Suzuki Gsxr 750 2004 Service Manual Full download: http://manualplace.com/download/suzuki-gsxr-750-5X - R750



FOREWORD

This manual contains an introductory description on the SUZUKI GSX-R750 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.

A 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 isafe for the rider and passenger.

SUZUKI MOTOR CORPORATION

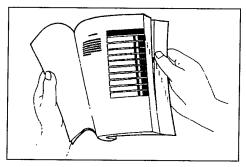
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HOW TO USE THIS MANUAL TO LOCATE WHAT YOU ARE LOOKING FOR:

- 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 you find the item and page you need.

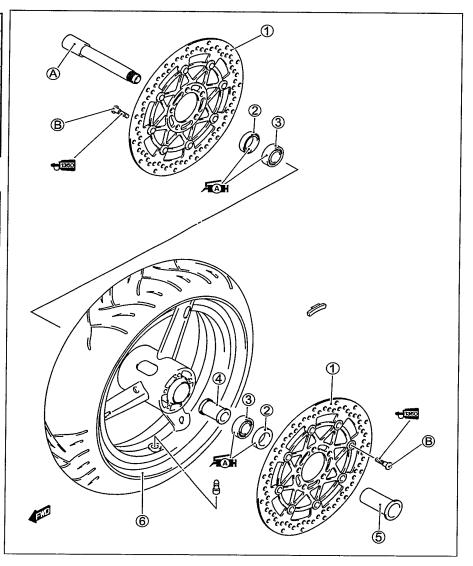


COMPONENT PARTS AND WORK TO BE DONE

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

_	
1	Brake disc
2	Dust seal
3	Bearing
4	Spacer
(5)	Spacer nut
6	Front wheel
(A)	Front axle
$^{\odot}$	Brake disc bolt (Front)

()			
ITEM	N⋅m	kgf-m	lb-ft
A	100	10.0	72.5
B	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
O	Torque control required. Data beside it indicates specified torque.	1360	Apply THREAD LOCK SUPER "1360". 99000-32130
197	Apply oil. Use engine oil unless otherwise specified.	LLC	Use engine coolant. 99000-99032-11X (Except USA)
M/O	Apply molybdenum oil solution. (Mixture of engine oil and SUZUKI MOLY PASTE in a ratio of 1:1)	FORK	Use fork oil. 99000-59056-SS5
FAH	Apply SUZUKI SUPER GREASE "A". 99000-25010 (Others) 99000-25030 (USA)	BF	Apply or use brake fluid.
FMH	Apply SUZUKI MOLY PASTE. 99000-25140		Measure in voltage range.
FSH	Apply SUZUKI SILICONE GREASE. 99000-25100	A	Measure in current range.
1215	Apply SUZUKI BOND "1215". 99000-31110 (Except USA)	Ω	Measure in resistance range.
1207B	Apply SUZUKI BOND "1207B". 99104-31140 (USA) 99000-31140 (Others)		Measure in diode test range.
	Apply THREAD LOCK SUPER "1303". 99000-32030	(10)) (10))	Measure in continuity test range.
	Apply THREAD LOCK SUPER "1322". 99000-32110 (Except USA)	TOOL	Use special tool.
	Apply THREAD LOCK "1342". 99000-32050	DATA	Indication of service data.

ABBREVIATIONS USED IN THIS MANUAL

Α **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, AP Sensor) A/F : Air Fuel Mixture В **BBDC** : Before Bottom Dead Center **BTDC** : Before Top Dead Center B+ : Battery Positive Voltage 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

: Daytime Running Light

DRL

Ε **ECM** : Engine Control Module Engine Control Unit (ECU) (FI Control Unit) **ECT Sensor** : Engine Coolant Temperature 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 IAP Sensor : Intake Air Pressure Sensor (IAPS) IAT Sensor : Intake Air Temperature Sensor (IATS) IG : Ignition

: Liquid Crystal Display

(Malfunction Indicator Lamp)

: Light Emitting Diode

: Left Hand

LCD

LED

LH

M

MAL-Code : Malfunction Code

(Diagnostic Code)

Max

: Maximum

MIL

: Malfunction Indicator Lamp

(LED)

Min

: Minimum

Ν

NOX

: Nitrogen Oxides

OHC

: Over Head Camshaft

OPS

: Oil Pressure Switch

PCV

: Positive Crankcase

Ventilation (Crankcase Breather)

R

RH

: Right Hand

ROM

: Read Only Memory

S

SAE

: Society of Automotive Engineers

SDS

: Suzuki Diagnosis System

STC System

: Secondary Throttle Control System

(STCS)

STP Sensor

: Secondary Throttle Position Sensor

(STPS)

ST Valve

: Secondary Throttle Valve (STV)

STV Actuator : Secondary Throttle Valve Actuator

(STVA)

TO Sensor

: Tip-Over Sensor (TOS)

TP Sensor

: Throttle Position Sensor (TPS)

SAE-TO-FORMER SUZUKI TERM

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		
FULL TERM	ABBREVIATION	FORMER SUZUKI TERM
Α		
Air Cleaner	ACL	Air Cleaner, Air Cleaner Box
В		
Barometric Pressure	BARO	Barometric Pressure, Atmospheric
		Pressure (APS, AP Sensor)
Battery Positive Voltage	B+	Battery Voltage, +B
С		
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 Tem-
		perature
		Water Temperature
Engine Speed	RPM	Engine Speed (RPM)
Evaporative Emission	EVAP	Evaporative Emission
Evaporative Emission Canister	EVAP Canister	(Canister)
F		
Fan Control	FC	
Fuel Level Sensor		Fuel Level Sensor, Fuel Level Gauge
Fuel Pump	FP	Fuel Pump (FP)
9		
Generator	GEN	Generator
Ground	GND	Ground (GND, GRD)

SAE TERM		FORMER CUZURI TERM	
FULL TERM	ABBREVIATION	FORMER SUZUKI TERM	
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	
М			
Malfunction Indicator Lamp	MIL	LED Lamp	
		Malfunction Indicator Lamp (MIL)	
Manifold Absolute Pressure	MAP	Intake Air Pressure (IAP), Intake Vacuum	
Mass Air Flow	MAF	Air Flow	
0			
On-Board Diagnostic	OBD	Self-Diagnosis Function	
		Diagnostic	
Open Loop	OL		
P			
Programmable Read Only Memory	PROM		
Pulsed Secondary Air Injection	PAIR	Pulse Air Control (PAIR)	
Purge Valve	Purge Valve	Purge Valve (SP Valve)	
R			
Random Access Memory	RAM		
Read Only Memory	ROM	ROM	
s			
Secondary Air Injection	AIR		
Secondary Throttle Control System	STCS	STC System (STCS)	
Secondary Throttle Valve	STV	ST Valve (STV)	
Secondary Throttle Valve Actuator	STVA	STV Actuator (STVA)	
т			
Throttle Body	ТВ	Throttle Body (TB)	
Throttle Body Fuel Injection	ТВІ	Throttle Body Fuel Injection (TBI)	
Throttle Position Sensor	TP Sensor	TP Sensor (TPS)	
Tank Pressure Control Valve	TPC Valve	TPC Valve	
v			
Voltage Regulator	VR	Voltage Regulator	
Volume Air Flow	VAF	Air Flow	

WIRE COLOR

В : Black Gr : Gray R : Red Ы : Blue Lbl : Light blue W : White Br : Brown Lg : Light green : Yellow Dg : Dark green : Orange

Dg : Dark green O : Oran G : Green P : Pink

: Black with Blue tracer B/BI B/Br : Black with Brown tracer B/G : Black with Green tracer B/Lg : Black with Light green tracer B/R : Black with Red tracer B/W : Black with White tracer B/Y : Black with Yellow tracer BI/B : Blue with Black tracer BI/G : Blue with Green tracer BI/R : Blue with Red tracer BI/W : Blue with White tracer BI/Y : Blue with Yellow tracer G/B : Green with Black tracer G/BI : Green with Blue tracer G/W : Green with White tracer G/Y : Green with Yellow tracer Gr/B : Gray with Black tracer Gr/R : Gray with Red tracer Gr/W : Gray with White tracer Gr/Y : Gray with Yellow tracer O/B : Orange with Black tracer O/G : Orange with Green tracer O/R : Orange with Red tracer O/W : Orange with White tracer O/Y : Orange with Yellow tracer P/B : Pink with Black tracer P/W : Pink with White tracer R/B : Red with Black tracer R/BI : Red with Blue tracer R/W : Red with White tracer W/B : White with Black tracer W/BI : White with Blue tracer W/R : White with Red tracer Y/B : Yellow with Black tracer Y/BI : Yellow with Blue tracer Y/G : Yellow with Green tracer Y/R : Yellow with Red tracer Y/W : Yellow with White tracer

GENERAL INFORMATION

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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.

A WARNING

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

CAUTION

Indicates a potential hazard that could result in motorcycle damage.

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 WARN-INGS 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

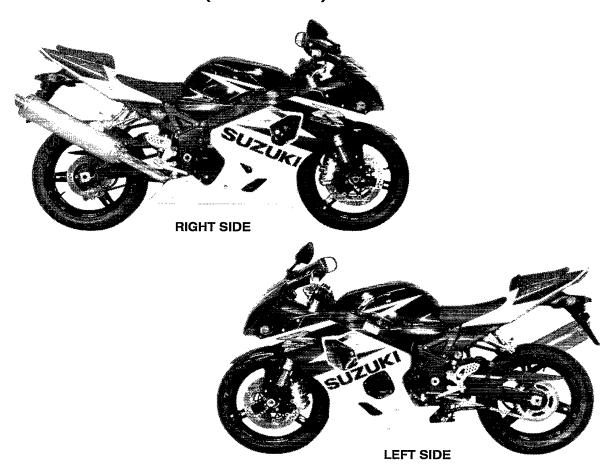
▲ WARNING

- * 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 in forced outdoors.
- * When working with toxic or flammable materials, make sure that the area you work in is wellventilated 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, water, exhaust or brake systems, check all lines and fittings related to the system for leaks.

CAUTION

- * If parts replacement is necessary, replace the parts with Suzuki Genuine Parts or their equiva-
- * When removing parts that are to be reused, keep them arranged in an orderly manner so that they may be reinstalled in the proper order and orientation.
- Be sure to use special tools when instructed.
- * Make sure that all parts used in reassembly are clean. Lubricate them when specified.
- * Use the specified lubricant, bond, or sealant.
- * When removing the battery, disconnect the negative cable first and then the positive cable.
- * When reconnecting the battery, connect the positive cable first and then the negative cable, and replace the terminal cover on the positive terminal.
- * When performing service to electrical parts, if the service procedures not require use of battery power, disconnect the negative cable the battery.
- * When tightening the cylinder head and case bolts and nuts, tighten the larger sizes first. Always tighten the bolts and nuts diagonally from the inside toward outside and to the specified tightening torque.
- * Whenever you remove oil seals, gaskets, packing, O-rings, locking washers, self-locking nuts, cotter pins, circlips and certain other parts as specified, be sure to replace them with new ones. Also, before installing these new parts, be sure to remove any left over material from the mating surfaces.
- * Never reuse a circlip. When installing a new circlip, take care not to expand the end gap larger than required to slip the circlip over the shaft. After installing a circlip, always ensure that it is completely seated in its groove and securely fitted.
- * Use a torque wrench to tighten fasteners to the specified torque. Wipe off grease and oil if a thread is smeared with them.
- * After reassembling, check parts for tightness and proper operation.
- * To protect the environment, do not unlawfully dispose of used motor oil, engine coolant and other fluids: batteries, and tires.
- * To protect Earth's natural resources, properly dispose of used motorcycle and parts.

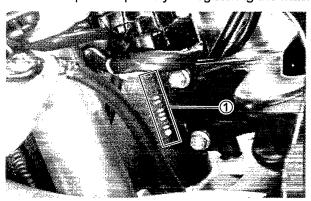
SUZUKI GSX-R750K4 ('04-MODEL)

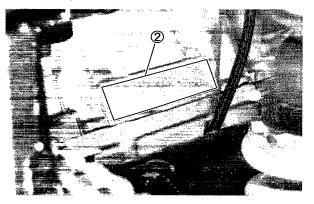


• Difference between photograph and actual motorcycle may exist dependsing on the markets.

SERIAL NUMBER LOCATION

The frame serial number or V.I.N. (Vehicle Identification Number) ① is stamped on the right side of the steering head pipe. The engine serial number ② 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 USA AND CANADA)**

Use only unleaded gasoline of at least 90 pump octane (R/2 + M/2).

Gasoline containing MTBE (Methyl Tertiary Butyl Ether), less than 10 % ethanol, or less than 5 % methanol with appropriate cosolvents and corrosion inhibitor is permissible.

FUEL (FOR OTHER COUNTRIES)

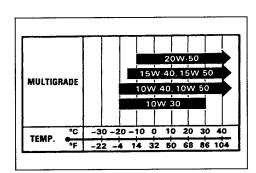
Gasoline used should be graded 95 octane (Research Method) or higher. An unleaded gasoline is recommended.

ENGINE OIL (FOR USA)

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 following chart.

ENGINE OIL (FOR OTHER COUNTRIES)

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 right chart.



BRAKE FLUID

Specification and classification: DOT 4

▲ 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 fork oil SS-05 or an equivalent fork oil.

ENGINE COOLANT

Use an anti-freeze/engine coolant compatible with an aluminum radiator, mixed with distilled water only.

WATER FOR MIXING

Use distilled water only. Water other than distilled water can corrode and clog the aluminum radiator.

ANTI-FREEZE/ENGINE COOLANT

The engine coolant perform as a corrosion and rust inhibitor as well as anti-freeze. Therefore, the engine coolant should be used at all times even though the atmospheric temperature in your area does not go down to freezing point.

Suzuki recommends the use of SUZUKI COOLANT anti-freeze/engine coolant. If this is not available, use an equivalent which is compatible with an aluminum radiator.

LIQUID AMOUNT OF WATER/ENGINE COOLANT

Solution capacity (total): Approx. 3 150 ml (3.3/2.8 US/Imp qt)

For engine coolant mixture information, refer to cooling system section, page 7-2

CAUTION

Mixing of anti-freeze/engine coolant should be limited to 60 %. Mixing beyond it would reduce its efficiency. If the anti-freeze/engine coolant mixing ratio is below 50 %, rust inhabiting performance is greatly reduced. Be sure to mix it above 50 % even though the atmospheric temperature does not go down to the freezing point.

BREAK-IN PROCEDURES

During manufacture only the best possible materials are used and all machined parts are finished to a very high standard but it is still necessary to allow the moving parts to "BREAK-IN" before subjecting the engine to maximum stresses. The future performance and reliability of the engine depends on the care and restraint exercised during its early life. The general rules are as follows.

Keep to these break-in engine speed limits:

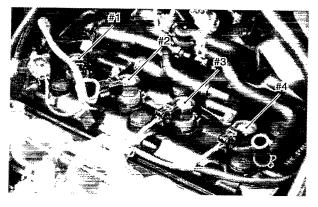
Initial 800 km (500 miles): Below 7 000 r/min Up to 1 600 km (1 000 miles): Below 10 500 r/min Over to 1 600 km (1 000 miles): Below 14 000 r/min

• Upon reaching an odometer reading of 1 600 km (1 000 miles) you can subject the motorcycle to full throttle operation.

However, do not exceed 14 000 r/min at any time.

CYLINDER IDENTIFICATION

The four cylinders of this engine are identified as No.1, No.2, No.3 and No.4 cylinder, as counted from left to right (as viewed by the rider on the seat.)

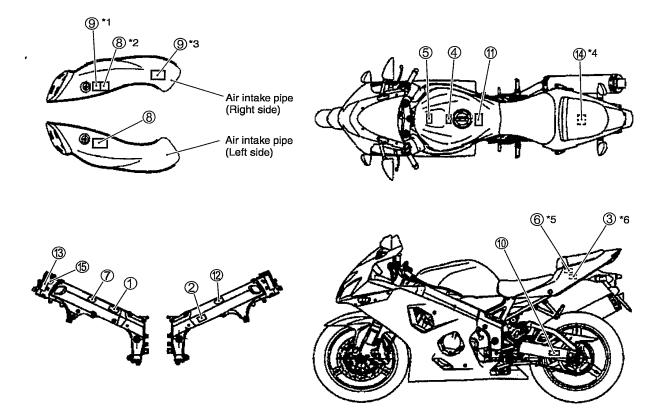


INFORMATION LABELS

	GSX-R750	GSX-R750UF
① Noise label	A (For E-03, 24, 33)	
② Information label	A (For E-03, 28, 33)	
③ Vacuum hose routing label	A (For E-33)	
Fuel caution label	A (For E-02, 24)	
Fuel information label	Α	Α
Manual notice label	A (For E-03, 33)	
⑦ Frame caution plate	A	Α
Warning screen label	A	Α
Warning steering label	A	Α
Tire air pressure label	A	Α
Warning safety label	A	Α
② ICES Canada label	A (For E-28)	
③ ID plate	A (Except E-03, 28, 33)	Α
⊕ E-19 ID label		A (For E-19)
⑤ Safety plate	A (For E-03, 28, 33)	

A: Attached

- *4: This label is attached on the rear fender. *5: This label is attached on the right side of rear fender.
- *6: This label is attached on the left side of rear fender.



SPECIFICATIONS DIMENSIONS AND DRY MASS

Overall length	2 055 mm (80.9 in)
Overall width	
Overall height	1 150 mm (45.3 in)
Wheelbase	
Ground clearance	135 mm (5.3 in)
Seat height	825 mm (32.5 in)
Dry mass	164 kg (361 lbs)E-33
	163 kg (359 lbs)Others

ENGINE

Type	Four stroke, liquid-cooled, DOHC
Number of cylinders	4
B - · ·	72.0 mm (2.834 in)
Stroke	46.0 mm (1.811 in)
Displacement	
Compression ratio	
Fuel system	
Air cleaner	
Starter system	•
Lubrication system	
Idle speed	

DRIVE TRAIN

Clutch	Wet multi-plate type
Transmission	6-speed constant mesh
Gearshift pattern	1-down, 5-up
Primary reduction ratio	1.857 (78/42)
Gear ratios, Low	
2nd	2.052 (39/19)
3rd	1.681 (37/22)
4th	1.450 (29/20)
5th	1.304 (30/23)
Top	1.181 (26/22)
Final reduction ratio	2.529 (43/17)
Drive chain	RK525ROZ5, 110 links

CHASSIS	
Front suspension	. Inverted telescopic, coil spring, oil damped
Rear suspension	
Front fork stroke	
Rear wheel travel	
Steering angle	
Caster	
Trail	
Turning radius	
Front brake	
Rear brake	
Front tire size	
Rear tire size	
	100/03 Zi (17 W/O (73 W), tubeless
ELECTRICAL	
Ignition type	9
Ignition timing	
Spark plug	NGK CR9E or DENSO U27ESR-N
Battery	12 V 36.0 kC (10 Ah)/10 HR
Generator	Three-phase A.C. generator
Main fuse	30 A
Fuse	15/10/10/10/10/10 A E-02, 19
	15/15/10/10/10/10 A E-03, 24, 28, 33
Headlight	12 V 55 W H7Lower Bulb
	12 V 60/55 W H4 Upper Bulb
Turn signal light	12 V 18 W
License plate light	
Brake light/Taillight	
Speedometer light	
Tachometer light	
Neutral indicator light	
High beam indicator light	LED
	LED
Position light	
Oil pressure/Coolant temperature/FI indicator light	LED
	LED
Engine RPM indicator light	LED
CAPACITIES	
Fuel tank, including reserve	16.5 L (4.4/3.6 US/Imp gal)E-33
	17.0 L (4.5/3.7 US/Imp gal)Others
Engine oil,oil change	2 800 ml (3.0/2.5 US/Imp qt)
with filter change	3 100 ml (3.3/2.7 US/Imp qt)
overhaul	3 600 ml (3.8/3.2 US/Imp qt)
Coolant	3.2 L. (3.4/2.8 US/Imp qt)
	,

These specifications are subject to change without notice.

COUNTRY AND AREA CODES

The following codes stand for the applicable country (-ies) and area (-s).

MODEL	CODE	COUNTRY or AREA	
GSX-R750	E-02	U.K.	
	E-03	U.S.A. (Except for california)	
	E-19	EU	İ
	E-24	Australia	ļ
	E-28	Canada	
	E-33	California (U.S.A.)	
GSX-R750UF	E-19	EU	\exists