

**KAWASAKI**

**350-S2**

**RIDER'S HANDBOOK**

## Foreword

We wish to thank you for choosing this fine Kawasaki Motorcycle. It is the end product of Kawasaki's advanced engineering, exhaustive testing, and continuous striving for superior reliability, safety, and performance. With the proper care and maintenance, your Kawasaki Motorcycle will go anytime and anywhere, so please follow the instructions in this handbook to keep it in top condition.

In addition to this handbook, for those owners who would like more detailed information on Kawasaki Motorcycles, or for those with the necessary technical knowledge and equipment for major adjustment and repair, a Service Manual is now available for purchase from your Kawasaki Dealer. However, please note that during the warranty period, repair or adjustment by other than an authorized Kawasaki Dealer may invalidate your warranty.

**KAWASAKI HEAVY INDUSTRIES, LTD.**

Motorcycle Division

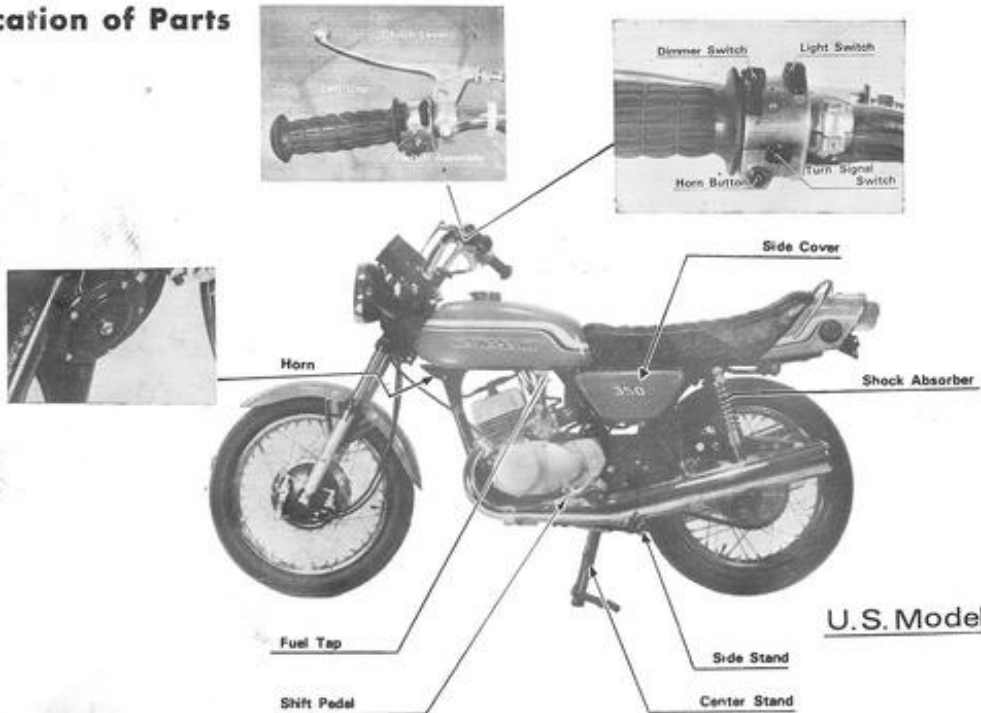
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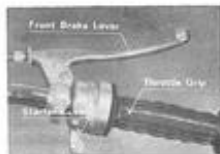
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## 1. Location of Parts





## 2. Specifications

### PERFORMANCE

Maximum Speed.....	111 mph (178 kph)
Acceleration.....	SS1/4 mile 13.6 sec.
Maximum Horsepower.....	45 HP @ 8000 r. p. m.
Maximum Torque.....	30.6 ft. ·lb. (4.25 kg·m) @ 7000 r. p. m.
Climbing Ability.....	40°
Fuel Consumption.....	76 miles/gal. @ 30 mph (32 km/ℓ @ 48kph)
Minimum Turning Radius.....	83 in. (2100 mm)
Braking Distance.....	39 ft. @ 31 mph (12 M @ 50 kph)

### DIMENSIONS

Overall Length.....	79.1 in. (2010 mm)
Overall Width.....	31.5 in. (800 mm)
Overall Height.....	43.1 in. (1095 mm)
Wheelbase.....	52.4 in. (1330 mm)
Ground Clearance.....	6.3 in. (160 mm)
Dry Weight.....	329 lbs. (149.5 kg.)

### ENGINE

Type.....	2 cycle, 3 cylinder, piston valve
Displacement.....	21.1 cu. in. (346.2 cc)
Bore × Stroke.....	2.09 × 2.06 (53 × 52.3 mm)
Compression Ratio.....	7.3:1
Ignition System.....	Battery
Ignition Timing.....	23° before TDC

Starting .....	Kick
Lubrication .....	Kawasaki Superlube (Separate Oil Supplying System)
Spark Plugs .....	NGK B-9HC
Carburetor .....	Mikuni VM 24SC

#### TRANSMISSION

Type .....	5-speed, constant mesh, return change
Clutch .....	Wet, multi-plate
Primary Reduction Ratio .....	2.22
Final Reduction Ratio .....	3.07
Overall Reduction Ratio .....	6.56
Gear Ratios 1st .....	2.86
2nd .....	1.79
3rd .....	1.35
4th .....	1.12
5th .....	0.96
Transmission Oil .....	SAE 20, 30 or ATF

#### FRAME

Type .....	Tubular, double cradle
Suspension Front .....	Telescopic fork
Rear .....	Swing arm
Tire Size Front .....	3.00-18 4PR
Rear .....	3.50-18 4PR
Brakes Front .....	Internal expansion, 2 leading shoe
Rear .....	Internal expansion
Front/Rear Drum Diameter .....	7.09 in. (180 mm)



Fuel Tank Capacity .....	3.7 US gallons (14 ℓ)
Oil Tank Capacity.....	1.7 US quarts (1.5 ℓ)
Castor .....	28°
Trail .....	4.3 in. (109 mm)

#### ELECTRICAL EQUIPMENT

Battery .....	12V 6AH
Headlight .....	12V 35/25W*
Tail Light.....	12V 8/23W*
Turn Signals .....	12V 23W
Meter Lamps (2) .....	12V 3W
Horn .....	12V 2.5A

\* 35/35W for Europe

### 3. Stopping Distance and Passtime (Consumer Information)

#### VEHICLE MINIMUM STOPPING DISTANCE ON DRY PAVEMENT

This figure indicates braking performance that can be met or exceeded by the vehicles to which it applies, without locking the wheels, under different conditions of loading. The information presented represents results obtainable by skilled drivers under controlled road and vehicle conditions, and the information may not be correct under other conditions.

Description of vehicles to which this table applies: Model 350 S2

A. <u>Fully Operational Service Brake</u>		
Load	Light	155
	Maximum	160
		0      50      100      150      200      250
		Stopping Distance in Feet from 60 mph.

Manufacturer: Kawasaki Heavy Industries, Ltd.

## ACCELERATION AND PASSING ABILITY

THIS FIGURE INDICATES PASSING TIMES AND DISTANCES THAT CAN BE MET OR EXCEEDED BY THE VEHICLES TO WHICH IT APPLIES, IN THE SITUATIONS DIAGRAMMED BELOW.

THE LOW-SPEED PASS ASSUMES AN INITIAL SPEED OF 20 MPH AND A LIMITING SPEED OF 35 MPH.  
THE HIGH-SPEED PASS ASSUMES AN INITIAL SPEED OF 50 MPH AND A LIMITING SPEED OF 80 MPH.

NOTICE: THE INFORMATION PRESENTED REPRESENTS RESULTS OBTAINABLE BY SKILLED DRIVERS UNDER CONTROLLED ROAD AND VEHICLE CONDITIONS, AND THE INFORMATION MAY NOT BE CORRECT UNDER OTHER CONDITIONS.

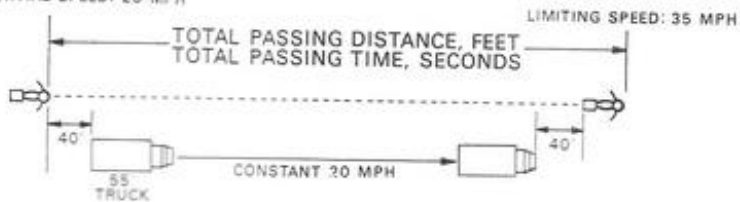
DESCRIPTION OF VEHICLES TO WHICH THIS TABLE APPLIES: Model 350 S2

### SUMMARY TABLE:

LOW-SPEED PASS:	354 FEET: 7.2 SECONDS
HIGH-SPEED PASS:	990 FEET: 9.9 SECONDS

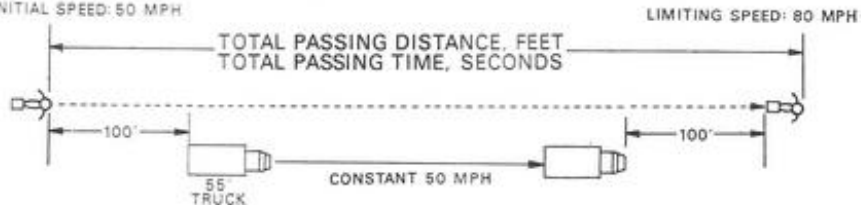
## LOW-SPEED

INITIAL SPEED: 20 MPH



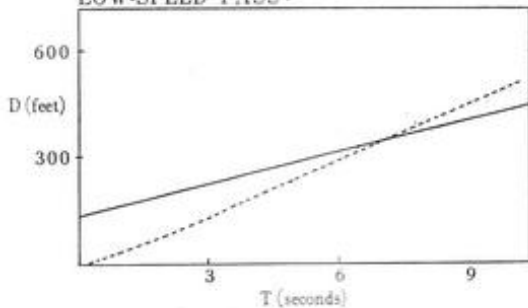
## HIGH-SPEED

INITIAL SPEED: 50 MPH

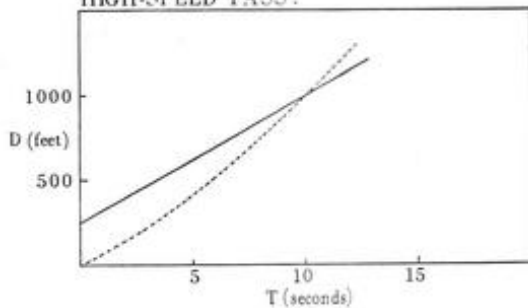


## GRAPHIC DETERMINATION OF PASSING TIME AND DISTANCE

LOW-SPEED PASS:



HIGH-SPEED PASS:



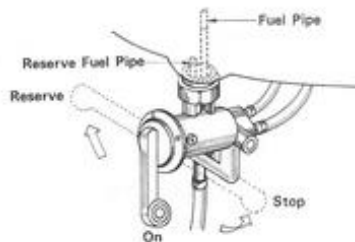
## 4. Controls



### (1) Ignition Switch

This is a three-position key operated switch for U.S. models, and a four-position switch on the European models.

Key position	
Off	Engine off. All electrical circuits off. Key can be removed.
On	Engine on. All electrical equipment (except parking lights) can be used. Key cannot be removed.
City Lights	Engine on. Tail light and front City light on. All electrical equipment (except headlight) can be used. Key cannot be removed.
Park	Engine off. Tail light on. All other electrical circuits cut off. Key can be removed.



## (2) Fuel Tap

The fuel tap has three positions: "S" Stop; "O" On; and "R" Reserve. When the motorcycle is stopped, the tap should be turned toward the rear to the "S" position to stop the flow of gas to the carburetor. Normal running is with the lever down in the "O" position. If you should suddenly run out of gas on the road, you can reach down and push the lever forward to the "R" position to call on the reserve supply of gas.

The gas tank holds 14 liters (3.7 U. S. gallons) of gasoline, 2 liters (approximately .5 gallon) of which is the reserve supply.

## (3) Throttle Friction Adjuster

The throttle friction adjuster in front of the throttle grip makes long-distance riding even more effortless.

With the adjuster turned out, throttle action is normal. By turning it in, throttle grip friction can be increased to where the grip will remain in any position to which it is turned.

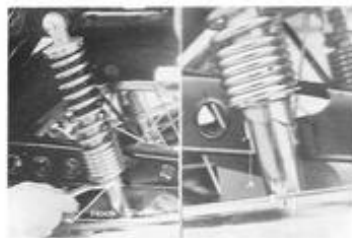




#### (4) Steering Damper

The steering damper can be used to make the steering and handlebars less sensitive to vibration and road surface irregularities during high speed conditions.

Tighten the steering damper about a quarter of a turn at a time until the desired effect is produced. During travel on bad roads or at low speeds, the steering damper should be loosened for better and more effortless handling.



#### (5) Rear Shock Absorbers

The rear shock absorbers are adjustable in three steps, to road and loading conditions.

Generally, shock absorbers should be a bit hard to allow for bad roads or high speed travel. But having shock absorbers harder than necessary for road conditions adversely affects riding comfort and stability. So while riding, if you feel that the shock absorbers are too hard or soft, adjustment is very simple.

Position	Shock Tension	Conditions
A	Standard	Single rider.
B	Slightly hard.	Heavy rider. Luggage strapped on. High speed travel.
C	Hard	Two riders.

Note: Always adjust both shock absorbers to the same position.





#### (6) Gas Tank Cap

The gas tank cap is held on by a hinge and closed with a catch. To swing it open, press down on the top while raising the catch. Push the cap down to close it.



#### (7) Trip Meter

The trip meter indicates distance traveled since it was last reset to zero. To reset it, turn the knob on the bottom of the speedometer until the trip meter reads zero.



#### (8) Parking Lock

To help discourage theft, the steering can be locked in either the full right or full left position when the motorcycle is parked.

To lock the steering, turn the handlebars to one side and insert the ignition key in the parking lock, turn it to the right, push it in, turn it to the left and remove it.

## 5. Fuel and Oil

Location	Gas Tank	Oil Tank	Transmission
Fuel or oil	Regular Gasoline (85 octane minimum)	Kawasaki Superlube Oil, or 2 Cycle Engine Oil	Engine Oil Summer-SAE 30 Winter-SAE 20 All seasons-10W30
Capacity	14 liters (3.7 US gallons)	1.5 liters (1.6 US quarts)	1.1 liters (1.2 US quarts)

### (1) Fuel

The Kawasaki Superlube system is used in this motorcycle, so it is not necessary to mix oil with the gasoline. Use only regular gasoline in the gas tank.

### (2) Engine Oil

#### ① The type of oil

Use any good quality 2 cycle engine oil. One absolute requirement for the 2 cycle oil used in the Superlube system is that it must flow readily at low temperatures. Do not use ordinary motor oil, transmission oil, or the like as a replacement for the proper oil; this is the cause of many engine troubles.



## ② Adding oil

On the rear side of the oil tank there is a window for checking the oil level, and one quart of oil should be added when the level nears the bottom of this window. Never let the oil tank run completely dry.

If the tank does run dry, air will enter the oil pipe, and putting oil in at this point will still not prevent the engine from running a few minutes without oil while the air is pumped out. At high speed, this could lead to serious engine damage. So always be sure to check the oil level before starting out.

## (3) Transmission Oil

The transmission oil performs the dual function of lubricating the wearing surfaces, and keeping the transmission cool. A good quality SAE 20 or 30 oil, multi-viscosity 10W30 oil, or AFT should be used.

As using dirty oil will shorten the life of the transmission parts, the oil should be changed after the first 500 miles, after 2,000 miles, and at 2,000 mile intervals after that.



#### ① Draining the oil

The oil should be changed when it is hot so all the particles that have collected on the bottom of the case can be drained out with it. When draining the transmission oil, the motorcycle must be on its center stand. If the kick stand is used, the cycle will be sitting on a slant and it will not be possible to drain the oil completely.



#### ② Refilling the transmission

The transmission should be refilled by pouring in the oil a little at a time and taking measurements along the way. The dipstick used for measuring the oil level is read after first screwing it into the filler hole.

Do not pour oil in up to the top mark on the dip stick immediately, because as the oil drains down off the transmission parts, the level will gradually rise. A correct reading can be taken two or three minutes after the last of the oil has been poured.

If the oil level is too high, not only will the clutch become hard to operate, but some of the oil may leak back out from excessive pressure. On the other hand, if there is not enough oil in the case, the rotating parts could be damaged, so take care to put in the specified amount.

### ③ Initial oil change

The first oil change is designated to be performed after 500 miles, which may seem to be an exceptionally short distance. However, an oil change at this point is necessary because as the various gears seat with each other, and as the clutch parts wear in, these filings collect in the oil. If this break-in oil is not drained out, it will hasten the wearing out of the various parts.

After the initial few hundred miles, wear is comparatively negligible, and the fresh oil can be left in until the 2,000 mile oil change with no ill effects.

## 6. Breaking In

Kawasaki Motorcycles are precision manufactured and made to last. The type of driving done during the first 1,000 miles, however, is of vital importance to the life of the vehicle, and unreasonably hard riding during this period can only serve to shorten its life.

### (1) Outline for Break-in Period

The break-in period is not only for the longevity of the engine, but for the sake of the chain, sprocket, brakes, and the entire vehicle. Therefore, engine speed should be limited to 4,000 r.p.m. during the first 500 miles, and should not be raised above 6,000 r.p.m. up to the 1,000 mile mark. To help you follow these recommendations, the following table shows engine speed in terms of vehicle speed for each gear.

Distance Traveled	Engine Speed	Vehicle speed in mph for each gear				
		1	2	3	4	5
Up to 500 miles	4,000 r.p.m.	15	25	32	39	45
500 to 1,000 miles	6,000 r.p.m.	23	37	48	59	68

**CAUTION:** Especially for first to third gears, the gear ratio and engine response make it very easy to raise engine r.p.m. above the specified limit, so please watch the tachometer indication closely.

### (2) Spark Plugs

NGK "B-9HC" spark plugs are standard for this motorcycle, but these plugs sometimes become fouled during the break-in period due to the type of driving required. If you find this is the case, the plugs should be replaced with a hotter type (B-8HC) until break in is completed. Caution: Do not use these "hot" spark plugs for high speed operation or hard acceleration, as engine damage could result from the excessive heat.

## 7. Operation

### (1) Starting the Engine

To make starting easy, the carburetor is equipped with a Starter Lever. Starting a cold engine is somewhat different from starting an engine when it is already warm, so please proceed according to the following directions:

#### ① When the engine is cold

- \* Turn on the fuel tap, and turn the ignition switch to "On".
- \* Make certain the gears are in neutral (the green light in the face of the tachometer should be lit). When the engine is stopped, rolling the motorcycle slightly when operating the shift pedal makes gear shifting easier.
- \* Push the starter lever as far as it will go, leaving the twist-grip throttle completely closed.
- \* Kick the starter pedal down smartly, and the engine will start.



Fig. 12

- \* If the engine does not start after two or three attempts, release the starter lever and open the throttle 1/2 turn to let additional air into the engine, then kick the pedal again.
- \* When the engine starts, keep the starter lever down and twist the throttle a few times until you are sure the engine will not stall. (Don't race the engine over 3,000 r.p.m.) Then close the throttle and warm the engine at idle speed.
- \* As soon as the engine is warm enough to idle smoothly without use of the starter lever, release the lever and see

if the engine will respond immediately to the throttle. If the response is sluggish, push the starter lever back down and twist the throttle several times until the engine is completely warmed up.

If you attempt to move the motorcycle without a sufficient warm-up period, you will encounter various problems: the clutch may not disengage properly and the motorcycle will jump when it is put into gear; or as you release the clutch, engine r.p.m. will suddenly drop and the engine may stall; acceleration will be erratic.

② **When the engine is warm, or on hot days**

- \* Turn on the fuel tap and the ignition switch, and make sure the gears are in neutral.
- \* Without use of the starter lever, open the throttle about 1/4 turn and kick the pedal down sharply.
- \* When the engine starts, twist the throttle a few times, keeping the engine speed below 3,000 r.p.m., until it will idle smoothly.
- \* Let the engine idle for about two minutes before starting out, even though it may already be warm enough. This is to give the oil pump a chance to put oil back into vital parts, and failure to do this will greatly shorten the life of the engine.

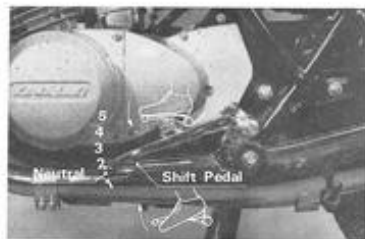
(2) **Starting Out, Shifting Gears**

By operating the shift pedal on the left hand side of the engine, the power and speed of rotation transmitted to the rear wheel can be selected to match riding conditions.

The transmission installed in this motorcycle is the 5-speed, constant mesh, return change type. As the diagram shows, neutral is located between first and second gears; first gear is below neutral, and second through fifth gears are above it.

Unlike the rotary type transmission, the return type cannot be shifted directly from top gear





to neutral. Down shifting is the reverse of shifting to a higher gear, so to reach neutral from fifth gear, the order is fourth, third, second, then neutral.

Note: Each gear is one full stroke different from the next gear, but neutral is halfway between first and second. When changing from first to neutral or from second to neutral, the shift pedal should be raised or lowered only a half step. A little practice should enable you to shift to neutral without hesitation.

### ① Starting out

When you have determined that the engine has been thoroughly warmed up, return the throttle grip to the fully closed position. Pull in the clutch lever and push down on the pedal to shift into first gear. Twist open the throttle slightly to raise the engine speed, and at the same time let out slowly on the clutch lever. If the motorcycle starts out with a jerk, you have released the clutch lever a little too fast.

### ② Acceleration

After gaining enough speed in first gear (at about 4,000 r.p.m.), squeeze in the clutch lever and at the same instant close the throttle completely. Pull up on the shift pedal to change into second gear, then open the throttle and release the clutch lever simultaneously. Unlike the slow operation of the clutch when starting out, up shifting must be done in one swift, smooth motion from beginning to end to avoid loss of speed, and the resulting necessity for shifting back down to a lower gear. Shifting up to third, fourth and fifth gears is done in

this same manner.

### ③ Deceleration

Close the throttle and apply the front and rear brakes together. When the desired speed is reached, disengage the clutch, push down on the pedal to shift into the next lower gear, and then open the throttle and release the clutch lever together. Shifting down is done in the same quick operation as shifting up.

**CAUTION:** Sudden down shifting at high speed causes an abrupt increase in engine speed and could damage the engine.

- \* Avoid traveling at engine speeds below 3,000 r.p.m. When engine rotation drops below 3,000 r.p.m., not only is this speed insufficient to charge the battery properly, but engine power and throttle response are considerably reduced, and constant driving at low engine speed will foul the spark plugs.
- \* During both acceleration and deceleration, the vehicle speed and engine r.p.m. should be kept within the limits for each gear, as set forth in the following tables.

Gear	Speed Range
1st	0—22 mph ( 0—35 kph)
2nd	16—35 mph (25—55 kph)
3rd	22—44 mph (35—70 kph)
4th	28—53 mph (45—85 kph)
5th	over 31 mph (over 50 kph)

Gear Shift	Downshift below these speeds
5th to 4th	81 mph (130 kph)
4th to 3rd	65 mph (105 kph)
3rd to 2nd	50 mph ( 80 kph)
2nd to 1st	31 mph ( 50 kph)

### (3) Braking

Close the throttle completely, and apply the front and rear brakes simultaneously. During sudden braking, never apply the front or rear brake alone. Using only one brake is extremely

dangerous as it could cause the motorcycle to skid.

#### (4) Parking

When parking for a short time on the road at night, there is a convenient "Parking" position of the ignition switch which can be used for safety. In this position the tail lamp lights, and the key can be removed from the switch. When parking during the day, or for a long period at night (more than two hours), however, the switch should be turned to the "Off" position, since the parking light will run down the battery if left on too long.

\* When parking the motorcycle, make it a habit to turn off the fuel tap, and to make use of the parking lock.

#### Safe Riding Technique

**Cornering:** Reduce speed to a safe level before starting to turn, and maintain the same speed or increase it slightly during the turn. A sudden change of speed - either higher or lower - during a turn is unsafe. If it is necessary to apply the brakes while cornering, favor the rear brake to avoid skidding. Be wary of oil, water or gravel which could cause skidding during the turn.

**Wet pavement:** Drop your speed, increase following distance, and ride in the most-used part of the traffic lanes where the pavement may be drier. Avoid the center of the traffic lane where the oil deposits are heaviest. Sudden braking will cause skidding so allow ample time for stopping.

**Clothing:** As much as possible, cover all parts of your body with some kind of protection. Wear a good helmet, eye protection, sturdy shoes or boots, gloves, a long-sleeved shirt and jacket, and full-length trousers.

## 8. Maintenance and Adjustment



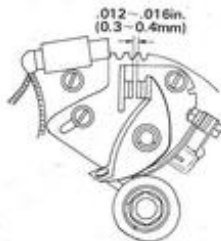
Regular inspection and adjustment is the key to maintaining your Kawasaki motorcycle in dependable condition, ready to answer your riding demands at a moment's notice. Some of these operations, such as front and rear brake adjustment, tire pressure, and chain slack, are so important that you should make a habit of checking them frequently.

### (1) Ignition System

As the breaker arm rubbing blocks and the contact point surfaces wear, the point gap and ignition timing can change over an extended period of operation. Incorrect ignition timing can cause difficult starting, poor acceleration, overheating, short spark plug life, and engine vibration. Therefore, inspection and adjustment of the contact points is recommended every 2,000 miles. Note: This motorcycle has three sets of points, each set controlling the ignition spark for a different cylinder. So when servicing the ignition, bear in mind that each set of points is independent and must be adjusted separately for both gap and timing.

### ① Point gap adjustment

Turn the crankshaft counter-clockwise with a 12mm wrench to the position where the points are at their maximum opening, loosen the lock screw and set the gap at .012 to .016 inch (0.3 to 0.4 mm).



- \* If the gap is too small, the points will become burnt.
- \* Dirt or oil on the points will prevent them from making proper contact. Clean the contacts with fine emery cloth, and afterward run a clean piece of paper between them to remove any remaining filings or oil.
- \* If the points become badly pitted or burnt, they should be replaced.

## ② Ignition timing adjustment



With the point gap properly adjusted, turn the crankshaft slowly until the timing mark at the inspection window is aligned with the mark on the rotor. At this time, if the points are just starting to open, ignition timing is correctly set to 23° before top dead center.

If adjustment is required, loosen the two contact assembly mounting screws and move the assembly to the right or left until the contacts are just barely open. Then tighten the two mounting screws and recheck the point gap and ignition timing. In the same manner, check and adjust the gap and ignition timing on the remaining two contact point sets.

## (2) Spark Plugs

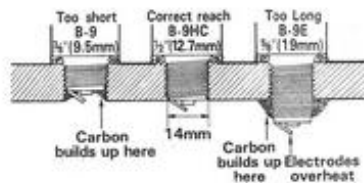
Neglecting the spark plugs eventually leads to difficult starting and poor performance.



- \* If the spark plugs are used for a long period, the electrodes gradually burn away and carbon builds up along the inside part. After about 2,000 miles, the plugs should be removed for inspection, cleaning and to reset the gap. If the center electrode is fairly worn down, the plug should be replaced.
- \* The spark plug gap setting is .016 to .020 inch (0.4 to 0.5 mm) for NGK B-8HC, NGK B-9HC (standard plug), or NGK B-10H.
- \* Whether or not the right temperature plugs are being used can be ascertained by noting the condition of the ceramic insulator around the electrode. A light

brown color indicates the correct plug is being used. If the ceramic is black, it indicates that the plug is firing at too low a temperature, so the next hotter type (NGK B-8HC) should be used instead. If the ceramic is white, the plug is operating at too high a temperature and it should be replaced with the next colder type (NGK B-10H).

The heat range of the spark plug functions like a thermostat for the engine. Using the wrong type of spark plug can make the engine run too hot (resulting in engine damage) or too cold (with poor performance, misfiring, and stalling). The standard plug (NGK B-9HC) has been selected to match the normal usage of this motorcycle in combined street and highway riding. Unusual riding conditions may require a different spark plug heat range. For extended high speed riding, such as production road racing, install the NGK B-10H plugs (colder). For constant low speed riding (urban traffic), it may be necessary to use NGK B-8HC plugs (hotter) to avoid fouling. This is especially true during the break-in period, where engine speed must be limited to insure long engine life.



Caution: In the event the spark plugs are replaced with a type other than those previously mentioned, make certain the replacement plugs have the same thread and reach as the standard plugs.

NGK	B	—	9	H	C
	Diameter of the threaded portion (14mm)		Temperature range	Reach (12.7mm)	Outer electrode angle

Equivalent spark plugs are shown here:

Required thread size	NGK Brand (Std.)	Champion	Riding Condition
14 mm diameter, 12.7 mm (1/2") reach.	B-8HC (hot)	L81/L-62R	Low speed
	B-9HC	L-3G/L-78/ L-60R	Normal riding
	B-10H (cold)	L-2G/L-57R	Racing

### (3) Carburetors

Before you attempt to adjust the carburetors, the engine must be warmed up. When the engine is cold, the gasoline and air do not mix normally, and a correct adjustment cannot be made.



#### ① Idling adjustment

This adjustment should be made if the engine tends to stop while idling, or if the idle speed is too high.

\* Air screw adjustment: The air screw controls the mixture strength at low r.p.m. It is adjusted by first turning it in all the way (But don't screw it in tightly!) and then backing it out  $1\frac{1}{2}$  turns. Do this on all three carburetors.

Caution: Once the air screw is set as above do not change the setting, as idle speed, acceleration and gas mileage may be adversely affected.



\* Throttle stop screw adjustment: Turn the throttle stop (idle adjust) screw of each carburetor until a stable idling speed of 1,300 to 1,500 r.p.m. is obtained. Hold your hand in back of each muffler and feel the exhaust pressure; if it is approximately the same for all three mufflers, the adjustment is correct.



## ② Control cable

Turn the adjuster to give the outer sleeve of the control cable about 1/16 to 1/8 inch (2 to 3 mm) play, and tighten the lock nut.



## ③ Starter lever

With the adjuster, adjust the starter lever for about 3/16 to 1/4 inch (5 to 7 mm) play, and tighten the lock nut.





#### ④ Oil pump adjustment

Due to stretching of the control wire and other factors, the oil pump lever sometimes gets out of adjustment and will not respond immediately to the opening of the throttle. When readjusting the carburetor, it is a good idea to check the oil pump adjustment, too.

Remove the right engine cover and see if the mark on the oil pump lever is aligned with the corresponding mark on the lever stopper with the throttle closed. If it is not, turn the cable adjuster to line up the two marks, and tighten

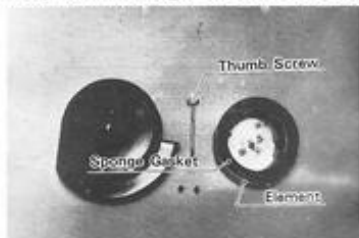
the lock nut. Twist the throttle and check that the oil pump lever opens at the same time as the carburetor slides from the fully closed position. Check the tightness of all oil line fittings, and then replace the right engine cover.

Careful adjustment of the oil pump is critical to engine performance and reliability. If the oil pump is improperly adjusted so that it lags behind the carburetors, the engine will not receive sufficient lubrication. This could lead to severe engine damage. If the oil pump is adjusted so that it opens before the carburetors, overlubrication will cause spark plug fouling, piston ring sticking, and rapid carbon buildup in the combustion chambers.

#### (4) Air Cleaner

A clogged air cleaner restricts the engine's air intake, decreasing gas mileage and engine power.

To remove the air cleaner, take off the motorcycle left side cover, raise the seat, loosen the air cleaner thumb screw, and pull the air cleaner assembly out through the left side of the frame.



Take out the two screws and separate the element from the assembly. Wash the element in gasoline and dry it out with compressed air.

**CAUTION:** A break in the element material, or damage to the sponge gasket will allow dirt and dust to pass through into the carburetors. If any part of the element is damaged, it must be replaced.

## (5) Clutch

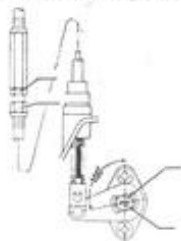
The clutch friction plates wear and the clutch cable stretches over a long period of riding, so it is necessary to adjust the clutch release mechanism and clutch cable every 2,000 miles.

Caution: Improper adjustment can cause erratic gear shifting, clutch slippage, or incomplete disengagement (with resulting stoplight creep).



① Loosen the clutch release lever lock nut and back out the adjusting screw one or two turns to where the lever turns freely.

② Set the lever angle at approximately 100° by turning the clutch cable adjuster.



③ Screw the clutch release lever adjusting screw back in until you feel pressure, and lock it in that position.

④ Adjust the clutch (hand) lever with the cable adjuster, for 1/16 to 1/8 inch (2 to 3 mm) play before you start to feel clutch spring tension. Use the small hand adjuster for minor corrections while riding.

⑤ Tighten all lock nuts.

## (6) Brake Adjustment

Make this adjustment carefully as correct brake adjustment is vital to your riding safety.



### ① Front brake

Set the adjusting nut for  $1/4$   $3/8$  in (7~10mm) brake lever play. Use the small adjuster on the hand lever bracket for minor corrections while riding.

Note: Adjustment of the brake cam connecting rod is not normally necessary. Please leave this adjustment to your dealer.



### ② Rear brake

First set the brake pedal to a comfortable position by loosening the lock nut and turning the adjuster bolt. Then adjust brake pedal play.

Turn the brake adjusting nut so the rear brake pedal has  $3/4$  to  $1 1/4$  inches (20 to 30 mm) of travel from the rest position to the fully applied position.

Note: Always check the brake light switch timing after adjusting the brake pedal.



### ③ Rear brake lamp switch

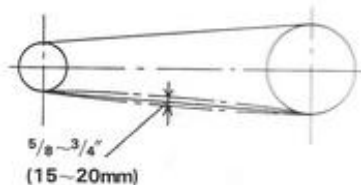
Check the operation of the brake lamp switch by turning on the ignition switch and depressing the brake pedal. The brake lamp must light about halfway through the brake pedal's range of movement, after 1/2 to 3/4 inch (15 to 20 mm) of pedal travel.

Adjust the switch by loosening the mounting nuts and moving the switch body up or down. Do not turn the switch body as the wires will be damaged. Don't adjust the switch

so that it turns on as soon as the pedal is moved. Otherwise, in normal driving, you might rest your foot on the pedal enough to light the brake lamp and annoy following drivers.

The brake lamp will also light when the front brake is applied, but as the front brake lamp switch is built into the front brake cable, adjustment is unnecessary. Check the switch by pulling the hand brake lever with the ignition switch turned on.

### (7) Drive Chain



The drive chain requires periodic inspection and lubrication. If it is allowed to dry out, the links fail to move freely, wearing down the chain itself, the front and rear sprockets, and putting a strain on the engine.

Drive chain adjustment is checked with the motorcycle off the stand in its normal upright position. Moving the chain up and down, see that vertical movement at its greatest point is 5/8 to 3/4 inch (15 to 20 mm).

To adjust the chain, loosen the torque link nut, and loosen the rear axle nut and the axle sleeve nut. Obtain the correct adjustment with the chain adjuster on each side (first loosening the lock nuts). Make use of the marks on the swing arm to insure that both adjusters are moved an



equal distance, thus preserving wheel alignment. After adjustment is completed, don't fail to tighten the axle and axle sleeve nuts, the torque link, and the chain adjuster lock nuts.

Note: When oiling the chain, use only enough oil to insure smooth movement. If more than this is applied, it will be thrown off as the chain moves, splattering over the motorcycle and collecting dirt.

## (8) Wheel Balance

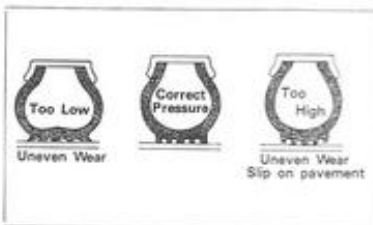
The wheels must be balanced properly to prevent rider fatigue from annoying vibration at high speed.

With the drive chain removed from the rear wheel, check the balance by raising each wheel

off the ground in turn, and spinning it lightly. The wheel is correctly balanced if it will come to a stop at any position. If you determine that the wheel requires balancing, proceed as follows.



## (9) Tires



- \* Attach a balance weight temporarily to the lightest side of the wheel and spin it again. Attach more weights as necessary and repeat the process until the difference between the heaviest and lightest sides of the wheel is within 1/3 ounce (10 grams). Less than this will not affect running stability.
- \* When any imbalance has been satisfactorily compensated for, attach the weights firmly with pliers.

Note: 10, 20 and 30 gram (1/3, 2/3 and 1 ounce) balance weights are available for purchase from Kawasaki Dealers.

Abnormally high or low tire pressure has an adverse effect on maneuverability, and shortens tire life.

Tire pressure is specified in the table below. Note that for continuous high speed riding, such as production road racing, tire pressure should be increased by 3 psi to minimize the effects of heat build-up in the tires.

Tire Size		Front	Rear
		3.00-18 4PR	3.50 S 4PR
Air Pressure	Standard	24 psi (1.7 kg/sq cm)	31 psi (2.2 kg/sq cm)
	High Speed	28 psi (2.0 kg/sq cm)	34 psi (2.4 kg/sq cm)



## (10) Headlight

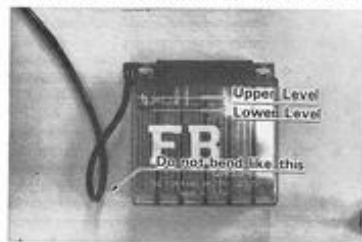
Left/right adjustment is done with the adjuster screw.

Up and down adjustment is performed by loosening the turn signal lights (or mounting bolts) and moving the headlight by hand. After adjustment is complete, be sure to retighten the light mountings with the signal lights pointing directly forward.

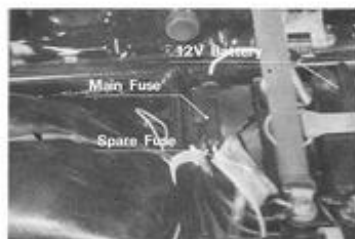


## (11) Battery

Ignition, lights and all other electrical equipment depend on the battery, so battery inspection and maintenance should never be neglected.



- ① Always keep the battery water level up above the low mark. When it gets low, add only distilled water, filling it to the upper level. Do not add sulphuric acid; the solution will become too strong and damage the battery.
- ② Do not let the plastic pipe on the side of the battery get folded or pinched, and route it away from the exhaust system, where it could be melted shut. This pipe lets out the gas that is produced inside the battery as it charges, and if the gas cannot escape through the pipe, it will break open the battery case.



- ③ Make certain that the battery connections are tight and that the correct polarity is observed. After the battery terminal clamps are tightened, a light coat of grease should be applied to the terminals to prevent corrosion.

## (12) Mufflers



The mufflers have baffle tubes which can fill up with carbon and other exhaust by-products over an extended period of operation, resulting in a slight drop in performance.

To remove the baffle tube for cleaning, take out the small bolt, grasp the baffle tube pin with pliers, and withdraw the tube. Clean it with a wire brush, and by striking it gently.

### (13) Cleaning

When the motorcycle becomes dirty, not only do the painted and plated surfaces deteriorate, but rust sets in on the nuts and bolts, and inspection and adjustment become difficult.

For these reasons, and for the beauty of the machine, cleaning should be made a part of your regular maintenance.

#### ① Preparation for washing

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

- \* Rear opening of the mufflers .....Cover with plastic bags, secured with rubber bands.
- \* Clutch and brake levers, hand grips ...Cover with plastic bags.
- \* Ignition switch .....Cover the keyhole with tape.
- \* Air cleaner intake .....Close up the opening with tape, or stuff in rags.  
(Be sure to remove these after washing.)

#### ② Where to be careful

Avoid spraying water with any great force near these places:

- \* Brake drums.

If water gets inside the brake drums, the brakes will not function until they are dried out. After washing, always test the brakes before taking the motorcycle out into traffic.

- \* Under the gas tank.

If too much water gets into the ignition coil or into the spark plug cap, 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.

#### ③ Washing

Using a brush and water, wash the tires, underside of the fenders, engine, etc. Wash the

painted and chrome surfaces with water and a sponge or soft cloth.

- Immediately after washing, remove the covers and start the engine to dry out any water which may have entered.

The motorcycle should always be lubricated after washing it, with special attention given to the chain and sprockets.

#### ④ Waxing

A clean, well-polished Kawasaki Motorcycle is a handsome machine. But besides adding to its looks, a good coat of wax protects the paint and chrome, and makes it easy to wipe off collected road dust and dirt.

Apply the wax with a clean, soft cloth and polish it with a separate cloth.

### (14) Storage

When the motorcycle is to be stored for any length of time, such as during the winter season, it should be prepared for storage according to the following guide.

\* Clean the entire vehicle thoroughly.



- \* Run the engine for about five minutes to warm the oil, and drain the transmission oil.
- \* Empty the gasoline from the gas tank and from the carburetors. Sitting for a long period of time sours the gasoline, which then clogs the fuel tap and carburetor jets.

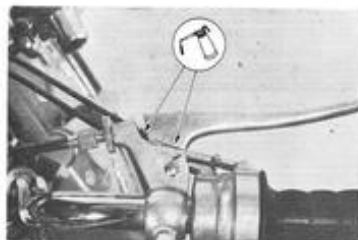
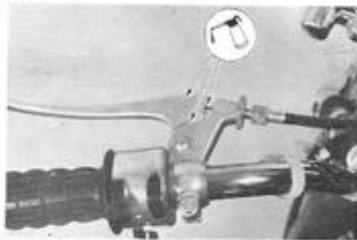


\* Remove the spark plugs and put several drops of SAE 30 oil into the cylinders. Kick the engine over two or three times to coat the sides of the cylinders with oil, and reinsert the spark plugs to prevent dirt from entering the cylinders.

- \* Reduce tire pressure by about 20% and set the motorcycle up on its center stand. Put a board under the front wheel to keep dampness from the tire.
- \* Spray oil on all unpainted metal surfaces to prevent rusting. Avoid getting oil on rubber parts, or in the brakes.
- \* 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.
- \* Put a cover over the motorcycle to keep dust and dirt from collecting on it.

## (15) Lubrication

Appropriate lubrication not only lengthens the life of the vehicle, but by keeping it running smoothly and quietly, adds to riding enjoyment. Using SAE 20 or 30 oil, lubricate the points shown in the photographs after washing the motorcycle, driving through rain, or whenever necessary.





## 9. Daily Checks

Front Brake

Rear Brake

Clutch

Oil Tank

Transmission Oil

Front Tire

Rear Tire

Battery

Electrical Equipment

Chrome Plated Parts

Brake lever play about 1/4 to 3/8 inch (7 to 10 mm)

Brake pedal play 3/4 to 1 1/4 inch (20 to 30 mm)

Clutch lever play about 1/16 to 1/8 inch (2 to 3 mm)

Oil level well above bottom of inspection window

Above low level on dip stick

Air pressure 24 psi (1.7 kg/sq cm)

Air pressure 31 psi (2.2 kg/sq cm)

Battery water above low level mark

Check that headlight, tail light, brake light and horn work.

Wash, clean and wipe with oil cloth to prevent rusting.



## 10. Periodic Maintenance Chart

	Initial 500 Miles	Initial 2,000 Miles	Every 2,000 Miles	Every 4,000 Miles
Change transmission oil	X	X	X	
Clean, set spark plugs	X	X	X	
Clean points, check ignition timing	X	X	X	
Check, adjust carburetor and oil pump	X	X	X	
Check, adjust clutch release	X	X	X	
Decarbon heads and exhaust system				X
Adjust drive chain	X	X	X	
Clean, lubricate drive chain	X	X	X	
Check, tighten spokes	X	X	X	
Clean air cleaner			X	
Add battery water	X	X	X	
Check, adjust brakes	X	X	X	
Remove wheels clean brakes				
Check fork oil level			X	
Change front fork oil				X
Tighten bolts and nuts	X	X	X	
Clean fuel tap screen			X	
Lubricate cables				X