MODEL APPLICATION

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

Year	Model	Beginning Frame No.
2018	ZX1002AJ	JKBZXVA1□JA000001 JKBZXT02AAA000001
2018	ZX1002BJ	JKBZXVB1□JA000001 JKBZXT02ABA000001

Part No.99924-1539-01

Motorcycle
Service Manual

Ninja H2 SX

Kawasaki

Quick Reference Guide

Foreword

(About this manual)
This service manual explains maintenance procedures for removing, installing, disassembling, assembling, and adjusting, as necessary, including periodic inspection and maintenance of major parts of recording models.

(Disclaimer)
1. This book does not describe all the matters concerning maintenance. This book is made for people who have basic skills and knowledge on maintenance of Kawasaki motorcycles (authorized Kawasaki motorcycle dealers or other motorcycle repairers). So those who do not have these skills and knowledge do not do maintenance or inspection with this manual. Skill shortage and lack of knowledge may cause maintenance troubles, parts breakage, etc.
2. All information contained in this publication is based on the latest product information available at the time of publication. 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.
3. Illustrations and photographs in this publication are intended for reference use only and may not depict actual model component parts.
4. 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. Please accept beforehand that the description content, illustration, photographs etc. may differ from actual vehicle due to vehicle specification change.
5. The content of the description may be changed without prior notice for vehicle specification change etc.

How to Use This Manual

In this manual, the product is divided into its major systems and these systems make up the manual's chapters. 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.

For example, if you want ignition coil information, 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 Ignition Coil section.

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

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

This manual contains four more symbols which will help you distinguish different types of information.

NOTE

○*NOTE indicates information that may help or guide you in the operation or service of the vehicle.*

● 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 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.

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

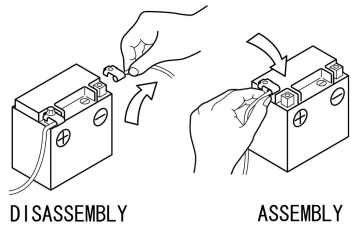
Before Servicing

Before starting to perform an inspection service or carry out a disassembly and reassembly operation on a motorcycle, read the precautions given below. To facilitate actual operations, notes, illustrations, photographs, cautions, and detailed descriptions have been included in each chapter wherever necessary. This section explains the items that require particular attention during the removal and reinstallation or disassembly and reassembly of general parts.

Especially note the following.

Battery Ground

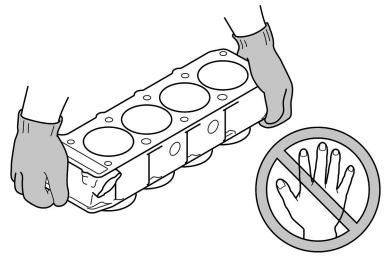
Before completing any service on the motorcycle, disconnect the battery cables from the battery to prevent the engine from accidentally turning over. Disconnect the ground cable (–) first and then the positive (+). When completed with the service, first connect the positive (+) cable to the positive (+) terminal of the battery then the negative (–) cable to the negative terminal.



GB02024B S

Edges of Parts

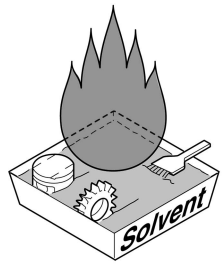
Lift large or heavy parts wearing gloves to prevent injury from possible sharp edges on the parts.



GB02004B S

Solvent

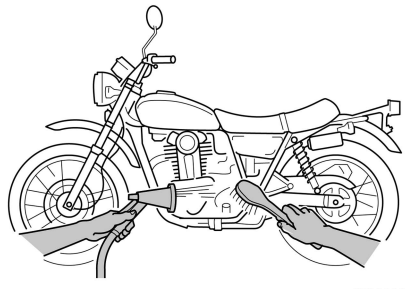
Use a high flash-point solvent when cleaning parts. High flash-point solvent should be used according to directions of the solvent manufacturer.



GB02005B S

Cleaning Vehicle before Disassembly

Clean the vehicle thoroughly before disassembly. Dirt or other foreign materials entering into sealed areas during vehicle disassembly can cause excessive wear and decrease performance of the vehicle.

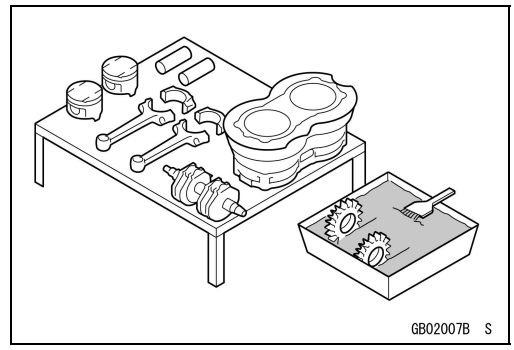


GB02006B S

Before Servicing

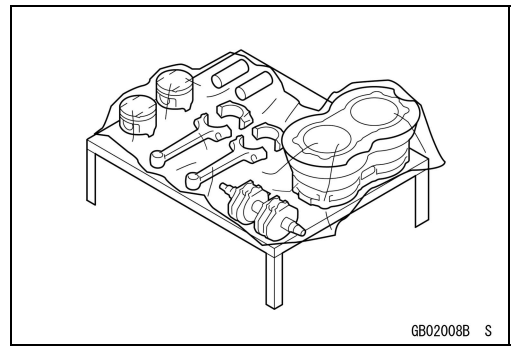
Arrangement and Cleaning of Removed Parts

Disassembled parts are easy to confuse. Arrange the parts according to the order the parts were disassembled and clean the parts in order prior to assembly.


GB02007B S

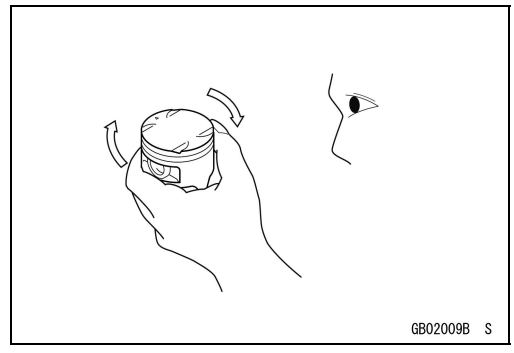
Storage of Removed Parts

After all the parts including subassembly parts have been cleaned, store the parts in a clean area. Put a clean cloth or plastic sheet over the parts to protect from any foreign materials that may collect before re-assembly.


GB02008B S

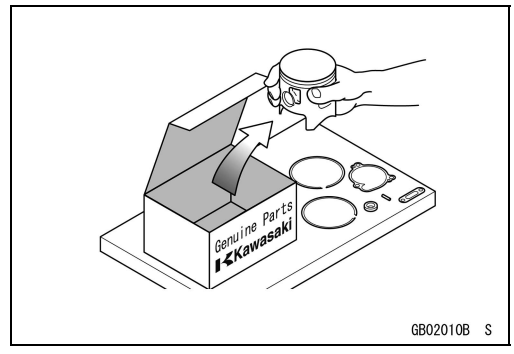
Inspection

Reuse of worn or damaged parts may lead to serious accident. Visually inspect removed parts for corrosion, discoloration, or other damage. Refer to the appropriate sections of this manual for service limits on individual parts. Replace the parts if any damage has been found or if the part is beyond its service limit.


GB02009B S

Replacement Parts

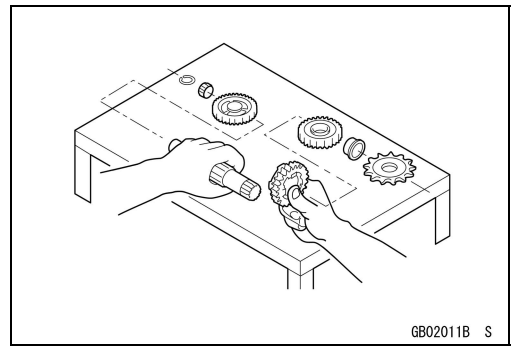
Replacement parts must be KAWASAKI genuine or recommended by KAWASAKI. Gaskets, O-rings, oil seals, grease seals, circlips, cotter pins or self-locking nuts must be replaced with new ones whenever disassembled.



GB02010B S

Assembly Order

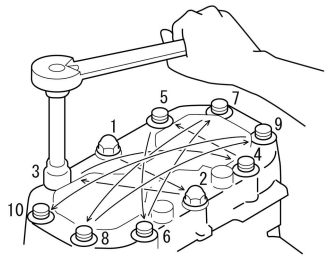
In most cases assembly order is the reverse of disassembly, however, if assembly order is provided in this Service Manual, follow the procedures given.


GB02011B S

Before Servicing

Tightening Sequence

Generally, when installing a part with several bolts, nuts, or screws, start them all in their holes and tighten them to a snug fit. Then tighten them according to the specified sequence to prevent case warpage or deformation which can lead to malfunction. Conversely when loosening the bolts, nuts, or screws, first loosen all of them by about a quarter turn and then remove them. If the specified tightening sequence is not indicated, tighten the fasteners alternating diagonally.

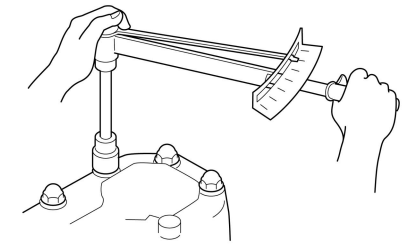


GB02012B S

Tightening Torque

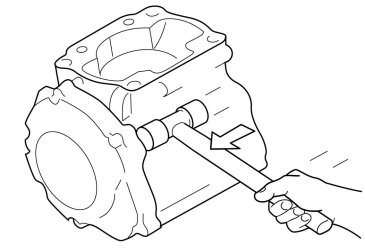
Incorrect torque applied to a bolt, nut, or screw may lead to serious damage. Tighten fasteners to the specified torque using a good quality torque wrench.

All of the tightening torque values are for use with dry, solvent - cleaned threads unless otherwise indicated. If a fastener which should have dry, clean threads gets contaminated with lubricant, etc., applying even the specified torque could damage it.


GB02013B S

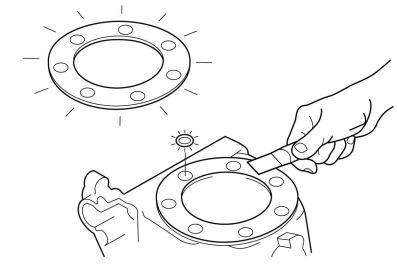
Force

Use common sense during disassembly and assembly, excessive force can cause expensive or hard to repair damage. When necessary, remove screws that have a non -permanent locking agent applied using an impact driver. Use a plastic-faced mallet whenever tapping is necessary.


GB02014B S

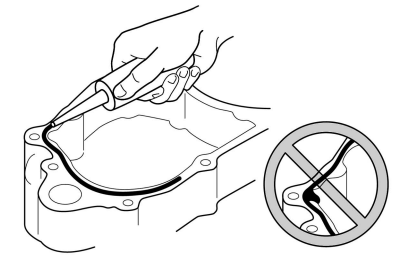
Gasket, O-ring

Hardening, shrinkage, or damage of both gaskets and O-rings after disassembly can reduce sealing performance. Remove old gaskets and clean the sealing surfaces thoroughly so that no gasket material or other material remains. Install the new gaskets and replace the used O-rings when re-assembling.


GB02015B S

Liquid Gasket, Non-permanent Locking Agent

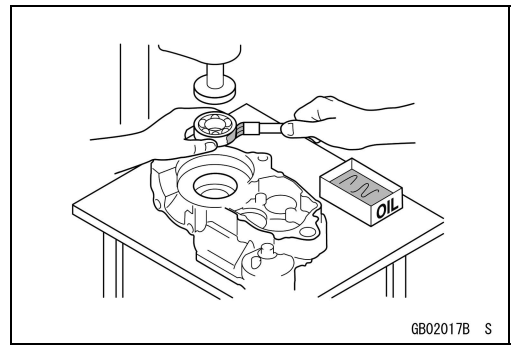
For applications that require Liquid Gasket or a Non-permanent Locking Agent, clean the surfaces so that no oil residue remains before applying liquid gasket or non-permanent locking agent. Do not apply them excessively. Excessive application can clog oil passages and cause serious damage.


GB02016B S

Before Servicing

Press

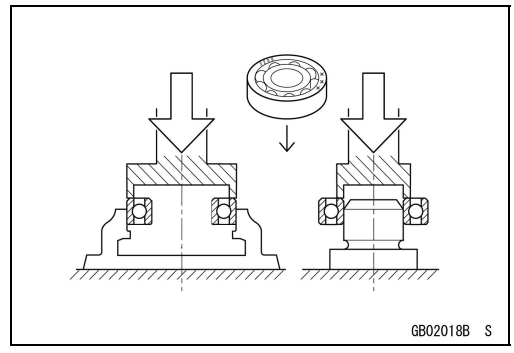
For items such as bearings or oil seals that must be pressed into place, apply small amount of oil to the contact area. Be sure to maintain proper alignment and use smooth movements when installing.



Ball Bearing and Needle Bearing

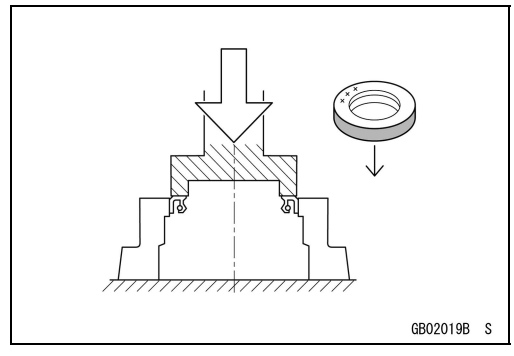
Do not remove pressed ball or needle unless removal is absolutely necessary. Replace with new ones whenever removed. Press bearings with the manufacturer and size marks facing out. Press the bearing into place by putting pressure on the correct bearing race as shown.

Pressing the incorrect race can cause pressure between the inner and outer race and result in bearing damage.

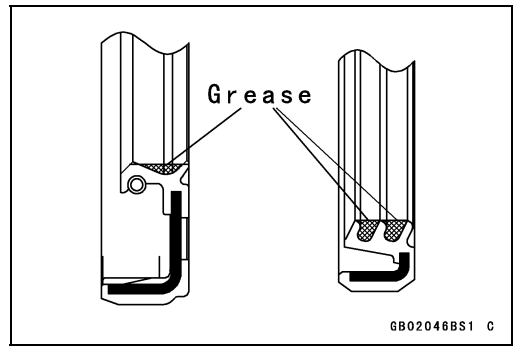


Oil Seal, Grease Seal

Do not remove pressed oil or grease seals unless removal is necessary. Replace with new ones whenever removed. Press new oil seals with manufacture and size marks facing out. Make sure the seal is aligned properly when installing.

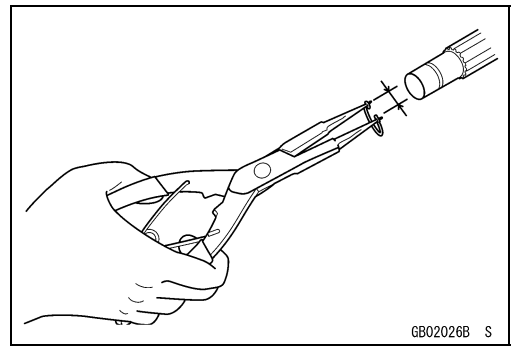


Apply specified grease to the lip of seal before installing the seal.



Circlips, Cotter Pins

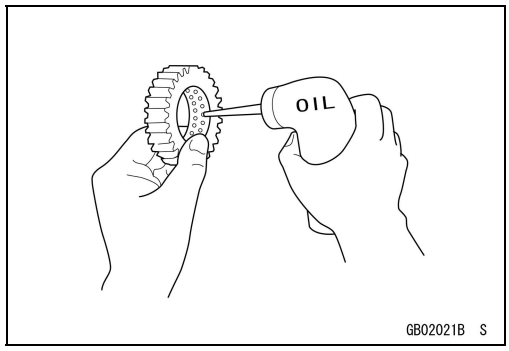
Replace the circlips or cotter pins that were removed with new ones. Take care not to open the clip excessively when installing to prevent deformation.



Before Servicing

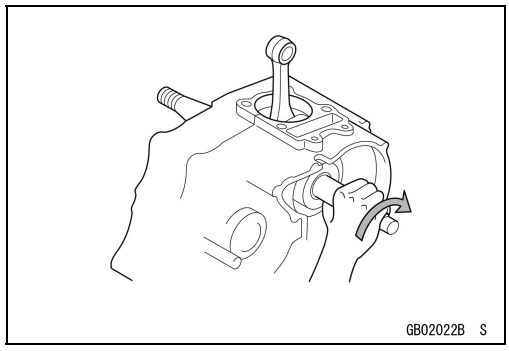
Lubrication

It is important to lubricate rotating or sliding parts during assembly to minimize wear during initial operation. Lubrication points are called out throughout this manual, apply the specific oil or grease as specified.



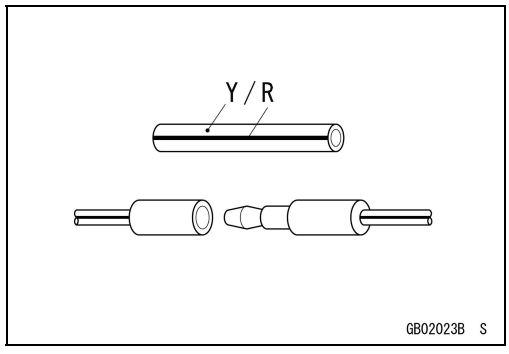
Direction of Engine Rotation

When rotating the crankshaft by hand, the free play amount of rotating direction will affect the adjustment. Rotate the crankshaft to positive direction (clockwise viewed from output side).



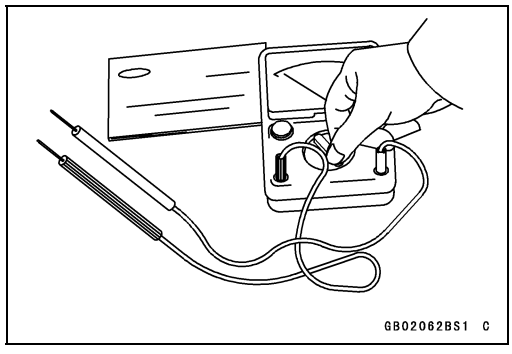
Electrical Wires

A two-color wire is identified first by the primary color and then the stripe color. Unless instructed otherwise, electrical wires must be connected to those of the same color.



Instrument

Use a meter that has enough accuracy for an accurate measurement. Read the manufacture's instructions thoroughly before using the meter. Incorrect values may lead to improper adjustments.



Handling Electronic Parts

Severe impacts to electronic parts such as the ECU, sensor, and relay can damage them. If dropped on a hard surface, replace such parts with new ones.

If a high voltage that is created by static electricity is applied to the electric parts, it could cause them to fail. To avoid this, touch a non-painted metal surface to discharge any static electricity that is accumulated on your body before inspecting or replacing electric parts.

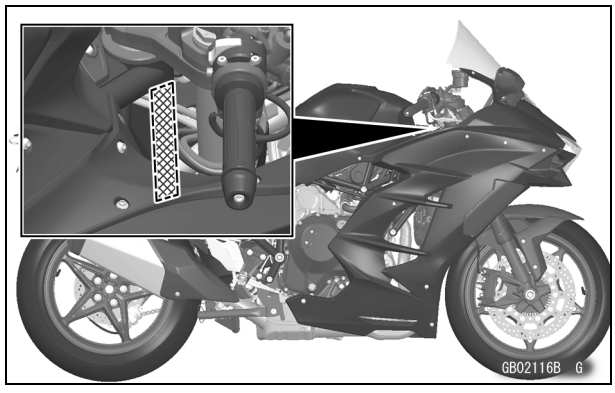
Be careful not to touch the electrical terminals of the electronic parts. The static electricity discharged from your body could damage them or deform the electrical terminals.

Model Identification

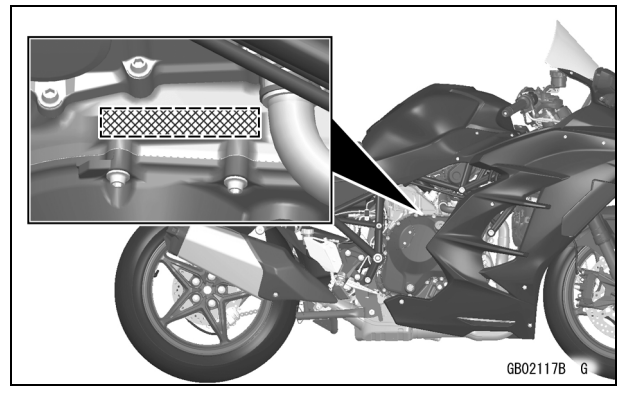
ZX1002AJ Left Side View

ZX1002AJ Right Side View

Frame Number



Engine Number



Model Identification

ZX1002BJ Left Side View

ZX1002BJ Right Side View

General Specifications

Items	ZX1002AJ/BJ
Dimensions	
Overall Length	2 135 mm (84.05 in.)
Overall Width	775 mm (30.51 in.)
Overall Height:	
ZX1002A	1 205 mm (47.44 in.)
ZX1002B	1 260 mm (49.61 in.)
Wheel Base	1 480 mm (58.27 in.)
Road Clearance	130 mm (5.12 in.)
Seat Height	835 mm (32.87 in.)
Curb Mass:	
ZX1002A:	256 kg (564 lb)
Front	132 kg (291 lb)
Rear	124 kg (273 lb)
ZX1002B:	260 kg (573 lb)
Front	134 kg (295 lb)
Rear	126 kg (278 lb)
Fuel Tank Capacity	19 L (5.0 US gal)
Performance	
Minimum Turning Radius	3.1 m (10.2 ft)
Engine	
Type	4-stroke, DOHC, 4-cylinder
Cooling System	Liquid-cooled
Bore and Stroke	76.0 × 55.0 mm (2.99 × 2.17 in.)
Displacement	998 cm³ (60.9 cu in.)
Compression Ratio	11.2 : 1
Maximum Horsepower	147 kW (200 PS) @11 000 r/min (rpm) (SEA-B1) 110.3 kW (150 PS) @8 000 r/min (rpm) (TH) 125.0 kW (170 PS) @9 000 r/min (rpm) (US, CA, CAL) – – –
Maximum Torque	137 N·m (14.0 kgf·m, 101 ft·lb) @9 500 r/min (rpm) (SEA-B1) 128.5 N·m (13.1 kgf·m, 95 ft·lb) @8 000 r/min (rpm) (TH) 133.4 N·m (13.6 kgf·m, 98 ft·lb) @8 200 r/min (rpm) (US, CA, CAL) – – –
Fuel System	FI (Fuel injection), MIKUNI 40EIDW × 4
Fuel Type:	
Minimum Octane Rating:	
Research Octane number (RON)	95
Antiknock Index (RON + MON)/2	90
Starting System	Electric Starter
Ignition System	Battery and coil (transistorized)
Timing Advance	Electronically advanced (IC igniter in ECU)
Ignition Timing	10° BTDC @1 100 r/min (rpm) ~ 48° BTDC @6 000 r/min (rpm)
Spark Plug	NGK SILMAR9E9
Cylinder Numbering Method	Left to right, 1-2-3-4

General Specifications

Items	ZX1002AJ/BJ
Firing Order	1-2-4-3
Valve Timing:	
Intake:	
Open	38° (BTDC)
Close	38° (ABDC)
Duration	256°
Exhaust:	
Open	44° (BBDC)
Close	24° (ATDC)
Duration	248°
Lubrication System	Forced lubrication (wet sump)
Engine Oil:	
Type	API SG, SH, SJ, SL, or SM with JASO MA, MA1 or MA2
Viscosity	SAE 10W-40
Capacity	4.7 L (5.0 US qt)
Drive Train	
Primary Reduction System:	
Type	Gear
Reduction Ratio	1.480 (74/50)
Clutch Type	Wet multi disc
Transmission:	
Type	6-speed, constant mesh, return shift
Gear Ratios:	
1st	3.077 (40/13)
2nd	2.471 (42/17)
3rd	2.045 (45/22)
4th	1.727 (38/22)
5th	1.524 (32/21)
6th	1.348 (31/23)
Final Drive System:	
Type	Chain drive
Reduction Ratio	2.444 (44/18)
Overall Drive Ratio	4.876 @Top gear
Frame	
Type	Trellis, high-tensile steel
Caster (Rake Angle)	24.7°
Trail	103 mm (4.06 in.)
Front Tire:	
Type	Tubeless
Size	120/70 ZR17M/C (58W)
Rim Size	17M/C × MT3.50

General Specifications

Items	ZX1002AJ/BJ
Rear Tire:	
Type	Tubeless
Size	190/55 ZR17M/C (75W)
Rim Size	17M/C × MT6.00
Front Suspension:	
Type	Telescopic fork (upside-down)
Wheel Travel	120 mm (4.72 in.)
Rear Suspension:	
Type	Swingarm (Uni-Trak)
Wheel Travel	139 mm (5.47 in.)
Brake Type:	
Front	Dual discs
Rear	Single disc
Electrical Equipment	
Battery	12 V 8.6 Ah (10HR)
Headlight:	
High Beam	LED
Low Beam	LED
City Light	LED
Cornering Light (ZX1002B)	LED
Brake/Tail Light	LED
Turn Signal Light	LED
License Plate Light	LED
Alternator:	
Type	Three-phase AC
Maximum Output	14.0 A - 30.0 V @5 000 r/min (rpm)

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

Unit Conversion Table

Prefixes for Units:

Prefix	Symbol	Power
mega	M	× 1 000 000
kilo	k	× 1 000
centi	c	× 0.01
milli	m	× 0.001
micro	μ	× 0.000001

Units of Mass:

kg	×	2.205	=	lb
g	×	0.03527	=	oz

Units of Volume:

L	×	0.2642	=	gal (US)
L	×	0.2200	=	gal (IMP)
L	×	1.057	=	qt (US)
L	×	0.8799	=	qt (IMP)
L	×	2.113	=	pint (US)
L	×	1.816	=	pint (IMP)
mL	×	0.03381	=	oz (US)
mL	×	0.02816	=	oz (IMP)
mL	×	0.06102	=	cu in.

Units of Force:

N	×	0.1020	=	kg
N	×	0.2248	=	lb
kg	×	9.807	=	N
kg	×	2.205	=	lb

Units of Length:

km	×	0.6214	=	mile
m	×	3.281	=	ft
mm	×	0.03937	=	in.

Units of Torque:

N·m	×	0.1020	=	kgf·m
N·m	×	0.7376	=	ft·lb
N·m	×	8.851	=	in·lb
kgf·m	×	9.807	=	N·m
kgf·m	×	7.233	=	ft·lb
kgf·m	×	86.80	=	in·lb

Units of Pressure:

kPa	×	0.01020	=	kgf/cm²
kPa	×	0.1450	=	psi
kPa	×	0.7501	=	cmHg
kgf/cm²	×	98.07	=	kPa
kgf/cm²	×	14.22	=	psi
cmHg	×	1.333	=	kPa

Units of Speed:

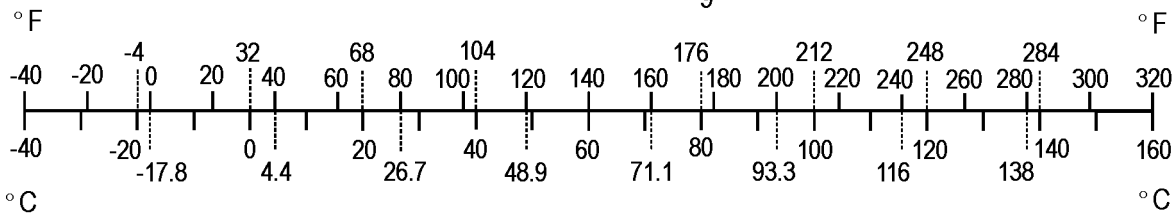
km/h	×	0.6214	=	mph

Units of Power:

kW	×	1.360	=	PS
kW	×	1.341	=	HP
PS	×	0.7355	=	kW
PS	×	0.9863	=	HP

Units of Temperature:

$$\frac{9(°C+40)}{5} - 40 = °F \qquad \frac{5(°F+40)}{9} - 40 = °C$$



Periodic Maintenance

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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.**

Periodic Inspection

*A: Service at number of years shown or indicated odometer reading intervals, whichever comes first.
*B: For higher odometer readings, repeat at the frequency interval established here.
*C: Service more frequently when operating in severe conditions: dusty, wet, muddy, high speed, or frequent starting/stopping.
○: Emission Related Item

Q: Inspection
: Change or Replace
: Lubrication

	Items	year (*A)	Odometer Reading (*B) × 1 000 km (× 1 000 mile) 1 (0.6)	6 (3.8)	12 (7.6)	18 (11.4)	24 (15.2)	See Page
Fuel System								
○	Air cleaner element (*C) (other than EUR Model)							2-17
○	Air cleaner element (*C) (EUR Model)							2-17
○	Idle speed		Q		Q		Q	2-18
○	Throttle control system (play, smooth return, no drag)	Q:1	Q		Q		Q	2-18
○	Engine vacuum synchronization				Q		Q	2-19
	Fuel system	Q:1	Q		Q		Q	2-20
	Fuel filter							2-21
	Fuel pump		: every 48 000 km (30 000 mile)					2-23
	Fuel hose	:5						2-23
○	Evaporative emission control system (other than EUR, US and CA Models)		Q	Q	Q	Q	Q	2-24
○	Evaporative emission control system (EUR Model)		Q		Q		Q	2-24
Cooling System								
	Coolant level		Q		Q		Q	2-26
	Cooling system	Q:1	Q		Q		Q	2-27
	Coolant, water hose and O-ring	:3	: every 36 000 km (22 500 mile)					2-28, 2-30
Engine Top End								
○	Valve clearance						Q	2-31
○	Air suction system				Q		Q	2-36
Clutch								
	Clutch operation (play, engagement, disengagement)		Q		Q		Q	2-36
	Clutch fluid level	Q:1	Q		Q		Q	2-37

Periodic Maintenance Chart

Items	year (*A)	Odometer Reading (*B) × 1 000 km (× 1 000 mile) 1 (0.6)	6 (3.8)	12 (7.6)	18 (11.4)	24 (15.2)	See Page
Clutch fluid, hose and pipe	Q:1	Q		Q		Q	2-36
Clutch fluid	↻:2					↻	2-38
Clutch hose/rubber parts of clutch master cylinder and slave cylinder	↻:4	↻: every 48 000 km (30 000 mile)					2-38, 2-39
Engine Lubrication System							
Engine oil (*C) and oil filter	↻:1	↻		↻		↻	2-40, 2-41
Wheels and Tires							
Tire air pressure	Q:1			Q		Q	2-42
Wheel and tire	Q:1			Q		Q	2-42
Wheel bearing damage	Q:1			Q		Q	2-43
Final Drive							
Drive chain lubrication condition (*C)		Q: every 600 km (400 mile)					2-44
Drive chain slack (*C)		Q: every 1 000 km (600 mile)					2-44
Drive chain wear (*C)				Q		Q	2-45
Drive chain guide wear				Q		Q	2-46
Brakes							
Brake system	Q:1	Q		Q		Q	2-47
Brake operation (effectiveness, play, no drag)	Q:1	Q		Q		Q	2-48
Brake fluid level	Q:1	Q		Q		Q	2-48
Brake fluid (front and rear)	↻:2					↻	2-49
Brake hose	↻:4						2-52
Rubber parts of brake master cylinder and caliper	↻:4	↻: every 48 000 km (30 000 mile)					2-54, 2-55
Brake pad wear (*C) (other than EUR Model)			Q	Q	Q	Q	2-59
Brake pad wear (*C) (EUR Model)				Q		Q	2-59
Brake light switch operation (other than EUR Model)		Q	Q	Q	Q	Q	2-59
Brake light switch operation (EUR Model)		Q		Q		Q	2-59
Suspension							
Suspension system	Q:1			Q		Q	2-60
Lubrication of rear suspension						◣	2-61
Steering							
Steering play	Q:1	Q		Q		Q	2-62
Steering stem bearing	◣:2					◣	2-64
Electrical System							
Electrical system	Q:1			Q		Q	2-65

Periodic Maintenance Chart

	Items	year (*A)	Odometer Reading (*B) × 1 000 km (× 1 000 mile) 1 (0.6)	6 (3.8)	12 (7.6)	18 (11.4)	24 (15.2)	See Page
○	Spark plug						Q	2-72
			↻: every 48 000 km (30 000 mile)					2-72
Supercharger								
	Supercharger oil screen						↻	2-73
	Supercharger impeller axial play		Q		Q		Q	2-74
Others								
	Chassis parts	:1						2-75
	Condition of bolts, nuts and fasteners		Q		Q		Q	2-76

Torque and Locking Agent

The following tables list the tightening torque for the major fasteners requiring use of a non-permanent locking agent or silicone sealant etc. All of the values are for use with dry solvent - cleaned threads unless otherwise indicated.

Letters used in the “Remarks” column mean:
AL: Tighten the two clamp bolts alternately two times to ensure even tightening torque.
G: Apply grease.
L: Apply a non-permanent locking agent.
LG: Apply liquid gasket.
Lh: Left-hand Threads
MO: Apply molybdenum disulfide oil solution.
(mixture of the engine oil and molybdenum disulfide grease in a weight ratio 10:1)
R: Replacement Parts
S: Follow the specified tightening sequence.
Si: Apply silicone grease.

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Fuel System (DFI)				
Throttle Case Bolts	3.5	0.36	31 in·lb	
Nozzle Assy Mounting Bolts	6.5	0.66	58 in·lb	L
Delivery Pipe Assy Mounting Screws	3.5	0.36	31 in·lb	
Fuel Pump Assembly Screws	0.98	0.10	8.7 in·lb	R
Fuel Pump Bolts	10	1.0	89 in·lb	L, S
Canister Bracket Bolts	10	1.0	89 in·lb	
Throttle Body Assy Mounting Bolts	10	1.0	89 in·lb	
Purge Valve Nut	7.0	0.71	62 in·lb	
Air Suction Valve Cover Bolts	10	1.0	89 in·lb	L
Air Hose Fitting	10	1.0	89 in·lb	L
Blow-off Valve Bolts	25	2.5	18	
Blow-off Valve Hose Clamp Screw	3.0	0.31	27 in·lb	
Upper Air Intake Chamber Duct Screen Bolts	3.0	0.31	27 in·lb	L
Upper Air Intake Chamber Duct Bolts	6.0	0.61	53 in·lb	L
Air Intake Hose Clamp Screw	3.5	0.36	31 in·lb	
Air Intake Chamber Bolts	8.0	0.82	71 in·lb	
Air Intake Chamber Mounting Bolts (L = 95 mm)	8.0	0.82	71 in·lb	L, S
Air Intake Chamber Mounting Bolts (L = 14 mm)	8.0	0.82	71 in·lb	L, S
Air Intake Chamber Duct Bolts	6.0	0.61	53 in·lb	L
Supercharger Housing Stay Bolts	10	1.0	89 in·lb	L
Supercharger Oil Screen Bolt	20	2.0	15	R
Supercharger Chain Tensioner Mounting Bolts	10	1.0	89 in·lb	L
Supercharger Housing Nozzle	3.0	0.31	27 in·lb	
Supercharger Housing Bolts (M8)	23	2.3	17	
Supercharger Housing Bolt (M6, L = 20 mm)	10	1.0	89 in·lb	L
Supercharger Chain Sprocket Bolt (Upper)	25	2.5	18	L
Supercharger Sprocket Cover Bolts	10	1.0	89 in·lb	
Supercharger Outer Housing Bolts	23	2.3	17	S
Supercharger Housing Bolts (M6, L = 30 mm)	10	1.0	89 in·lb	L

Torque and Locking Agent

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Supercharger Chain Sprocket Bolt (Lower)	40	4.1	30	L
Supercharger Chain Guide Bolts	10	1.0	89 in·lb	
Air Cleaner Housing Cover Bolts	6.0	0.61	53 in·lb	
Air Cleaner Housing Mounting Bolts	10	1.0	89 in·lb	L
IMU Mounting Bolts	6.5	0.66	58 in·lb	
Vehicle-down Sensor Mounting Bolts	6.0	0.61	53 in·lb	
Air Intake Chamber Pressure/Temperature Sensor Bolts	5.0	0.51	44 in·lb	
Camshaft Position Sensor Bolt	10	1.0	89 in·lb	
Water Temperature Sensor	12	1.2	106 in·lb	
Exhaust Butterfly Valve Actuator Pulley Bolt	5.0	0.51	44 in·lb	
Knock Sensor Bolt	25	2.5	18	
Oxygen Sensor	25	2.5	18	
Cooling System				
Water Temperature Sensor	12	1.2	106 in·lb	
Water Hose Fitting	10	1.0	89 in·lb	L
Thermostat Housing Bolts	6.0	0.61	53 in·lb	
Coolant Drain Bolt (Cylinder)	10	1.0	89 in·lb	
Upper Radiator Mounting Bolts	15	1.5	11	
Water Hose Fitting Cover Bolts	10	1.0	89 in·lb	
Clutch Cover Bolts	12	1.2	106 in·lb	L (1), S
Water Pump Impeller Bolt	10	1.0	89 in·lb	
Water Pump Cover Bolts (L = 25 mm)	10	1.0	89 in·lb	
Water Pump Cover Bolts (L = 40 mm)	10	1.0	89 in·lb	
Coolant Drain Bolt	10	1.0	89 in·lb	
Engine Top End				
Air Suction Valve Cover Bolts	10	1.0	89 in·lb	L
Sub Cover Bolts	10	1.0	89 in·lb	L
Cylinder Head Cover Bolts	10	1.0	89 in·lb	S
Camshaft Sprocket Bolts	15	1.5	11	L
Camshaft Chain Tensioner Mounting Bolts	10	1.0	89 in·lb	
Rear Camshaft Chain Guide Bolt	25	2.5	18	
Throttle Body Assy Holder Bolts	10	1.0	89 in·lb	S
Front Camshaft Chain Guide Bolt (Lower)	12	1.2	106 in·lb	
Front Camshaft Chain Guide Bolt (Upper)	25	2.5	18	
Upper Camshaft Chain Guide Bolts	12	1.2	106 in·lb	S
Cylinder Head Bolts (M10), Final	67	6.8	49	MO, S
Cylinder Head Bolts (M10), First	30	3.1	22	MO, S
Camshaft Cap Bolts	12	1.2	106 in·lb	S
Cylinder Head Plugs	20	2.0	15	L
Cylinder Head Bolts (M6)	12	1.2	106 in·lb	S
Exhaust Butterfly Valve Actuator Pulley Bolt	5.0	0.51	44 in·lb	
Muffler Body Mounting Bolt	25	2.5	18	

Torque and Locking Agent

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Muffler Body End Cover Bolts	10	1.0	89 in·lb	
Muffler Body Clamp Bolt	17	1.7	13	
Exhaust Pipe Holder Nuts	20	2.0	15	S
Exhaust Pipe Mounting Bolt	34	3.5	25	
Exhaust Butterfly Valve Cable Locknuts	5.5	0.56	49 in·lb	
Clutch				
Clutch Lever Pivot Bolt	1.0	0.10	8.9 in·lb	Si
Clutch Master Cylinder Bleed Valve	5.4	0.55	48 in·lb	
Clutch Lever Pivot Bolt Locknut	5.9	0.60	52 in·lb	
Clutch Master Cylinder Clamp Bolts	11	1.1	97 in·lb	S
Electronic Cruise Control Cancel Switch (Clutch) Screw	0.30	0.03	2.7 in·lb	L
Starter Lockout Switch Screw	0.70	0.07	6.2 in·lb	
Clutch Hose Banjo Bolts	25	2.5	18	
Clutch Pipe Joint Nuts	18	1.8	13	
Clutch Cover Damper Plate Bolts	10	1.0	89 in·lb	L
Clutch Cover Bolts	12	1.2	106 in·lb	L (1), S
Oil Filler Plug	Hand -tighten	–	–	
Crankshaft Timing Plug	25	2.5	18	
Clutch Cover Plate Bolts	5.0	0.51	44 in·lb	L
Clutch Stopper Bolts	10	1.0	89 in·lb	
Clutch Hub Nut	130	13.3	95.9	R
Clutch Slave Cylinder Mounting Bolts (L = 25 mm)	10	1.0	89 in·lb	L
Clutch Slave Cylinder Mounting Bolt (L = 70 mm)	10	1.0	89 in·lb	L
Clutch Slave Cylinder Bleed Valve	8.5	0.87	75 in·lb	
Engine Lubrication System				
Oil Filler Plug	Hand -tighten	–	–	
Oil Pump Drive Chain Guide Bolts	10	1.0	89 in·lb	L
Oil Pump Driven Gear Bolt	10	1.0	89 in·lb	L, Lh
Oil Passage Plugs	20	2.0	15	L
Oil Cooler Bolts	15	1.5	11	L, S
Oil Filter	17	1.7	13	G, R
Oil Filter Pipe	35	3.6	26	L
Oil Pressure Switch	15	1.5	11	LG
Oil Pressure Relief Valve	15	1.5	11	L
Engine Oil Drain Bolt	25	2.5	18	
Oil Pan Bolts	10	1.0	89 in·lb	S
Engine Removal/Installation				
Front Engine Mounting Bolts (Front)	45	4.6	33	L, S
Front Engine Mounting Bolt (Rear, L= 30 mm)	45	4.6	33	L, S
Front Engine Mounting Bolt (Rear, L= 40 mm)	45	4.6	33	L, S
Swingarm Mounting Plate Nut (Upper)	45	4.6	33	R, S

Torque and Locking Agent

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Swingarm Pivot Shaft Nut	110	11.2	81.1	S
Swingarm Mounting Plate Bolt (Lower)	45	4.6	33	L, S
Center Stand Bracket Bolt (L = 20 mm)	50	5.1	37	S
Side Stand Bracket Bolt (Rear, ZX1002A)	50	5.1	37	L, S
Side Stand Bracket Bolt (Rear, ZX1002B)	50	5.1	37	S
Center Stand Bracket Bolt (L = 30 mm)	50	5.1	37	L, S
Center Stand Bolts	45	4.6	33	S
Rear Engine Mounting Bolts	45	4.6	33	
Side Stand Bracket Bolts	50	5.1	37	L, S
Crankshaft/Transmission				
Breather Cover Bolts	10	1.0	89 in·lb	
Balancer Shaft Clamp Bolts	10	1.0	89 in·lb	
Balancer Shaft Clamp Lever Bolts	33	3.4	24	L
Breather Plate Bolts	10	1.0	89 in·lb	L
Oil Passage Plugs	20	2.0	15	L
Crankcase Oil Nozzle	15	1.5	11	L
Oil Nozzle (M5)	3.0	0.31	27 in·lb	
Transmission Oil Nozzle Pipe Bolts	10	1.0	89 in·lb	L
Oil Nozzles (M8)	5.0	0.51	44 in·lb	
Bearing Holder Screws	10	1.0	89 in·lb	L
Connecting Rod Big End Nuts	see the text	←	←	MO, R
Crankcase Bolts (M7, L = 60 mm)	20	2.0	15	S (1)
Crankcase Bolts (M8)	27	2.8	20	S
Crankcase Bolts (M6, L = 40 mm)	12	1.2	106 in·lb	S
Crankcase Bolt (M6, L = 30 mm)	12	1.2	106 in·lb	S
Crankcase Bolts (M7, L = 45 mm)	20	2.0	15	
Crankcase Bolts (M10, L = 120 mm), Final	48	4.9	35	MO, S
Crankcase Bolts (M10, L = 120 mm), First	12	1.2	106 in·lb	MO, S
Crankcase Bolts (M10, L = 100 mm), Final	48	4.9	35	MO, S
Crankcase Bolts (M10, L = 100 mm), First	12	1.2	106 in·lb	MO, S
Crankcase Bolts (M7, L = 85 mm)	20	2.0	15	
Bearing Holder Screws	10	1.0	89 in·lb	L
Transmission Case Bolts	20	2.0	15	
Shift Drum Cam Holder Bolt	15	1.5	11	L
Oil Nozzles (M8)	5.0	0.51	44 in·lb	
Gear Positioning Lever Bolt	12	1.2	106 in·lb	
Shift Shaft Return Spring Pin	29	3.0	21	L
Shift Lever Clamp Bolt	10	1.0	89 in·lb	
Tie-Rod Locknuts	7.0	0.71	62 in·lb	Lh (1)
Shift Pedal Mounting Bolt	25	2.5	18	L
Wheels/Tires				
Front Axle Clamp Bolts	20	2.0	15	S

Torque and Locking Agent

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Air Valve Nuts	4.5	0.46	40 in·lb	L
Front Axle Nut	130	13.3	95.9	
Rear Wheel Nuts	110	11.2	81.1	S
Final Drive				
Engine Sprocket Nut	145	14.8	107	MO
Drive Chain Guide Bolt (L = 14 mm)	10	1.0	89 in·lb	L
Drive Chain Guide Bolts (L = 30 mm)	10	1.0	89 in·lb	
Engine Sprocket Cover Bolt	10	1.0	89 in·lb	L
Chain Guide Bolts	1.75	0.178	15 in·lb	L
Rear Axle Nut, First	160	16.3	118	
Rear Axle Nut, Final	200	20.4	148	
Bearing Housing Clamp Bolts	33	3.4	24	S
Rear Sprocket Nuts	60	6.1	44	R, S
Brakes				
Brake Hose Banjo Bolts	25	2.5	18	
Front Brake Reservoir Cap Stopper Screw	1.2	0.12	11 in·lb	
Brake Lever Pivot Bolt	1.0	0.10	8.9 in·lb	Si
Brake Lever Pivot Bolt Locknut	5.9	0.60	52 in·lb	
Front Master Cylinder Bleed Valve	5.4	0.55	48 in·lb	
Front Master Cylinder Clamp Bolts	11	1.1	97 in·lb	S
Brake/Electronic Cruise Control Cancel Switch Screw	0.30	0.03	2.7 in·lb	
Front Wheel Rotation Sensor Bolts	25	2.5	18	
Front Wheel Rotation Sensor Rotor Bolts	4.0	0.41	35 in·lb	S
Front Brake Disc Mounting Bolts	28	2.9	21	L, S
Caliper Bleed Valves	8.0	0.82	71 in·lb	
Front Brake Pad Pins	15.2	1.55	11	
Front Caliper Mounting Bolts	35	3.6	2 26	
Rear Master Cylinder Mounting Bolts	25	2.5	18	L
Electronic Cruise Control Cancel Switch Adjuster Locknut	7.0	0.71	62 in·lb	
Brake Pedal Bolt	9.0	0.92	80 in·lb	
Rear Master Cylinder Push Rod Locknut	17	1.7	13	
Rear Wheel Rotation Sensor Bolts	25	2.5	18	
Rear Brake Pad Pins	17	1.7	13	
Rear Caliper Holder Pin	17	1.7	13	Si
Rear Caliper Holder Pin Nut	22	2.2	16	
Rear Caliper Mounting Bolts	35	3.6	26	
Rear Brake Disc Mounting Bolts	28	2.9	21	L, S
Suspension				
Upper Front Fork Clamp Bolts	20	2.0	15	
Lower Front Fork Clamp Bolts	23	2.3	17	AL
Front Fork Top Plugs	22.5	2.29	16.6	

Torque and Locking Agent

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Piston Rod Nuts	28.5	2.91	21.0	
Front Fork Bottom Allen Bolts	23	2.3	17	L
Rear Shock Absorber Bracket Nuts	35	3.6	26	R
Upper Rear Shock Absorber Nut	35	3.6	26	R
Tie-Rod Nuts	35	3.6	26	R
Lower Rear Shock Absorber Nut	35	3.6	26	R
Swingarm Pivot Shaft Nut	110	11.2	81.1	
Rocker Arm Nut	35	3.6	26	R
Steering				
Right Switch Housing Bolts	0.90	0.09	8 in·lb	
Throttle Case Bolts	3.5	0.36	31 in·lb	
Handlebar Holder Clamp Bolts	25	2.5	18	S
Handlebar Holder Positioning Bolts	10	1.0	89 in·lb	L, S
Handlebar Mounting Bolts	35	3.6	26	L
Left Switch Housing Bolts	3.5	0.36	31 in·lb	
Upper Front Fork Clamp Bolts	20	2.0	15	
Steering Stem Head Nut	80	8.2	59	
Steering Stem Nut	20	2.0	15	
Lower Front Fork Clamp Bolts	23	2.3	17	AL
Frame				
Rear View Mirror Mounting Bolts	8.0	0.82	71 in·lb	
Upper Fairing Bracket Nuts	30	3.1	22	S
Front Intake Duct Bolts	5.0	0.51	44 in·lb	
Rear Intake Duct Bolts	6.0	0.61	53 in·lb	
Rear Frame Bolts	27	2.8	20	L, S
Grab Rail Mounting Bolts	20	2.0	15	
Front Fender Mounting Bolts	4.0	0.41	35 in·lb	L
Flap Mounting Bolts	7.0	0.71	62 in·lb	L
Reflector Nut	3.4	0.35	30 in·lb	
Frame Bracket Bolts	25	2.5	18	S
Front Footpeg Bracket Bolts	25	2.5	18	
Rear Master Cylinder Mounting Bolts	25	2.5	18	L
Rear Footpeg Bracket Bolts	25	2.5	18	
Front Footpeg Bolts	4.5	0.46	40 in·lb	L
Swingarm Mounting Plate Bolt (Lower)	45	4.6	33	L
Side Stand Bracket Bolt (Rear, ZX1002A)	50	5.1	37	L
Side Stand Bracket Bolt (Rear, ZX1002B)	50	5.1	37	
Side Stand Bracket Bolts	50	5.1	37	L
Side Stand Bolt	30	3.1	22	L
Center Stand Bracket Bolt (L = 20 mm)	50	5.1	37	
Center Stand Bracket Bolt (L = 30 mm)	50	5.1	37	L
Center Stand Bolts	45	4.6	33	

Torque and Locking Agent

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Electrical System				
Spark Plugs	13	1.3	115 in·lb	
Camshaft Position Sensor Bolt	10	1.0	89 in·lb	
Water Temperature Sensor	12	1.2	106 in·lb	
Crankshaft Sensor Bolts	6.0	0.61	53 in·lb	L
Gear Position Sensor Bolt	10	1.0	89 in·lb	
Alternator Cover Bolts	10	1.0	89 in·lb	
Alternator Lead Holding Plate Bolt	10	1.0	89 in·lb	L
Stator Coil Bolts	12	1.2	106 in·lb	L
Alternator Rotor Bolt	155	15.8	114	
Timing Rotor Bolt	39	4.0	29	L
Oxygen Sensor	25	2.5	18	
Electronic Cruise Control Cancel Switch (Clutch) Screw	0.30	0.03	2.7 in·lb	L
Starter Lockout Switch Screw	0.70	0.07	6.2 in·lb	L
Left Handlebar Switch Housing Screws	3.5	0.36	31 in·lb	
Brake/Electronic Cruise Control Cancel Switch Screw	0.30	0.03	2.7 in·lb	L
Right Handlebar Switch Housing Screws	0.90	0.09	8 in·lb	
Regulator/Rectifier Mounting Nuts	7.0	0.71	62 in·lb	
Fuel Level Sensor Bolts	7.0	0.71	62 in·lb	L
Starter Motor Mounting Bolts	10	1.0	89 in·lb	
Starter Motor Cable Terminal Nut	6.0	0.61	53 in·lb	G
Starter Motor Terminal Locknut	11	1.1	97 in·lb	
Brush Holder Screw	3.8	0.39	34 in·lb	
Starter Motor Through Bolts	5.0	0.51	44 in·lb	
Engine Ground Terminal Bolt	10	1.0	89 in·lb	
Side Stand Switch Bolt	9.0	0.92	80 in·lb	
Electronic Cruise Control Cancel Switch (Rear Brake) Screw	1.2	0.12	11 in·lb	

Torque and Locking Agent

The tables below, relating tightening torque to thread diameter, lists the basic torque for the bolts, nuts and screws. Use these tables for the bolts, nuts and screws which are not specified the tightening torque particularly on the previous pages. All of the values are for use with dry solvent-cleaned threads.

Basic Torque for General Fasteners

For Bolts and Nuts

Threads Diameter (mm)	Torque		
	N·m	kgf·m	ft·lb
5	4.5	0.46	40 in·lb
6	8.0	0.82	71 in·lb
8	20	2.0	15
10	35	3.6	26
12	60	6.1	44

For Screws, Plastic Part Tightening Portions and Plastic Washer Tightening Portions

Threads Diameter (mm)	Torque		
	N·m	kgf·m	ft·lb
4	1.2	0.12	11 in·lb
5	3.0	0.31	27 in·lb
6	4.0	0.41	35 in·lb

For Self-Tapping Screws

Threads Diameter (mm)	Torque		
	N·m	kgf·m	ft·lb
All	1.2	0.12	11 in·lb

For Wellnuts

Threads Diameter (mm)	Torque		
	N·m	kgf·m	ft·lb
4	0.2	0.02	1.8 in·lb
5	0.5	0.05	4.4 in·lb
6	1.0	0.10	8.9 in·lb

Specifications

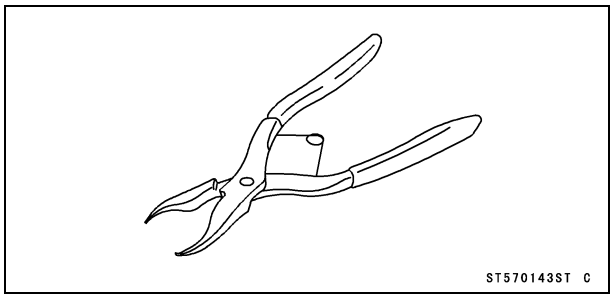
Item	Standard	Service Limit
Fuel System (DFI)		
Throttle Grip Free Play	2 ~ 3 mm (0.08 ~ 0.12 in.)	– – –
Idle Speed	1 100 ±100 r/min (rpm)	– – –
Throttle Body Vacuum	38.0 ±2.7 kPa (285 ±20 mmHg) at idle speed	– – –
Air Cleaner Element	Viscous paper element	– – –
Cooling System		
Coolant:		
Type (Recommended)	Permanent type of antifreeze	– – –
Color	Green	– – –
Mixed Ratio	Soft water 50%, coolant 50%	– – –
Freezing Point	–35°C (–31°F)	– – –
Total Amount	2.9 L (3.1 US qt)	– – –
Engine Top End		
Valve Clearance:		
Exhaust	0.33 ~ 0.38 mm (0.0130 ~ 0.0150 in.)	– – –
Intake	0.15 ~ 0.22 mm (0.0059 ~ 0.0087 in.)	– – –
Engine Lubrication System		
Engine Oil:		
Type	API SG, SH, SJ, SL or SM with JASO MA, MA1 or MA2	– – –
Viscosity	SAE 10W-40	– – –
Capacity	3.5 L (3.7 US qt) (When filter is not removed.)	– – –
	4.3 L (4.5 US qt) (When filter is removed.)	– – –
	4.7 L (5.0 US qt) (When engine is completely dry.)	– – –
Level	Between upper and lower level lines (Wait several minutes after idling or running)	– – –
Wheels/Tires		
Tire Tread Depth:		
Front	3.6 mm (0.14 in.)	1 mm (0.04 in.) (AT, CH, DE) 1.6 mm (0.06 in.)
Rear	5.0 mm (0.20 in.)	UP to 130 km/h (80 mph): 2 mm (0.08 in.) Over 130 km/h (80 mph):3 mm (0.12 in.)
Air Pressure (when cold):		
Front	Up to 195 kg (430 lb) load: 290 kPa (2.90 kgf/cm², 42 psi)	– – –
Rear	Up to 195 kg (430 lb) load: 290 kPa (2.90 kgf/cm², 42 psi)	– – –

Specifications

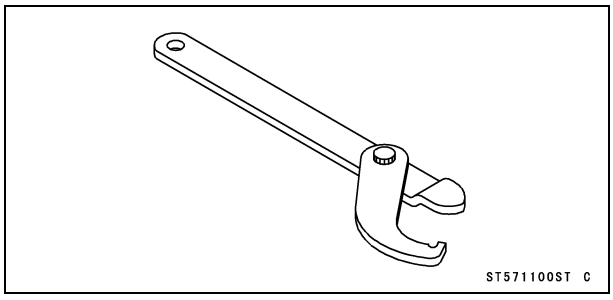
Item	Standard	Service Limit
Final Drive		
Drive Chain Slack	25 ~ 35 mm (1.0 ~ 1.4 in.)	– – –
Drive Chain 20-link Length	317.5 ~ 318.2 mm (12.50 ~ 12.53 in.)	319 mm (12.6 in.)
Standard Chain:		
Make	ENUMA	– – –
Type	EK525RMXZ/3D	– – –
Link	120 links	– – –
Brakes		
Brake Fluid:		
Grade	DOT4	– – –
Brake Pad Lining Thickness:		
Front	4.0 mm (0.16 in.)	1.0 mm (0.04 in.)
Rear	3.7 mm (0.15 in.)	1.5 mm (0.06 in.)
Brake Light Timing:		
Front	Pulled ON	– – –
Rear	ON after about 7 mm (0.28 in.) of pedal travel	– – –
Electrical System		
Spark Plug:		
Type	NGK SILMAR9E9	– – –
Gap	0.8 ~ 0.9 mm (0.031 ~ 0.035 in.)	– – –
Supercharger		
Supercharger Impeller Axial Play	– – –	0.5 mm (0.02 in.)

Special Tools

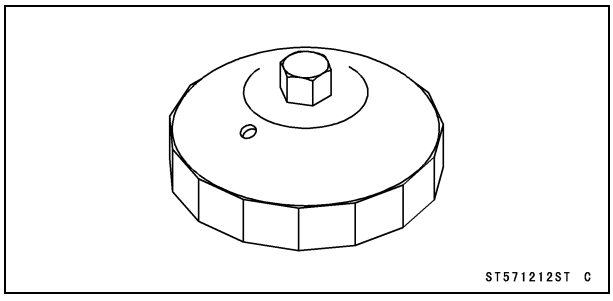
Inside Circlip Pliers:
57001-143



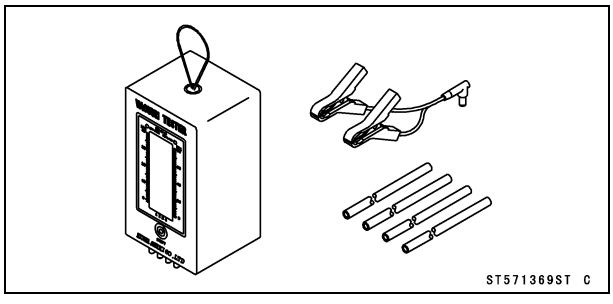
Steering Stem Nut Wrench:
57001-1100



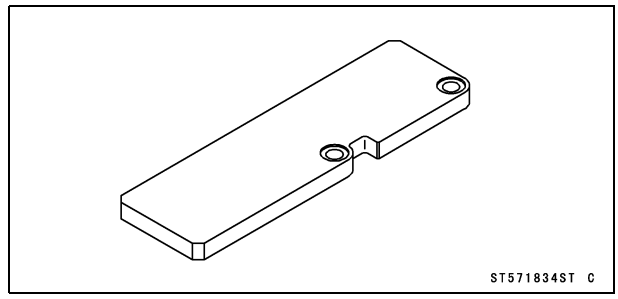
Oil Filter Wrench:
57001-1212



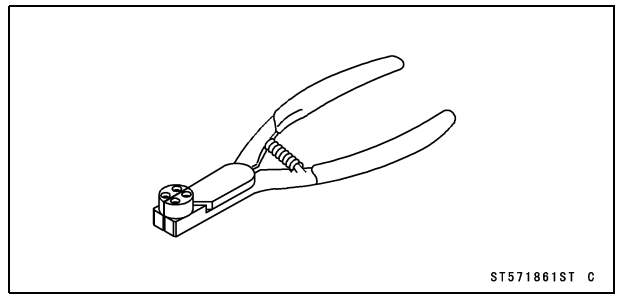
Vacuum Gauge:
57001-1369



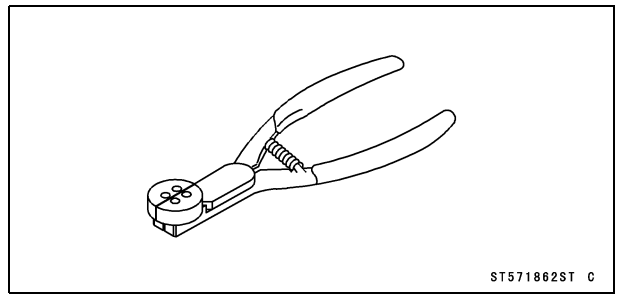
Dial Gauge Holder Plate:
57001-1834



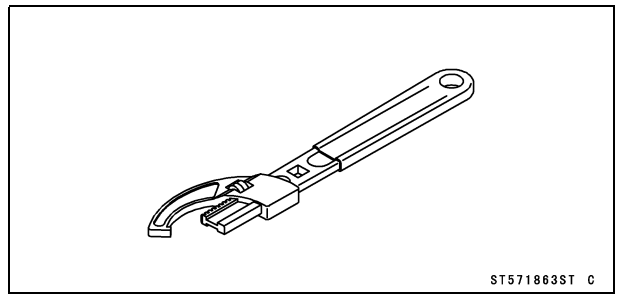
Brake Caliper Piston Pliers (ϕ16 ~ ϕ26):
57001-1861



Brake Caliper Piston Pliers (ϕ26 ~ ϕ36):
57001-1862



Adjustable Hook Wrench:
57001-1863



Periodic Maintenance Procedures

Fuel System (DFI)

Air Cleaner Element Replacement

NOTE

○*In dusty areas, the element should be replaced more frequently than the recommended interval.*

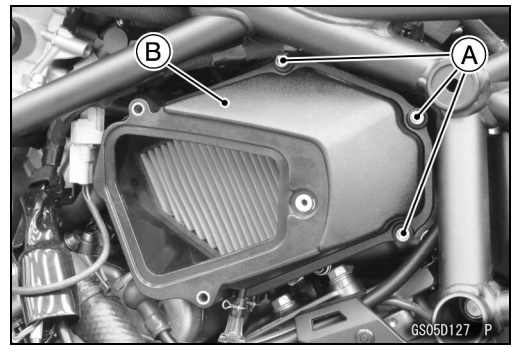
⚠ WARNING

If dirt or dust is allowed to pass through into the throttle body assy, the throttle may become stuck, possibly causing accident. Replace the air cleaner element according to the maintenance chart.

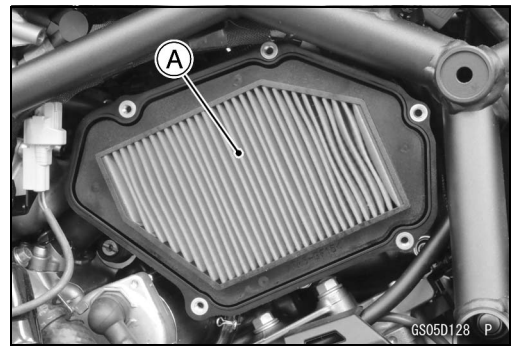
NOTICE

If dirt gets through into the engine, excessive engine wear and possibly engine damage will occur.

● Remove:
Rear Intake Duct (see Intake Duct Removal in the Frame chapter)
Left Fuel Tank Cover (see Fuel Tank Cover Removal in the Frame chapter)
Air Cleaner Housing Cover Bolts [A]
Air Cleaner Housing Cover [B]



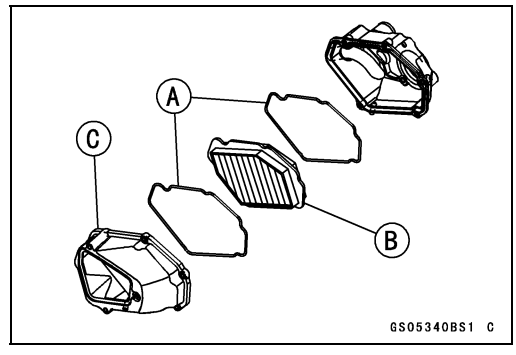
● Discard the air cleaner element [A].



● Replace the O-rings [A] with new ones.
● Install:
New Element [B]
Air Cleaner Housing Cover [C]
● Tighten:

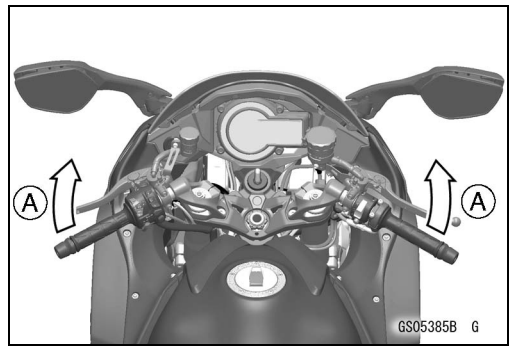
Torque - Air Cleaner Housing Cover Bolts: 6.0 N·m (0.61 kgf·m, 53 in·lb)

● Install the removed parts (see appropriate chapters).



Periodic Maintenance Procedures

Idle Speed Inspection



- Start the engine and warm it up thoroughly.
- With the engine idling, turn the handlebars to both sides [A].

★If handlebar movement changes the idle speed, the throttle cables may be improperly adjusted or incorrectly routed, or damaged. Be sure to correct any of these conditions before riding (see Throttle Control System Inspection and Cable, Wire, and Hose Routing section in the Appendix chapter).

⚠ WARNING

Operation with improperly adjusted, incorrectly routed or damaged cables could result in an unsafe riding condition. Follow the service manual to be make sure to correct any of these conditions.

- Check the idle speed.

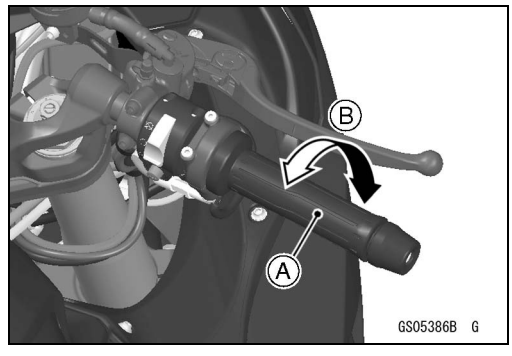
Idle Speed
Standard: 1 100 ±100 r/min (rpm)

Idle Speed Adjustment

NOTE

○*This motorcycle is equipped with the idle speed control system. The idle speed is adjusted automatically at the specified value (1 100 r/min (rpm)) by the idle speed control system. Therefore, it is not necessary to adjust the idle speed normally.*

Throttle Control System Inspection

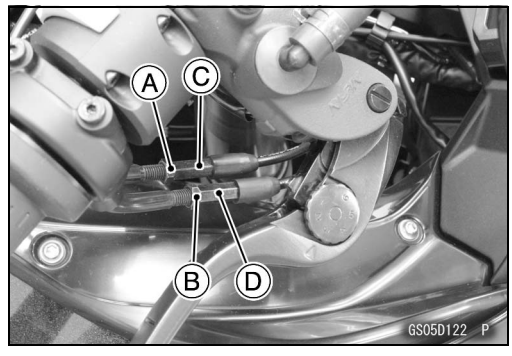


- Check that the throttle grip [A] moves smoothly from full open to close, and the throttle closes quickly and completely by the return spring in all steering positions.

★If the throttle grip does not return properly, check the throttle cable routing, grip free play, and cable damage. Then lubricate the throttle cable.

- Check the throttle grip free play [B].

Throttle Grip Free Play
Standard: 2 ~ 3 mm (0.08 ~ 0.12 in.)



★If the free play is incorrect, adjust the throttle cable as follows.

- Loosen the locknuts [A] [B].
- Screw both throttle cable adjusters [C] [D] to give the throttle grip plenty of play.
- Turn the decelerator cable adjuster [C] until there is no play when the throttle grip play completely closed.
- Tighten the locknut [A].
- Turn the accelerator cable adjuster [D] until 2 ~ 3 mm (0.08 ~ 0.12 in.) of throttle grip play is obtained.
- Tighten the locknut [B].

★If the free play can not be adjusted with the adjusters, replace the cable.

Periodic Maintenance Procedures

Engine Vacuum Synchronization Inspection

⚠ WARNING

The air intake chamber can become extremely hot during normal operation and cause severe burns. Do not remove the air intake chamber while it is hot.

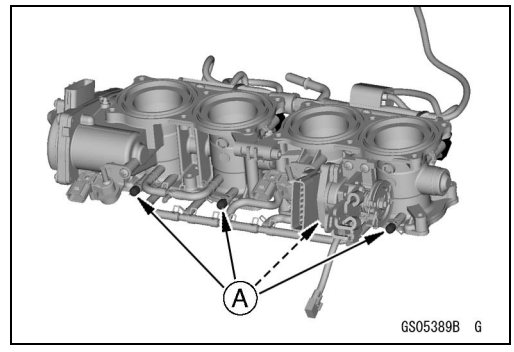
NOTE

○*These procedures are explained on the assumption that the intake and exhaust systems of the engine are in good condition.*

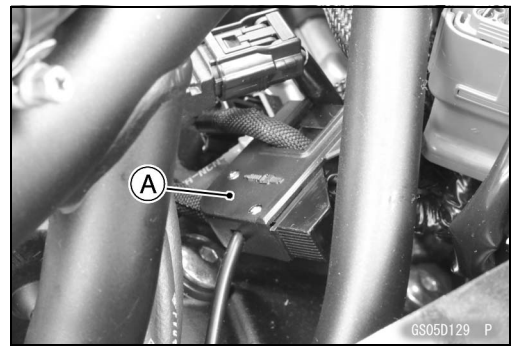
- Situate the motorcycle so that it is vertical.
- Remove:
  Air Intake Chamber (see Air Intake Chamber Removal in the Fuel System (DFI) chapter)

- Pull off the rubber caps [A] from the fittings of each throttle body.
- ★Remove the throttle body assy temporarily if the operation is difficult (see Throttle Body Assy Removal in the Fuel System (DFI) chapter).
- Connect a vacuum gauge and hoses (Special Tool: 57001-1369) to the fittings on the throttle body.

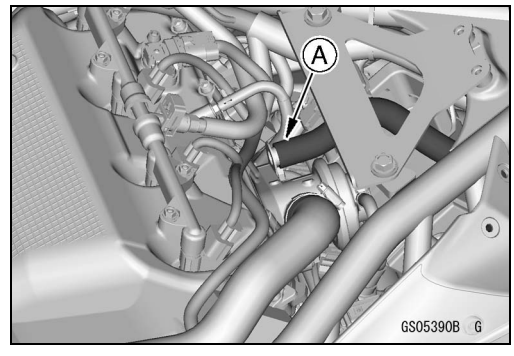
Special Tool - Vacuum Gauge: 57001-1369



- Connect a highly accurate tachometer lead [A] to one of the stick coil primary leads.



- Install the air intake chamber (see Air Intake Chamber Installation in the Fuel System (DFI) chapter).
- Plug the air switching valve hose end [A].
- Install the fuel tank temporarily (see Fuel Tank Installation in the Fuel System (DFI) chapter).



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