

MODEL APPLICATION

Year	Model	Beginning Frame No.
1984	ZX900-A1	JKAZX2A1□EA000001, or JKAZX2A1□EB500001, or ZX900A-000001
1985	ZX900-A2	JKAZX2A1□FA015001, or JKAZX2A1□FB505301, or ZX900A-015001

□ : This digit in the frame number changes from one machine to another.

KAWASAKI
HEAVY INDUSTRIES, LTD.
MOTORCYCLE GROUP



Kawasaki

GPz900R



**Motorcycle
Service Manual**

Quick Reference Guide

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This quick reference guide will assist you in locating a desired topic or procedure.

- Bend the pages back to match the black tab of the desired chapter number with the black tab on the edge at each table of contents page.
- Refer to the sectional table of contents for the exact pages to locate the specific topic required.

LIST OF ABBREVIATIONS

A	ampere(s)
ABDC	after bottom dead center
AC	alternating current
ATDC	after top dead center
BBDC	before bottom dead center
BDC	bottom dead center
BTDC	before top dead center
°C	degree(s) Celsius
DC	direct current
F	farad(s)
°F	degree(s) Fahrenheit
ft	foot, feet
g	gram(s)
h	hour(s)
L	liter(s)
lb	pound(s)
m	meter(s)
min	minute(s)
N	newton(s)
Pa	pascal(s)
PS	horsepower
psi	pound(s) per square inch
r	revolution
rpm	revolution(s) per minute
TDC	top dead center
TIR	total indicator reading
V	volt(s)
W	watt(s)
Ω	ohm(s)

Read OWNER'S MANUAL before operating.

Foreword

This manual is designed primarily for use by trained mechanics in a properly equipped shop. However, it contains enough detail and basic information to make it useful to the owner who desires to perform his own basic maintenance and repair work. A basic knowledge of mechanics, the proper use of tools, and workshop procedures must be understood in order to carry out maintenance and repair satisfactorily. Whenever the owner has insufficient experience or doubts his ability to do the work, all adjustments, maintenance, and repair should be carried out only by qualified mechanics.

In order to perform the work efficiently and to avoid costly mistakes, read the text, thoroughly familiarize yourself with the procedures before starting work, and then do the work carefully in a clean area. Whenever special tools or equipment are specified, do not use makeshift tools or equipment. Precision measurements can only be made if the proper instruments are used, and the use of substitute tools may adversely affect safe operation.

For the duration of your warranty period, especially, we recommend that all repairs and scheduled maintenance be performed in accordance with this service manual. Any owner maintenance or repair procedure not performed in accordance with this manual may void the warranty.

To get the longest life out of your Motorcycle:

- Follow the Periodic Maintenance Chart in the Service Manual.
- Be alert for problems and non-scheduled maintenance.
- Use proper tools and genuine Kawasaki Motorcycle parts. Special tools, gauges, and testers that are necessary when servicing Kawasaki motorcycles are introduced by the Special Tool Manual. Genuine parts provided as spare parts are listed in the Parts Catalog.
- Follow the procedures in this manual carefully. Don't take shortcuts.
- Remember to keep complete records of maintenance and repair with dates and any new parts installed.

How to Use this Manual

In preparing this manual, we divided the product into its major systems. These systems became the manual's chapters. All information for a particular system from adjustment through disassembly and inspection is located in a single chapter.

The Quick Reference Guide shows you all of the product's system and assists in locating their chapters. Each chapter in turn has its own comprehensive Table of Contents.

The Periodic Maintenance Chart is located in the General Information chapter. The chart gives a time schedule for required maintenance operations.

If you want spark plug information, for example, go to the Periodic Maintenance Chart first. The chart tells you how frequently to clean and gap the plug. Next, use the Quick Reference Guide to locate the Electrical System chapter. Then, use the Table of Contents on the first page of the chapter to find the Spark Plug section.

Whenever you see these WARNING and CAUTION symbols, heed their instructions! Always follow safe operating and maintenance practices.

WARNING

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

CAUTION

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

This manual contains five more symbols (in addition to WARNING and CAUTION) which will help you distinguish different types of information.

NOTE

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

- Indicates a procedural step or work to be done.
- Indicates a procedural sub-step or how to do the work of the procedural step it follows. It also precedes the text of a WARNING, CAUTION, or NOTE.
- ★ Indicates a conditional step or what action to take based on the results of the test or inspection in the procedural step or sub-step it follows.
- ☆ Indicates a conditional sub-step or what action to take based upon the results of the conditional step it follows.

In most chapters an exploded view illustration of the system components follows the Table of Contents. In these illustrations you will find the instructions indicating which parts require specified tightening torque, oil, grease or a locking agent during assembly.

If you want extra plug information, for example, go to the Periodic Maintenance Chart first. The chart tells you how frequently to clean and gap the plug. Next, use the Quick Reference Guide to locate the Electrical System chapter. Then, use the Table of Contents on the first page of the chapter to find the Spark Plug section.

Whenever you see three WARNING and CAUTION symbols, heed their instructions. Always follow safe opening and maintenance practices.

WARNING

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

CAUTION

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

This manual contains five more symbols in addition to WARNING and CAUTION which will help you distinguish different types of information.

NOTE

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

This manual is designed primarily for use by trained mechanics in a properly equipped shop. However, it contains enough detail and basic information to make it useful to the owner who desires to perform his own basic maintenance and repair work. A basic knowledge of mechanics, the proper use of tools and workshop procedures must be understood in order to carry out maintenance and repair satisfactorily. Whenever the owner has important experience or knows his ability to do the work, all adjustments, maintenance, and work should be carried out only by qualified mechanics.

In order to perform the work efficiently and to avoid costly mistakes, read the text thoroughly familiar yourself with the procedures before starting work, and then do the work carefully in a clean area. Whenever special tools or equipment are specified, do not use makeshift tools or equipment. Precision measurements can only be made if the proper instruments are used, and the use of substitute tools may adversely affect safe operation.

For the duration of your warranty period, especially, we recommend that all repair and scheduled maintenance be performed in accordance with this service manual. Any owner maintenance or repair procedure not followed in accordance with this manual may void the warranty.

- To get the longest life out of your motorcycle:
 - Follow the Periodic Maintenance Chart in the Service Manual.
 - Be alert for problems and non-scheduled maintenance.
 - Use proper tools and genuine Kawasaki Motor-cycle parts. Special tools, gauges, and testers that are necessary when servicing Kawasaki motorcycles are introduced by the Special Tool Manual. Genuine parts provided as spare parts are listed in the Parts Catalog.
 - Follow the procedures in this manual carefully. Don't take shortcuts.
 - Remember to keep complete records of maintenance and repair work done and any new parts installed.

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

General Information

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Before removal and disassembly, clean the motorcycle. Any dirt entering the engine or other parts will work as an abrasive and cause damage. For the same reason, before installing a new part, clean off any dust or metal filings.

(2) Battery Ground
Remove the ground (-) lead from the battery before performing any disassembly operations on the motorcycle. This prevents:

- (a) the possibility of accidentally turning the engine over while partially disassembled.
- (b) the possibility of electrical connections which will occur when they are not intended to be made.

(3) Tighten Specifications
Generally, when installing a part with several bolts, nuts, or screws, tighten them in the order and torque specified in this manual. Tighten them evenly in a crisscross pattern. This is to avoid warping the part. Tighten them in the order and torque specified in this manual. The bolt, nut, or screw that loosens all of them by about a quarter of turn will then remove them. Where there is a tightening sequence indication in this Service Manual, the bolt, nut, or screw must be tightened in the order and method indicated.

(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 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) 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.

(7) Liquid Gasket, Non-Permanent Locking Agent, Silicone Sealant
Follow manufacturer's directions for cleaning and greasing surfaces where these compounds will be used. Apply sparingly. Excessive amounts may block engine oil passages and cause engine damage. An example of a non-permanent locking agent commonly available in North America is Loctite Lock-N-Gait (Blue). Use the following liquid gasket and silicone sealant.

Kawasaki Bond (Silicone Sealant) : 88019-130
Kawasaki Bond (Liquid Gasket - Blue) : 88104-1003



1-2 GENERAL INFORMATION

Before Servicing

Before starting to service a motorcycle, careful reading of the applicable section is recommended to eliminate unnecessary 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) Dirt

Before removal and disassembly, clean the motorcycle. Any dirt entering the engine 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 filings.

(2) Battery Ground

Remove the ground (—) lead from the battery before performing any disassembly operations on the motorcycle. This prevents:

- (a) the possibility of accidentally turning the engine over while partially disassembled.
- (b) sparks at electrical connections which will occur when they are disconnected.
- (c) damage to electrical parts.

(3) Tightening Sequence

Generally, 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 in a cross pattern. This is to avoid distortion of the part and/or causing gas or oil leakage. Conversely when loosening the bolts, nuts, or screws, first loosen all of them by about a quarter of turn and then remove them.

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.

(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 plasticfaced 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) 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.

(7) Liquid Gasket, Non-permanent Locking Agent, Silicone Sealant

Follow manufacturer'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). Use the following liquid gasket and silicone sealant.

**Kawasaki Bond (Liquid Gasket – Black)
: 92104-1003**



Kawasaki Bond (Silicone Sealant) : 56019-120



(8) 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.

(9) Gasket, O-ring

Do not reuse a gasket or O-ring once it has been in service. The mating surfaces around the gasket should be free of foreign matter and perfectly smooth to avoid oil or compression leaks.

(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) Ball Bearing

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.

(12) Oil Seal and Grease Seal

Replace any oil or grease seals that were removed with new ones, as removal generally damages seals.

When pressing in a seal which has manufacturer's marks, press it in with the marks facing out. Seals should be pressed into place using a suitable driver, which contacts evenly with the side of seal, until the face of the seal is even with the end of the hole.

(13) Seal Guide

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.

(14) 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.

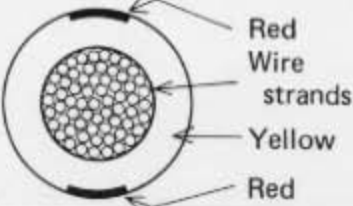
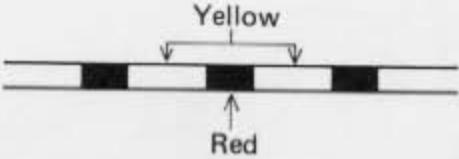
(15) Lubrication

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.

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. This manual makes reference to molybdenum disulfide grease (MoS₂) in the assembly of certain engine and chassis parts. Always check manufacturer recommendations before using such special lubricants.

(16) Electrical Wires

All the electrical wires are either single-color or two-color and, with only a few exceptions, must be connected to wires of the same color. On any of the two-color wires there is a greater amount of one color and a lesser amount of a second color, so a two-color wire 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" wire; it would be a "red/yellow" wire if the colors were reversed to make red the main color.

Wire (cross-section)	Name of Wire Color	Picture in Wiring Diagram
 <p>Red Wire strands</p> <p>Yellow</p> <p>Red</p>	<p>Yellow/red</p>	 <p>Yellow</p> <p>Red</p>

1-4 GENERAL INFORMATION

(17) Replacement Parts

When there is a replacement instruction, replace these parts with new ones every time they are removed. These replacement parts will be damaged or lose their original function once removed.

(18) Inspection

When parts have been disassembled, visually inspect these parts for the following conditions or other damage. If there is any doubt as to the condition of them, replace them with new ones.

Abrasion	Crack	Hardening	Warp
Bent	Dent	Scratch	Wear
Color change	Deterioration	Seizure	

(19) Service Data

Numbers of service data in this text have following meanings:

"Standards": Show dimensions or performances which brand-new parts or systems have.

"Service limits": Indicate the usable limits. If the measurement shows excessive wear or deteriorated performance, replace the damaged parts.

(18) Electrical Wire

All the electrical wires are either single-color or two-color and with only a few exceptions must be connected to wires of the same color. On any of the two-color wires there is a greater amount of one color and a lesser amount of a second color, so a two-color wire 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" wire; it would be a "red/yellow" wire if the color were reversed to make red the main color.

Figure in Wiring Diagram	Name of Wire Color	Wire (cross-section)
	Yellow/Red	



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