MADE IN JAPAN

TE03340DN9 C

TE03348DZ2 C



# VN900DE



\* 9 9 9 8 7 - 1 7 8 1 \*



**KAWASAKI HEAVY INDUSTRIES, LTD.**  
Motorcycle & Engine Company  
Part No. 99987-1781

Printed in Japan

GB