



Kawasaki

CONCOURS

1000GTR

Product: 1989-2000 Kawa

Full Download: <https://www>

[concours-1000gtr-motocycl](https://www.concours-1000gtr-motocycl)



Sample of manual. Downl

<https://www.arepairmanua>

Motorcycle Service Manual

Quick Reference Guide

General Information 1

Fuel System 2

Cooling System 3

Engine Top End 4

Clutch 5

Engine Lubrication System 6

Engine Removal/Installation 7

Crankshaft/Transmission 8

Wheels/Tires 9

Final Drive 10

Brakes 11

Suspension 12

Steering 13

Frame 14

Electrical System 15

Appendix 16

Supplement-1989 Model 17

Supplement-1990-1993 Models 18

Supplement-1994-1997 Models 19

Supplement-2000 Model 20

Product: 1989-2000 Kawasaki
Full Download: <https://www.oncour.com/1000gtr-motorcycle>



Sample of manual. Download
<https://www.arepairmanual.com>

All rights reserved.
In any form or by any
written permission of

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.



**CONCOURS
1000GTR**



Motorcycle Service Manual

All rights reserved. No parts of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic mechanical photocopying, recording or otherwise, without the prior written permission of Quality Assurance Department/Consumer Products Group/Kawasaki Heavy Industries, Ltd., Japan.

No liability can be accepted for any inaccuracies or omissions in this publication, although every possible care has been taken to make it as complete and accurate as possible.

The right is reserved to make changes at any time without prior notice and without incurring an obligation to make such changes to products manufactured previously. See your dealer for the latest information on product improvements incorporated after this publication.

All information contained in this publication is based on the latest product information available at the time of publication. Illustrations and photographs in this publication are intended for reference use only and may not depict actual model component parts.

LIST OF ABBREVIATIONS

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



**WARNING
CONTAINS
ASBESTOS**

Breathing asbestos
dust is dangerous
to health

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.

Read OWNER'S MANUAL before operating.

EMISSION CONTROL INFORMATION

To protect the environment in which we all live, Kawasaki has incorporated crankcase emission (1) and exhaust emission (2) control systems in compliance with applicable regulations of the United States Environmental Protection Agency and California Air Resources Board. Additionally, Kawasaki has incorporated an evaporative emission control system (3) in compliance with applicable regulations of the California Air Resources Board on vehicles sold in California only.

1. Crankcase Emission Control System

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

2. Exhaust Emission Control System

This system reduces the amount of pollutants discharged into the atmosphere by the exhaust of this motorcycle. The fuel and ignition systems of this motorcycle have been carefully designed and constructed to ensure an efficient engine with low exhaust pollutant levels.

3. Evaporative Emission Control System

Vapors caused by fuel evaporation in the fuel system are not vented into the atmosphere. Instead, fuel vapors are routed into the running engine to be burned, or stored in a canister when the engine is stopped. Liquid fuel is caught by a vapor separator and returned to the fuel tank.

The Clean Air Act, which is the Federal law covering motor vehicle pollution, contains what is commonly referred to as the Act's "tampering provisions."

"Sec. 203(a) The following acts and the causing thereof are prohibited...

(3)(A) for any person to remove or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this title prior to its sale and delivery to the ultimate purchaser, or for any manufacturer or dealer knowingly to remove or render inoperative any such device or element of design after such sale and delivery to the ultimate purchaser.

(3)(B) for any person engaged in the business of repairing, servicing, selling, leasing, or trading motor vehicles or motor vehicle engines, or who operates a fleet of motor vehicles knowingly to remove or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this title following its sale and delivery to the ultimate purchaser..."

(Continued on next page.)

NOTE

- o The phrase "remove or render inoperative any device or element of design" has been generally interpreted as follows:
1. Tampering does not include the temporary removal or rendering inoperative of devices or elements of design in order to perform maintenance.
 2. Tampering could include:
 - a. Maladjustment of vehicle components such that the emission standards are exceeded.
 - b. Use of replacement parts or accessories which adversely affect the performance or durability of the motorcycle.
 - c. Addition of components or accessories that result in the vehicle exceeding the standards.
 - d. Permanently removing, disconnecting, or rendering inoperative any component or element of design of the emission control systems.

WE RECOMMEND THAT ALL DEALERS OBSERVE THESE PROVISIONS OF FEDERAL LAW. THE VIOLATION OF WHICH IS PUNISHABLE BY CIVIL PENALTIES NOT EXCEEDING \$10,000 PER VIOLATION.

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED

Federal law prohibits the following acts or the causing thereof:

- (1) The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use, or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

- Replacement of the original exhaust system or muffler with a component not in compliance with Federal regulations.
- Removal of the muffler(s) or any internal portion of the muffler(s).
- Removal of the air box or air box cover.
- Modifications to the muffler(s) or air intake system by cutting, drilling, or other means if such modifications result in increased noise levels.

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.

General Information

Table of Contents

Before Servicing	1-2
Model Identification	1-4
General Specifications	1-5
Periodic Maintenance Chart	1-8
Torque and Locking Agent	1-9
Hose Routing	1-13
Wire Routing	1-16

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:

- the possibility of accidentally turning the engine over while partially disassembled.
- sparks at electrical connections which will occur when they are disconnected.
- 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 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) 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) 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.

(8) 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.

(9) Liquid Gasket, Non-permanent Locking Agent

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 nonpermanent locking agent commonly available in North America is Loctite Lock'n Seal (Blue).

(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) Cotter Pin

Replace any cotter pins that were removed with new ones, as removal deforms and breaks them.

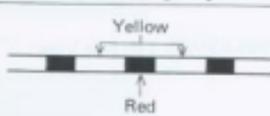
(16) Lubrication

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 (MoS_2) in the assembly of certain engine and chassis parts. Always check manufacturer recommendations before using such special lubricants.

(17) 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</p> <p>Wire strands</p> <p>Yellow</p> <p>Red</p>	Yellow/red	 <p>Yellow</p> <p>Red</p>

(18) 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.

(19) 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	

(20) 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.

14 GENERAL INFORMATION

.....
Model Identification
.....

ZG1000-A1 Left Side View:



ZG1000-A2 Left Side View:



ZG1000-A3/A3A Left Side View:



 General Specifications

Items	ZG1000-A1/A2/A3/A3A
Dimensions:	
Overall length	2,290 mm
Overall width	[ZG1000-A1] 760 mm, (A) (C) (SA) (U) 930 mm [ZG1000-A2/A3/A3A] 930 mm, (F) (N) 760 mm
Overall height	1,415 mm
Wheelbase	1,555 mm
Road clearance	140 mm
Seat height	815 mm
Dry weight	[ZG1000-A1] 258 kg, (A) (C) (SA) (U) 265 kg, (Ca) 265.5 kg [ZG1000-A2/A3/A3A] 265 kg, (F) (N) 258 kg, (Ca) 265.5 kg
Curb weight: Front	142 kg
Rear	[ZG1000-A1] 152 kg, (A) (C) (SA) (U) 160 kg, (Ca) 160.5 kg [ZG1000-A2/A3/A3A] 160 kg, (Ca) 160.5 kg
Fuel tank capacity	28.5 L
Performance:	
Climbing ability	30°
Braking distance	12.5 m from 50 km/h
Minimum turning radius	3.3 m
Engine:	
Type	4-stroke, DOHC, 4-cylinder
Cooling system	Liquid-cooled
Bore and stroke	74.0 x 58.0 mm
Displacement	997 mL
Compression ratio	10.2
Maximum horsepower	80.9 kW (110 PS) @9,500 r/min (rpm), (F) 75.1 kW (102 PS) @9,000 r/min (rpm) (UTAC's Norms), (A) 78.0 kW (106 PS) @8,500 r/min (rpm), (Ca) 52.2 kW (71 PS) @6,000 r/min (rpm), (Ca) (U) 73.6 kW (100 PS) @6,500 r/min (rpm) (DIN)
Maximum torque	98.0 N-m (10.0 kg-m, 72.3 ft-lb) @6,500 r/min (rpm), (F) —, (A) 94.1 N-m (9.6 kg-m, 69.4 ft-lb) @6,500 r/min (rpm), (Ca) 85.3 N-m (8.7 kg-m, 62.9 ft-lb) @5,500 r/min (rpm), (Ca) (A) 90.2 N-m (9.2 kg-m, 66.5 ft-lb) @6,500 r/min (rpm) (DIN)
Carburetion system	Carburetors, Keihin CVK32 x 4
Starting system	Electric starter
Ignition system	Battery and coil (transistorized)
Timing advance	Electrically advanced

1-6 GENERAL INFORMATION

Items	ZG1000-A1/A2/A3/A3A
Ignition timing	From 10° BTDC @1,000 r/min (rpm) to 35° BTDC @3,500 r/min (rpm), (Ⓐ) From 10° BTDC @1,200 r/min (rpm) to 35° BTDC @3,500 r/min (rpm), [ZG1000-A3 (Ⓒ)] From 10° BTDC @1,200 r/min (rpm) to 35° BTDC @3,500 r/min (rpm)
Spark plug	NGK DR8ES or ND X27ESR-U, (Ⓐ) (Ⓒ) NGK D8EA or ND X24ES-U, (Ⓐ) (Ⓒ) (Ⓐ) NGK D9EA or ND X27ES-U, (Ⓒ) NGK DR8ES-L or ND X24ESR-U
Cylinder numbering method	Left to right, 1-2-3-4
Firing order	1-2-4-3
Valve timing: Inlet Open Close Duration Exhaust Open Close Duration	37.5° BTDC 57.5° ABDC 275° 57.5° BBDC 37.5° ATDC 275°
Lubrication system	Forced lubrication (wet sump with cooler)
Engine oil: Grade Viscosity Capacity	SE or SF class SAE 10W40, 10W50, 20W40, or 20W50 3.7 L
Drive Train:	
Primary reduction system:	
Type	Gear
Reduction ratio	1.732 (97/56)
Clutch type	Wet multi disc
Transmission: Type	6-speed, constant mesh, return shift
Gear ratios: 1st 2nd 3rd 4th 5th 6th	3.071 (43/14) 2.055 (37/18) 1.590 (35/22) 1.333 (32/24) 1.153 (30/26) 0.965 (28/29)
Final drive system: Type	Shaft drive
Reduction ratio	2.708 (16/21 x 32/9)
Overall drive ratio	4.530 @ Top gear
Final gear case oil: Type	API GL-5 Hypoid gear oil SAE90 (above 5°C) SAE80 (below 5°C)
Capacity	220 mL

Items	ZG1000-A1/A2/A3/A3A
Frame:	
Type	Tubular, diamond
Caster (rake angle)	28.5°
Trail	123 mm
Front tire:	Type
	Size
	110/80 VR 18 or 110/80 V18
Rear tire:	Type
	Size
	150/80 VR 16 or 150/80 VB 16
Front suspension:	Type
	Wheel travel
	140 mm
Rear suspension:	Type
	Wheel travel
	140 mm
Brake type:	Front
	Rear
	Dual disc
	Single disc
Electrical Equipment:	
Battery	12 V 18 Ah
Headlight:	Type
	Bulb
	12 V 60/55 W
Tail/brake light	12 V 5/21 W x 2, (A) (S) (U) 12 V 8/27 W x 2
Alternator:	Type
	Rated output
	28.6 A @6,000 r/min (rpm), 14 V
Voltage regulator:	Type
	Short-circuit

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

(A) : Australian Model

(C) : Canadian Model

(CA) : California Model

(F) : French Model

(F) : Finnish Model

(I) : Italian Model

(N) : Norwegian Model

(SA) : South African Model

(S) : Swedish Model

(S) : Swiss Model

(U) : US Model

(W) : West German Model

1-8 GENERAL INFORMATION

Periodic Maintenance Chart

The scheduled maintenance must be done in accordance with this chart to keep the motorcycle in good running condition. The initial maintenance is vitally important and must not be neglected.

OPERATION	FREQUENCY	Whichever comes first ↓ Every	ODOMETER READING							
			800 km	5,000 km	10,000 km	15,000 km	20,000 km	25,000 km	30,000 km	See Page
Spark plug -- clean			•	•	•	•	•	•	•	15-23
Spark plug -- check *				•	•	•	•	•	•	15-23
Valve clearance -- check *				•	•	•	•	•	•	4-19
Air suction valve (Swi, US) -- check *			•	•	•	•	•	•	•	4-7
Air cleaner element -- clean				•	•	•	•	•	•	2-13
Air cleaner element -- replace		5 cleanings								2-14
Throttle grip play -- check *			•	•	•	•	•	•	•	2-6
Idle speed -- check *			•	•	•	•	•	•	•	2-7
Engine vacuum synchronization -- check *			•	•	•	•	•	•	•	2-7
Fuel system -- check *										2-9
Evaporative emission control system (Cal) -- check *			•	•	•	•	•	•	•	2-16
Engine oil -- change		year	•	•	•	•	•	•	•	6-6
Oil filter -- replace			•	•	•	•	•	•	•	6-6
Radiator hoses, connections -- check *		year	•	•	•	•	•	•	•	3-10
Coolant -- change		2 years								3-4
Final gear case oil level -- check *				•	•	•	•	•	•	10-5
Final gear case oil -- change			•							10-5
Propeller shaft joint -- lubricate					•					10-14
Fuel hose -- replace		4 years								
Clutch fluid level -- check *		month	•	•	•	•	•	•	•	5-5
Clutch fluid -- change		2 years								5-5
Clutch hose and pipe -- replace		4 years								5-7
Clutch master cylinder cup and dust seal -- replace		2 years								5-7
Clutch slave cylinder piston seal -- replace		2 years								5-8
Brake lining or pad wear -- check *			•	•	•	•	•	•	•	11-7
Brake fluid level -- check *		month	•	•	•	•	•	•	•	11-11
Brake fluid -- change		2 years								11-12
Brake hose -- replace		4 years								11-14
Brake master cylinder cup and dust seal -- replace		2 years								11-8
Caliper piston seal and dust seal -- replace		2 years								11-6
Brake light switch -- check *			•	•	•	•	•	•	•	15-35
Steering -- check *			•	•	•	•	•	•	•	13-4
Steering stem bearing -- lubricate		2 years								13-6
Front fork oil -- change										12-5
Tire wear -- check *				•	•	•	•	•	•	9-10
Swing arm pivot, uni-trak linkage -- lubricate										12-9
Battery electrolyte level -- check *		month	•	•	•	•	•	•	•	15-9
General lubrication -- perform			•	•	•	•	•	•	•	16-8
Nut, bolt, and fastener tightness -- check *			•	•	•	•	•	•	•	1-9
Coolant filter -- lean		year								2-13

†: For higher odometer readings, repeat at the frequency interval established here.

*: Replace, add, adjust, clean, or torque if necessary.

(Cal) : California Model

(US) : U.S.A. Model

(Swi) : Switzerland -- ZG1000-A3-- Model

Torque and Locking Agent

The following tables list the tightening torque for the major fasteners requiring use of a non-permanent locking agent or liquid gasket.

Letters used in the "Remarks" column mean:

L : Apply a non-permanent locking agent to the threads.

LG : Apply liquid gasket to the threads.

SS : Apply silicone sealant to the threads.

O : Apply an oil to the threads and seated surface.

S : Tighten the fasteners following the specified sequence.

St : Stake the fasteners to prevent loosening.

Fastener	Torque			Remarks
	N-m	kg-m	ft-lb	
Cooling System:				
Fan Switch	27	2.8	20	
Water Temperature Sensor	7.8	0.80	69 in-lb	SS
Bleeder Bolt	7.8	0.80	69 in-lb	
Drain Plugs	7.8	0.80	69 in-lb	
Engine Top End:				
Cylinder Head Cover Bolts	9.8	1.0	87 in-lb	
Upper Chain Guide Mounting Bolts	9.8	1.0	87 in-lb	
Rear Chain Guide Mounting Bolt	20	2.0	14.5	L
Chain Tensioner Mounting Bolts	9.8	1.0	87 in-lb	
Camshaft Sprocket Bolts	15	1.5	11.0	L
Valve Clearance Adjusting Screw Locknuts	25	2.5	18.0	
Rocker Shaft (Small)	9.8	1.0	87 in-lb	
Main Oil Pipe Banjo Bolts	25	2.5	18.0	
Head Oil Pipe Bolts	9.8	1.0	87 in-lb	
Camshaft Cap Bolts	12	1.2	104 in-lb	S
Cylinder Head Bolts (10 mm Dia.)	39	4.0	29	S
When reusing any one of the following parts:				
Bolt	36	3.7	27	S
Washer				
Cylinder Head				
Cylinder Head Bolts (11 mm Dia.)	51	5.2	38	S
When reusing any one of the following parts:				
Bolt	48	4.9	35	S
Washer				
Cylinder Head				
Cylinder Head Bolt (6 mm Dia.)	9.8	1.0	87 in-lb	
Cylinder Bolts	15	1.5	11.0	
Drain Plugs	7.8	0.80	69 in-lb	
Cylinder Head Mounting Bolts (10 mm Dia.)	54	5.5	40	
Exhaust Pipe Mounting Bolts				L

1-10 GENERAL INFORMATION

Fastener	Torque			Remarks
	N-m	kg-m	ft-lb	
Clutch:				
Clutch Hose Banjo Bolts	29	3.0	22	
Clutch Lever Pivot Nut	5.9	0.60	52 in-lb	
Clutch Master Cylinder Clamp Bolts	8.8	0.90	78 in-lb	
Clutch Hose Joint	18	1.8	13.0	
Clutch Slave Cylinder Bleeder Bolt	7.8	0.80	69 in-lb	
Clutch Spring Retainer Bolt	11	1.1	95 in-lb	
Clutch Hub Nut	130	13.5	98	
Right Cover Bolts				L*1
Right Cover Damper Bolts				L
Engine Lubrication System:				
Oil Passage Plug	18	1.8	13.0	
Lower Crankcase Plug (25 mm Dia.)	18	1.8	13.0	
Crankcase Outside Oil Pipe Banjo Bolts	25	2.5	18.0	
Oil Pump Gear Holder Screws				L
Oil Pump Mounting Bolts	12	1.2	104 in-lb	L
Oil Pump Relief Valve				L
Main Oil Pipe Banjo Bolt	25	2.5	18.0	
Oil Pressure Switch	15	1.5	11.0	L
Oil Cooler Banjo Bolts (Oil Cooler Side)	25	2.5	18.0	
Oil Cooler Banjo Bolts (Oil Pan Side)	34	3.5	25	
Oil Pan Bolts				L*2
Oil Filter Bolt	20	2.0	14.5	
Engine Removal/Installation:				
Engine Mounting Nuts	54	5.5	40	
Crankshaft/Transmission:				
Connecting Rod Big End Cap Nuts	-	-	-	See p. 8-10.
Timing Rotor Bolt	25	2.5	18.0	
Alternator Shaft Left End Bolt	25	2.5	18.0	
Alternator Coupling Brades Bolt	9.8	1.0	87 in-lb	
Alternator Shaft Right End Nut	59	6.0	43	
Alternator Shaft Chain Tensioner Mounting Bolts				L
Alternator Shaft Chain Guide Bolts				L
One-way Clutch Bolts	12	1.2	104	L
Balancer Shaft Guide Pin Plate Bolt				L
Balancer Shaft Clamp Lever Mounting Bolt				L
Crankshaft Main Bearing Cap Bolts	34	3.5	25	
Crankshaft Bolts (8 mm Dia.)	27	2.8	20	
Crankshaft Bolts (6 mm Dia.)	15	1.5	11.0	
Shift Drum Ball Bearing Holder Allen Bolts				L
Shift Drum Pin Plate Screw				L
External Shift Mechanism Return Spring Pin				L
Shift Pedal Pivot Bolt	25	2.5	18.0	L
Shift Pedal Bracket Bolt (14 mm Dia.)	78	8.0	58	
Drive Shaft Left Side Damper Cam Nut	225	23.0	166	

Fastener	Torque			Remarks
	N-m	kg-m	ft-lb	
Wheels/Tires:				
Front Axle Nut	88	9.0	65	
Tire Air Valve Nuts	1.5	0.15	13 in-lb	
Rear Axle Nut	110	11.0	80	
Final Drive:				
Front Drive Gear Nut	195	20.0	145	St
Front Driven Gear Bolt	120	12.0	87	St
Front Driven Gear Bearing Housing Bolts	9.8	1.0	87	
Front Drive Gear Cap Bolts	9.8	1.0	87	
Ring Gear Mounting Bolts (8 mm Dia.)	24	2.4	17.5	
Ring Gear Mounting Bolt (10 mm Dia.)	34	3.5	25	
Final Gear Case Mounting Studs				L
Final Gear Case Oil Pipe Banjo Bolts	12	1.2	104 in-lb	
Final Gear Case Mounting Nuts	29	3.0	22	
Pinion Gear Nut	120	12.0	87	St
Drive Shaft Left Side Damper Cam Nut	225	23.0	166	
Final Gear Case Oil Drain Bolt	17	1.7	12.0	
Brakes:				
Brake Lever Pivot Nut	5.9	0.60	52 in-lb	
Front Master Cylinder Clamp Bolts	8.8	0.90	78 in-lb	
Brake Hose Banjo Bolts	25	2.5	18.0	
Bleed Valves	7.8	0.80	69 in-lb	
Front Brake Caliper Mounting Bolts	32	3.3	24	
Disc Mounting Bolts	23	2.3	16.5	
Torque Link Nuts	29	3.0	22	
Rear Master Cylinder Mounting Bolts	23	2.3	16.5	
Rear Brake Caliper Mounting Bolts	34	3.5	25	
Suspension:				
Front Fork:				
Top Plugs	23	2.3	16.5	
Upper Fork Clamp Bolts	16	1.6	11.5	
Lower Fork Clamp Bolts	21	2.1	15.0	
Drain Screws	1.5	0.15	13 in-lb	LG
Bottom Allen Bolts: A1 ~ A8	2.0	14.5		
Axle Clamp Bolts: On and after A9	35	3.6	26	
Rear Shock Absorber:				
Upper Shock Absorber Bolt	39	4.0	29	
Lower Shock Absorber Bolt	59	6.0	43	
Rocker Arm Bolt/Tie-rod Bolts	59	6.0	43	
Air Valve Hose End	12	1.2	104	
Damper Adjusting Rod				L
Swing Arm Pivot Bolt Mounting Bolts	23	2.3	16.5	
Swing Arm Pivot Bolt Locknut	52	5.3	38	
Swing Arm Pivot Bolt	27	2.8	20	
Steering:				
Steering Stem Head Nut	39	4.0	29	
Handlebar Holder Mounting Bolts	19	1.9	13.5	
Handlebar Clamp Bolts	19	1.9	13.5	

1-12 GENERAL INFORMATION

Fastener	Torque			Remarks
	N-m	kg-m	ft-lb	
Electrical System:				
Alternator Mounting Bolts	25	2.5	18.0	L
Alternator Coupling Brades Bolt	9.8	1.0	87 in-lb	
Starter Motor Lead Terminal	4.9	0.50	43 in-lb	
Pickup Coil Cover Bolts				L*3
Spark Plugs	14	1.4	10.0	
Timing Rotor Bolt	25	2.5	18.0	
Alternator Cover Cap Nut	4.9	0.50	43	
Fan Switch	27	2.8	20	
Water Temperature Sensor	7.8	0.80	69 in-lb	SS
Neutral Switch	15	1.5	11.0	
Oil Pressure Switch	15	1.5	11.0	L
Side Stand Switch Mounting Bolts				L

*1 : Four of them require non-permanent locking agent (see Right Cover Installation Note).

*2 : Three of them require non-permanent locking agent (see Oil Pan Installation Notes).

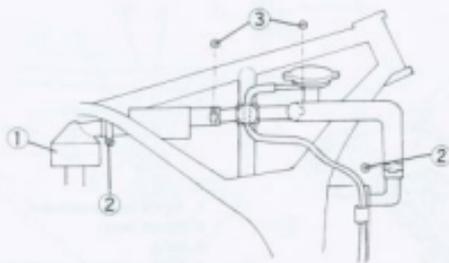
*3 : Two of them require non-permanent locking agent (see Pickup Coil Removal/Installation Notes).

This table relating tightening torque to thread diameter, lists the basic torque for bolts and nuts. Use this table for only the bolts and nuts which do not require a specific torque value.

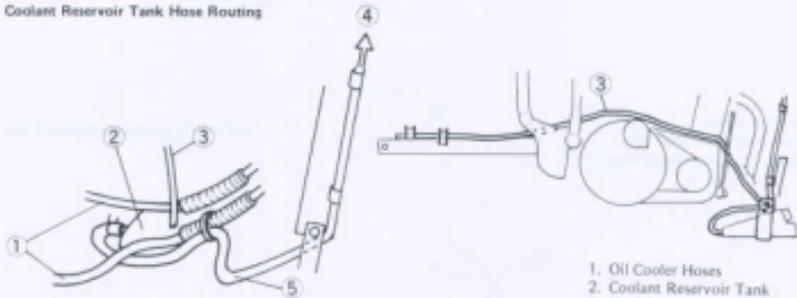
General Fasteners

Threads dia. (mm)	Torque		
	N-m	kg-m	ft-lb
5	3.4 - 4.9	0.35 - 0.50	30 - 43 in-lb
6	5.9 - 7.8	0.60 - 0.80	52 - 69 in-lb
8	14 - 19	1.4 - 1.9	10.0 - 13.5
10	25 - 34	2.6 - 3.5	19.0 - 25
12	44 - 61	4.5 - 6.2	33 - 45
14	73 - 98	7.4 - 10.0	54 - 72
16	115 - 155	11.5 - 16.0	83 - 115
18	165 - 225	17.0 - 23	125 - 165
20	225 - 325	23 - 33	165 - 240

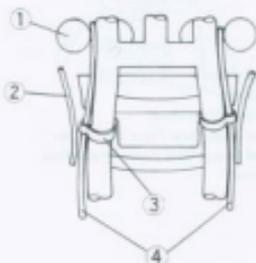
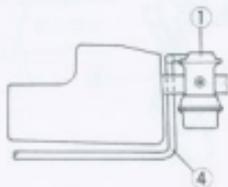
Hose Routing

Radiator Water Hose Routing

1. Thermostat Housing
2. The bolt head faces outward.
3. The bolt head faces upward.

Coolant Reservoir Tank Hose Routing

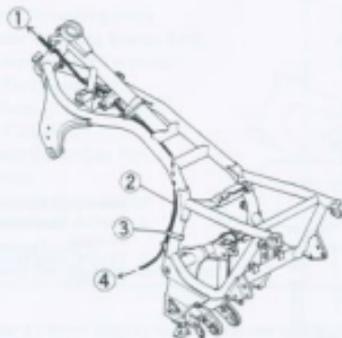
1. Oil Cooler Hoses
2. Coolant Reservoir Tank
3. Hose
4. To the radiator cap.
5. Hose

Carburetor Air Breather Hose Routing**Other than Californian Model****Californian Model**

1. Carburetor
 2. Side Cover
 3. Clamp
 4. Air Breather Hose
- *: Route the hoses between #2 and #3 carburetors.

1-14 GENERAL INFORMATION

Clutch Hose

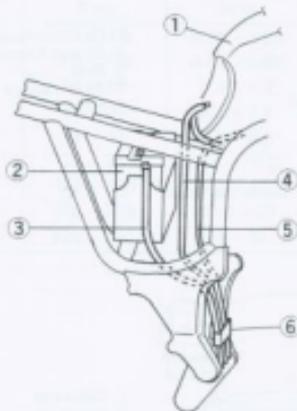


1. To the master cylinder.
2. Clutch Hose
3. Strap
4. To the clutch slave cylinder.

Battery Vent Hose

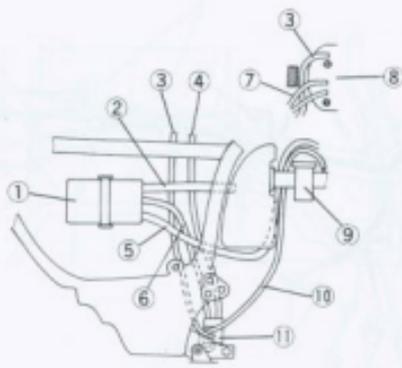
Fuel Tank Over Flow Vent Hose

Fuel Gauge Over Flow Drain Hose



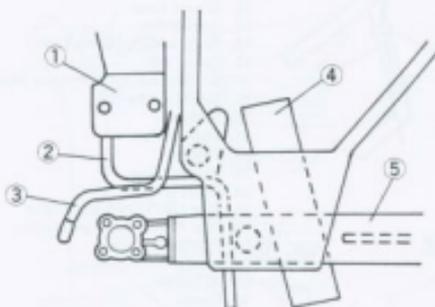
1. Fuel Tank
2. Battery
3. Battery Vent Hose
4. Fuel Tank Over Flow Vent Hose
5. Fuel Gauge Over Flow Drain Hose
6. Clamp

Evaporative Emission Control System Hose



1. Canister
2. Purge Hose (Green)
3. Fuel Return Hose (Red)
4. Breather Hose (Blue)
5. Breather Hose (Yellow)
6. Breather Hose (Blue)
7. Water Drain Hose
8. Fuel Tank
9. Carburetor
10. Vacuum Hose (White)
11. Liquid/Vapor Separator

Air Filter Housing Water Drain Hose

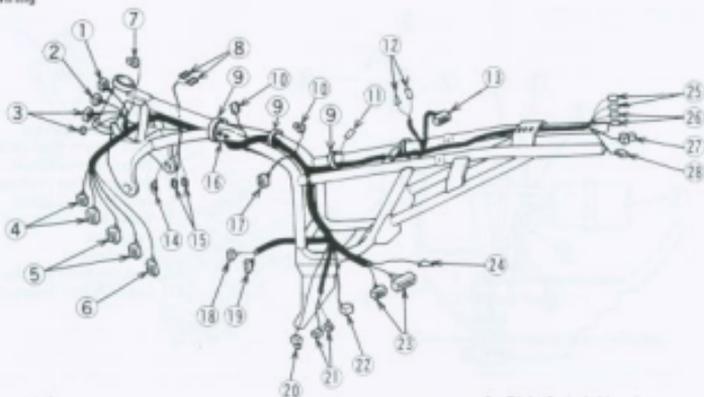


1. Air Filter Housing
2. Water Drain Hose
3. Clutch Oil Pipe
4. Rear Shock Absorber
5. Swing Arm

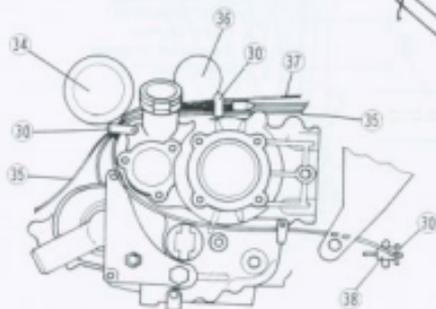
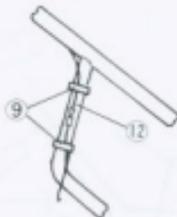
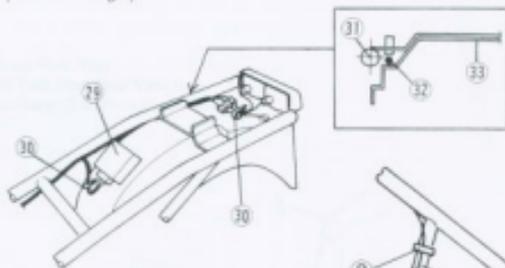
1-16 GENERAL INFORMATION

Wire Routing

Electrical Wiring



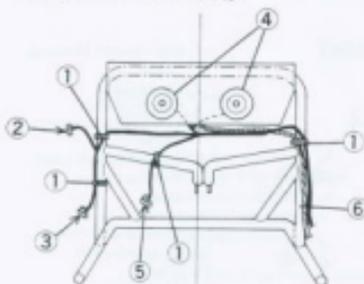
(viewed from right)



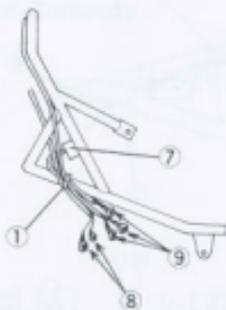
1. Right Switch Housing
2. Ignition Switch
3. Left Switch Housing
4. Meter Assembly
5. Front Harness
6. Reserve Lighting Device
7. Cooling Fan
8. Ignition Coil
9. Strap
10. Coolant Temperature Sensor
11. Battery (-)
12. Rear Brake Light Switch
13. IC Ignitor
14. Ground Lead
15. Ignition Coil
16. Position Mark (White Tape)
17. Pickup Coil
18. Neutral Switch/Oil Pressure Switch
19. Side Stand Switch
20. Alternator
21. Starter Relay
22. Fuse Box
23. Junction Box
24. Batter (+)
25. Rear Left Turn Signal Lights
26. Rear Right Turn Signal Lights
27. Tail/Brake Lights
28. License Plate Light
29. IC Ignitor
30. Clamp
31. Frame
32. Harness
33. Rear Fender
34. Alternator
35. Pickup Coil Lead
36. Starter Motor
37. Alternator Lead
38. Side Stand Switch

(viewed from front)

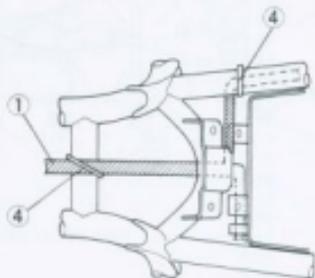
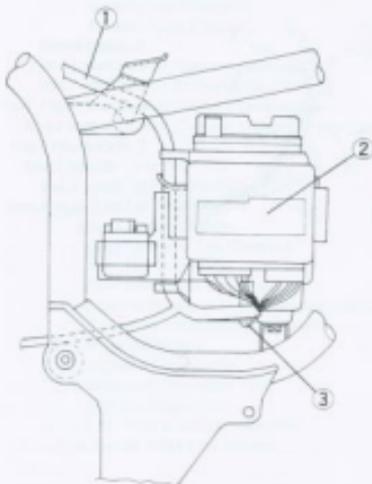
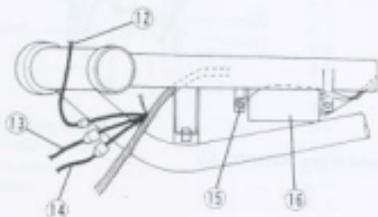
ZG1000-A1 ~ ZG1000-A8



(viewed from left)

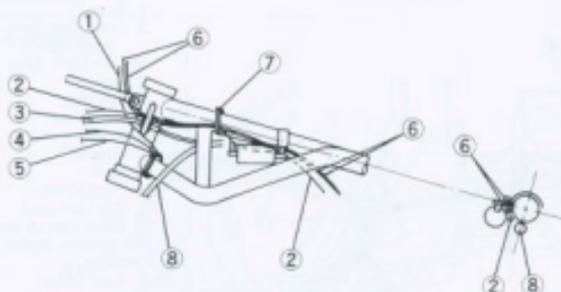


1. Strap
2. Front Right Turn Signal Light
3. Turn Signal Relay
4. Horns
5. Headlight
6. Meter Lead
7. Reserve Lighting Device
8. Meter
9. Front Harness
10. City Light Lead (Other than US and Canadian Model)
11. Clamp
12. Right Switch Housing Lead
13. Left Switch Housing Lead
14. Ignition Switch Lead
15. Ground Lead
16. Ignition Coil

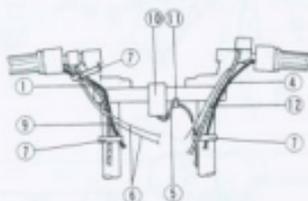


1. Harness
2. Junction Box
3. Clamp
4. Strap

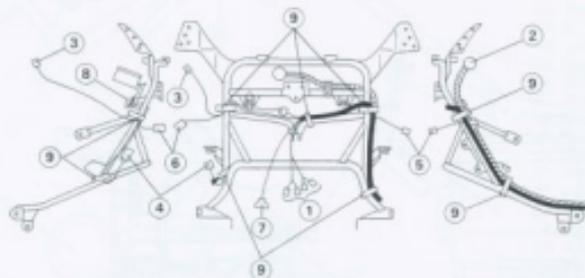
1-18 GENERAL INFORMATION



1. Right Switch Housing Lead
2. Choke Cable
3. Clutch Oil Pipe
4. Left Switch Housing Lead
5. Ignition Switch Lead
6. Throttle Cables
7. Strap
8. Harness
9. Front Brake Hose
10. Ignition Switch
11. Clamp
12. Clutch Hose



On and after 'ZG1000-A9



1. Horn Leads
2. Clock Lead
3. Meter Lead
4. Front Right Turn Signal Lead
5. Front Left Turn Signal Lead
6. Relay Lead
7. Headlight Lead
8. Clamp
9. Strap

Fuel System

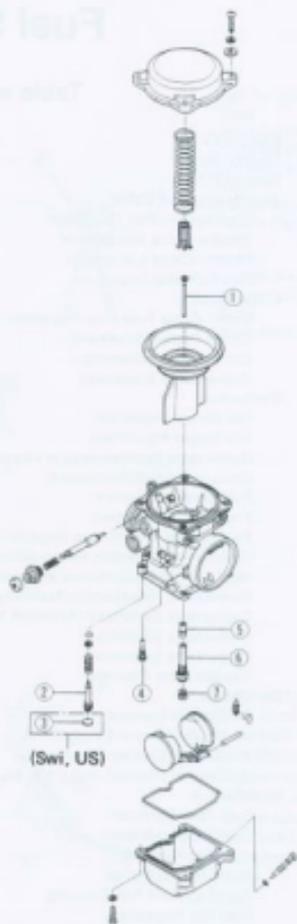
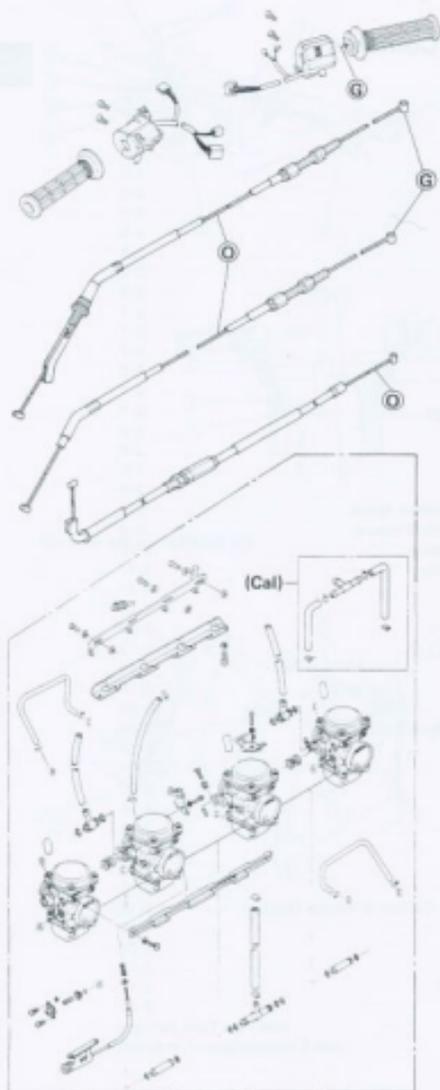
Table of Contents

2

Exploded View	2-2
Specifications	2-4
Special Tools	2-4
Throttle Grip and Cable	2-5
Throttle Grip Play Inspection	2-5
Throttle Cable Adjustment	2-5
Throttle Cable Lubrication	2-6
Throttle Cable Inspection	2-6
Choke Cable	2-6
Choke Cable Free Play Inspection	2-6
Choke Cable Adjustment	2-6
Choke Cable Lubrication	2-7
Choke Cable Inspection	2-7
Carburetors	2-7
Idle Speed Inspection	2-7
Idle Speed Adjustment	2-7
Carburetors Synchronization Inspection	2-7
Carburetors Synchronization	2-8
Fuel Level Inspection	2-8
Fuel Level Adjustment	2-9
Fuel System Cleanliness Inspection	2-9
Carburetors Assembly Removal/Installation Notes	2-9
High Altitude Performance Adjustment(US model)	2-9
Carburetors Disassembly/Assembly Notes	2-10
Carburetors Separation/Assembly Notes	2-11
Carburetors Cleaning	2-11
Carburetors Inspection	2-12
Coolant Filter Cleaning	2-13
Air Cleaner	2-13
Air Cleaner Element Removal	2-13
Air Cleaner Element Installation	2-13
Air Cleaner Element Cleaning	2-13
Air Cleaner Element Inspection and Replacement	2-14
Fuel Tank	2-14
Fuel Tank Removal	2-14
Fuel Tank Installation	2-15
Fuel Tap Removal	2-15
Fuel Tap Installation	2-15
Fuel Tank and Tap Cleaning	2-16
Fuel Tap Inspection	2-16
Fuel Tank and Cap Inspection	2-16
Evaporative Emission Control System(US California Vehicle Only)	2-16
Parts Removal/Installation Notes	2-16
Hose Inspection	2-16
Separator Inspection	2-16
Separator Operation Test	2-17
Canister Inspection	2-17
Fuel Tank and Cap Inspection	(see Fuel Tank section)
Fuel Gauge and Lever Sensor	(see Electrical System chapter)

2-2 FUEL SYSTEM

Exploded View



1. Jet Needle
2. Pilot Screw
3. Plug
4. Pilot Jet
5. Needle Jet
6. Needle Jet Holder
7. Main Jet

Cal : California model

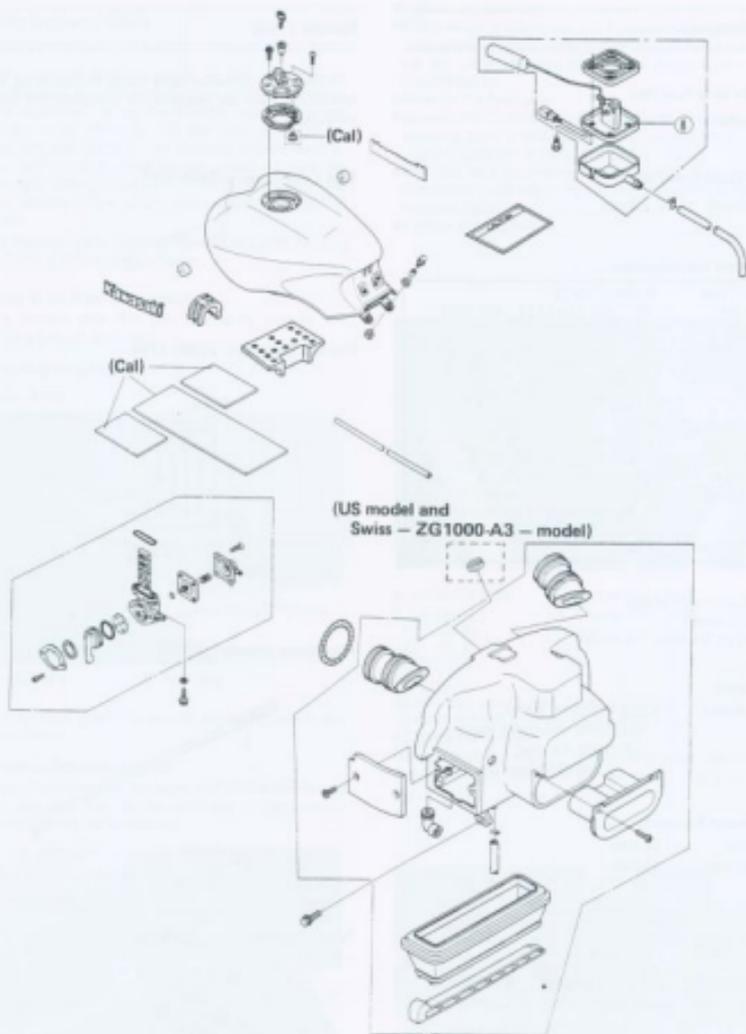
Swi : Swiss model

US : US model

8. Fuel Level Sensor

O : Apply oil.

G : Apply grease.



2.4 FUEL SYSTEM

Specifications

Throttle Grip Free Play

Standard: 2 – 3 mm

Choke Cable Free Play

Standard: 2 – 3 mm

Carburetor Specifications

Make/Type	Keihin/CV
Main Jet	125,  130,  130
Main Air Jet	130
Air Cut Valve	
Air Jet	#85
Jet Needle	N52M
Pilot Jet	35 [32]
Pilot Air Jet	85
Pilot Screw	2 turns out,  \rightarrow ,  1 1/4, [ZG1000-A3 ] 1 1/4
Starter Jet	55,  45
Fuel Level	-0.5 mm [1.5 mm (above) ~ 0.5 mm (below) from bottom edge of carburetor body]
Float Height	17 mm

 : Californian model

 : US model

 : High Altitude (US model)

Idle Speed

Standard: 1,000 \pm 50 r/min (rpm),
 1,200 \pm 50 r/min (rpm)
[ZG1000-A3 ] 1,200 \pm 50 r/min (rpm)

Air Cleaner Element

Grade: SE class
Viscosity: SAE30

NOTE

The vacuum gauge & tachometer (P/N 57001-1291) can be used instead of the vacuum gauge set (P/N 57001-1198).

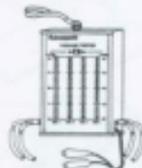
Special Tools

Along with common hand tools, the following more specialized tools are required for complete fuel system service.

Fuel Level Gauge: 57001-1017



Vacuum Gauge Set: 57001-1198



Pilot Screw Adjuster: 57001-1239



Pressure Cable Luber: K56019-021



Product: 1989-2000 Kawasaki
Full Download: <https://www.repairmanualsonline.com/kawasaki-1000gr-motorcycle>

Sample of manual. Download
<https://www.repairmanualsonline.com/kawasaki-1000gr-motorcycle>