

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

### **A**WARNING

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

### **ACAUTION**

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 MANU-FACTURED FOR USE IN A REASON-ABLE AND PRUDENT MANNER BY A QUALIFIED OPERATOR AND AS A VEHICLE ONLY.



Follow safety

instructions

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

Brake Shoes or Pads Clutch Friction Material Gaskets Insulators

SAFETY INSTRUCTIONS

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

### TAMPERING WITH NOISE CONTROL SYSTEM

### Owners are warned that the law may prohibit:

- (a) 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; and
- (b) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

### FOREWORD

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

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

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

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

### KAWASAKI HEAVY INDUSTRIES, LTD.

### **CONSUMER PRODUCTS & COMPONENTS GROUP**

© Kawasaki Heavy Industries, Ltd., 1990

Sep. 1990. (1). (M)

Specifications	
Location of Parts11	
General Information14	
Meter Instruments14	
Speedometer and Tachometer15	
Fuel Gauge15	
Indicator Lights15	
Key	
Ignition Switch/Steering Lock17	
Right Handlebar Switches	
Engine Stop Switch18	
Starter Button19	
Headlight Switch	1
Left Handlebar Switches	1
Dimmer Switch20	1
Turn Signal Switch20	1
Horn Button	ł
Passing Button20	ļ.
Brake/Clutch Lever Adjusters	
Fuel Tank Cap22	

Fuel Tank Fuel Tap Stand Seat Lock Document/Tool Kit Compartment Helmet Hooks Tying Hooks Break-In How to Ride the Motorcycle Starting the Engine Jump Starting Moving Off	25 26 27 29 30 31 31 34 36
Moving Off	36
Shifting Gears	37
Braking	38
Stopping the Engine	39
Stopping the Motorcycle	
in an Emergency	40
Parking	41
Safe Operation	42
Daily Safety Checks	42

Additional Considerations for	
High Speed Operation	44
Maintenance and Adjustment	45
Periodic Maintenance Chart	46
Engine Oil	49
Spark Plugs	53
Valve Clearance	54
Air Cleaner	54
Throttle Grip	58
Choke Lever	60
Carburetors	62
Clutch	64
Drive Chain	66
Brakes	73
Brake Light Switches	76
Rear Shock Absorbers	
Wheels	81
Battery	85
Headlight Beam	
Fuses	

Fuel System	90
Cleaning	
Storage	
Wiring DiagramInside	e back cover

PERFORMANCE Maximum Horsepower Maximum Torque Minimum Turning Radius DIMENSIONS	36.8 kW (50 PS) @10,000 r/min (rpm) 40.2 N-m (4.1 kg-m, 29.7 ft-lb) @6,000 r/min (rpm) 2.8 m (110.2 in.)
Overall Length	2,080 mm (81.89 in.)
<f><g><n></n></g></f>	2,140 mm (84.25 in.)
< >	2,090 mm (82.28 in.)
Overall Width	755 mm (29.7 in.)
Overall Height	1,095 mm (43.11 in.)
Wheelbase	1,435 mm (56.50 in.)
<\$>	1,440 mm (56.69 in.)
Road Clearance	120 mm (4.72 in.)
Dry Weight	179 kg (395 lb)
ENGINE	
Туре	DOHC, 4-cylinder, 4-stroke, air-cooled
Displacement	553 mL (33.7 cu in.)
Bore x Stroke	58.0 x 52.4 mm (2.28 x 2.06 in.)
Compression Ratio	9.5 : 1
Starting System	Electric starter
Cylinder Numbering Method	Left to right, 1-2-3-4
Firing Order	1-2-4-3
Carburetors	Keihin CVK30 x 4
Ignition System	Battery and coil (transistorized ignition)

Ignition Timing 12.5° BTDC @1,300 r/min (rpm)~ (Electronically advanced) 35° BTDC @7,000 r/min (rpm) NGK DR9EA or ND X27ESR-U Spark Plugs Lubrication System Engine Oil Forced lubrication (wet sump) SE or SF class SAE 10W40, 10W50, 20W40, or 20W50 3.0 L (3.2 US qt) Engine Oil Capacity TRANSMISSION Transmission Type 6-speed, constant mesh, return shift Clutch Type Wet, multi disc Chain drive 2.934 (27/23 x 65/26) 2.375 (38/16) Driving System Primary Reduction Ratio Final Reduction Ratio <S> 2.562 (41/16) **Overall Drive Ratio** 5.937 (Top gear) <S> 6.406 (Top gear) 2.571 (36/14) Gear Ratio: 1st 1.777 (32/18) 2nd 1.380 (29/21) 1.125 (27/24) 0.961 (25/26) 3rd 4th 5th 0.851 (23/27) 6th

8

FRAME Castor Trail Tire Size:	Front Rear	27° 104 mm (4.09 in.) 110/80-17 57H Tubeless 140/70-18 67H Tubeless
Fuel Tank Capacity ELECTRICAL EQUIP Battery Headlight Tail/Brake Light		15 L (4.0 US gal) 12 V 12 Ah 12 V 60/55 W 12 V 5/21 W × 2 12 V 8/27 W × 2

<E> : Finnish model

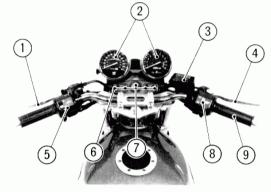
<G> : Greek model

<l> : Italian model

<N> : Norwegian model

<S> : South African model

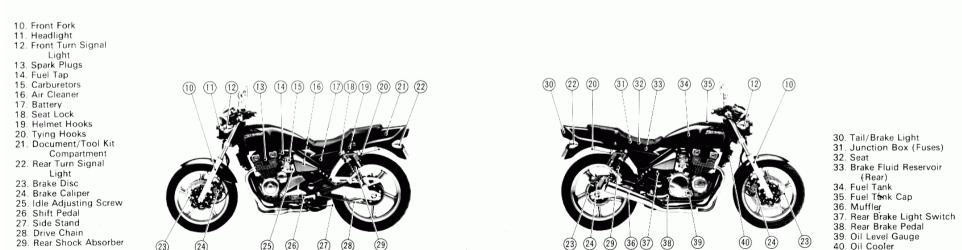
Specifications subject to change without notice, and may not apply to every country.



- 1. Clutch Lever
- 2. Meter Instruments
- 3. Brake Fluid Reservoir
- (Front)
- 4. Front Brake Lever
- 5. Left Handlebar Switches
- 6. Indicator Lights
- 7. Ignition Switch/Steering Lock
- 8. Right Handlebar Switches
- 9. Throttle Grip

40. Oil Cooler

11



26

25)

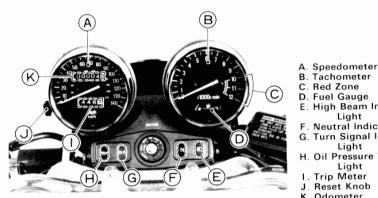
(27)

(28)

29. Rear Shock Absorber

(23)

### Meter Instruments



D. Fuel Gauge E. High Beam Indicator Light Neutral Indicator Light G. Turn Signal Indicator Light H. Oil Pressure Warning Light I. Trip Meter

K. Odometer

### Speedometer and Tachometer

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

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

### **ACAUTION**

Engine r/min (rpm) should not be allowed to enter the red zone; operation in the red zone will overstress the engine and may cause serious engine damage.

### Fuel Gauge

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

### Indicator Lights

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

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

When the headlight is on high ٤D beam, the high beam indicator light is lit.

15

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

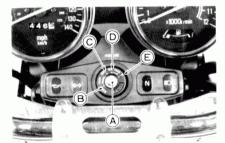
### Kev

This motorcycle has a combination key, which is used for the ignition switch/steering lock, fuel tank cap, and seat lock.

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

### Ignition Switch/Steering Lock

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



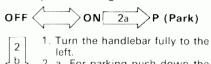
- A. Ignition Switch/Steering Lock
- B. LOCK position
- C. OFF position
- ON position D.
- P (Park) position E.

### OFF Engine off. All electrical circuits off. ON Engine on. All electrical equipment can be used. Steering locked. Engine LOCK off. All electrical circuits off P(Park) Steering locked. Engine off. Taillight and city light on All other electrical circuits cut off.

### NOTE

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

### To operate the ignition switch:



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

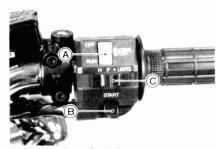
Right Handlebar Switches Engine Stop Switch

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

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

### NOTE

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



A. Engine Stop Switch B. Starter Button C. Headlight Switch

### 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.

### Headlight Switch

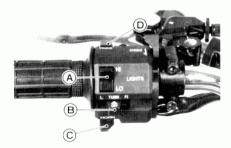
field angle control			
0	The headlight is off with the switch in the $\odot$ position.		
Р	The city, tail, and meter lights come on if the switch is pushed to the <b>P</b> position with the ignition switch in the ON position		
н	The head, city, tail, and me- ter lights come on if the switch is pushed forward to the <b>H</b> position with the ig- nition switch in the ON po- sition.		

19

18

### Left Handlebar Switches Dimmer Switch

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



A. Dimmer Switch B. Turn Signal Switch C. Horn Button D. Passing Button

### **Turn Signal Switch**

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

### Horn Button

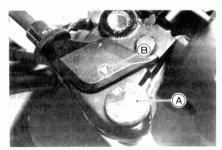
When the horn button is pushed, the horn sounds.

### Passing Button

When the passing button is pushed, the headlight high beam (passing beam) comes on to signal the driver of the vehicle ahead that you are about to pass him. The passing light shuts off as soon as the switch is released.

### Brake/Clutch Lever Adjusters

There is an adjuster on both the brake and clutch levers. The brake lever adjuster has 4 positions and the clutch lever 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 triangular mark on the lever holder. The distance from the grip to the released lever is minimum at Number 4 for the brake lever ver and Number 5 for the clutch lever, and maximum at Number 1 for both.



A. Adjuster B. Mark

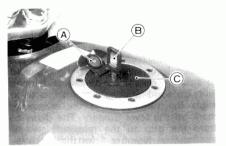
### Fuel Tank Cap

To open the fuel tank cap, pull up the key hole cover. Insert the ignition switch key into the lock and turn the key to the right.

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

### NOTE

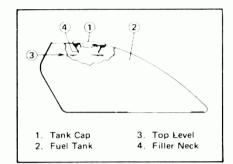
- The tank cap cannot be closed without the key inserted, and the key cannot be removed unless the cap is locked properly.
- ODo not push the cap down with the key, or the cap cannot be locked.



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

Fuel Tank

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



### AWARNING

Gasoline is extremely flammable and can be explosive under certain conditions. Turn the ignition switch OFF. Do not smoke. Make sure the area is well ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light. Never fill the tank so the fuel level rises into the filler neck. If the tank is overfilled, heat may cause the fuel to expand and overflow through the vents in the tank cap. After refueling, make sure the tank cap is closed securely.

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

### 22

### Fuel Requirement:

Your Kawasaki engine is designed to use unleaded gasoline. However, except for Australian models, if suitable gasoline is not available then PRE-MIUM, SUPER, or FOUR-STAR gasolines may be used.

### **ACAUTION**

Use of leaded gasoline is illegal in some countries, states or territories. Check local regulations before using leaded gasoline.

### Octane Rating

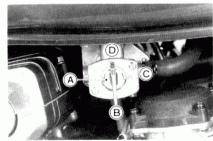
The octane rating of a gasoline is a measure of its resistance to detonation or "knocking." The term commonly used to describe a gasoline's octane rating is the Research Octane Number (RON). Always use a gasoline with an octane rating equal to, or higher than, Research Octane Number (RON) 91.

### NOTE

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

### Fuel Tap

The fuel tap is an automatic type which shuts off the fuel supply when the engine is stopped in the ON or RES position.



A. Fuel Tap B. ON position D. RES position

The fuel tap has three positions: ON, RES (reserve), and PRI (prime). If the fuel runs out with the tap in the ON position, turn the tap to PRI, leave it for a few seconds, and then turn it to RES. The last 3.2 L (0.8 US gal) of fuel can be used by turning the fuel tap to RES.

The PRI position bypasses the automatic control and is useful for priming the engine after running out of gas, or for completely draining the tank.

### NOTE

- Since riding distance is limited when on RES, refuel at the earliest opportunity.
- Make certain that the fuel tap is turned to ON (Not RES) after filling up the fuel tank.
- To start a cold engine after the motorcycle has been stored for a long time, first turn the tap to PRI, leave it for a moment, and return it to ON.

### **AWARNING**

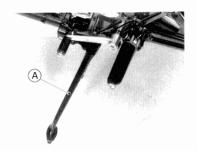
Practice operating the fuel tap with the motorcycle stopped. To prevent an accident you should be able to operate the fuel tap while riding without taking your eyes off the road.

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

Do not leave the fuel tap in the PRI (prime) position while riding or parking the motorcycle. The engine may become flooded or fuel may spill onto the ground and create a fire hazard, if the vehicle falls over.

### Stand

The motorcycle is equipped with the side stand.



### A. Side Stand

### ΝΟΤΕ

OWhen 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.

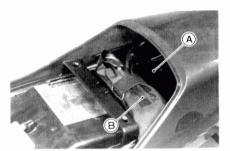
26

### Document/Tool Kit Compartment

The document/tool kit compartment is located inside the rear fairing behind the seat.

Use the compartment to keep the owner's manual and any papers or documents that should be kept with the motorcycle.

Also store the tool kit in the compartment. The minor adjustments and replacement of parts explained in this manual can be performed with the tools in the kit.



A. Document/Tool Kit Compartment B. Tool Kit

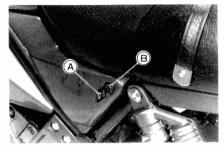
### AWARNING

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

### Seat Lock

To open the seat, insert the ignition switch key into the seat lock and while turning the key to the right, pull the seat up and to the rear.

The seat is locked when pushed back into place.



A. Ignition Switch Key B. Seat Lock

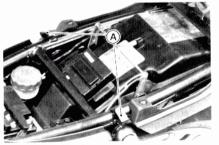
27

### Helmet Hooks

Helmets can be secured to the motorcycle using the helmet hooks located under the seat.

### **AWARNING**

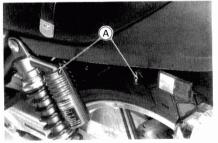
Do not ride the motorcycle with helmets attached to the hooks. The helmets could cause an accident by distracting the operator or interfering with normal vehicle operation.



A. Helmet Hooks

### Tying Hooks

When tying up light loads to the seat, pull up the hooks under the left and right sides of the rear fairing.



A. Tying Hooks

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

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

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

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

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

• Do not race the engine while the transmission is in neutral.

In addition to the above, at 800 km (500 mi) it is extremely important that the owner have the initial maintenance service performed by an authorized Kawasaki dealer.

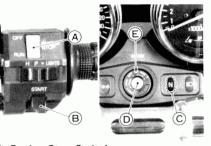
# Starting the Engine

•Turn the fuel tap to the ON position.





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



- A. Engine Stop Switch
- B. Starter Button
- C. Neutral Indicator Light D. Ignition Switch
- E. ON position
- If the engine is cold, pull the choke lever all the way.

31

### NOTE

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



A. Choke Lever

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

### **ACAUTION**

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

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

### NOTE

 If you drive the motorcycle before the engine is warmed up, return the choke to the off position as soon as you start moving.

### **ACAUTION**

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.

### AWARNING

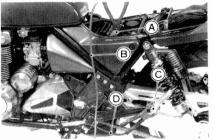
Battery acid generates hydrogen gas which is flammable and explosive under certain conditions. It is present within a battery at all times, even in a discharged condition. Keep all flames and sparks (cigarettes) away from the battery. Wear eye protection when working with a battery. In the event of battery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

- Connecting Jumper Cables
- Make sure the ignition switch is turned "OFF."

34

### Remove the seat.

• 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. To Booster Battery Positive (+) Terminal C. Unpainted Metal Surface
- D. To Booster Battery Negative (-) Terminal
- •Connect another jumper cable from the negative (-) terminal of the booster battery to your motorcycle rear brake pedal or other unpainted

metal surface. Do not use the negative (-) terminal of the battery.

### AWARNING

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

positive (+) to negative (-), or a battery explosion and serious damage to the electrical system may occur.

•Follow the standard engine starting procedure.

### **ACAUTION**

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

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

35

### Movina Off

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



A. Shift Pedal

### NOTE

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

### Shifting Gears

- •Close the throttle while pulling in the clutch lever.
- •Shift into the next higher or lower gear.

### AWARNING

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

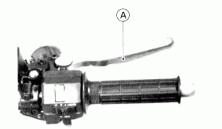
 Open the throttle part way, while releasing the clutch lever.

### NOTE

○The transmission is equipped with 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.

### Braking

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



A. Front Brake Lever



A. Rear Brake Pedal

### Stopping the Engine

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

39

# Stopping the Motorcycle in an Emergency

38

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

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

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

### Parking

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

### **ACAUTION**

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.

### **AWARNING**

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 city light and taillight on for greater visibility by turning the ignition switch to the P (park) position.
- Do not leave the switch at P position too long, or the battery will discharge.

### **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.

### **A**WARNING

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

Fuel Engine oil Tires	Oil level be	tween level lines.	
	Front 200 kPa (2.0 kg/cm <sup>2</sup> , 28 psi)		
	Bear	225 kPa (2.25 kg/cm <sup>2</sup> , 32 psi)	

Drive chain	Slack 35 ~ 45 mm (1.4 ~ 1.8 in.).
Nuts, bolts, fasteners	Check that steering and suspension components, axles,
<u></u>	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 $\sim$ 3 mm (0.08 $\sim$ 0.12 in.).
Clutch	Clutch lever play 2 $\sim$ 3 mm (0.08 $\sim$ 0.12 in.).
	Clutch lever operates smoothly.
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 rear fender under the seat.

43

42

### Additional Considerations for High Speed Operation

- Brakes: The importance of the brakes, especially during high speed operation, cannot be overemphasized. Check to see that they are correctly adjusted and functioning properly.
- **Steering:** Looseness in the steering can cause loss of control. Check to see that the handlebar turns freely but has no play.
- **Tires:** High speed operation is hard on tires, and good tires are crucial for riding safety. Examine their overall condition, inflate to the proper pressure, and check the wheel balance.

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

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

### AWARNING

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.

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

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

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

### Periodic Maintenance Chart

Frequency	Whichever comes first		*Odomet	er Reading	km	n (mi)	<i>r</i>
Operation	Every	800 (500)	000) 10,000 10,000 10,000	(00, 00) (000; 00) (000; 02)	(000) 52 000) 12	30.00	0 0 8 See Page
K Carburetor synchronization check †		• •	•	• •	•	•	62
Idle speedcheck †		• •	•	• •	•	٠	62
Throttle grip playcheck †		•	•	•	•	•	58
Spark plugclean and gap †		•	•	• •	•	•	53
K Valve clearancecheck †		•	•	•		٠	54
Air cleaner elementclean		•	•	•		•	54
Air cleaner elementreplace	5 cleanin	igs		•			54
Fuel systemcheck			•	•		•	90
Cylinder head bolt tightness check †		•	•	•		•	_
Battery electrolyte levelcheck †	month	• •	•	• •	•	•	85
Brake light switchcheck †		• •	•	• •	•	٠	76

	Whichever	*Odometer Reading	km (mi)
Frequency Operation	comes first	(000) (00) (00) (00) (00) (00) (00)	(000 52 (00) 52 (0) 52 (0) 5 () 5 (
	Every		C C/Page
Brake pad wearcheck †		• • • •	• • 73
Brake fluid levelcheck †	month •	• • • •	• • 74
K Brake fluidchange	2 years	•	76
Clutchadjust	•	• • • •	• • 64
K Steeringcheck †	•	• • • •	• • –
Drive chain wearcheck +		• • • •	• • 70
Nut, bolt, and fastener tightness check †	•	• •	• –
Tire wearcheck †		• • • •	• • 83
Engine oilchange	year •	• •	• 49
Oil filterreplace	•	• •	• 49
K General lubricationperform		• • • •	• • -
K Front fork oilchange			• –
K Swing arm pivotlubricate		• •	• -

Frequency Operation	Whichever comes first *Odometer Reading km (mi comes first *Odometer Reading km (mi exercised and a second	) 000 8 Page
K Steering stem bearinglubricate	2 years	-
K Master cylinder cup and dust sealreplace	2 years	14.1°
K Caliper piston seal and dust sealreplace	2 years	-
K Brake hosereplace	4 years	_
K Fuel hosereplace	4 years	_
Drive chainlubricate	Every 300 km (200 mi)	72
Drive chain slackcheck +	Every 800 km (500 mi)	66

к : Should be serviced by an authorized Kawasaki dealer

- For higher odometer readings, repeat at the frequency interval established here.
- t : Replace, add, adjust, or torque if necessary.

### Engine Oil

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

### A 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

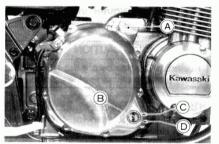
wait several minutes until the oil set tles.

### **ACAUTION**

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

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

### 49



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

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

### ACAUTION

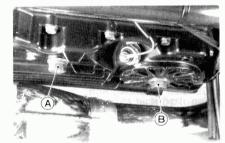
If the engine oil gets extremely low or if the oil pump or oil passages clog up or otherwise do not function properly, the oil pressure warning light will light. If this light stays on when the engine speed is above 1.200 r/min (rpm), stop the engine immediately and find the cause.



A. Oil Pressure Warning Light

Oil and/or Oil Filter Change

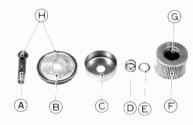
- •Warm up the engine thoroughly, and then stop the engine.
- Place an oil pan beneath the engine.
- Remove the engine drain plug.



A. Drain Plug B. Oil Filter Mounting Bolt

- •With the motorcycle perpendicular to the ground, let the oil completely drain.

- If the oil filter is to be changed, remove the oil filter mounting bolt and drop out the oil filter.
- •Replace the oil filter element with a new one.



A. Mounting Bolt E. Flat Washer F. Element B. Filter Cover C. Element Fence G. Grommet H. O-Ring

D. Spring

### NOTE

- OCheck for O-ring damage. If necessary, replace them with new ones. OWhen installing the oil filter, make sure the O-rings are in place.
- •Apply a little engine oil to the O-ring on the filter mounting bolt, fit the filter cover and element fence on the bolt, and install the spring and flat washer.
- Apply a little engine oil to the grommets on both sides of the element. and turn the filter to work the element into place. Be careful that the element grommets do not slip out of place.
- ●Install the oil filter, tightening its mounting bolt to the specified torque.
- After the oil has completely drained out, install the engine drain plug with its gasket. Proper torque for it is shown in the table.

# 52

### NOTE

OReplace the damaged gasket with a new one.

- •Fill the engine up to the upper level line with a good quality motor oil specified in the table.
- Check the oil level

### **Tightening Torque** -

Engine Drain Plug:
29 N-m (3.0 kg-m, 22 ft-lb)
Oil Filter Mounting Bolt:
20 N-m (2.0 kg-m, 14.5 ft-lb)

### Engine Oil

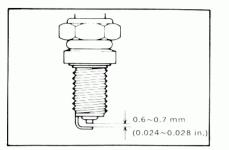
	Grade	SE or SF class
	Giude.	OL OF ST CIASS
	Viscosity:	SAE 10W40, 10W50,
		20W40, or 20W50
	Capacity:	2.6 L (2.8 US qt)
		[when filter is not removed]
		3.0 L (3.2 US qt)
1		[when filter is removed]

### Spark Plugs

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

### Maintenance

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



### Spark Plug

Standard	NGK DR9EA or
Plug	ND X27ESR-U
Plug	0.6 ~ 0.7 mm
Gap	(0.024 ~ 0.028 in.)
Tightening	14 N-m
Torque	(1.4 kg-m, 10.0 ft-lb)

### 53

### Valve Clearance

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

### **ACAUTION**

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

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

Inspection and adjustment should be done by an authorized Kawasaki dealer.

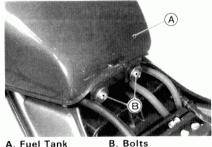
### Air Cleaner

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

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

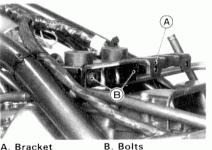
### Element Removal

- •Turn the fuel tap to the ON position.
- •Remove the seat.
- Pull the fuel hose off the fuel tap.
- Remove the fuel tank mounting bolts and remove the fuel tank.



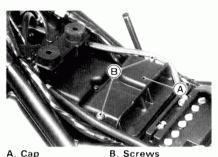
A. Fuel Tank

•Unscrew the fuel tank mounting bracket bolts

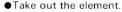


A. Bracket

Remove the air cleaner housing cap mounting screws and remove the cap.



A. Cap





A. Element

- •Put a clean, lint-free towel over the air. cleaner housing to keep dirt or other foreign material from entering.
- Inspect the element material for damage. If any part of the element is damaged, the element must be replaced.

### AWARNING

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

### **ACAUTION**

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

### NOTE

OElement installation is performed in the reverse order of removal.

Element Cleaning

- •Clean the element in a bath of a high flash-point solvent.
- Dry the element with compressed air or by shaking it. •After cleaning, saturate the element
- with SE class SAE 30 motor oil.

• Press the element against a workbench to squeeze out the excess oil. then wrap it in a clean rag and squeeze it as dry as possible. Be careful not to deform the element frame and expanded metal.

### **AWARNING**

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

57

56

### Throttle Grip

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

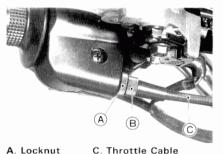
### Inspection

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



### Adjustment

 Loosen the locknut at the throttle grip. and turn the adjuster until the proper amount of throttle grip play is obtained.



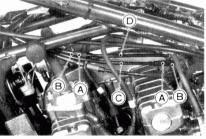
C. Throttle Cable B. Adjuster (Accelerator Cable)

### Tighten the locknut.

- If the throttle cables can not be adjusted by using the cable adjuster at the upper end of the throttle cable, use the cable adjusters at the lower ends of the throttle cables.
- Remove the fuel tank (see Element Removal in the Air Cleaner section).
- Loosen the locknuts, and screw both throttle cable adjusters in fully at the

lower ends of the throttle cables so as to give the throttle grip plenty of play.

- Turn out the decelerator cable adjuster until there is no clearance between the cable and adjuster when the throttle grip is completely closed.
- Turn the accelerator cable adjuster until 2 ~ 3 mm (0.08 ~ 0.12 in.) of throttle grip play is obtained. Tighten the locknut.



A. Adjusters C. Decelerator Cable B. Locknuts D. Accelerator Cable

### **A**WARNING

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

●Install the fuel tank.

### Choke Lever

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

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

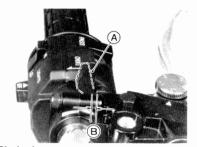
### Inspection

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



A. Starter Plunger Lever B. Starter Plunger

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

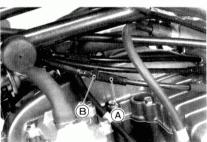


A. Choke Lever B. 2  $\sim$  3 mm (0.08  $\sim$  0.12 in.)

### Adjustment

- •Remove the fuel tank (see Element Removal in the Air Cleaner section).
- Loosen the locknut at the middle of the choke cable, and turn the adjuster until the cable has the proper amount of play.

61



A. Adjuster

60

B. Locknut

Tighten the locknut after adjustment.Install the fuel tank.

### Carburetors

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

The following procedure covers the idle speed adjustment. Carburetor synchronization should be done by an authorized Kawasaki dealer.

### NOTE

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

### Adjustment

- Start the engine, and warm it up thoroughly.
- Adjust the idle speed to 1,250 ~ 1,350 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.

### AWARNING

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

### Clutch

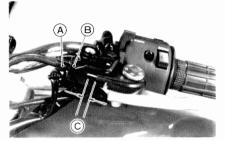
Due to friction plate wear and clutch cable stretch over a long period of use, the clutch must be adjusted in accordance with the Periodic Maintenance Chart.

### **AWARNING**

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

### Inspection

• Check that the clutch lever has  $2 \sim 3$  mm (0.08  $\sim$  0.12 in.) of play as shown in the figure.



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

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

### Adjustment

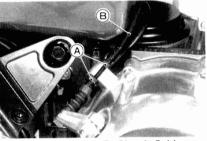
•Loosen the locknut at the clutch lever. •Turn the adjuster so that the clutch lever will have  $2 \sim 3 \text{ mm} (0.08 \sim 0.12 \text{ in.})$  of play.

### AWARNING

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

### Tighten the locknut.

• If it cannot be done, use the mounting nuts at the lower end of the cable.



A. Mounting Nuts B. Clutch Cable

### NOTE

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

### 65

### Drive Chain

64

The drive chain must be checked, adjusted, and lubricated in accordance with the Periodic Maintenance Chart for safety and to prevent excessive wear. If the chain becomes badly worn or maladjusted – either too loose or too tight – the chain could jump off the sprockets or break.

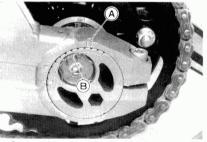
### AWARNING

A chain that breaks or jumps off the sprockets could snag on the engine sprocket or lock the rear wheel, severely damaging the motorcycle and causing it to go out of control.

Chain Slack Inspection

- •Set the motorcycle up on its side stand.
- •Check to see if wheel alignment is properly adjusted. The left and right notches on the swing arm should point to the same marks or positions

on the left and right chain adjusters. If they do not, adjust wheel alignment as described in the later paragraph – *Wheel Alignment Adjustment.* 



A. Swing Arm Notch B. Marks

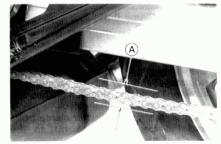
### NOTE

 Wheel alignment can also be checked using the straightedge or string method.

### AWARNING

Misalignment of the wheel will result in abnormal wear, and may result in an unsafe riding condition.

 Rotate the rear wheel to find the position where the chain is tightest, and measure the vertical movement midway between the sprockets.



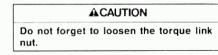
A. 35 ~ 45 mm (1.4 ~ 1.8 in.)

•If the drive chain is too tight or too loose, adjust it so that the chain slack will be within the standard value.

### Drive Chain Slack

Standard	35 ~ 40 mm (1.4 ~ 1.6 in.)
Too tight	less than 35 mm (1.4 in.)
Too loose	more than 45 mm (1.8 in.)

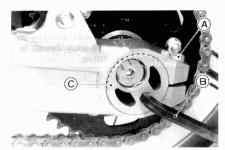
Chain Slack Adjustment • Loosen the rear torque link nut.





A. Torque Link Nut

Loosen the left and right chain adjuster clamp bolts.



- A. Adjuster Clamp Bolt B. Allen Wrench
- C. Chain Adjuster
- Insert an Allen wrench (12 mm) into the hexagonal hole in the chain adjuster, and turn it forward or rearward until the drive chain has the correct amount of chain slack.
- Tighten the chain adjuster clamp bolts and the rear torque link nut to the specified torque.

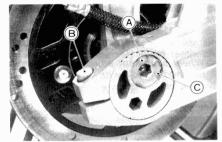
### AWARNING

If the torgue link nut or the clamp bolts are not securely tightened, an unsafe riding condition may result.

- •Rotate the wheel, measure the chain slack again at the tightest position, and readiust if necessary.
- Check the rear brake effectiveness.

Wheel Alignment Adjustment

•Remove the right retaining ring from the axle shaft.



C. Retaining Ring A. Axle Nut B. Adjuster Clamp Bolt

- Loosen the axle nut.
- Loosen the rear torque link nut.
- •Loosen the right chain adjuster clamp bolt, and turn the right chain adjuster so that the left and right notches on the swing arm may point to the same marks or positions on the left and right adjusters.
- Tighten the clamp bolt, axle nut, and torque link nut to the specified torque.

69

- 68
- Insert the retaining ring to secure the axle shaft.

### NOTE

OWheel alignment adjustment can also be performed with the left chain adjuster.

### **AWARNING**

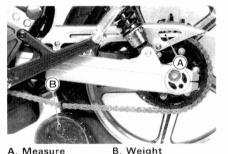
If the axle nut, torgue link nut, or clamp bolts are not securely tightened, or the retaining rings are not installed, an unsafe riding condition may result.

### **Tightening Torque**

Axle Nut	88 N-m (9.0 kg-m, 65 ft-lb)
Adjuster	39 N-m
Clamp Bolts	(4.0 kg-m, 29 ft-lb)
Torque Link	32 N-m
Nut	(3.3 kg-m, 24 ft-lb)

Wear Inspection

- Stretch the chain taut either by using the chain adjusters, or by hanging a 10 kg (20 lb) weight on the chain.
- Measure the length of 20 links on the straight part of the chain from pin center of the 1st pin to pin center of the 21st pin. Since the chain may wear unevenly, take measurements at several places.
- If the length exceeds the service limit. the chain should be replaced.



A. Measure

Drive Chain 20-Link Length

Service Limit: 323 mm (12.7 in.)

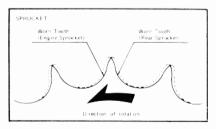
### **AWARNING**

For safety, use only the standard chain. It is an endless type and should not be cut for installation; have it installed by an authorized Kawasaki dealer.

- Rotate the rear wheel to inspect the drive chain for damaged rollers, and loose pins and links.
- •Also inspect the sprockets for unevenly or excessively worn teeth, and damaged teeth.

### NOTE

O Sprocket wear is exaggerated for illustration. See Service Manual for wear limits.

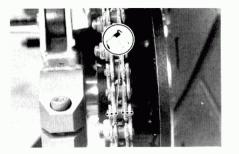


If there is any irregularity, have the drive chain and/or the sprockets replaced by an authorized Kawasaki dealer.

### Lubrication

Lubrication is also necessary after riding through rain or on wet roads, or any time that the chain appears dry. A heavy oil such as SAE 90 is preferred to a lighter oil because it will stay on the chain longer and provide better lubrication.

•Apply oil to the sides of the rollers so that it will penetrate to the rollers and bushings. Apply oil to the O-rings so that the O-rings will be coated with oil. Wipe off any excess oil.

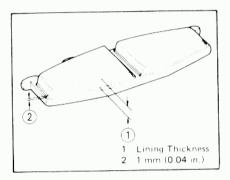


 If the chain is especially dirty, clean it using diesel oil or kerosine and then apply oil as mentioned above.

### 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.



### Disc Brake Fluid:

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

### Fluid Requirement

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

### Recommended Disc Brake Fluid

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

73

## 72

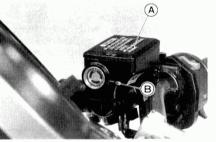
### ACAUTION

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

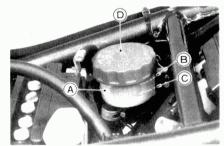
Check for brake hose damage.

### Fluid Level Inspection

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



A. Front Reservoir B. Lower Level Line



A. Rear Reservoir C. Lower Level Line B. Upper Level Line D. Filler Cap

•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 reservoir is a stepped line showing the upper level line.



A. Front Reservoir B. Upper Level Line

### AWARNING

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

### Fluid Change

Have the brake fluid changed by an authorized Kawasaki dealer.

### Front 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.

### AWARNING

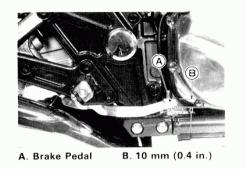
If the brake lever or pedal feels mushy when it is applied, there might be air in the brake lines or the brake may be defective. Since it is dangerous to operate the motorcycle under such conditions, have the brake checked immediately by an authorized Kawasaki dealer.

### **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 on the ignition switch.
- •The brake light should go on when the front brake is applied.
- •If it does not, ask your authorized Kawasaki dealer to inspect the front brake light switch.
- •Check the operation of the rear brake light switch by depressing the brake pedal. The brake light should go on after about 10 mm (0.4 in.) of pedal travel.



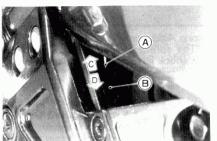
 If it does not, adjust the rear brake light switch.

### Adjustment

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

### **ACAUTION**

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.

76

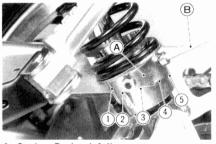
### **Rear Shock Absorbers**

The rear shock absorbers can be adjusted by changing the spring preload and compression and rebound damping force for various riding and loading conditions.

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

### Spring Adjustment

The spring preload adjuster on each rear shock absorber has 5 positions.



A. Spring Preload Adjuster B. Screwdriver Bit

•Turn each preload adjuster with a screwdriver bit in accordance with the following table:

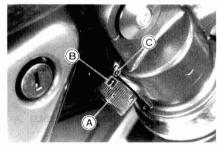
Position	1	2	3	4	5
Spring Action			→ :	Stron	ger

The standard setting position for an average-build rider of 68 kg (150 lb)

with no passenger and no accessories is No. 2.

### Compression Damping Force Adjustment

The compression damping force adjuster on each rear shock absorber upper end has 4 positions. The numbers on the adjuster show the setting position.



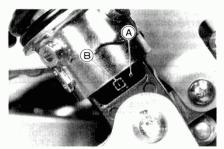
A. Compression Damping Force Adjuster B. Number C. Mark •Turn the adjuster to the desired number aligning it with the mark on the absorber in accordance with the following table:

Position	1	2	3	4
Compression Damping Force			→ La	irger

The standard setting position for an average-build rider of 68 kg (150 lb) with no passenger and no accessories is No. 1.

### Rebound Damping Force Adjustment

The rebound damping force adjuster on each rear shock absorber bottom has 4 positions. The numbers on the adjuster show the setting position.



- A. Rebound Damping Force Adjuster B. Number
- •Turn the adjuster to the desired number until you feel a click in accordance with the following table:

Position	Ι	Π	III	IIII
Rebound Damping Force			→ La	arger

The standard setting position for an average-build rider of 68 kg (150 lb)

### 80

### **AWARNING**

The tires, rims, and air valves on this motorcycle are designed only for tubeless type wheels. The recommended standard tires, rims, and air valves must be used for replacement. Do not install tube-type tires on tubeless rims. The beads may not seat properly on the rim causing tire deflation.

Do not install a tube inside a tubeless tire. Excessive heat build-up may damage the tube causing tire deflation.

### Tires:

### Payload and Tire Pressure

Failure to maintain proper inflation pressures or observe payload limits for your tires may adversely affect handling and performance of your motorcycle and can result in loss of control. The maximum recommended load in addition to vehicle weight is 180 kg (397 lb), inwith no passenger and no accessories is No. I.

### **AWARNING**

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

### Wheels

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



A. TUBELESS Mark



A. TUBELESS Mark

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

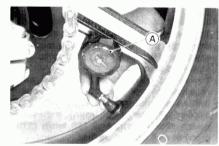
81

cluding rider, passenger, baggage, and accessories.

Check the tire pressure often, using an accurate 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.



A. Tire Pressure Gauge

Tire Air Pressure (when cold)

Front	200 kPa (2.0 kg/cm², 28 psi)
Rear	225 kPa (2.25 kg/cm², 32 psi)

### Tire Wear, Damage

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

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



A. Tire Depth Gauge

### Minimum Tread Depth

Front		1 mm (0.04 in.)
Rear	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.

### ΝΟΤΕ

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

### AWARNING

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

Tires that have been punctured and repaired do not have the same capabilities as undamaged tires. Do not exceed 100 km/h (60 mph) within 24 hours after repair, and 180 km/h (110 mph) at any time after that.

### Standard Tire

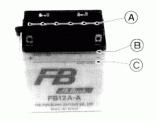
Front	110/80-17 57H BRIDGESTONE G547E Tubeless
Rear	140/70-18 67H BRIDGESTONE G548F Tubeless

### Battery

Battery Electrolyte Level Inspection

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

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



### A. Filler Caps C. Lower Level Line B. Upper Level Line

• If the electrolyte level is low in any cell, fill with distilled water as follows.

•Remove the battery filler caps and fill with distilled water until the electrolyte level in each cell reaches the upper level line.

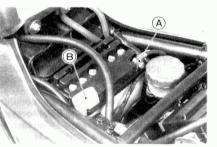
### 84

### **ACAUTION**

Add only distilled water to the battery. Ordinary tap water is not a substitute for distilled water and will shorten the life of the battery.

### Battery Removal

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



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

Take the battery out of the case.

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

### Battery Installation

• Put the battery in the battery case, and route the battery vent hose as shown on the caution label.

- •Connect the capped lead to the (+) terminal, and then connect the black lead to the (-) terminal.
- Put a light coat of grease on the terminals to prevent corrosion.
- •Cover the (+) terminal with its protective cap.

### CAUTION

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

### Headlight Beam Horizontal Adjustment

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



A. Horizontal Adjuster B. Vertical Adjuster

•Turn the horizontal adjuster in or out until the beam points straight ahead.

### 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.

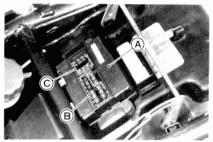
•Turn the vertical adjuster in or out to adjust the headlight vertically.

**NOTE** On high beam, the brightest point should be slightly below horizontal with the motorcycle on its wheels and the rider seated. Adjust the headlight to the proper angle according to local



### Fuses

Fuses are arranged in the junction box 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.

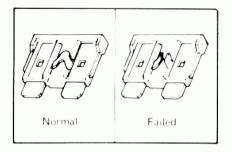


A. Junction Box C. Spare Fuses B. Fuses

### AWARNING

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.



89

### Fuel System

88

regulations.

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

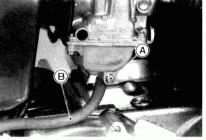
### AWARNING

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

Inspection

•Turn the fuel tap to the PRI position.

- Connect a suitable hose to the fitting at the bottom of each carburetor float bowl.
- •Run the lower ends of the hoses into a suitable container.
- •Turn out each drain screw a few turns to drain the carburetors, and check to see if water or dirt has accumulated in the carburetors.



A. Drain Screw B. Suitable Hose

•Tighten the drain screws.

### NOTE

Olf any water or dirt appears during the above operation, have the fuel system checked by an authorized Kawasaki dealer.

### Cleaning

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

### Preparation for Washing

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

- Rear opening of muffler; Cover with plastic bag secured with 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

- •Disc brake 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)
- Swing arm pivot

### ΝΟΤΕ

• 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.

92

### 

After Washing

eration.

utes.

Remove the plastic bags and tape, and

Lubricate the pivots, bolts, and nuts.

Test the brakes before motorcycle op-

Start the engine and run it for 5 min.

**AWARNING** 

Never wax or lubricate the brake

discs. Loss of braking and an accident

could result. Clean the discs with an

oilless solvent such as trichloro-

ethylene or acetone. Observe the sol-

vent manufacturer's warnings.

clean the air cleaner intake.

### Preparation for Storage:

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

### WARNING

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

- •Remove the spark plugs and put several drops of SE class SAE 30 oil into each cylinder. Push the starter button for a few seconds to coat the cylinder walls with oil, and install the spark plugs.
- Reduce tire pressure by about 20%.
- •Set the motorcycle on a box or stand so that both wheels are raised off the ground. (If this cannot be done, put boards under the front and rear wheels to keep dampness away from the tire rubber.)

- •Spray oil on all unpainted metal surfaces to prevent rusting. Avoid getting oil on rubber parts or in the brakes.
- Lubricate the drive chain and all the cables.
- •Remove the battery, and store it where it will not be exposed to direct sunlight, moisture, or freezing temperatures. During storage it should be given a slow charge (one ampere or less) about once a month. Keep the battery well charged during cold weather so that the electrolyte does not freeze and crack open the battery. The more discharged the battery becomes, the more easily it freezes.
- Tie a plastic bag over the exhaust pipe to prevent moisture from entering.
- Put a cover over the motorcycle to keep dust and dirt from collecting on it.

### Preparation after Storage:

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

# ZR550-B Wiring Diagram

