Kawasaki

Includes:
-Important Safety Information
-Operating Instructions
-Maintenance and Storage

VULCAN 1500 CLASSIC
Motorcycle

保存版

OWNER'S MANUAL

⚠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.

Quick Reference Guide

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

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.

⚠ WARNING

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

CAUTION

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

NOTE

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

NOTICE

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

FOREWORD

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.

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.
Consumer Products & Machinery Company

Apr. 2007. (1). (S)

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SPECIFICATIONS

DIMENSIONS

Overall Length	2,505 mm (98.62 in.)
Overall Width	995 mm (39.2 in.)
Overall Height	1,140 mm (44.88 in.)
Wheelbase	1,665 mm (65.55 in.)
Road Clearance	125 mm (4.92 in.)
	299 kg (659 lb)

ENGINE

Type	SOHC, V-type, 2-cylinder, 4-stroke, liquid-cooled
Displacement	1,470 cm^3 (89.7 cu in.)
Bore × Stroke	102.0 × 90.0 mm (4.02 × 3.54 in.)
Compression Ratio	9.0 : 1
Starting System	Electric Starter
Cylinder Numbering Method	Front to rear, 1-2
Firing Order	1-2
Carburetion System	Digital Fuel Injection System (DFI)
Ignition System	Battery and Coil (transistorized ignition)
Ignition Timing	5° BTDC @950 r/min (rpm)
(Electronically advanced)	~25° BTDC @4,500 r/min (rpm)

Spark Plug		NGK DPR6EA-9 or ND X20EPR-U9
Lubrication System		Forced lubrication (Wet sump)
Engine Oil	Type :	API SE, SF or SG
	:	API SH, SJ or SL with JASO MA
		SAE 10W-40
	Capacity :	3.5 L (3.7 US qt)
Coolant Capacity		2.3 L (2.4 US qt)

TRANSMISSION

Transmission Type		5-Speed, constant mesh, return shift
Clutch Type		Wet, multi disc
Driving System		Shaft drive
Primary Reduction Ratio		1.517 (85/56)
Final Reduction Ratio		2.619 (15/21 × 33/9)
Overall Drive Ratio		3.105 (Top Gear)
Gear Ratio:	1st	2.500 (40/16)
	2nd	1.590 (35/22)
	3rd	1.192 (31/26)
	4th	0.965 (28/29)
	5th	0.781 (25/32)
Final Gear Case Oil		API GL-5 SAE 90 [above 5°C (41°F)]
		SAE 80 [below 5°C (41°F)]
Final Gear Case Oil Capacity		200 mL (0.21 US qt)

FRAME		
Caster		32°
Trail		165 mm (6.5 in.)
Tire Size:	Front	130/90-16 67H Tube-type
	Rear	150/80B16 71H Tube-type
Rim Size:	Front	16 x 3.00
	Rear	16 x 3.50
Fuel Tank Capacity		19 L (5.0 US gal)
ELECTRICAL EQUIPMENT		
Battery		12 V 18 Ah
Headlight		12 V 60/55 W
Tail/Brake Light		12 V 5/21 W × 2

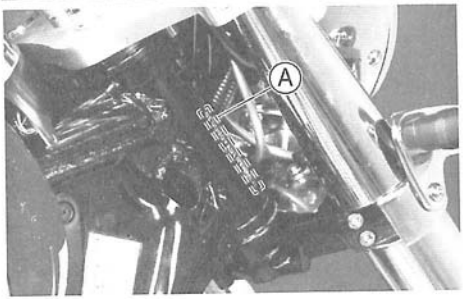
<C>: California model

Specifications subject to change without notice.

SERIAL NUMBER LOCATIONS

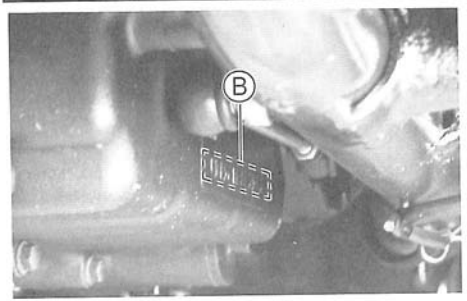
The engine and frame serial numbers are used to register the motorcycle. They are the only means of identifying your particular machine from others of the same model type. These serial numbers may be needed by your dealer when ordering parts. In the event of theft, the investigating authorities will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

Engine No.



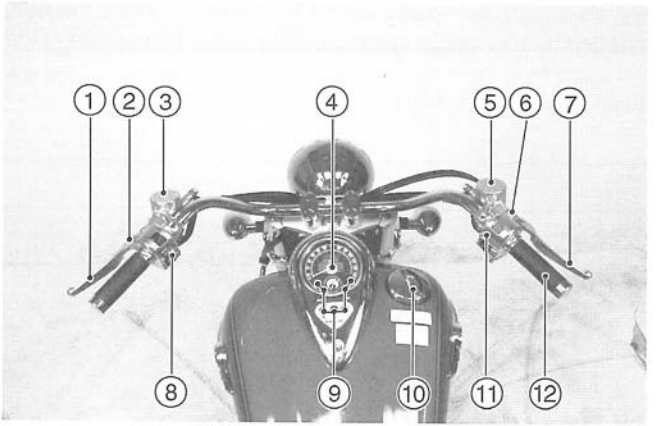
A. Frame Number

Engine No.

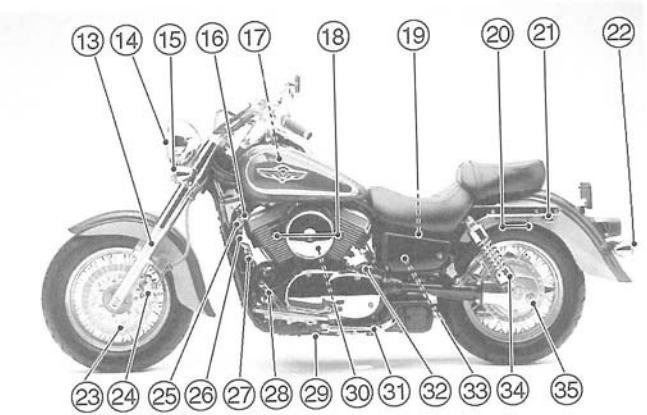


A. Engine Number

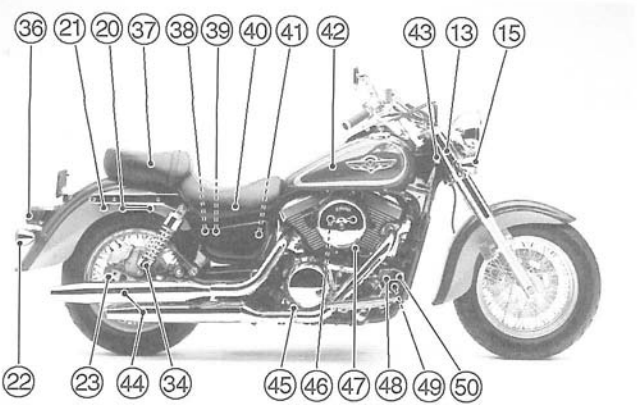
LOCATION OF PARTS



1. Clutch Lever
2. Clutch Lever Adjuster
3. Clutch Fluid Reservoir
4. Meter Instruments
5. Brake Fluid Reservoir (Front)
6. Brake Lever Adjuster
7. Front Brake Lever
8. Left Handlebar Switches
9. Indicator Lights
10. Fuel Tank Cap
11. Right Handlebar Switches
12. Throttle Grip

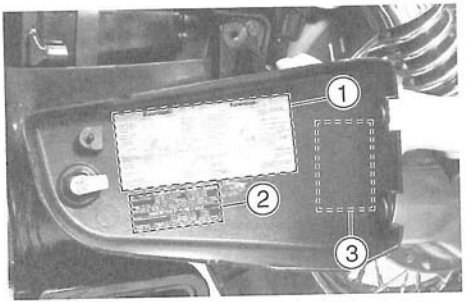


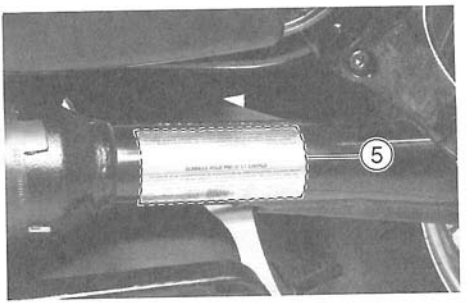
13. Front Fork
14. Headlight
15. Front Turn Signal/Running Position Light
16. Horn
17. Radiator Cap
18. Spark Plugs
19. Battery
20. Tying Hooks
21. Helmet Hook
22. Rear Turn Signal Light
23. Brake Disc
24. Brake Caliper
25. Ignition Switch
26. Choke Knob
27. Radiator
28. Shift Pedal
29. Side Stand Switch
30. Air Cleaner Element
31. Side Stand
32. Frame Earth Bracket
33. Tool Kit Case/Tool Kit
34. Rear Shock Absorber
35. Final Gear Case

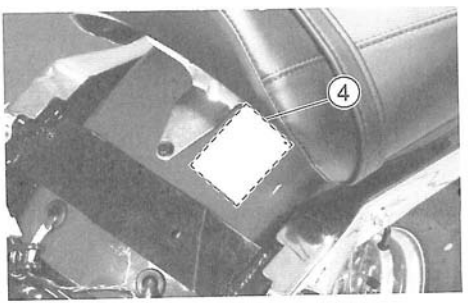


36. Tail/Brake Light
37. Passenger's Seat
38. Starter Relay
39. Junction Box (Fuses)
40. Rider's Seat
41. Coolant Reserve Tank
42. Fuel Tank
43. Steering Lock
44. Mufflers
45. Oil Level Gauge
46. Throttle Valves
47. Idle Speed Adjusting Screw
48. Rear Brake Pedal
49. Rear Brake Light Switch
50. Brake Fluid Reservoir (Rear)

LOCATION OF LABELS

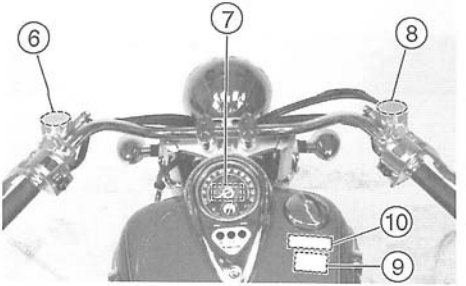


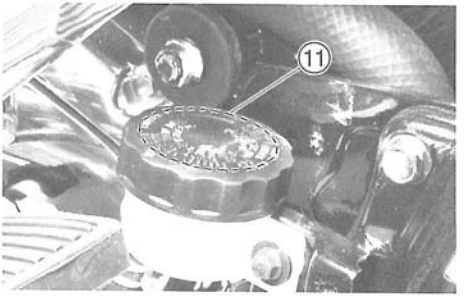




1. Daily Safety Checks
2. Engine Oil and Oil Filter
*3. Vacuum Hose Routing Diagram
4. Vehicle Emission Control Information
5. Tire and Load Data

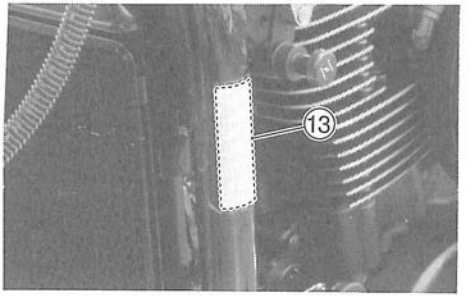
*: only on California model
(For further information of label, refer to the "LABEL INFORMATION" chapter.)

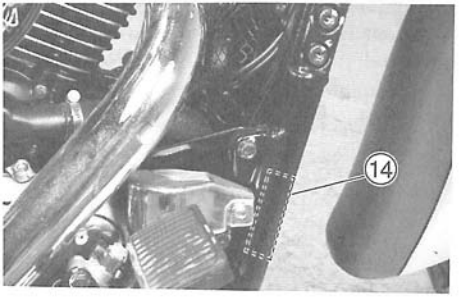




6. Clutch Fluid
7. Break-In Caution
8. Brake Fluid (Front)
*9. Fuel Level
10. Fuel Caution
11. Brake Fluid (Rear)
12. Battery Poison/Danger

*: only on California model
(For further information of label, refer to the "LABEL INFORMATION" chapter.)





13. Noise Emission Control Information
14. 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 that the motorcycle 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 been prepared to assist you in making your determinations.

1. Any passenger should be thoroughly familiar with motorcycle operation. The passenger can affect control of the motorcycle by improper positioning during cornering and sudden movements. It is important that the passenger sit still while the motorcycle is in motion and not interfere with the operation of the motorcycle. Do not carry animals on your motorcycle.

2. You should instruct any passenger before riding to keep his feet on the passenger footpegs and hold on to the operator, seat strap or grab rail. Do not carry a passenger unless he or she is tall enough to reach the footboards and footboards 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.

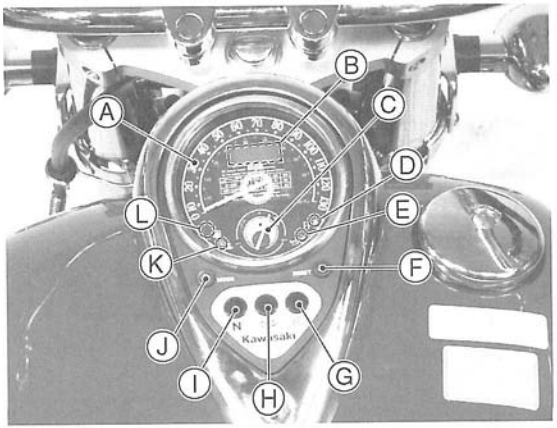
8. Fairings, windshields, backrests, and other large items have the capability of adversely affecting stability and handling of the motorcycle, not only because of their weight, but also due to the aerodynamic forces acting on these surfaces while the motorcycle is in operation. Poorly designed or installed 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 183 kg (403 lb).

Meter Instruments



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

Speedometer

The speedometer shows the speed of the vehicle.

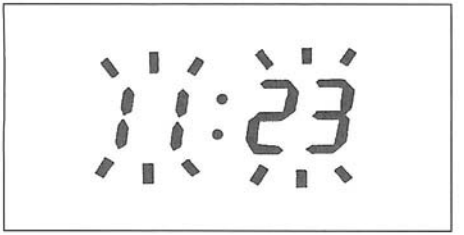
Digital Meter

The LCD (Liquid Crystal 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 LCD segments are displayed for five seconds, then the clock or meters operate normally depending on the mode selected.

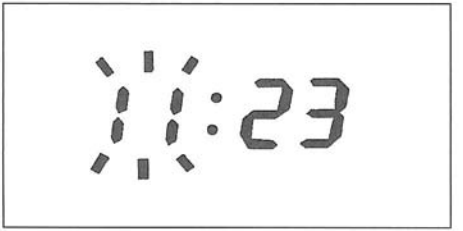
Clock –

To adjust hours and minutes:

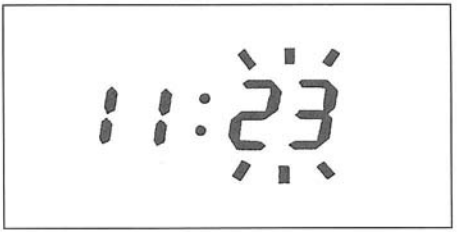
1. Turn the ignition key to "ON".
2. Push the MODE button to display the clock.
3. Push the RESET button for more than two seconds. Both the hour and minute displays start flashing.



4. Again push the RESET button, then the hour display only flashes. Push the MODE button to advance the hours.



5. Push the RESET button. The hour display stops flashing and the minute display starts flashing. Push the MODE button to advance the minutes.



6. Push the RESET button. Both the hour and minute displays start flashing again.
7. 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 miles that the vehicle has been ridden. This meter cannot be reset.

NOTE

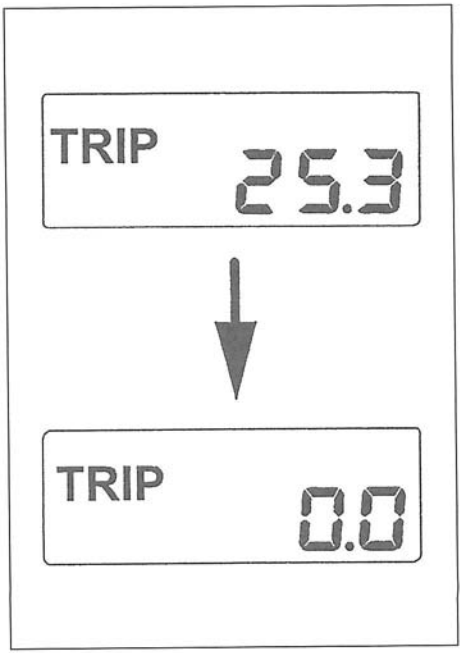
- *The data is maintained even if the battery is disconnected.*
- *When the figures come to 999999, they are stopped and locked.*

Trip Meters –

The trip meters shows the distance in miles they were traveled since they were last reset to zero.

To reset the trip meter:

1. Push the MODE button to display the trip meter.
2. Push the RESET button and hold it in.
3. 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 is reset while the vehicle is stopped, it starts counting as soon as the vehicle starts moving.*
- *When the figures come to 9999.9 when the vehicle is running, they turn back to 0.0 and start counting again.*
- *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.

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 meter 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 turned to left or right, the turn signal indicator light flashes on and off.

: The oil pressure warning light goes on whenever the oil pressure is dangerously low or the ignition key 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 coolant temperature warning light goes on when the ignition key is turned to "ON" and goes off soon after ensuring that its circuit functions properly. The warning light also 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) indicator light goes on when the ignition key is turned to "ON" and goes off soon after ensuring that its circuit functions properly. If DFI (Digital Fuel Injection) system trouble occurs while riding, this indicator light goes on to inform the rider, have the DFI system by a competent mechanic following the procedures in the Service Manual.

: The fuel level indicator light goes on when the ignition key is turned to "ON" and goes off soon after ensuring that its circuit functions properly. The indicator light also goes on when only 4.0 L (1.1 US gal) of fuel remains. Refuel at the earliest opportunity when the fuel level indicator light comes on with the engine running.

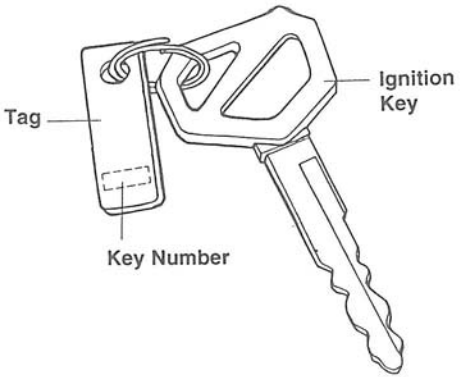
Keys

This motorcycle has a combination key, which is used for the ignition switch, steering lock, left side cover lock, helmet hook, fuel tank cap.

Blank keys are available at your Kawasaki dealers. Ask your dealer to make any additional spare keys you may need, using your original key as a master, or using the key code on the tag with your keys.

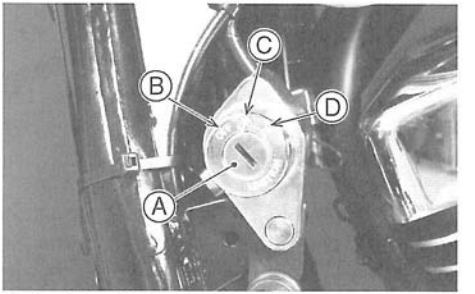
Record the code from the tag with your keys here. Participating Kawasaki dealers can use the code to make a new key in the event that you original keys are lost.

Write your key number here.



Ignition Switch

The ignition switch is located at the left side next to the front 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 position
C. ON position
D. P (Park) position

OFF	Engine off. All electrical circuits off.
ON	Engine on. All electrical equipment can be used.
P (Park)	Engine off. Taillight on. All other electrical circuits cut off.

NOTE

- *For parking push down the key in the ON position and turn it to P (Park) position.*
- *The tail and running position 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 P (Park) position on for a long time (one hour), the battery may become totally discharged.*

Right Handlebar Switches

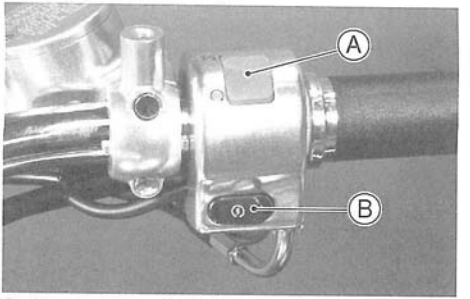
Engine Stop Switch

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 some emergency requires stopping the engine, 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.*



A. Engine Stop Switch
B. Starter Button

Starter Button

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

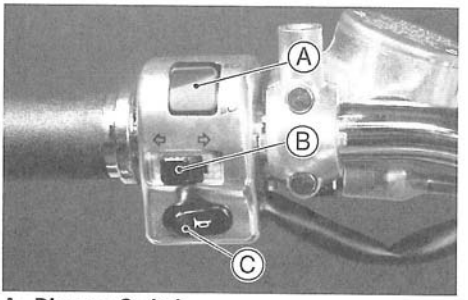
Refer to the Starting the Engine section of the "How to Ride the Motorcycle" chapter for starting instructions.

Left Handlebar Switches

Dimmer Switch

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

High beam ..... (≡D)
Low beam ..... (≡D)



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.

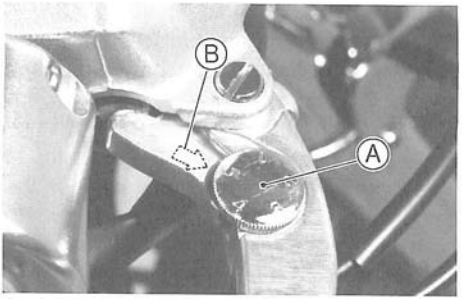
The turn signal switch is automatically canceled after it has first been on for 8 seconds, and then the motorcycle has traveled an additional 65 m (213 ft). However, make a practice of pushing the switch in to stop flashing.

Horn Button

When the horn button is pushed, the horn sounds.

Brake/Clutch Lever Adjusters

There is an adjuster on both the brake and clutch levers. Each 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. Mark

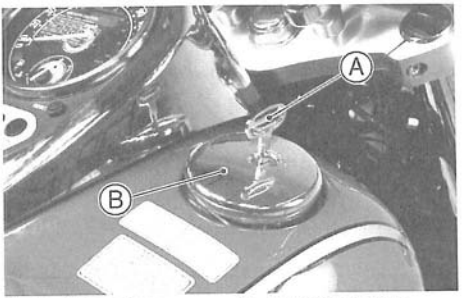
Fuel Tank Cap

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.

NOTE

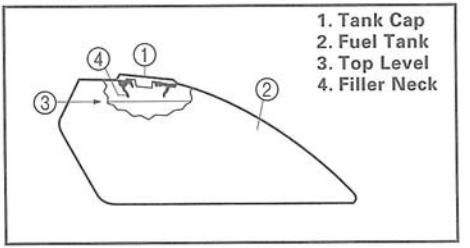
- *The fuel tank cap cannot be closed without the key inserted, and the key cannot be removed unless the cap is locked properly.*
- *Do not push on the key to close the cap, or the cap cannot be locked.*



A. Ignition Key B. Fuel Tank Cap

Fuel Tank

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



⚠ WARNING

Gasoline is extremely flammable and can be explosive under certain conditions. Turn the ignition 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. Never fill the tank so the fuel level rises into the filler neck. If the tank is overfilled, heat may cause the fuel to expand and overflow through the vents in the tank cap.

After refueling, make sure the fuel tank cap is closed securely. If gasoline is spilled on the fuel tank, wipe it off immediately.

CAUTION

California models only: Never fill the tank so the fuel level rises into the filler neck. If the tank is overfilled, heat may cause the fuel to expand and flow into the Evaporative Emission Control System resulting in hard starting and engine hesitation.

Fuel Requirement:

Fuel Type

Use clean, fresh unleaded gasoline with a minimum Antiknock Index of 90. The Antiknock Index is posted on service station pumps in the U.S.A. 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 $\frac{(RON + MON)}{2}$	90
Research Octane Number (RON)	95

CAUTION

Use minimum of 90 octane gasoline only to prevent severe engine damage.

CAUTION

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.

CAUTION

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.*

CAUTION

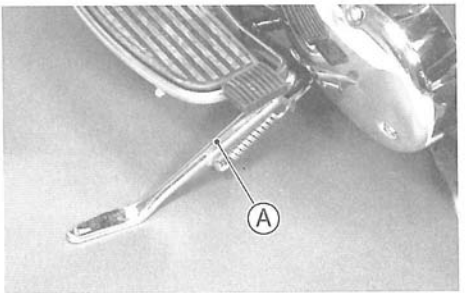
Never use gasoline with an octane rating lower than the minimum specified by Kawasaki.
Never use "gasohol" with more than 10% ethanol, or more than 5% methanol. Gasoline containing methanol must also be blended with cosolvents and corrosion inhibitors.

CAUTION

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

Stand

The motorcycle is equipped with a side stand.



A. Side Stand

NOTE

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

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

NOTE

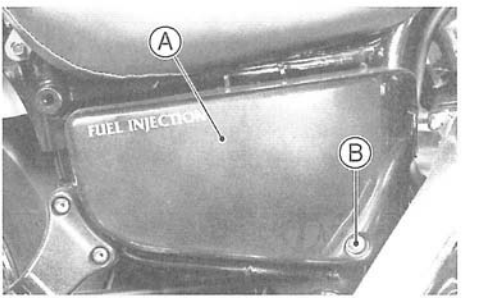
- *The motorcycle is equipped with a side stand switch. This switch is designed so that the engine stops if the clutch is engaged with the transmission in gear when the side stand is left down.*

Side Covers

The left and right side covers are removed for refilling the coolant, taking out the tool kit, and inspecting the fuses.

Right Side Cover Removal:

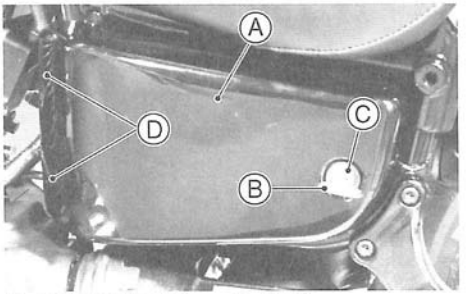
1. Remove the right side cover mounting screw.
2. Pull the side cover outward.



A. Right Side Cover B. Screw

Left Side Cover Removal:

1. Insert the ignition key into the lock, and turn the key to the right.
2. Pull the side cover rear end outward.
3. Push the side cover toward the front with the ignition key inserted.



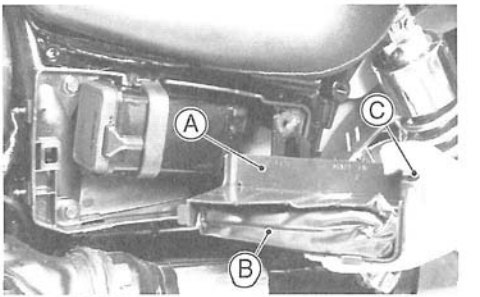
A. Left Side Cover
B. Ignition key
C. Lock
D. Projections

Tool Kit Case

The tool kit case is located behind the left side cover.

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

- Pull the tool kit case outward by firmly grabbing the grip of the tool kit case.

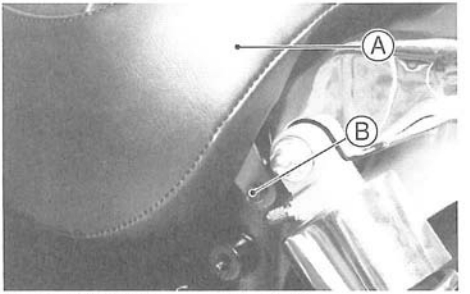


A. Tool Kit Case
B. Tool Kit
C. Grip

Seat

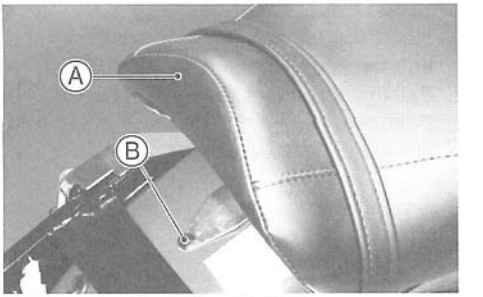
Seat Removal

- To remove the rider's seat, remove the left and right seat mounting bolts, and then pull the front of the seat up and push it to the front.



A. Rider's seat **B. Bolt**

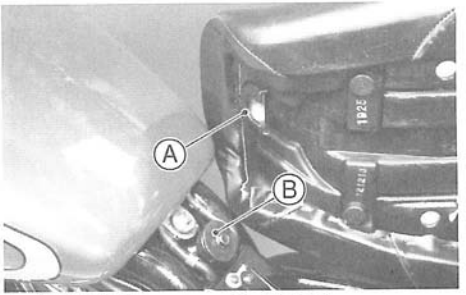
- Then remove the passenger's seat by unscrewing off the mounting bolt and pulling the seat forward.



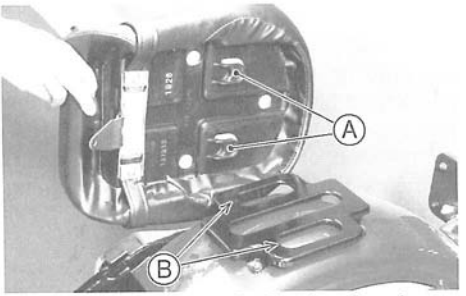
A. Passenger's seat **B. Bolt**

Seat Installation

- To install the rider's seat, fit the receptacle at the front of the seat over the holder at the rear of the fuel tank, and tighten the bolts.



A. Receptacle B. Holder



A. Projections B. Bracket Openings

- To install the passenger's seat, place the projections on the rear of the seat into the openings of the seat bracket, and tighten the bolt.

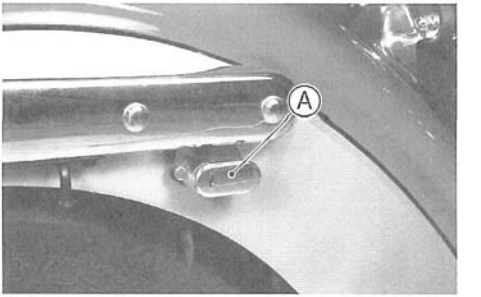
Helmet Hook

Helmet can be secured to the motorcycle using the helmet hooks. The helmet hooks are located at the left and right sides of the frame.

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

⚠ WARNING

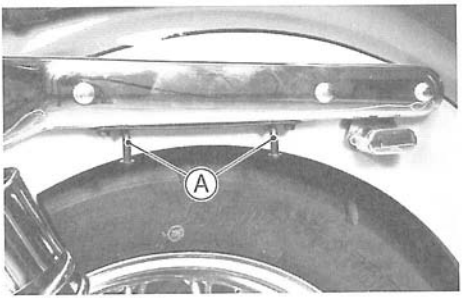
Do not ride the motorcycle with helmets attached to the hooks. The helmets could cause an accident by distracting the operator or interfering with normal vehicle operation.



A. Helmet Hook

Tying Hooks

When tying up light loads to the seat, use the tying hooks left and right below the passenger's seat.



A. Tying Hooks

Steering Lock

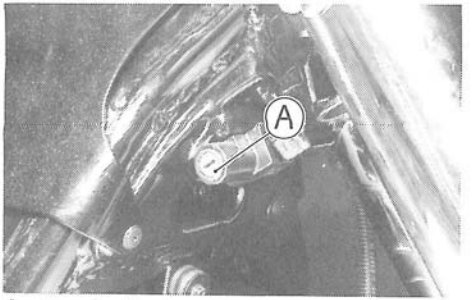
The motorcycle is equipped with the steering lock at the right side of the head pipe.

To lock the steering:

1. Turn the handlebar to the left.
2. Insert the ignition key.
3. Turn the key to the right.
4. Pull the key out.

⚠ WARNING

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



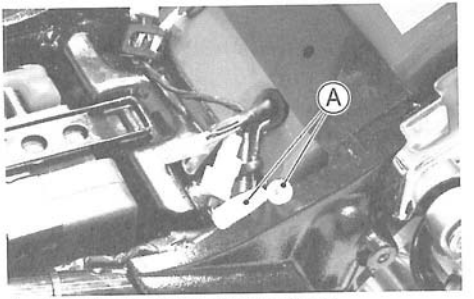
A. Steering Lock

Electric Accessory Connectors

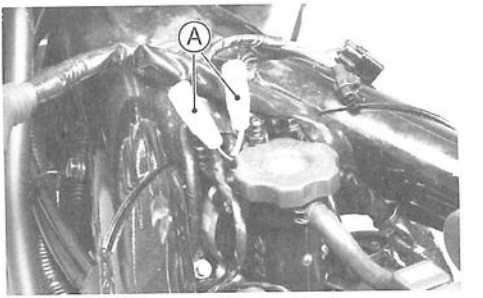
The electric power of the battery can be used through the electric accessory connectors regardless of ignition switch position. Observe and follow the notes listed below.

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



A. Electric Accessory Connectors

- Remove the fuel tank. (Refer to the throttle control system section of the "Maintenance and Adjustment" chapter.)

CAUTION

Always install a fuse of 10 A or less in the electrical accessory circuit. The vehicle has one fuse (10 A) to protect the entire electrical system. If this fuse fails, the engine will not run.
Do not connect more than 30 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.

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

km/h (mph)

Gear position / Distance traveled	1st	2nd	3rd	4th	5th
0 ~ 800 km (0 ~ 500 mi)	32 (20)	50 (31)	66 (41)	82 (51)	101 (63)
800 ~ 1,600 km (500 ~ 1,00 mi)	40 (25)	64 (40)	85 (53)	106 (66)	130 (81)

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.

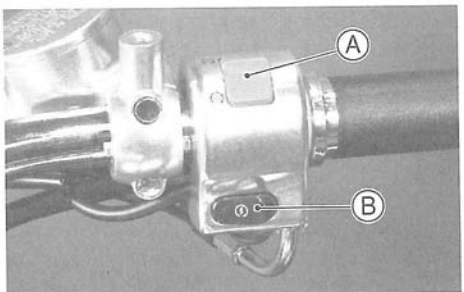
⚠ WARNING

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.

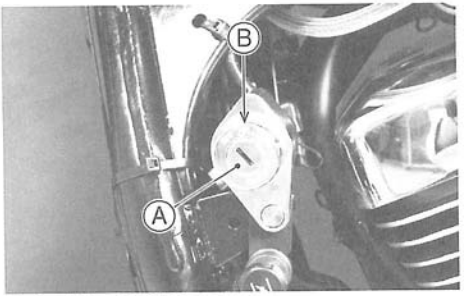
Starting the Engine

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



A. Engine Stop Switch
B. Starter Button

- Turn the ignition key to ON.

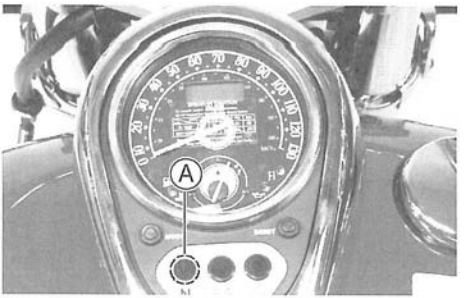


A. Ignition Switch
B. ON position

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.*

- Make certain the transmission is in neutral.



A. Neutral Indicator Light

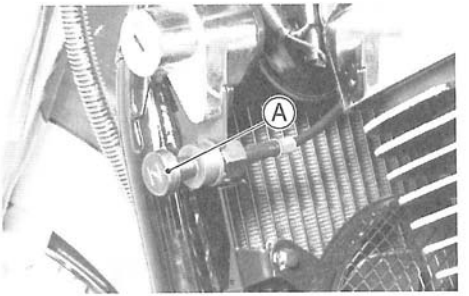
- Leaving the throttle completely closed, push the starter button without using the choke knob.

CAUTION

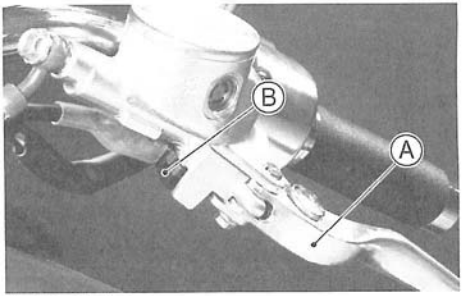
Do not operate the starter continuously for more than 5 seconds, or the starter will overheat and the battery power will drop temporarily. Wait 15 seconds between each operation of the starter to let it cool and the battery power recover.

NOTE

- *Pull the choke knob all the way out if the engine is hard to start in cold weather or at high altitudes, and then return the choke knob all the way back when the engine is warmed up enough to idle without using the choke.*



A. Choke Knob



A. Clutch Lever
B. Starter Lockout Switch

NOTE

- *If the engine is flooded, crank the engine over with the throttle fully open until the engine starts.*
- *The motorcycle is equipped with a starter lockout switch. This switch prevents the electric starter from operating when the clutch is engaged and the transmission is not in neutral.*

CAUTION

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

Jump Starting

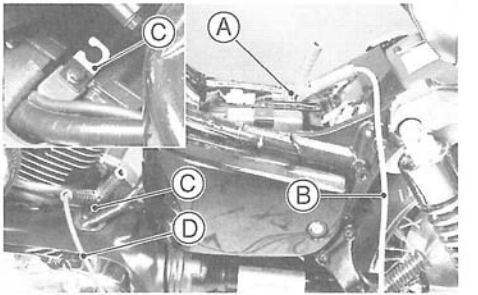
If your motorcycle battery is "run down," it should be removed and charged. If this is not practical, a 12 volt booster battery and jumper cables may be used to start the engine.

⚠ WARNING

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

Connecting Jumper Cables

- Remove the rider's seat.
- Make sure the ignition key is turned to "OFF".
- 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. Frame Earth Bracket
D. From Booster Battery Negative (–) Terminal

- Connect another jumper cable from the negative (–) terminal of the booster battery to your motorcycle frame earth bracket. Do not use the negative (–) terminal of the battery.

⚠ WARNING

Do not make this last connection at the fuel system or battery. Take care that you do not touch the positive and negative cables together, and do not lean over the battery when making this last connection. Do not jump start a frozen battery. It could explode.
Do not reverse polarity by connecting positive (+) to negative (–), or a battery explosion and serious damage to the electrical system may occur.

- Follow the standard engine starting procedure.

CAUTION

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

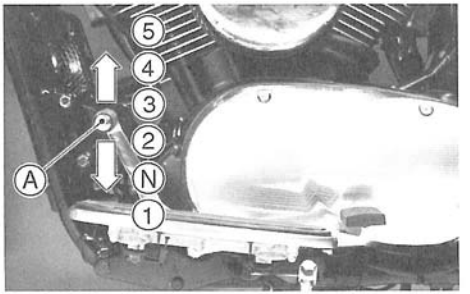
- After the engine has started, disconnect the jumper cables. Disconnect the negative (–) cable from the motorcycle first. Reinstall the rider's seat.

⚠ WARNING

Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

Moving Off

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



A. Shift Pedal

NOTE

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

Shifting Gears

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

⚠ WARNING

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

- 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

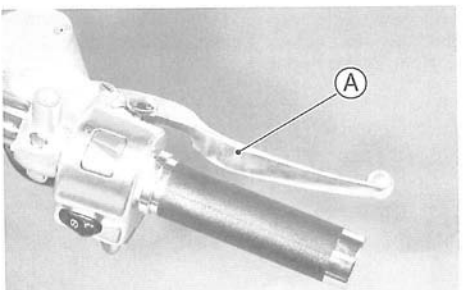
Shifting up	km/h (mph)	Shifting down	km/h (mph)
1st → 2nd	20 (12)	5th → 4th	40 (25)
2nd → 3rd	30 (19)	4th → 3rd	30 (19)
3rd → 4th	40 (25)	3rd → 2nd	20 (12)
4th → 5th	50 (31)	2nd → 1st	15 (9)

Braking

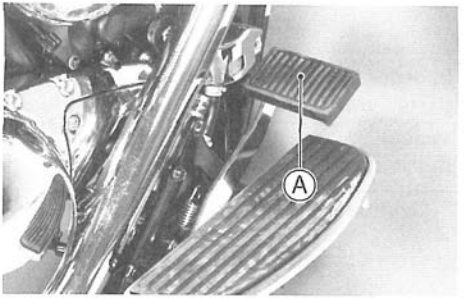
- Close the throttle completely, leaving the clutch engaged (except when shifting gears) so that the engine will help slow down the motorcycle.
- Shift down one gear at a time so that you are in 1st gear when you come to a complete stop.
- When stopping, always apply both brakes at the same time. Normally 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.

CAUTION

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



A. Front Brake Lever



A. Rear Brake Pedal

Stopping the Engine

- Close the throttle completely.
- Shift the transmission into neutral.
- Turn the ignition 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

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

CAUTION

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

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

⚠ WARNING

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

- Lock the steering to help prevent theft.

NOTE

- *When stopping near traffic at night, you can leave the taillight on for greater visibility by turning the ignition 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. Platinum and rhodium in the converter react with harmful carbon monoxide and hydrocarbons to convert them into harmless carbon dioxide and water 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.

- Use only unleaded gasoline. Never use leaded gasoline. Leaded gasoline significantly reduces the capability of the catalytic converter.
- Do not coast the vehicle with the ignition switch and/or engine stop switch off. Do not attempt to start the engine by rolling the vehicle if the battery is discharged. 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 Riding Technique

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Daily Safety Checks

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

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

⚠ WARNING

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

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

Front	Up to 183 kg Load (403 lb)	200 kPa (2.00 kg/cm^2, 28 psi)
Rear	Up to 97.5 kg Load (215 lb)	250 kPa (2.50 kg/cm^2, 36 psi)
	97.5 ~ 183 kg Load (215 ~ 403 lb)	280 kPa (2.80 kg/cm^2, 40 psi)

Nuts, bolts, fasteners	Check that steering and suspension components, axles, and all controls are properly tightened or fastened.
Steering	Action smooth but not loose from lock to lock. No binding of control cables.
Brakes	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	No clutch fluid leakage.
Coolant	No coolant leakage. Coolant level between level lines (when engine is cold)
Final gear case	No oil leakage.
Electrical equipment	All lights and horn work.
Engine stop switch	Stops engine.
Side stand	Returns to its fully up position by spring tension. Return spring not weak or not damaged.

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

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 over-emphasized. 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.

Spark Plugs: For demanding operation such as racing, install spark plugs with one heat colder range NGK DPR7EA-9 or ND X22EPR-U9.

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

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

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

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

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

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

MAINTENANCE AND ADJUSTMENT

The maintenance and adjustments outlined in this chapter must be carried out 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 California Air Resources Board on vehicle sold in California only.

1. Crankcase Emission Control System

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

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.

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 133 through 136 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.

Periodic Maintenance Chart

	Operation / Frequency	Every	Whichever comes first ↓ *Odometer Reading km (mi) 1,000 (600)	6,000 (4,000)	12,000 (7,500)	18,000 (12,000)	24,000 (15,000)	30,000 (20,000)	36,000 (24,000)	See Page
Emission Related	Idle speed – check †		●		●		●		●	97
	Throttle control system – check †		●	●	●	●	●	●	●	92
	Spark plug – clean and gap †			●	●	●	●	●	●	86
	Air suction valve – check †			●	●	●	●	●	●	89
	Air cleaner element – clean † #				●		●		●	92
	Evaporative emission control system (Cal) – check †		●	●	●	●	●	●	●	88
Non-Emission	Κ Brake/clutch hoses connections – check †			●	●	●	●	●	●	–
	Brake light switch – check †		●	●	●	●	●	●	●	104
	Brake pad wear – check †#			●	●	●	●	●	●	100
	Brake/clutch fluid level – check †	month	●	●	●	●	●	●	●	101, 99
	Κ Brake/clutch fluid – change	2 years					●			103, 99
	Κ Fuel hoses connections – check †			●	●	●	●	●	●	–

	Operation / Frequency	Every	1,000 (600)	6,000 (4,000)	12,000 (7,500)	18,000 (12,000)	24,000 (15,000)	30,000 (20,000)	36,000 (24,000)	See Page
		Whichever comes first	*Odometer Reading km (mi)							
Non-Emission Related	K Steering – check †		•	•	•	•	•	•	•	–
	Final gear case oil level – check †				•		•		•	83
	Final gear case oil – change		•						•	84
	K Propeller shaft joint – lubricate				•				•	–
	Nut, bolt, and fastener tightness – check †		•		•		•		•	123
	K Spoke tightness and rim runout – check †		•	•	•	•	•	•	•	–
	Tire wear – check †			•	•	•	•	•	•	110
	Engine oil – change #	6 months	•	•	•	•	•	•	•	76
	Oil filter – replace		•		•		•		•	76
	General lubrication – perform				•		•		•	119
	K Front fork oil – change	2 years					•			–
	Front fork oil leak – check †				•		•		•	–
	Rear shock absorber oil leak – check †				•		•		•	–

	Operation / Frequency	Whichever comes first — Every	*Odometer Reading km (mi) 1,000 (600)	6,000 (4,000)	12,000 (7,500)	18,000 (12,000)	24,000 (15,000)	30,000 (20,000)	36,000 (24,000)	See Page
Non-Emission Related	κ Swingarm pivot – lubricate				•				•	–
	κ Coolant – change	2 years					•			82
	Radiator hoses, connections – check †		•							79
	κ Steering stem bearing – lubricate	2 years					•			–
	κ Brake/clutch master cylinder cup and dust seal – replace	4 years								–
	κ Caliper piston seal and dust seal – replace	4 years								–
	κ Clutch slave cylinder piston seal – replace	4 years								–

κ : Should be serviced by an authorized Kawasaki dealer.
* : For higher odometer readings, repeat at the frequency interval established here.
† : Replace, add, adjust, or torque if necessary.
# : Service more frequently when operating in severe conditions: dusty, wet, muddy, high speed, or frequent starting/stopping.
(Cal) : California model only

Engine Oil

In order for the engine, transmission, and clutch to function properly, maintain the engine oil at the proper level, and change the oil and 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.

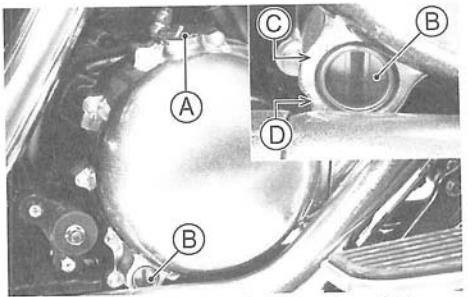
Oil Level Inspection

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

CAUTION

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

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

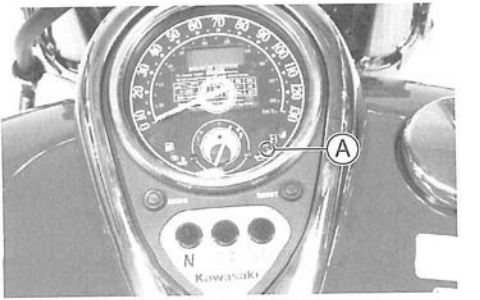


A. Oil Filler Cap
B. Oil Level Gauge
C. Upper Level Line
D. Lower Level Line

- 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.

CAUTION

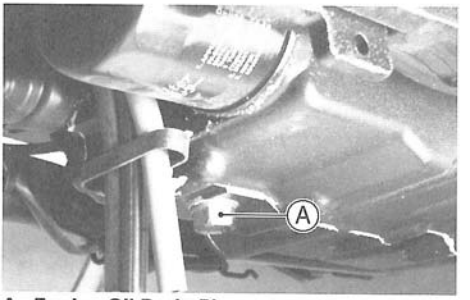
If the engine oil gets extremely low or if the oil pump does not function properly or oil passages are clogged, the oil pressure warning light will light. If this light stays on when the engine speed is running slightly above the idle speed, stop the engine immediately and find the cause.



A. Oil Pressure Warning Light

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 drain plug.



A. Engine Oil Drain Plug

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

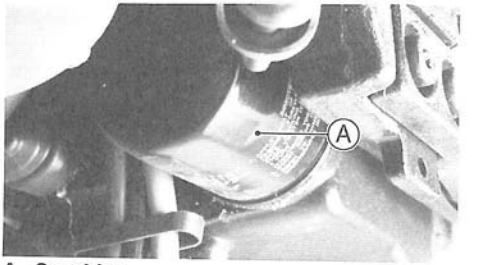
⚠ WARNING

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

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

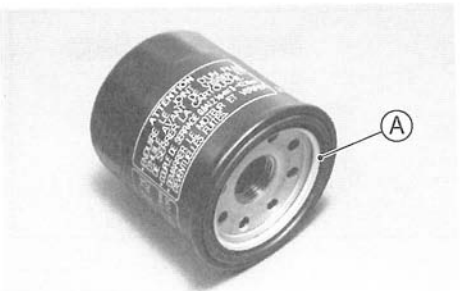
NOTE

○ *If a torque wrench or required Kawasaki special tool is not available, this item should be serviced by a 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 its gasket and tighten it to the specified torque.

NOTE

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

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

Tightening Torque

Engine Drain Plug:
20 N-m (2.0 kg-m, 14.5 ft·lb)
Cartridge:
18 N-m (1.8 kg-m, 13 ft·lb)

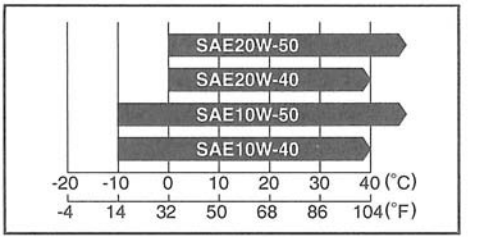
Recommended Engine Oil

Type	: API SE, SF or SG : API SH, SJ or SL with JASO MA
Viscosity	: SAE 10W-40

Engine Oil Capacity

Capacity	: 2.9 L (3.1 US qt) [when filter is not removed] 3.1 L (3.3 US qt) [when filter is removed] 3.5 L (3.7 US qt) [when engine is completely dry]

Depending on the atmospheric temperature of your riding area, the engine oil viscosity should be changed according to the following chart:



Cooling System

Radiator and Cooling Fan:

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

⚠ WARNING

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

CAUTION

Using high-pressure water, as from a car wash facility, could damage the radiator fins and impair the radiator's effectiveness.
Do not obstruct or deflect airflow through the radiator by installing unauthorized accessories in front of the radiator or behind the cooling fan. Interference with the radiator airflow can lead to overheating and consequent engine damage.

Radiator Hoses:

Check the radiator hoses for cracks or deterioration, and connections for looseness 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, and replenish coolant if the level is low. Change the coolant in accordance with the Periodic Maintenance Chart.

Information for Coolant

To protect the cooling system (consisting of the aluminum engine and radiator) from rust and corrosion, the use of corrosion and rust

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

⚠ WARNING

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

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

CAUTION

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

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

Use a permanent type of antifreeze (soft water and ethylene glycol plus corrosion and

rust inhibitor chemicals for aluminum engines and radiators) in the cooling system. On the mixture ratio of coolant, choose the suitable one referring to the relation between freezing point and strength directed on the container.

CAUTION

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

NOTE

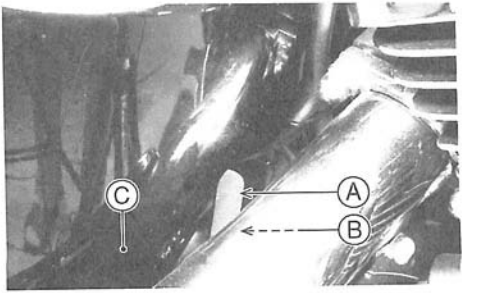
○ *A permanent type of antifreeze is installed in the cooling system when shipped. It is colored green and contains ethylene glycol. It is mixed at 50% and has the freezing point of –35 °C (–31°F).*

Coolant Level Inspection

- Situate the motorcycle so that it is perpendicular to the ground.
- Check the coolant level through the coolant level gauge. The coolant level should be between the F (Full) and L (Low) marks.

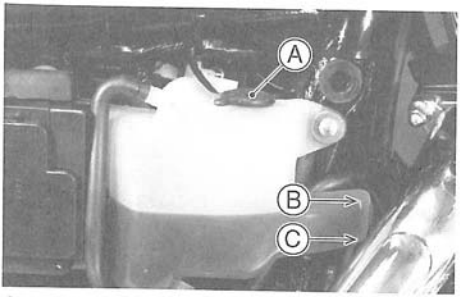
NOTE

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



A. F (Full) Mark
B. L (Low) Mark
C. Right Side Cover

- If the amount of coolant is insufficient, remove the right side cover, pull open the cap from the reserve tank and add coolant through the filler opening to the F (Full) mark.



A. Cap
B. F (Full) Mark
C. L (Low) Mark

- Install the cap and right 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.*

CAUTION

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

Coolant Change

Have the coolant changed by an authorized Kawasaki dealer.

Final Gear Case Oil

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

⚠ WARNING

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

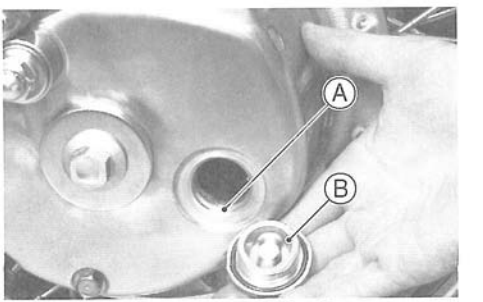
Oil Level Inspection

- Have a helper hold the motorcycle vertical on level ground.
- Remove the filler cap.

CAUTION

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

- Check the oil level. If it is low, add oil as necessary. The oil level should come to the bottom thread of the filler opening with the motorcycle held vertical on level ground.



A. Bottom Thread **B. Filler Cap**

NOTE

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

Oil Change

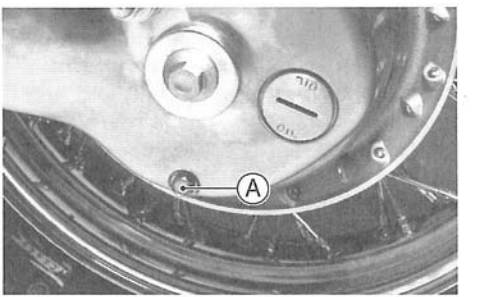
NOTE

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

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

⚠ WARNING

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



A. Drain Plug

⚠ WARNING

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

- After the oil has completely drained out, install the drain plug and gasket. Replace the damaged gasket with a new one.
- With the motorcycle held vertical on level ground, fill the gear case up to the bottom thread of the filler opening with the oil specified below.

Final Gear Case Oil

Oil Capacity	about 200 mL (0.21 US qt)
Oil Type	API "GL-5" Hypoid gear oil above 5°C (41°F) SAE90 below 5°C (41°F) SAE80

NOTE

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

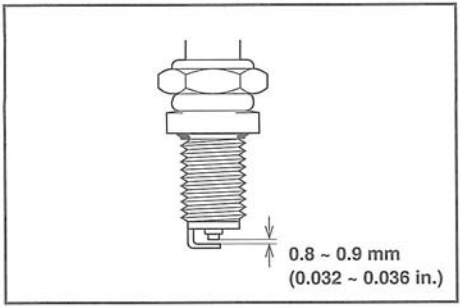
- Install the filler cap.

Spark Plugs

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

Maintenance

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



Spark Plug

Standard Plug	NGK DPR6EA-9 or ND X20EPR-U9
Plug Gap	0.8 ~ 0.9 mm (0.032 ~ 0.036 in.)
Tightening Torque	18 N-m, (1.8 kg-m, 13.0 ft·lb)

CAUTION

For cold weather and/or low speed riding, a hotter spark plug shown in the table may be used for quicker warm-ups and more efficient engine operation. However, for normal temperatures and/or high speed use, the standard spark plug must be used to prevent engine damage.

NOTE

- *Fit the plug cap securely onto the spark plug, and pull the cap lightly to make sure that it is properly installed.*
- *If a torque wrench is not available, this item should be serviced by a Kawasaki dealer.*

Hotter Spark Plug

NGK DPR5EA-9 or ND X16 EPR-U9

Valve Clearance

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

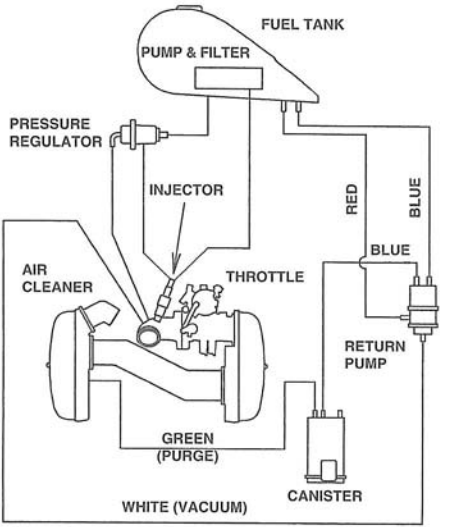
Evaporative Emission Control System (California model only)

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

Inspection

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

VACUUM HOSE ROUTING DIAGRAM



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Kawasaki Clean Air System

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

Air Suction Valves:

The air suction valve is essentially a check valve which allows fresh air to flow only from the air cleaner into the exhaust port. Any air that has passed the air suction valve is prevented from returning. Inspect the air suction valves in accordance with the Periodic Maintenance Chart. Also, inspect the air suction valves whenever stable idling cannot be obtained, engine power is greatly reduced, or there are abnormal engine noises.

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

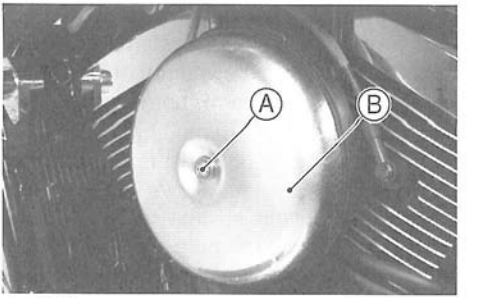
Air Cleaner

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

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

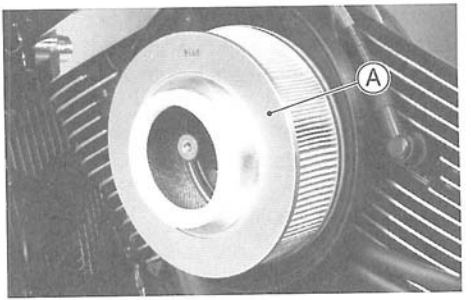
Element Removal

- Unscrew the mounting bolt on the air cleaner cover located on the left side of the engine and remove the cover from the air cleaner housing.



A. Bolt
B. Left Air Cleaner Cover

- Pull the element out of the housing.



A. Element

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

⚠ WARNING

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

CAUTION

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

NOTE

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

Element Cleaning

- Clean the element by tapping it lightly to loosen dust.
- Blow away the remaining dust by applying compressed air from the inside to the outside (from the clean side to the dirty side).

Throttle Control System

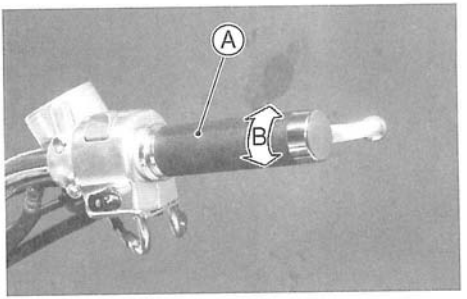
Check the throttle grip play, and the throttle body bores in accordance with the Periodic Maintenance Chart, and adjust the throttle grip play and clean the throttle bores around the butterfly valves if necessary.

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 the 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.

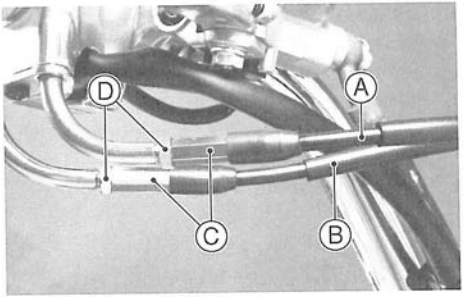


A. Throttle Grip
B. 2 ~ 3 mm (0.08 ~ 0.12 in.)

- If there is improper play, adjust it.

Adjustment

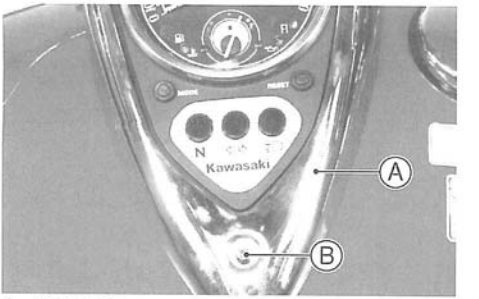
- Loosen the locknuts at the upper ends of the throttle cables, and screw both throttle cable adjusting nuts in completely so as to give the throttle grip plenty of play.
- Turn out the decelerator cable adjusting nut until there is no play when the throttle grip is completely closed. Tighten the locknut.



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

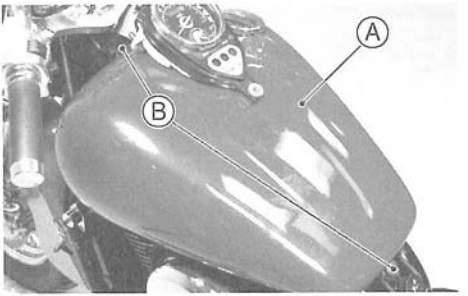
- Turn the accelerator cable adjusting nut until 2 ~ 3 mm (0.08 ~ 0.12 in.) of throttle grip play is obtained. Tighten the locknut.

- If the throttle cables cannot be adjusted by using the cable adjusting nuts at the upper ends of the throttle cables, use the adjuster at the middle of the throttle cable.
- First give the throttle grip plenty of play at the upper ends of the throttle cables as mentioned above. Tighten the locknuts.
- Remove the fuel tank as follows.
- Take off the rider's seat mounting bolts and remove the rider's seat.
- Take off the meter cover mounting bolt.



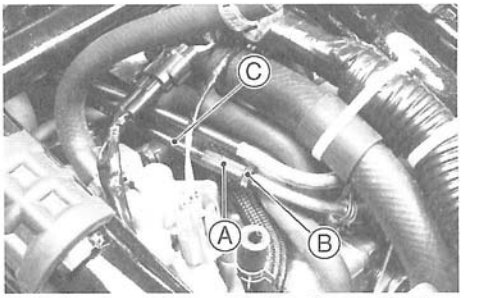
A. Meter Cover
B. Mounting Bolt

- Pull the meter cover to front, and disconnect the speedometer cable and wire leads from the meter unit.
- Take off the fuel tank mounting bolts from the front and rear ends of the fuel tank and remove it.



A. Fuel Tank B. Bolts

- Loosen the locknut at the accelerator cable, and turn the cable adjuster in fully so as to give the throttle grip plenty of play.



A. Adjusters C. Accelerator Cable
B. Locknuts

- Turn out the accelerator cable adjuster until the correct throttle grip free play is obtained. Tighten the locknut.

⚠ WARNING

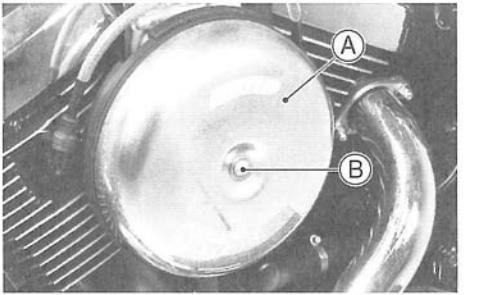
Operation with improperly adjusted, incorrectly routed, or damaged cables could result in an unsafe riding condition.

- Install the parts removed.

Throttle Bore Cleaning

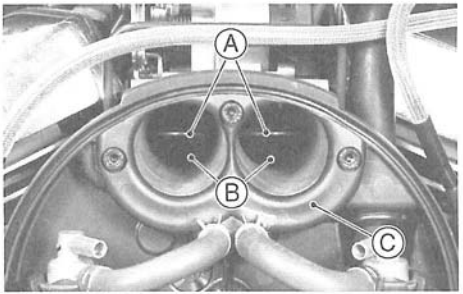
Check the throttle bores in front of the butterfly valves and the butterfly valves for carbon deposits.

- Take out the bolt in right air cleaner cover, and remove the right air cleaner cover.



A. Right Air Cleaner Cover
B. Bolt

- Wipe any carbon off the throttle bores and butterfly valves with a lint-free cloth penetrated with a high flash-point solvent.



A. Butterfly Valves
B. Throttle Bores
C. Throttle Body

- Install the parts removed.

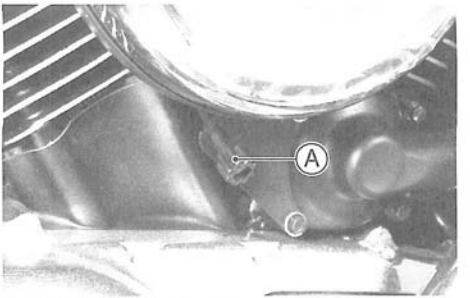
Idle Speed

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

The following procedure covers the idle adjustment.

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 900 ~ 1,000 r/min (rpm) by turning the idle adjusting screw.



A. Idle Adjusting Screw

- Open and close the throttle a few times to make sure that the idle speed does not change. Readjust if necessary.
- With the engine idling, turn the handlebar to each side. If handlebar movement changes the idle speed, the throttle cables may be improperly adjusted or incorrectly routed, or they may be damaged. Be sure to correct any of these conditions before riding.

⚠ WARNING

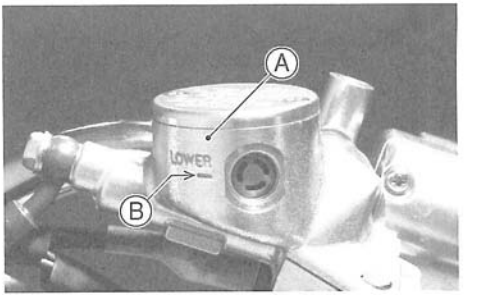
Operation with damaged cables could result in an unsafe riding condition.

Clutch

The motorcycle is equipped with a hydraulically operated clutch that requires no adjustment except fluid level inspection in accordance with the Periodic Maintenance Chart.

Fluid Level Inspection

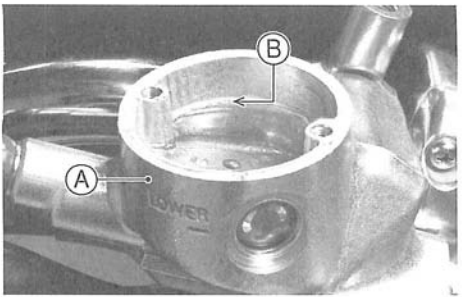
- The fluid level in the clutch fluid reservoir must be kept above the lower level line next to the gauge (reservoir held horizontal).
- If the fluid level is lower than the lower level line, check for fluid leaks in the clutch line, and fill the clutch fluid reservoir to the upper level line stepped inside it.



A. Clutch Fluid Reservoir
B. Lower Level Line

NOTE

- *Use the same fluid as is used in the brakes and keep the same requirements mentioned in the "Brakes" section.*

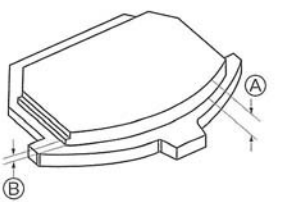


A. Clutch Fluid Reservoir
B. Upper Level Line

Brakes

Brake Wear Inspection

In accordance with the Periodic Maintenance Chart, 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.)

Disc 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.

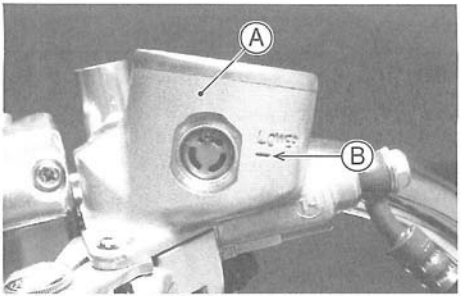
Fluid Requirement

Use heavy-duty brake fluid only from a container marked D.O.T.4.

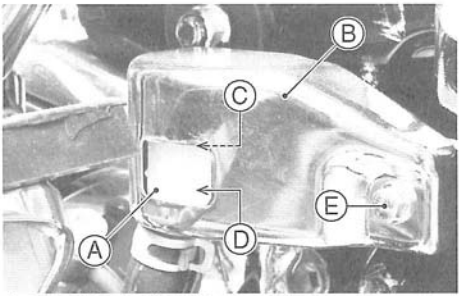
CAUTION
Do not spill brake fluid onto any painted surface. **Do not use fluid from a container that has been left open or that has been unsealed for a long time.** **Check for fluid leakage around the fittings.** **Check brake hose for damage.**

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).

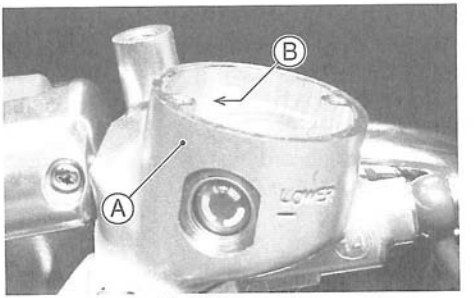


A. Front Brake Fluid Reservoir
B. Lower Level Line



A. Rear Brake Fluid Reservoir
B. Cover
C. Upper Level Line
D. Lower Level Line
E. Bolt

- If the fluid level in each 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

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.

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

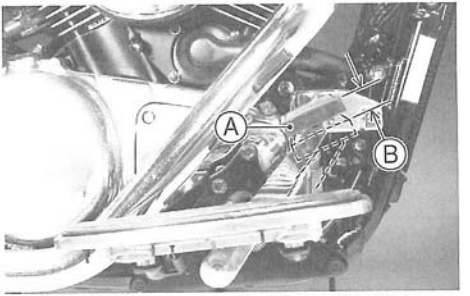
If the brake lever or pedal feels mushy when it is applied, there might be air in the brake lines or the brake may be defective. Since it is dangerous to operate the motorcycle under such conditions, have the brake checked immediately by an authorized Kawasaki dealer.

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.
- 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.)

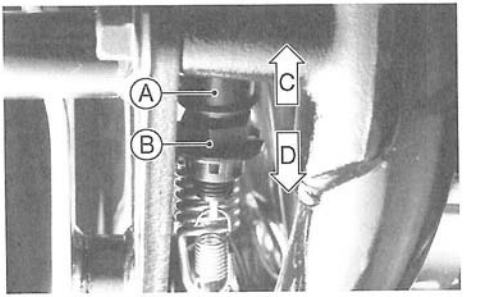
- If it does not, adjust the rear brake light switch.

Adjustment

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

CAUTION

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



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

Rear Shock Absorbers

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

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

Air Pressure

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

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

Air Pressure Adjustment

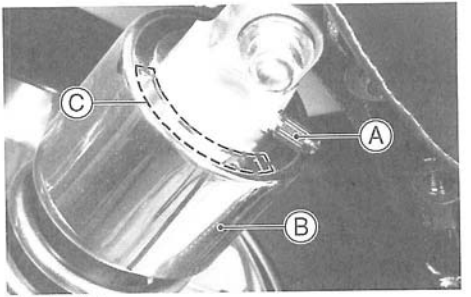
Air Pressure	Setting	Load	Road
Atmospheric Pressure	Soft	Light	Good
⇕	⇕	⇕	⇕
300 kPa (3.0 kg/cm^2, 43 psi)	Hard	Heavy	Bad

To adjust the air pressure:

NOTE

- *Check and adjust the air pressure when the rear shock absorbers are cold (room temperature).*

- Raise the rear wheel off the ground by using a suitable jack.
- Take off the air valve caps on the left and right shock absorbers.



A. Air Valve
B. Rebound Damping Force Adjuster
C. Number

- Check the air pressure with the air pressure gauge.

NOTE

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

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

CAUTION

Inject air little by little so that air pressure does not rise rapidly. Air pressure exceeding 500 kPa (5.0 kg/cm², 71 psi) may damage the oil seal.
Try to set the air pressure of the left and right shock absorbers as equally as possible.

⚠ WARNING

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

Rebound Damping Force

The rebound damping force adjuster on each rear shock absorber has 4 positions so that the rebound damping force can be adjusted for different road and loading conditions. The numbers on the adjuster show the setting position. The following table shows an example of damping force adjustment. To obtain stable handling and a suitable ride, adjust the damping force as indicated. The damping force can be left soft for average riding. But it should be adjusted harder for high speed riding or riding with a passenger. If the damping feels too soft or too stiff, adjust it in accordance with the following table.

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

Rebound Damping Force Adjustment

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

To adjust the damping force:

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

⚠ WARNING

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

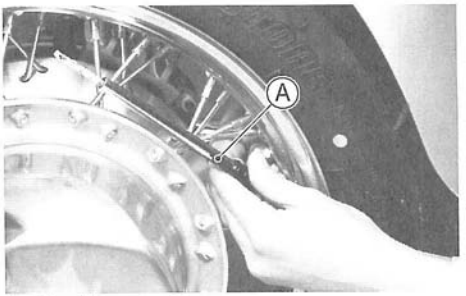
Wheels

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 183 kg (403 lb), including rider, passenger, baggage, and accessories.

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



A. Tire Pressure Gauge

NOTE

- *Measure the tire pressure when the tires are cold (that is, when the motorcycle has not been ridden more than a mile during the past 3 hours).*
- *Tire pressure is affected by changes in ambient temperature and altitude, and so the tire pressure should be checked and adjusted when your riding involves wide variations in temperature or altitude.*

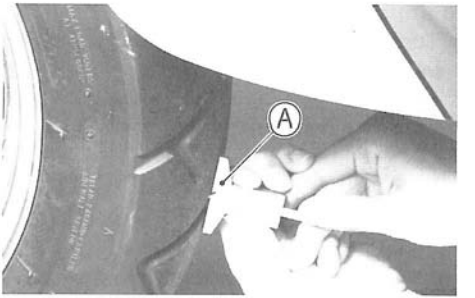
Tire Air Pressure (when cold)

Front	Up to 183 kg Load (403 lbs)	200 kPa (2.00 kg/cm^2, 28 psi)
Rear	*Up to 97.5 kg* Load (215 lb)	*250 kPa* (2.50 kg/cm^2, 36 psi)
	97.5 ~ 183 kg Load (215 ~ 403 lb)	280 kPa (2.80 kg/cm^2, 40 psi)

Tire Wear, Damage

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

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



A. Tire Depth Gauge

Minimum Tread Depth

Front	————	1 mm (0.04 in.)
Rear	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

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

NOTE

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

Standard Tire (Tube type)

Front	Size: 130/90-16 67H ○ BRIDGESTONE "EXEDRA G703 L" ○ DUNLOP "D404FU"
Rear	Size: 150/80B16 71H ○ BRIDGESTONE "EXEDRA G702 L" ○ DUNLOP "D404L"

⚠ WARNING

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 (27°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		
Tempera-ture	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

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.

Kawasaki-recommended chargers are

OptiMate III
Yuasa 1.5 Amp Automatic charger
Battery Mate 150–9

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 that is 1/10th of the battery capacity. For example, the charging rate for a 10 Ah battery would be 1.0 ampere.
- The charger will keep the battery fully charged until you are ready to re-install the battery in the motorcycle (see Battery Installation).

CAUTION

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

CAUTION

If you charge the maintenance-free battery, never fail to observe the instructions shown in the label on the battery.

⚠WARNING

Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

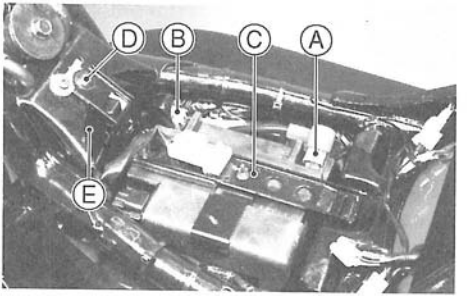
Battery Removal

- Remove the rider's seat.
- Remove the battery holder screw and take off the battery holder.

NOTE

- *Do not remove the screw of the vehicle-down sensor.*

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



A. (+) Terminal
B. (–) Terminal
C. Battery Holder
D. Screw
E. Vehicle-down Sensor

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

Battery Installation

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

NOTE

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

CAUTION

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

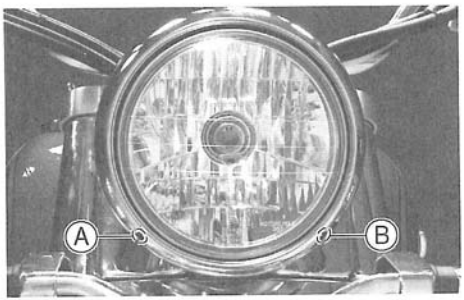
- Put a light coat of grease on the terminals to prevent corrosion.
- Cover the terminals with its protective cap.
- Reinstall the parts removed.

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. Horizontal Adjusting Screw
B. Vertical Adjusting Screw

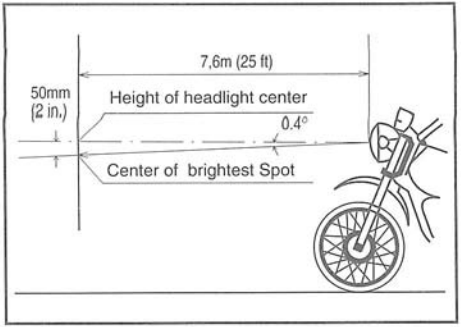
Vertical Adjustment

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.

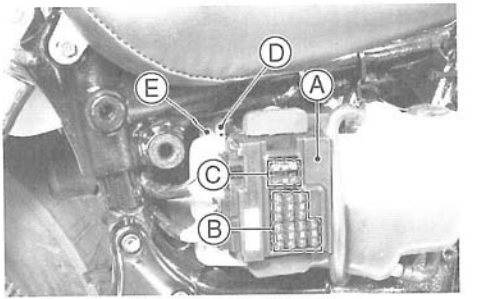
NOTE

- *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 in.) drop at 7.6 m (25 ft) measured from the center of the headlight, with the motorcycle on its wheels and the rider seated.*



Fuses

Fuses are arranged in the junction box located on the coolant reserve tank. The main fuse is mounted on the starter relay located behind the coolant reserve tank. The Electronic Control Unit (ECU) is located under the seat. If a fuse fails during operation, inspect the electrical system to determine the cause, and then replace it with a new fuse of proper amperage.



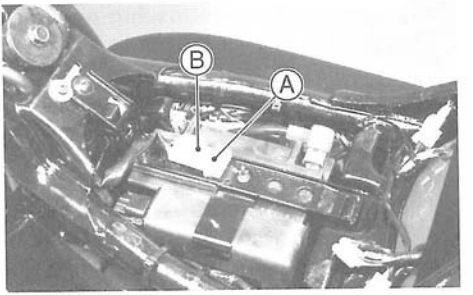
A. Junction Box
B. Fuses
C. Spare Fuses
D. Main Fuse
E. Starter Relay

NOTE

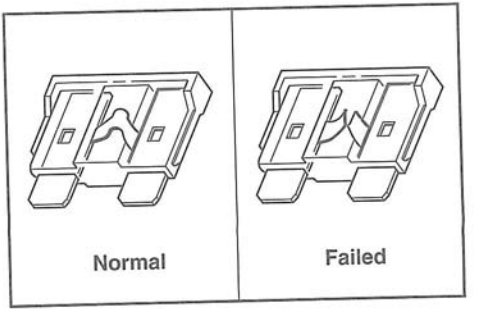
- *To check or replace the main fuse, the rider's seat must be removed.*

⚠ WARNING

Do not use any substitute for the standard fuse.
Replace the blown fuse with a new one of the correct capacity as specified on the junction box and main fuse.



A. ECU Main Fuse
B. ECU Spare Fuse



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

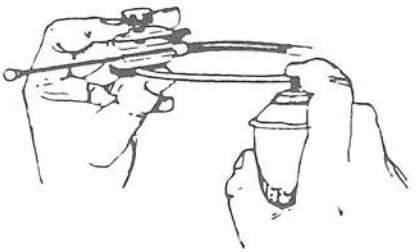
○ *A few drops of oil are effective to keep bolts and nuts from rusting and sticking. This makes removal easier. Badly rusted nuts, bolts, etc., should be replaced with new ones.*

Apply motor oil to the following pivots:

- Side Stand
- Clutch Lever
- Front Brake Lever
- Rear Brake Pedal

Lubricate the following cables with pressure cable luber:

- Throttle Inner Cables

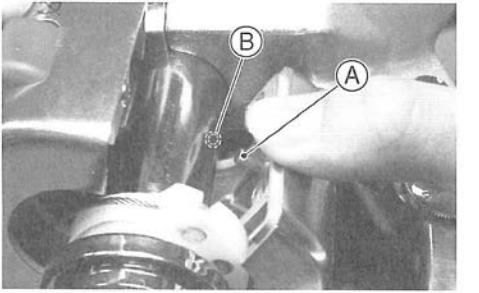


Apply grease to the following points:

- Throttle Inner Cable Upper Ends

NOTE

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



A. Projection **B. Hole**

Cleaning

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

Preparation for Washing

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

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

Where to be Careful

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

- Meter instruments
- Headlight
- Disc brake/clutch master cylinders and calipers
- Under the fuel tank – If water gets into the ignition coils or into the spark plug caps, the spark will jump through the water and be grounded out. When this happens, the motorcycle will not start and the affected parts must be wiped dry.
- Front and rear wheel hubs
- Steering pivot (steering stem head pipe)
- Swingarm pivot

NOTE

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

After Washing

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

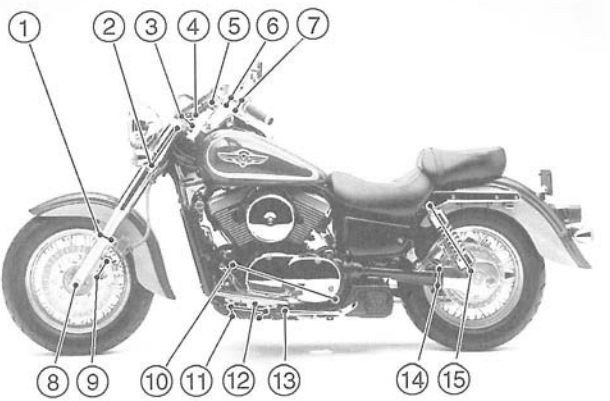
⚠ WARNING

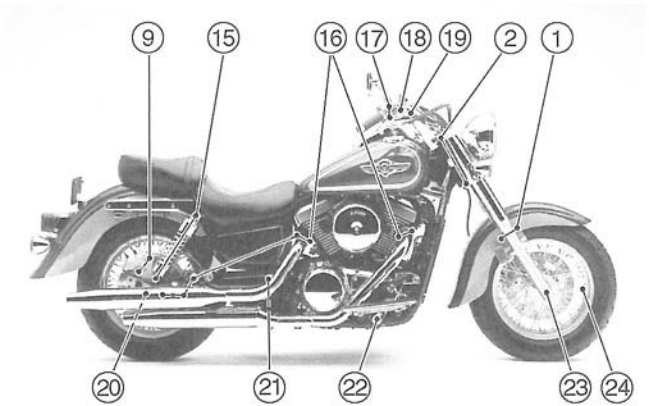
Never wax or lubricate the brake discs. Loss of braking and an accident could result. Clean the discs with an oilless solvent such as trichloroethylene or acetone. Observe the solvent manufacturer's warnings.

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 Clamp Bolts
4. Stem Head Bolt
5. Clutch Lever Pivot Bolt
6. Clutch Lever Holder Clamp Bolts
7. Left Handlebar Switch Housing Clamp Screws
8. Front Axle Nut
9. Caliper Mounting Bolts
10. Engine Mounting Bolts and Nuts
11. Footpeg Mounting Bracket Bolts
12. Shift Pedal Bolt
13. Side Stand Bolt
14. Final Gear Case Mounting Nuts
15. Rear Shock Absorber Mounting Nuts





16. Muffler Mounting Bolts
17. Right Handlebar Switch Housing Clamp Screw
18. Brake Lever Holder Clamp Bolts
19. Brake Lever Pivot Bolt
20. Rear Axle Nut
21. Pivot Shaft Bolt
22. Brake Pedal Mounting Bolts
23. Front Axle Clamp Bolt
24. Spokes

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

Motor 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 with a pump or siphon.

⚠ WARNING

Gasoline is extremely flammable and can be explosive under certain conditions. 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).
- Remove the empty fuel tank and store it well.
- Remove the spark plugs and spray fogging oil, such as Kawasaki K-Kare Fogging Oil (part number K61030-002), directly into each cylinder. Push the starter button for a few seconds to coat the cylinder walls. Install the spark plugs.

⚠ WARNING

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

- Reduce tire pressure by about 20%.
- Set the motorcycle on a box or stand so that both wheels are raised off the ground. (If this cannot be done, put boards under the front and rear wheels to keep dampness away from the tire rubber.)
- Spray oil on all unpainted metal surfaces to prevent rusting. Avoid getting oil on rubber parts or in the brakes.
- Lubricate all the cables.
- Remove the battery, and store it where it will not be exposed to direct sunlight, moisture, or freezing temperatures. During storage it should be given a slow charge (one ampere or less) about once a month. Keep the battery well charged 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 bag from the mufflers.
- Install the battery in the motorcycle and charge the battery if necessary.
- Make sure the spark plugs are tight.
- Fill the fuel tank with fuel.
- Check all the points listed in the Daily Safety 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
- Clutch lever not pulled in and transmission not in neutral
- Fuse blown
- Battery leads do not make good electrical contact with battery terminals
- Battery discharged

Engine Cranks, But Won't Start

- No fuel in tank
- Fuel line clogged
- Fuel broken down
- Choke is not used when engine is in cold weather or at high altitude.
- Engine flooded
- Spark plugs not in good contact
- Spark plugs fouled or wet
- Incorrect spark plug gap
- Battery discharged
- 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

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

OWNER SATISFACTION

(For Products Sold in the Continental United States of America Only)

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

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

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

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

Please send your correspondence to:

CONSUMER RELATIONS
KAWASAKI MOTORS CORP., U.S.A.
P. O. Box 25252
SANTA ANA, CA. 92799-5252
(949) 460-5688

REPORTING SAFETY DEFECTS

(For Products Sold in the Continental United States of America 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 protect our environment, properly discard used batteries, tires, engine oil, 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.

MAINTENANCE RECORD

Owner Name .....

Address .....

Phone Number .....

Engine Number .....

Vehicle Number .....

Selling Dealer Name .....

Phone Number .....

Warranty Start Date .....

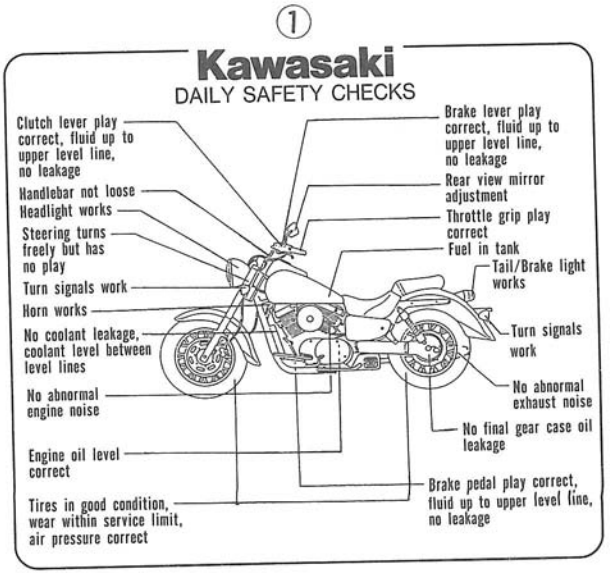
Note: Keep this information and a spare key in a secure location

Date	Odometer Reading	Maintenance Performed	Deafer Name	Dealer Address

Date	Odometer Reading	Maintenance Performed	Deafer Name	Dealer Address

Date	Odometer Reading	Maintenance Performed	Deafer Name	Dealer Address

Date	Odometer Reading	Maintenance Performed	Deafer Name	Dealer Address

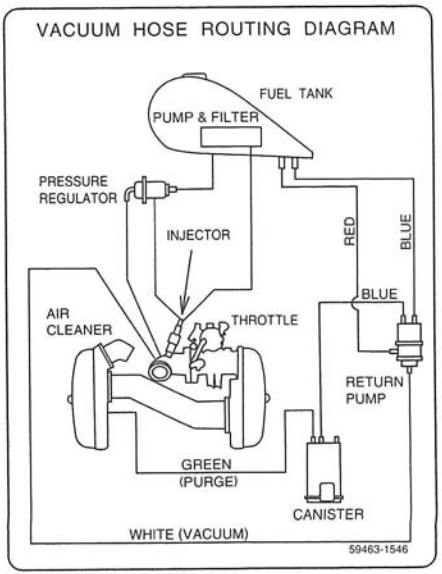


②

ENGINE OIL AND OIL FILTER

Engine Oil Change --- when filter is not removed: 2.9 liters (3.1 US qt)
when filter is removed : 3.1 liters (3.3 US qt)
Engine Oil Type : API SE, SF or SG
: API SH, SJ or SL with JASO MA
SAE10W-40
See Owner's Manual for engine oil / filter information and change intervals.

③ only on California model



④

VEHICLE EMISSION CONTROL INFORMATION

ENGINE FAMILY CODE ---------- _____

MODEL(S) ---------- _____

EXHAUST EMISSION CONTROL SYSTEM ---------- _____

DISPLACEMENT ---------- _____

TUNE UP SPECIFICATIONS

IGNITION TIMING	5° BTDC AT 950 RPM
IDLE SPEED	950 ± 50 RPM IN NEUTRAL
IDLE AIR FUEL MIXTURE SETTING	NO ADJUSTMENT
VALVE CLEARANCE (ENGINE COLD)	NO ADJUSTMENT
SPARK PLUG	DPR6EA-9 (NGK) SPARK PLUG GAP : 0.8-0.9 MM X20EPR-U9 (DENSO) (0.032-0.036 IN)
FUEL	GASOLINE WITH RESEARCH OCTANE NO. (RON) 95 MIN.
ENGINE OIL	SERVICE RATING : API SE, SF OR SG API SH, SJ OR SL WITH JASO MA VISCOSITY : SAE 10W-40 SEE THE OWNER'S MANUAL FOR ENGINE OIL INFORMATION.

THIS VEHICLE CONFORMS TO USEPA REGULATIONS
APPLICABLE TO XXXX MODEL YEAR NEW MOTORCYCLES.
KAWASAKI HEAVY INDUSTRIES, LTD.

④ only on California model

VEHICLE EMISSION CONTROL INFORMATION

ENGINE FAMILY CODE ---------- _____
EVAP. FAMILY ---------- _____
MODEL(S) ---------- _____
EXHAUST EMISSION CONTROL SYSTEM ---------- _____
DISPLACEMENT ---------- _____

TUNE UP SPECIFICATIONS

IGNITION TIMING	5° BTDC AT 950 RPM
IDLE SPEED	950 ± 50 RPM IN NEUTRAL
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ENGINE OIL	SERVICE RATING : API SE, SF OR SG API SH, SJ OR SL WITH JASO MA VISCOSITY : SAE 10W-40 SEE THE OWNER'S MANUAL FOR ENGINE OIL INFORMATION.

THIS VEHICLE CONFORMS TO USEPA AND CALIFORNIA
REGULATIONS APPLICABLE TO XXXX MODEL YEAR NEW MOTORCYCLES
AND IS CERTIFIED TO 0.8 G/KM HC ENGINE FAMILY EXHAUST
EMISSION STANDARD IN CALIFORNIA.
KAWASAKI HEAVY INDUSTRIES, LTD.

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 183kg load (403lbs)	200 kpa (2.00kgf ㎠,28psi)	BRIDGESTONE 130/90-16M/C 67H EXEDRA G703 L	DUNLOP 130/90-16M/C 67H D404FU	1mm(0.04in)	
Rear	Up to 97.5kg load (215lbs)	200 kpa (2.50kgf ㎠,36psi)	BRIDGESTONE 150/80B16M/C 71H EXEDRA G702 J	DUNLOP 150/80B16M/C 71H D404L	Up to 130 km/h(80MPH)	2mm(0.08in)
	97.5 183kg load (215 403lbs)	280 kpa (2.80kgf ㎠,40psi)			OVER 130 km/h(80MPH)	3mm(0.08in)

⑥/⑧

⑦

BREAK-IN CAUTION

To ensure proper vehicle performance, do not exceed the break-in limits shown below.

mile \ mph	1st	2nd	3rd	4th	5th
0−500	20	31	41	51	63
500−1,000	25	40	53	66	81

Note) When operating on public roadways, keep max. speed under traffic law limits.

⑨ only on California model

CAUTION

Never fill tank so fuel level rises into filler neck. If tank is overfilled, heat may cause fuel to expand and flow into Evaporative Emission Control System resulting in hard starting and engine hesitation.

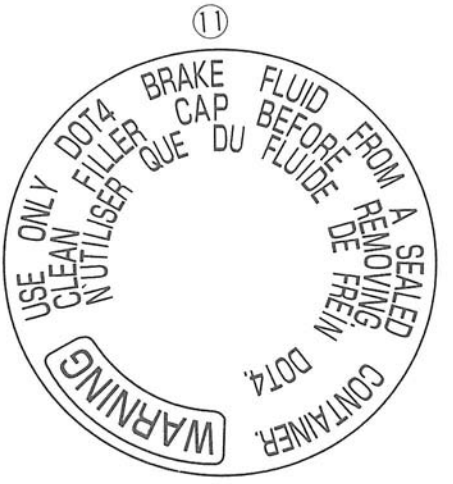
⑩

IMPORTANT

USE 90+OCTANE $\left(\frac{\text{RON+MON}}{2}\right)$ GASOLINE ONLY

CAUTION

USE MINIMUM OF 90+OCTANE GASOLINE ONLY TO PREVENT SEVERE ENGINE DAMAGE.



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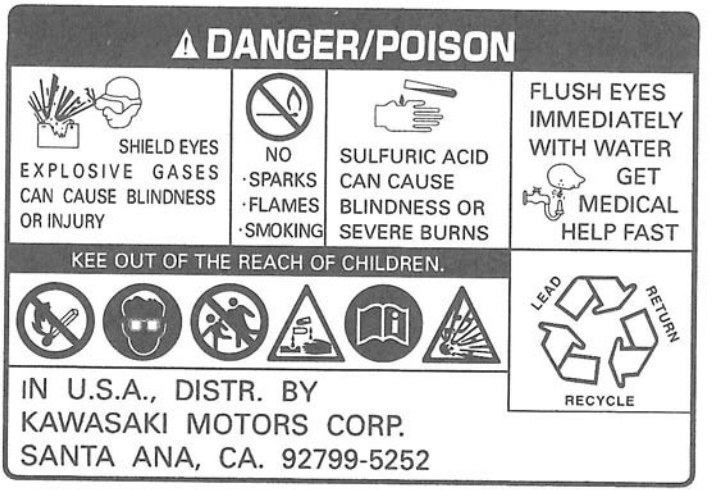

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MOTORCYCLE NOISE EMISSION CONTROL INF.

THIS XXXX 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. (VNT50N)
MODEL SPECIFIC CODE:
SEE VEHICLE IDENTIFICATION NUMBER ON STEERING HEAD
NOISE LIMIT/CLOSING RPM:

⑭

MFD. BY KAWASAKI HEAVY INDUSTRIES, LTD.
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
GVWR 1120LBS.GAWR F 403 LBS,WITH 130/90-16M/C -67H TIRE, J16M/CxMT3.00 RIM, AT 28 PSI. CDLD.
GAWR R 717 LBS. WITH 150/80B16M/C 71H TIRE, J16M/CxMT3.50 RIM, AT 40 PSI. COLD.
JKBVNAN1
MOTOR CYCLE (VN1500N) MADE IN JAPAN

MEMO

MEMO

VN1500N

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Kawasaki

KAWASAKI HEAVY INDUSTRIES,LTD.
Consumer Products & Machinery Company

Part No. 99987-1465

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