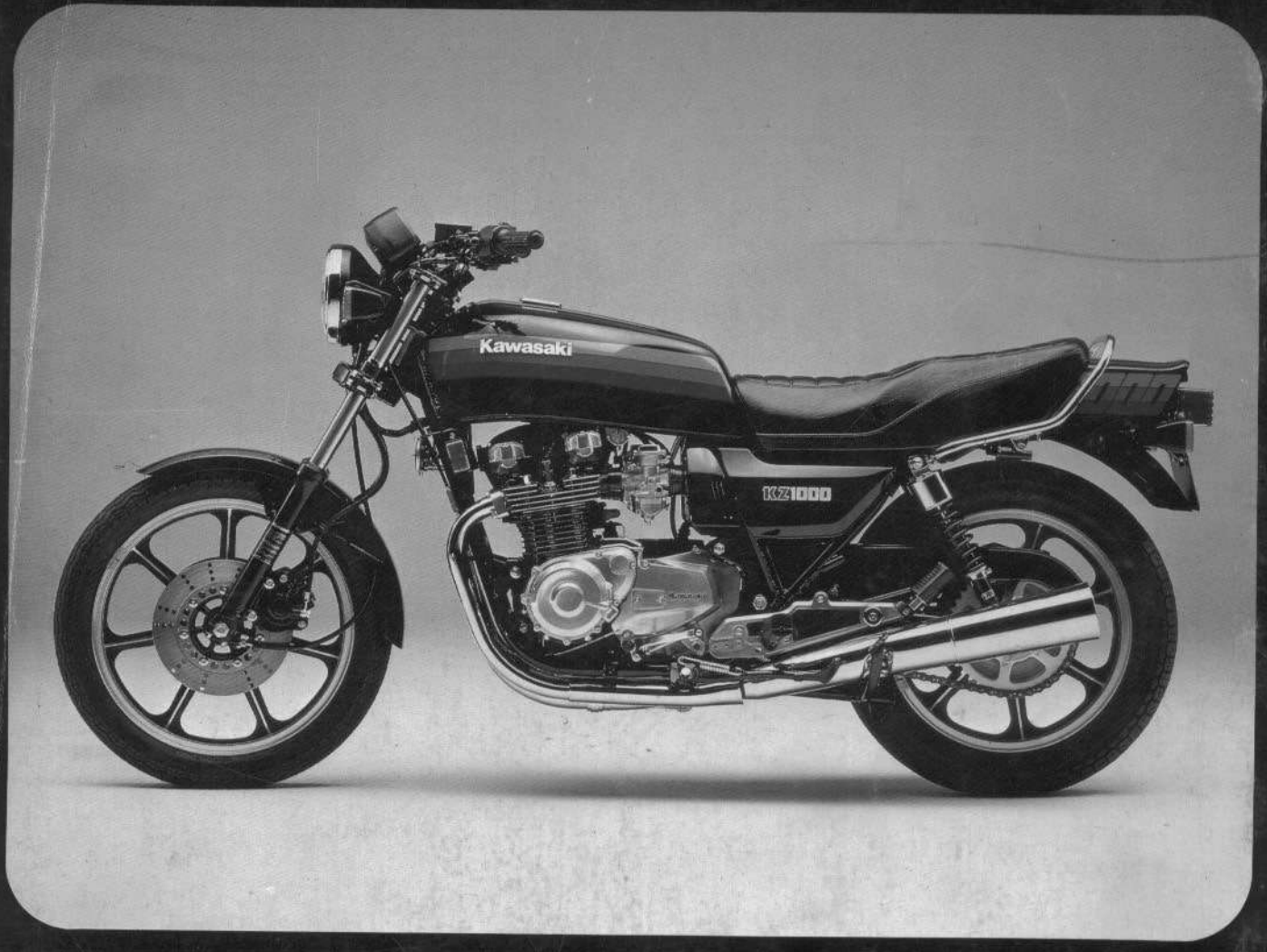
Kawasaki

KZ1000
KZ1100



Motorcycle
Service Manual

Quick Reference Guide

To use, bend the manual back and match the desired chapter below against the black spot showing at the edge of these pages.

General Information

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BEFORE SERVICING

Before starting to service a motorcycle, careful reading of the applicable section is recommended to eliminate unnesessary work. Photographs, diagrams, notes, cautions, warnings, and detailed descriptions have been included wherever necessary. Nevertheless, even a detail account has limitations, a certain amount of basic knowledge is also required for successful work.

Especially note the following:

(1) Edges
Watch for sharp edges, especially during major engine disassembly and assembly. Protect your hands with gloves or a piece of thick cloth when lifting the engine or turning it over.

(2) Dirt
Before removal and disassembly, clean the motorcycle. Any dirt entering the engine, carburetor or other parts will work as an abrasive and shorten the life of the motorcycle. For the same reason, before installing a new part, clean off any dust or metal fillings.

(3) Tightening Sequence
Where there is a tightening sequence indication in this Service Manual: the bolts, nuts, or screws must be tightened in the order and method indicated. When installing a part with several bolts, nuts, or screws; they should all be started in their holes and tightened to a snug fit. Then tighten them evenly, according to the tightening sequence, to the specified torque. This is to avoid distortion of the part and/or causing gas or oil leakage. Conversely when loosening the bolts, nuts, or screws; loosen all of them about a quarter of turn and then remove them.

(4) Torque
The torque values given in this Service Manual should always be adhered to. Either too little or too much torque may lead to serious damage. Use a good quality, reliable torque wrench.

(5) Force
Common sense should dictate how much force is necessary in assembly and disassembly. If a part seems especially difficult to remove or install, stop and examine what may be causing the problem. Whenever tapping is necessary, tap lightly using a wooden or plastic-faced mallet. Use an impact driver for screws (particularly for the removal of screws held by a locking agent) in order to avoid damaging the screw heads.

(6) Lubricant
Don't use just any oil or grease. Some oils and greases in particular should be used only in certain applications and may be harmful if used in an application for which they are not intended.

(7) Battery Ground
Before performing any disassembly operations on the motorcycle, remove the ground (−) lead from the battery to prevent the possibility of accidentally turning the engine over while partially disassembled.

(8) Engine Rotation
When turning the crankshaft by hand, always turn it in the direction of normal rotation; which is clockwise, viewed from the right side of the engine. This will ensure proper adjustments.

(9) Lublication
Engine wear is generally at its maximum while the engine is warming up and before all the rubbing surfaces have an adequate lubricative film. During assembly, oil or grease (whichever is more suitable) should be applied to any rubbing surface which has lost its lubricative film. Old grease and dirty oil should be cleaned off. Deteriorated grease has lost its lubricative quality and may contain abrasive foreign particles.

(10) Press
A part installed using a press or driver, such as a wheel bearing, should first be coated with oil on its outer or inner circumference so that it will go into place smoothly.

(11) Oil Seal, Grease Seal
Replace any oil or grease seals that were removed with new ones, as removal generally damages seals. A seal guide is required for certain oil or grease seals during installation to avoid damage to the seal lips. Before a shaft passes through a seal, apply a little oil, preferably high temperature grease on the lips to reduce rubber to metal friction.

(12) Gasket, O-ring
When in doubt as to the condition of a gasket or O-ring, replace it with a new one. The mating surfaces around the gasket should be free of foreign matter and perfectly smooth to avoid oil or compression leaks.

(13) Liquid Gasket, Non-permanaent Locking Agent
Follow manufacture's directions for cleaning and preparing surfaces where these compounds will be used. Apply sparingly. Excessive amounts may block engine oil passages and cause serious damage. An example of a non-permanent locking agent commonly available in North America is Loctite Lock'n Seal (Blue).

(14) Ball Bearing, Oil Seal, Grease Seal Installation
When installing a ball bearing, the bearing race which is affected by friction should be pushed by a suitable driver. This prevents severe stress on the balls and races, and prevents races and balls from being dented. Press a ball bearing until it stops at the stop in the hole or on the shaft. Seals should be pressed into place using a suitable driver, which contacts evenly with the side of the seal until the face of the seal is even with the end of the hole.

(15) Circlip, Retaining Ring
Replace any circlips and retaining rings that were removed with new ones, as removal weakens and deforms them. When installing circlips and retaining rings, take care to compress or expand them only enough to install them and no more.

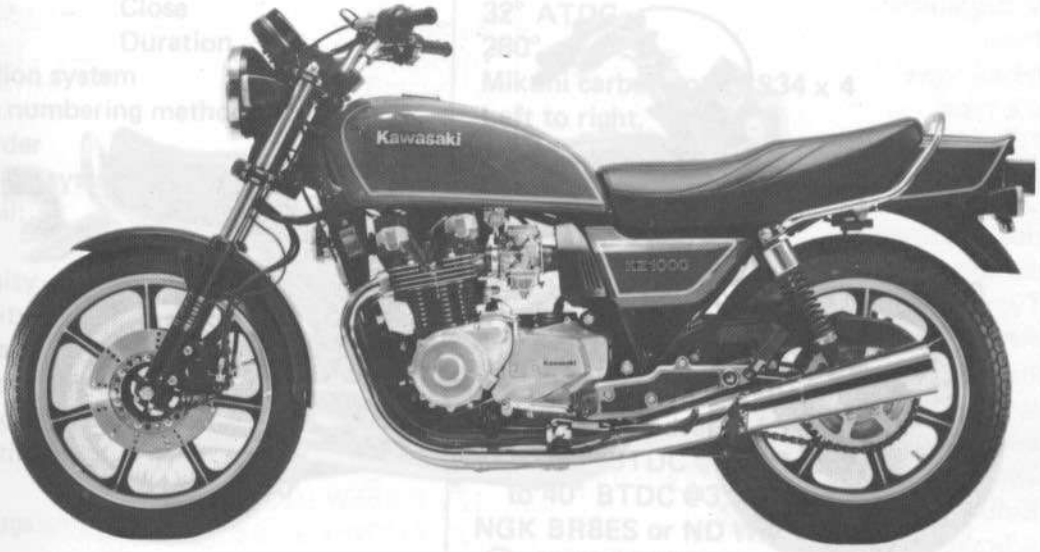
(16) High Flash-Point Solvent
A high flash-point solvent is recommended to reduce fire danger. A commercial solvent commonly available in North America is Stoddard solvent (generic name). Always follow manufacturer and container directions regarding the use of any solvent.

(17) Molybdenum Disulfide (MoS_2) Grease
This manual makes reference to molybdenum disulfide grease in the assembly of certain engine and chassis parts. Always check manufacturer recommendations before using such special lubricants.

(18) Electrical Leads
All the electrical leads are either single-color or two-color and, with only a few exceptions, must be connected to leads of the same color. On any of the two-color leads there is a greater amount of one color and a lesser amount of a second color, so a two-color lead is identified by first the primary color and then the secondary color. For example, a yellow wire with thin red stripes is referred to as a "yellow/red" lead; it would be a "red/yellow" lead if the colors were reversed to make red the main color.

MODEL IDENTIFICATION

KZ1000-J:



KZ1000-K:

KZ1000-M:

SPECIFICATIONS

KZ/Z1000-J1 Specifications:

Items		KZ/Z1000-J1
Dimensions:		
Overall length		2,265 mm, Ⓤ 2,240 mm
Overall width		820 mm, Ⓤ 845 mm
Overall height		1,145 mm
Wheelbase		1,520 mm
Road clearance		140 mm
Seat height		805 mm
Dry weight		230 kg
Fuel tank capacity		21.4 liters
Performance:		
Climbing ability		30°
Braking distance		12.5 m from 50 kph
Minimum turning radius		2.5 m
Engine:		
Type		4-stroke, DOHC, 4-cylinder
Cooling system		Air cooled
Bore and stroke		69.4 x 66.0 mm
Displacement		998 cc
Compression ratio		9.2
Maximum horsepower		102HP @8,500 rpm, Ⓖ 97HP @8,500 rpm
Maximum torque		9.3 kg-m @7,000 rpm, Ⓖ 8.8 kg-m @7,500 rpm
Valve timing:		
Inlet	Open	35° BTDC
	Close	65° ABDC
	Duration	280°
Exhaust	Open	68° BBDC
	Close	32° ATDC
	Duration	280°
Carburetion system		Mikuni carburetors, BS34 x 4
Cylinder numbering method		Left to right, 1-2-3-4
Firing order		1-2-4-3
Lubrication system		Forced lubrication (Wet sump)
Engine oil:		
Grade		SE class
Viscosity		SAE 10W40, 10W50, 20W40, or 20W50
Capacity		3.7 liters
Starting system		Electric starter
Ignition system		Battery and coil (Transistorized)
Timing advance		Mechanically advanced
Ignition timing		From 10° BTDC @1,000 rpm to 40° BTDC @3,400 rpm
Spark plugs		NGK BR8ES or ND W24ESR-U, Ⓤ NGK B8ES or ND W24ES-U

Ⓤ: US model Ⓖ: West German, Swiss, and Swedish models

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

(Continued on next page.)

KZ/Z1000-J1 Specifications (Cont.):

Items	KZ/Z1000-J1
Drive Train:	
Primary reduction system:	
Type	Gear
Reduction ratio	1.732 (97/56)
Clutch type	Wet multi disc
Transmission:	
Type	5-speed, constant mesh, return shift
Gear ratios 1st	2.642 (37/14)
2nd	1.833 (33/18)
3rd	1.428 (30/21)
4th	1.173 (27/23)
5th	1.040 (26/25)
Final drive system:	
Type	Chain drive
Reduction ratio	2.733 (41/15)
Overall drive ratio	4.923 @Top gear
Frame:	
Type	Tubular, double cradle
Castor (rake angle)	27.5°
Trail	99 mm
Front tire:	
Type	Tubeless
Size	3.25V-19 4PR
Rear tire:	
Type	Tubeless
Size	4.25V-18 4PR
Front suspension:	
Type	Telescopic fork (Pneumatic)
Wheel travel	145 mm
Rear suspension:	
Type	Swing arm
Wheel travel	100 mm
Brake type:	
Front	Dual disc brake
Rear	Single disc brake
Electrical Equipment:	
Alternator:	
Type	Three-phase AC
Rated output	20 amp. @8,000 rpm, 14V
Voltage regulator	Short-circuit type
Battery	12V 18AH
Headlight:	
Type	Sem-sealed
Bulb	12V 60/55W (Quartz-halogen)
Tail/brake light	12V 5/21W x 2, Ⓤ Ⓒ 12V 8/27W x 2

Ⓤ : US model Ⓒ : Canadian model

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KZ/Z1000-K1, KZ1000-M1 Specifications:

Items	KZ/Z1000-K1	KZ1000-M1
Dimensions:		
Overall length	2,293 mm, Ⓤ 2,245 mm	2,245 mm
Overall width	820 mm	*
Overall height	1,220 mm	*
Wheelbase	1,535 mm	*
Road clearance	130 mm	*
Seat height	785 mm	*
Dry weight	234 kg, Ⓤ 232 kg	232 kg
Fuel tank capacity	15 liters	*
Performance:		
Climbing ability	30°	*
Braking distance	12.5 m from 50 kph	*
Minimum turning radius	2.6 m	*
Engine:		
Type	4-stroke, DOHC, 4-cylinder	*
Cooling system	Air cooled	*
Bore and stroke	69.4 x 66.0 mm	*
Displacement	998 cc	*
Compression ratio	9.2	*
Maximum horsepower	92HP @8,000 rpm, Ⓖ 95HP @8,500 rpm	*
Maximum torque	8.7 kg-m @7,000 rpm, Ⓖ 8.2HP @7,500 rpm	*
Valve timing:		
Inlet Open	30° BTDC	*
Close	60° ABDC	*
Duration	270°	*
Exhaust Open	63° BBDC	*
Close	27° ATDC	*
Duration	270°	*
Carburetion system	Mikuni carburetors, BS34 x 4	*
Cylinder numbering method	Left to right, 1-2-3-4	*
Firing order	1-2-4-3	*
Lubrication system	Forced lubrication (Wet sump)	*
Engine oil:		
Grade	SE class	*
Viscosity	SAE 10W40, 10W50, 20W40, or 20W50	*
Capacity	3.7 liters	*
Starting system	Electric starter	*
Ignition system	Battery and coil (Transistorized)	*
Timing advance	Mechanically advanced	*
Ignition timing	From 10° BTDC @1,000 rpm to 40° BTDC @3,400 rpm	*
Spark plugs	NGK BR8ES or ND W24ESR-U, Ⓤ NGK B8ES or ND W24ES-U	NGK B8ES or ND W24ES-U

Ⓤ: US model Ⓖ: West German, Swiss, and Swedish models

* : Identical to KZ/Z1000-K1

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(Continued on next page.)

KZ/Z1000-K1, KZ1000-M1 Specifications (Cont.):

Items	KZ/Z1000-K1	KZ1000-M1
Drive Train:		
Primary reduction system:		
Type	Gear	*
Reduction ratio	1.732 (97/56)	*
Clutch type	Wet multi disc	*
Transmission:		
Type	5-speed, constant mesh, return shift	*
Gear ratios 1st	2.642 (37/14)	*
2nd	1.833 (33/18)	*
3rd	1.428 (30/21)	*
4th	1.173 (27/23)	*
5th	1.040 (26/25)	*
Final drive system:		
Type	Chain drive	*
Reduction ratio	2.600 (39/15)	*
Overall drive ratio	4.684 @Top gear	*
Frame:		
Type	Tubular, double cradle	*
Castor (rake angle)	29°	*
Trail	107 mm	*
Front tire:		
Type	Tubeless	Tube type
Size	3.25V-19 4PR, Ⓤ Ⓒ 3.25H-19 4PR	3.25H-19 4PR
Rear tire:		
Type	Tubeless	Tube type
Size	130/90V-16 4PR, Ⓤ Ⓒ 130/90-16 67H	130/90-16 67H
Front suspension:		
Type	Telescopic fork (Pneumatic)	*
Wheel travel	180 mm	*
Rear suspension:		
Type	Swing arm	*
Wheel travel	120 mm	*
Brake type:		
Front	Dual disc brake	*
Rear	Single disc brake	*
Electrical Equipment:		
Alternator:		
Type	Three-phase AC	*
Rated output	20 amp. @8,000 rpm, 14V	*
Voltage regulator	Short-circuit type	*
Battery	12V 18AH	*
Headlight:		
Type	Semi-sealed	Sealed
Bulb	12V 60/55W (Quartz-halogen)	12V 60/50W
Tail/brake light	12V 5/21W x 2, Ⓤ Ⓒ 12V 8/27W x 2	12V 8/27W x 2

Ⓤ : US model Ⓒ : Canadian model
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