FOREWORD

This manual contains an introductory description on the SUZUKI GSX1300R and procedures for its inspection/service and overhaul of its main components.
Other information considered as generally known is not included.
Read the GENERAL INFORMATION section to familiarize yourself with the motorcycle and its maintenance. Use this section as well as other sections to use as a guide for proper inspection and service.
This manual will help you know the motorcycle better so that you can assure your customers of fast and reliable service.

- *This manual has been prepared on the basis of the latest specifications at the time of publication. If modifications have been made since then, differences may exist between the content of this manual and the actual motorcycle.*
- *Illustrations in this manual are used to show the basic principles of operation and work procedures. They may not represent the actual motorcycle exactly in detail.*
- *This manual is written for persons who have enough knowledge, skills and tools, including special tools, for servicing SUZUKI motorcycles. If you do not have the proper knowledge and tools, ask your authorized SUZUKI motorcycle dealer to help you.*

⚠ WARNING

Inexperienced mechanics or mechanics without the proper tools and equipment may not be able to properly perform the services described in this manual. Improper repair may result in injury to the mechanic and may render the motorcycle unsafe for the rider and passenger.

IMPORTANT

All street-legal Suzuki motorcycles with engine displacement of 50 cc or greater are subject to Environmental Protection agency emission regulations. These regulations set specific standards for exhaust emission output levels as well as particular servicing requirements. This manual includes specific information required to properly inspect and service GSX1300R in accordance with all EPA regulations. It is strongly recommended that the chapter on Emission Control, Periodic Servicing and Carburetion be thoroughly reviewed before any type of service work is performed.
Further information concerning the EPA emission regulations and U.S. Suzuki's emission control program can be found in the U.S. SUZUKI EMISSION CONTROL PROGRAM MANUAL/SERVICE BULLETIN.

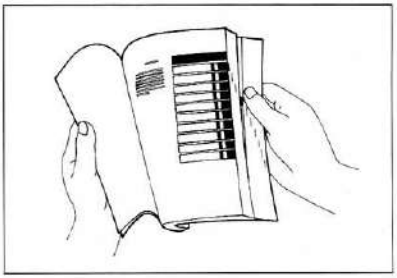
SUZUKI MOTOR CORPORATION
Motorcycle Service Department

GROUP INDEX

HOW TO USE THIS MANUAL

TO LOCATE WHAT YOU ARE LOOKING FOR:

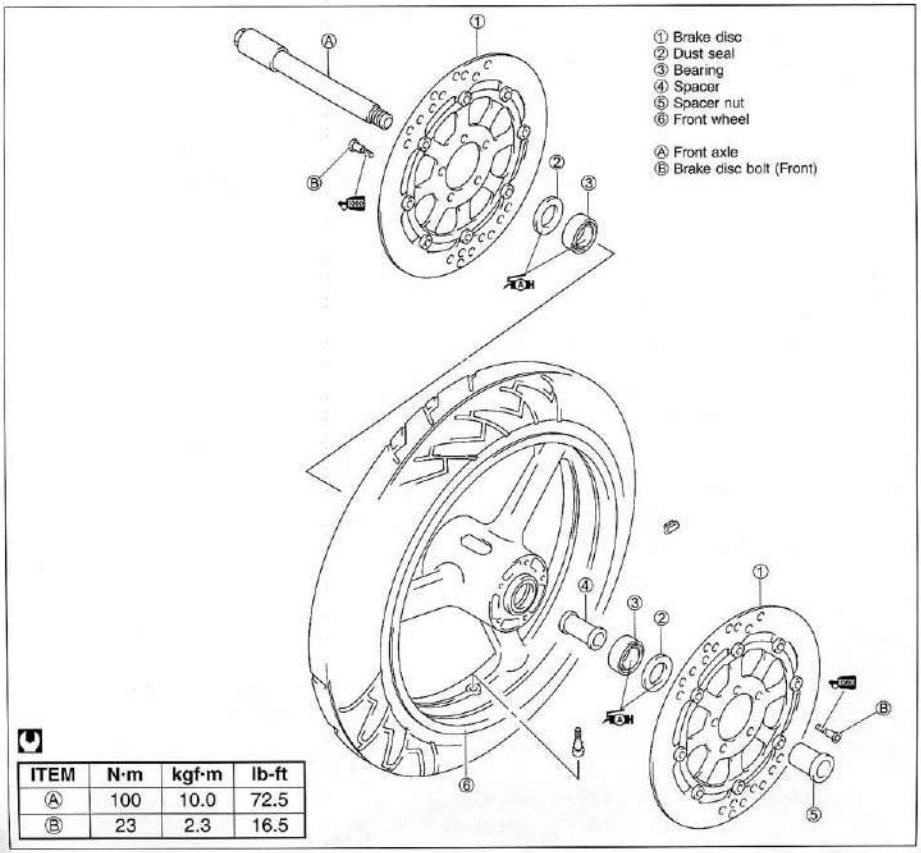
1. The text of this manual is divided into sections.
2. The section titles are listed in the GROUP INDEX.
3. Holding the manual as shown at the right will allow you to find the first page of the section easily.
4. The contents are listed on the first page of each section to help find the item and page you need.



COMPONENT PARTS AND WORK TO BE DONE

Under the name of each system or unit, is its exploded view. Work instructions and other service information such as the tightening torque, lubricating points and locking agent points, are provided.

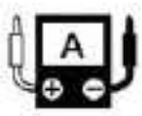
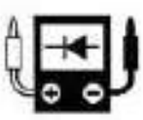
Example: Front wheel



ITEM	N·m	kgf·m	lb-ft
Ⓐ	100	10.0	72.5
Ⓑ	23	2.3	16.5

SYMBOL

Listed in the table below are the symbols indicating instructions and other information necessary for servicing. The meaning of each symbol is also included in the table.

SYMBOL	DEFINITION	SYMBOL	DEFINITION
	Torque control required. Data beside it indicates specified torque.		Use engine coolant.
	Apply oil. Use engine oil unless otherwise specified.		Use fork oil. 99000-99044-L01
	Apply molybdenum oil solution. (Mixture of engine oil and SUZUKI MOLY PASTE in a ratio of 1:1)		Apply or use brake fluid.
	Apply SUZUKI SUPER GREASE "A". 99000-25030 (For USA) 99000-25010 (For the other countries)		Measure in voltage range.
	Apply SUZUKI MOLY PASTE. 99000-25140		Measure in current range.
	Apply SUZUKI BOND "1207B". 99104-31140 (for USA) 99000-31140 (for the other countries)		Measure in diode test range.
	Apply THREAD LOCK SUPER "1303". 99000-32030		Measure in continuity test range.
	Apply THREAD LOCK "1342". 99000-32050		Use special tool.
	Apply THREAD LOCK SUPER "1360". 99000-32130		Indication of service data.

ABBREVIATIONS MAY BE USED IN THIS MANUAL

A

ABDC	: After Bottom Dead Center
AC	: Alternating Current
ACL	: Air Cleaner, Air Cleaner Box
API	: American Petroleum Institute
ATDC	: After Top Dead Center
ATM Pressure	: Atmospheric Pressure Atmospheric Pressure Sensor (APS)
A/F	: Air Fuel Mixture

B

BBDC	: Before Bottom Dead Center
BTDC	: Before Top Dead Center
B+	: Battery Positive Voltage

C

CKP Sensor	: Crankshaft Position Sensor (CKPS)
CKT	: Circuit
CLP Switch	: Clutch Lever Position Switch (Clutch Switch)
CMP Sensor	: Camshaft Position Sensor (CMPS)
CO	: Carbon Monoxide
CPU	: Central Processing Unit

D

DC	: Direct Current
DMC	: Dealer Mode Coupler
DOHC	: Double Over Head Camshaft
DRL	: Daytime Running Light

E

ECM	: Engine Control Module Engine Control Unit (ECU) (FI Control Unit)
ECT Sensor	: Engine Coolant Tempareture Sensor (ECTS), Water Temp. Sensor (WTS)
EVAP	: Evaporative Emission
EVAP Canister	: Evaporative Emission Canister (Canister)

F

FI	: Fuel Injection, Fuel Injector
FP	: Fuel Pump
FPR	: Fuel Pressure Regulator
FP Relay	: Fuel Pump Relay

G

GEN	: Generator
GND	: Ground
GP Switch	: Gear Position Switch

H

HC	: Hydrocarbons

I

IAC Valve Actuator	: Intake Air Control Valve Actuator
IAP Sensor	: Intake Air Pressure Sensor (IAPS)
IAT Sensor	: Intake Air Temperature Sensor (IATS)
IG	: Ignition

L

LCD	: Liquid Crystal Display
LED	: Light Emitting Diode (Malfunction Indicator Lamp)
LH	: Left Hand

M

MAL-Code	: Malfunction Code (Diagnostic Code)
Max	: Maximum
MIL	: Malfunction Indicator Lamp (LED)
Min	: Minimum

N

NOx	: Nitrogen Oxides

O

OHC	: Over Head Camshaft
OPS	: Oil Pressure Switch

P

PCV	: Positive Crankcase Ventilation (Crankcase Breather)

R

RH	: Right Hand
ROM	: Read Only Memory

S

SAE	: Society of Automotive Engineers

T

TO Sensor	: Tip Over Sensor (TOS)
TP Sensor	: Throttle Position Sensor (TPS)

V

VCSV	: Vacuum Control Solenoid Valve
VD	: Vacuum Damper
VTV	: Vacuum Transmitting Valve

SEA-TO-FORMER SUZUKI TERM(ONLY FOR U.S.A.)

This table lists SAE (Society of Automotive Engineers)J1930 terms and abbreviations which may be used in this manual in compliance with SAE recommendations, as well as their former SUZUKI names.

SAE TERM		FORMER SUZUKI TERM
FULL TERM	ABBREVIATION	
A		
Air Cleaner	ACL	Air Cleaner, Air Cleaner Box
B		
Barometric Pressure	BARO	Barometric Pressure, Atmospheric Pressure
Battery Positive Voltage	B+	Battery Voltage, +B
C		
Camshaft Position Sensor	CMP Sensor	Camshaft Position Sensor(CMPS)
Crankshaft Position Sensor	CKP Sensor	Crankshaft Position Sensor(CKPS), Crank Angle
D		
Data Link Connector	DLC	Dealer Mode Coupler
Diagnostic Test Mode	DTM	——
Diagnostic Trouble Code	DTC	Diagnostic Code, Malfunction Code
E		
Electronic Ignition	EI	——
Engine Control Module	ECM	Engine Control Module (ECM) FI Control Unit, Engine Control Unit(ECU)
Engine Coolant Level	ECL	Coolant Level
Engine Coolant Temperature	ECT	Coolant Temperature, Engine Coolant Temperature Water Temperature
Engine Speed	RPM	Engine Speed(RPM)
Evaporative Emission	EVAP	Evaporative Emission
Evaporative Emission Canister	EVAP Canister	—— (Canister)
Purge Valve	Purge Valve	Purge Valve(SP Valve)
F		
Fan Control	FC	——
Fuel Level Sensor	——	Fuel Level Sensor, Fuel Level Gauge
Fuel Pump	FP	Fuel Pump(FP)
G		
Generator	GEN	Generator
Ground	GND	Ground(GND,GRD)

SAE TERM		FORMER SUZUKI TERM
FULL TERM	ABBREVIATION	
I		
Idle Speed Control	ISC	—
Ignition Control	IC	Electronic Spark Advance(ESA)
Ignition Control Module	ICM	—
Intake Air Temperature	IAT	Intake Air Temperature(IAT), Air Temperature
M		
Malfunction Indicator Lamp	MIL	LED Lamp Malfunction Indicator Lamp(MIL)
Manifold Absolute Pressure	MAP	Intake Air Pressure, Intake Vacuum
Mass Air Flow	MAF	Air Flow
O		
On-Board Diagnostic	ODB	Self-Diagnosis Function Diagnostic
Open Loop	OL	—
P		
Programmable Read Only Memory	PROM	—
Pulsed Secondary Air Injection	PAIR	Pulse Air Control (PAIR)
R		
Random Access Memory	RAM	—
Read Only Memory	ROM	ROM
S		
Secondary Air Injection	AIR	—
T		
Throttle Body	TB	Throttle Body(TB)
Throttle Body Fuel Injection	TBI	Throttle Body Fuel Injection(TBI)
Throttle Position Sensor	TP Sensor	TP Sensor(TPS)
V		
Voltage Regulator	VR	Voltage Regulator
Volume Air Flow	VAF	Air Flow

GENERAL INFORMATION

1

CONTENTS

WARNING/CAUTION/NOTE

Please read this manual and follow its instructions carefully. To emphasize special information, the symbol and the words WARNING, CAUTION and NOTE have special meanings. Pay special attention to the messages highlighted by these signal words.

⚠ WARNING

Indicates a potential hazard that could result in death or injury.

⚠ CAUTION

Indicates a potential hazard that could result in motorcycle damage.

NOTE:

Indicates special information to make maintenance easier or instructions clearer.

Please note, however, that the warnings and cautions contained in this manual cannot possibly cover all potential hazards relating to the servicing, or lack of servicing, of the motorcycle. In addition to the WARNINGS and CAUTIONS stated, you must use good judgement and basic mechanical safety principles. If you are unsure about how to perform a particular service operation, ask a more experienced mechanic for advice.

GENERAL PRECAUTIONS

⚠ WARNING

- **Proper service and repair procedures are important for the safety of the service mechanic and the safety and reliability of the motorcycle.**
- **When 2 or more persons work together, pay attention to the safety of each other.**
- **When it is necessary to run the engine indoors, make sure that exhaust gas is forced outdoors.**
- **When working with toxic or flammable materials, make sure that the area you work in is well-ventilated and that you follow all of the material manufacturer's instructions.**
- **Never use gasoline as a cleaning solvent.**
- **To avoid getting burned, do not touch the engine, engine oil, radiator and exhaust system until they have cooled.**
- **After servicing the fuel, oil, engine coolant, exhaust or brake systems, check all lines and fittings related to the system for leaks.**

SUZUKI GSX1300RX ('99-MODEL)

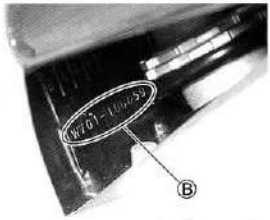
RIGHT SIDE

LEFT SIDE

* Difference between photograph and actual motorcycle depends on the markets.

SERIAL NUMBER LOCATION

The frame serial number or V.I.N. (Vehicle Identification Number) Ⓐ is stamped on the right side of the steering head pipe. The engine serial number Ⓑ is located on the rear side of the crankcase. These numbers are required especially for registering the machine and ordering spare parts.



FUEL, OIL AND ENGINE COOLANT RECOMMENDATION

FUEL (For U.S.A. model)

1. Use only unleaded gasoline of at least 87 pump octane ($\frac{R+M}{2}$) method or 91 octane or higher rated by the research method.
2. Suzuki recommends that customers use alcohol free, unleaded gasoline whenever possible.
3. Use of blended gasoline containing MTBE (Methyl Tertiary Butyl Ether) is permitted.
4. Use of blended gasoline/alcohol fuel is permitted, provided that the fuel contains not more than 10% ethanol. Gasoline/alcohol fuel may contain up to 5% methanol if appropriate cosolvents and corrosion inhibitors are present in it.
5. If the performance of the vehicle is unsatisfactory while using blended gasoline/alcohol fuel, you should switch to alcohol-free unleaded gasoline.
6. Failure to follow these guideline could possibly void applicable warranty coverage. Check with your fuel supplier to make sure that the fuel you intend to use meets the requirements listed above.

FUEL (For Canadian model)

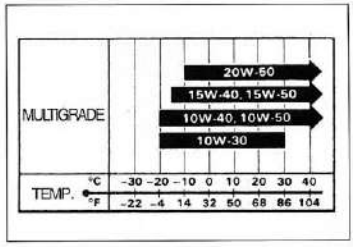
Use only unleaded gasoline of at least 87 pump octane ($\frac{R+M}{2}$) method or 91 octane or higher rated by the research method.

FUEL (For the other models)

Gasoline used should be graded 91 octane (Research Method) or higher. Unleaded gasoline is recommended.

ENGINE OIL (For U.S.A. model)

SUZUKI recommends the use of SUZUKI PERFORMANCE 4 MOTOR OIL or an oil which is rated SF or SG under the API (American Petroleum Institute) service classification. The recommended viscosity is SAE 10W/40. If an SAE 10W/40 oil is not available, select and alternative according to the right chart.



ENGINE OIL (For the other models)

Use a premium quality 4-stroke motor oil to ensure longer service life of your motorcycle. Use only oils which are rated SF or SG under the API service classification.

The recommended viscosity is SAE 10W-40. If an SAE 10W-40 motor oil is not available, select an alternative according to the following chart.

BRAKE FLUID

Use DOT4 brake fluid.

⚠ WARNING

Since the brake system of this motorcycle is filled with a glycol-based brake fluid by the manufacturer, do not use or mix different types of fluid such as silicone-based and petroleum-based fluid for refilling the system, otherwise serious damage will result.

Do not use any brake fluid taken from old or used or unsealed containers.

Never re-use brake fluid left over from a previous servicing, which has been stored for a long period.

FRONT FORK OIL

Use SUZUKI FORK OIL L01 or an equivalent fork oil.