

SHOP MANUAL



KZ Series

Unit Conversion Table

cc	x	.0610	=	cu in
cc	x	.02816	=	fl oz (imp)
cc	x	.03381	=	fl oz (U S)
cu in	x	16.39	=	cc
fl oz (imp)	x	35.51	=	cc
fl oz (U S)	x	29.57	=	cc
ft-lbs	x	12	=	in-lbs
ft-lbs	x	.1383	=	kg-m
gal (imp)	x	4.546	=	liters
gal (imp)	x	1.201	=	gal (U S)
gal (U S)	x	3.7853	=	liters
gal (U S)	x	.8326	=	gal (imp)
grams	x	.03527	=	oz
in	x	25.40	=	mm
in-lbs	x	.0833	=	ft-lbs
in-lbs	x	.0115	=	kg-m
kg	x	2.2046	=	lb
kg	x	35.274	=	oz
kg/cm ²	x	14.22	=	lbs/sq in
kg-m	x	7.233	=	ft-lbs
kg-m	x	86.796	=	in-lbs
km	x	.6214	=	miles
lb	x	.4536	=	kg
lb/sq in	x	.0703	=	kg/cm ²
liter	x	28.16	=	fl oz (imp)
liter	x	33.81	=	fl oz (U S)
liter	x	.8799	=	qt (imp)
liter	x	1.0567	=	qt (U S)
meter	x	3.281	=	ft
mile	x	1.6093	=	km
mm	x	.03937	=	in
oz	x	28.35	=	grams
qt (imp)	x	1.1365	=	liters
qt (imp)	x	1.201	=	qt (U S)
qt (U S)	x	.9463	=	liters
qt (U S)	x	.8326	=	qt (imp)
°C → °F:		$\frac{9(^{\circ}\text{C} + 40)}{5}$	=	°F
°F → °C:		$\frac{5(^{\circ}\text{F} + 40)}{9}$	=	°C

List of Abbreviations

ABDC	.....	after bottom dead center
ATDC	.....	after top dead center
BBDC	.....	before bottom dead center
BDC	.....	bottom dead center
BTDC	.....	before top dead center
cc	.....	cubic centimeters
cu in	.....	cubic inches
fl oz	.....	fluid ounces
ft	.....	foot, feet
ft-lbs	.....	foot-pounds
gal	.....	gallon, gallons
hp	.....	horsepower
in	.....	inch, inches
in-lbs	.....	inch-pounds
kg	.....	kilogram, kilograms
kg/cm ²	.....	kilograms per square centimeter
kg-m	.....	kilogram-meters
km	.....	kilometer
kph	.....	kilometers per hour
lb, lbs	.....	pound, pounds
lbs/sq in	.....	pounds per square inch
ℓ	.....	liter
m	.....	meter, meters
mi	.....	mile, miles
mm	.....	millimeters
mph	.....	miles per hour
oz	.....	ounce, ounces
psi	.....	pounds per square inch
qt	.....	quart, quarts
rpm	.....	revolutions per minute
sec	.....	second, seconds
SS	.....	standing start
TDC	.....	top dead center
"	.....	inch, inches

SHOP MANUAL



KZ Series

Foreword

This manual is designed primarily for use in a properly equipped shop by motorcycle mechanics although it contains enough detail and basic information to make it useful to the motorcycle user who desires to carry out his own basic maintenance and repair work. Since a certain basic knowledge of mechanics, the proper use of tools, and workshop procedures must be understood in order to carry out maintenance and repair satisfactorily, the adjustments, maintenance, and repair should be carried out only by qualified mechanics whenever the owner has insufficient experience or has doubts as to his ability to do the work so that the motorcycle can be operated safely.

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

This manual is divided into the following four sections:

(1) Adjustment

The adjustment section gives the procedure for all adjustments which may become necessary periodically and which do not involve major disassembly.

(2) Disassembly

This section shows the best method for the removal, disassembly, assembly, and installation which are necessary for maintenance and repair. Since assembly and installation are usually the reverse of disassembly and removal, assembly and installation are not explained in detail in many cases. Instead, assembly notes and installation notes are provided to explain special points.

(3) Maintenance and Theory of Operation

The procedures for inspection and repair are described in detail in this section. An explanation on the structure and functioning of each of the major parts and assemblies is given to enable the mechanic to understand better what he is doing.

(4) Appendix

The appendix in the back of this manual contains miscellaneous information, including a special tool list, a torque table, a table for periodic maintenance, and a troubleshooting guide.

Since this Shop Manual is based on the first production units of the KZ400, there may be minor discrepancies between the actual vehicle and the illustrations and text in this manual. Major changes and additions pertaining to later year units will be explained in a supplement following the appendix or by a new edition.

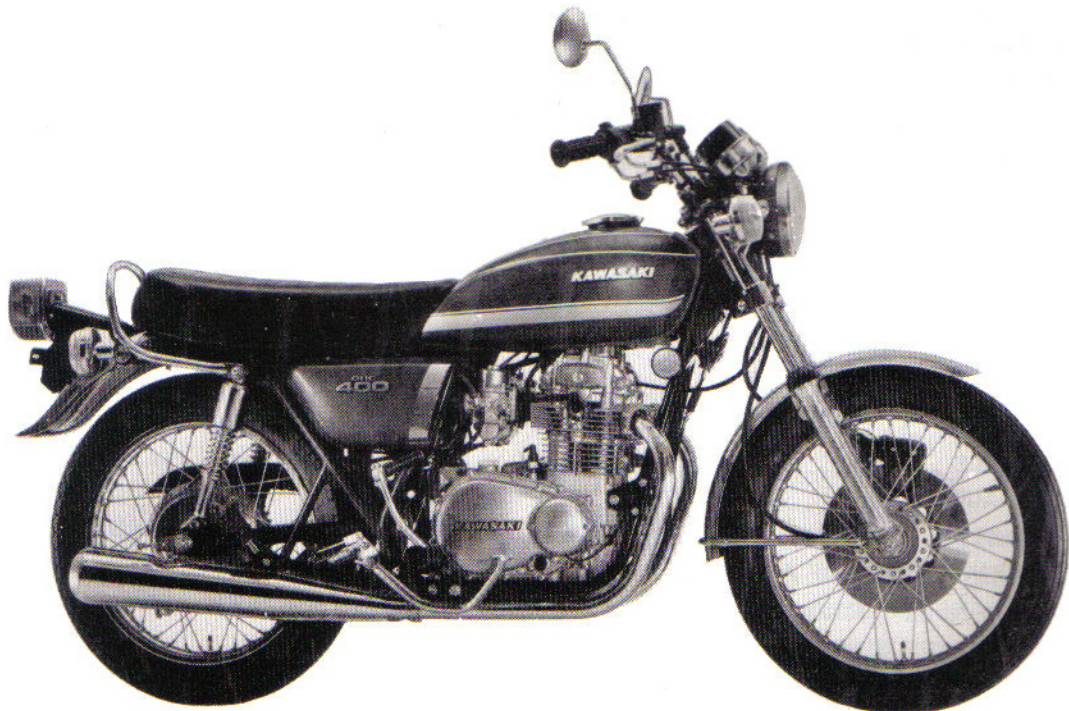
Places marked by an asterisk (*) indicate where improvements have been made in the text over the original edition or where the information only applies to a newer model.



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Specifications

Dimension

Overall length	2,080 mm
Overall width	810 mm
Overall height	1,120 mm
Wheelbase	1,360 mm
Road clearance	125 mm
Dry weight	170 kg
Fuel tank capacity	14 ℓ

Performance

SS ¼ mile	14.8 sec
Climbing ability	24°
Braking distance	15 m @50kph
Minimum turning radius	2.3 m

Engine

Type	SOHC 2 cylinder, 4 stroke, air-cooled	
Bore and stroke	64 x 62 mm	
Displacement	398 cc	
Compression ratio	9.0 : 1	
Maximum horsepower	35 HP @8,500 rpm	
Maximum torque	3.17 kg-m @7,500 rpm	
Valve timing		
Inlet	Open	26° BTDC
	Close	74° ABDC
	Duration	280° Total
Exhaust	Open	68.5° BBDC
	Close	31.5° ATDC
	Duration	280° Total
Carburetors	Keihin CVB 36 x 2	
Lubrication system	Forced lubrication (wet sump)	
Engine oil	SE class SAE 10W40	
Engine oil capacity	Less filter	2.6 ℓ
	Total incl. filter	3.0 ℓ
Starting system	Electric & kick	
Ignition system	Battery & coil	
Ignition timing	From 15° BTDC @1,500 rpm to 40° BTDC @2,670 rpm	
Spark plugs	ND W-24ES or NGK B-8ES	

Transmission

Type	5-speed, constant mesh, return shift	
Clutch	Wet, multi disc	
Gear ratio: 1st	2.571 (36/14)	
2nd	1.684 (32/19)	
3rd	1.273 (28/22)	
4th	1.040 (26/25)	
5th	0.889 (24/27)	
Primary reduction ratio	2.435 (56/23)	
Final reduction ratio	3.000 (45/15)	
Overall drive ratio	6.493 (5th)	

6 SPECIFICATIONS**Electrical Equipment**

Generator (Dynamo)	Nippon Denso 021000-3560
Regulator	Nippon Denso 026000-2490
Ignition coil	Nippon Denso 029700-3430
Battery	Yuasa 12N12A-4A-1 12V 12AH
Starter	Mitsuba SM242
Headlight type	Sealed Beam
Headlight	12V 50/35W
Tail/Brake light	12V 8/27W
Speedometer light	12V 3.4W x 2
Tachometer light	12V 3.4W x 2
Neutral indicator light	12V 3.4W
High beam indicator light	12V 1.7W
Turn signal lights	12V 23W x 4
Turn signal indicator light	12V 3.4W
Oil pressure indicator light	12V 3.4W
Brake light failure indicator light	12V 3.4W
Horn	12V 2.5A

Frame

Type	Tubular, double-cradle
Steering angle	41° to either side
Castor	63°
Trail	102 mm
Tire size	Front 3.25S-18 4PR, ribbed tread
	Rear 3.50S-18 4PR, universal tread
Suspension	Front Telescopic fork
	Rear Swing arm
Suspension stroke	Front 135 mm
	Rear 80 mm
Front fork oil capacity (each fork)	150~ 170 cc
Front fork oil type	SAE 5W20

Brakes

Type	Front Disc brake
	Rear Internal expansion, leading-trailing
Rear brake drum inside dia. and width	180 x 30 mm
Disc diameter	277 mm

Specifications subject to change without notice.