

MODEL APPLICATION

Year	Model	Beginning Frame No.
2004	KX250-N1	JKAKXMNC□4A000001 or JKAKX250NNA000001
2005	KX250-N2	JKAKXMNC□5A010001 or JKAKX250NNA010001

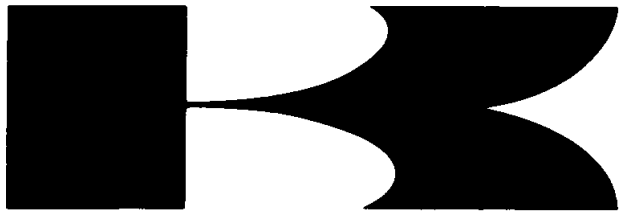
□:This digit in the frame number changes from one machine to another.



KAWASAKI HEAVY INDUSTRIES, LTD.
Consumer Products & Machinery Company

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Printed in Japan



Kawasaki

KX250F



Motorcycle Service Manual

Quick Reference Guide

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LIST OF ABBREVIATIONS

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

Foreword

This manual is designed primarily for use by trained mechanics in a properly equipped shop. However, it contains enough detail and basic information to make it useful to the owner who desires to perform his own basic maintenance and repair work. A basic knowledge of mechanics, the proper use of tools, and workshop procedures must be understood in order to carry out maintenance and repair satisfactorily. Whenever the owner has insufficient experience or doubts his ability to do the work, all adjustments, maintenance, and repair should be carried out only by qualified mechanics.

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

To get the longest life out of your vehicle:

- Follow the Periodic Maintenance Chart in the Service Manual.
- Be alert for problems and non-scheduled maintenance.
- Use proper tools and genuine Kawasaki Motorcycle parts. Special tools, gauges, and testers that are necessary when servicing Kawasaki motorcycles are introduced by the Special Tool Catalog or Manual. Genuine parts provided as spare parts are listed in the Parts Catalog.
- Follow the procedures in this manual carefully. Don't take shortcuts.
- Remember to keep complete records of maintenance and repair with dates and any new parts installed.

How to Use This Manual

In 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 these WARNING and CAUTION symbols, heed their instructions! Always follow safe operating and maintenance practices.

WARNING

This warning symbol identifies special instructions or procedures which, if not correctly followed, could result in personal injury, or loss of life.

CAUTION

This caution symbol identifies special instructions or procedures which, if not strictly observed, could result in damage to or destruction of equipment.

This manual contains four more symbols (in addition to WARNING and CAUTION) which will help you distinguish different types of information.

NOTE

○ *This note symbol indicates points of particular interest for more efficient and convenient operation.*

- Indicates a procedural step or work to be done.
- Indicates a procedural sub-step or how to do the work of the procedural step it follows. It also precedes the text of a 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



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1-2 GENERAL INFORMATION

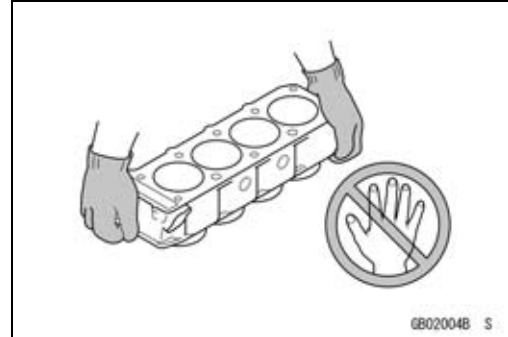
Before Servicing

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:

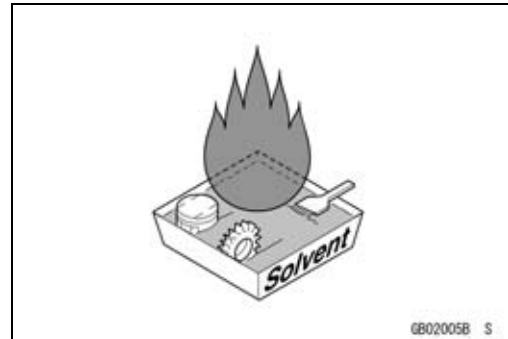
Edges of Parts

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



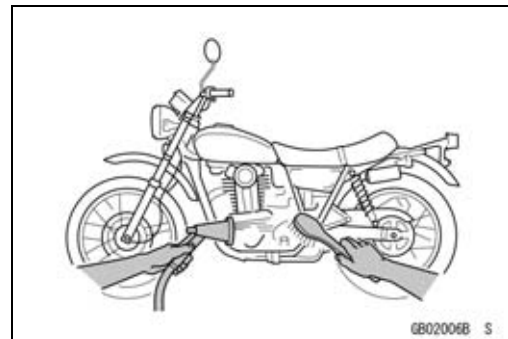
Solvent

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



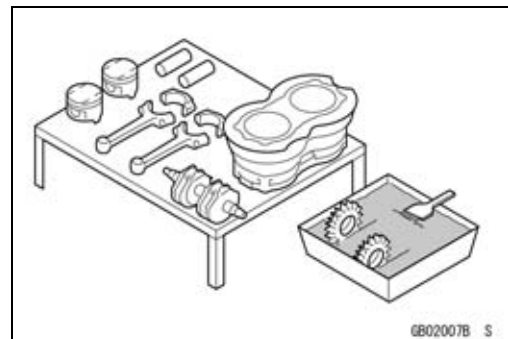
Cleaning vehicle before disassembly

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.



Arrangement and Cleaning of Removed Parts

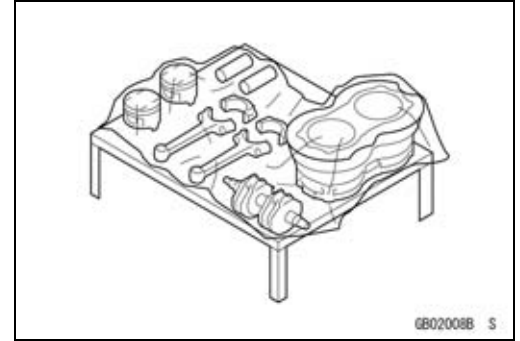
Disassembled parts are easy to confuse. Arrange the parts according to the order the parts were disassembled and clean the parts in order prior to assembly.



Before Servicing

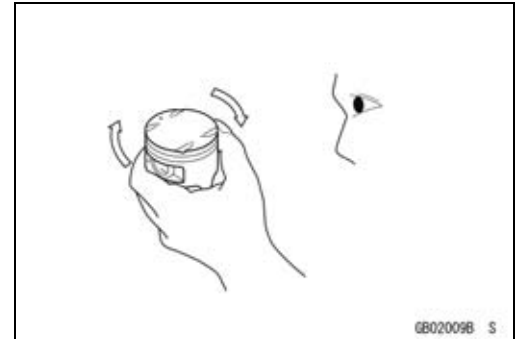
Storage of Removed Parts

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.



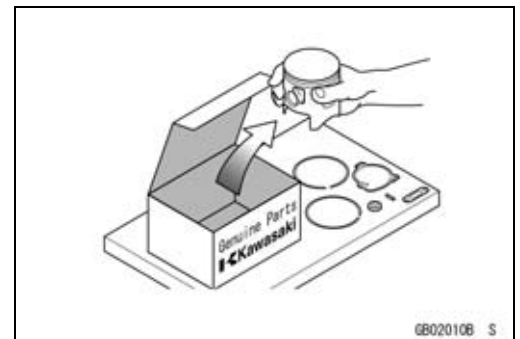
Inspection

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.



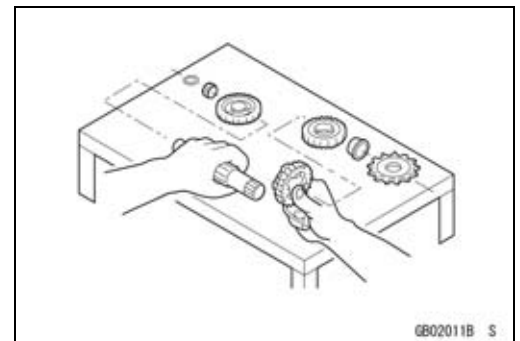
Replacement Parts

Replacement Parts must be KAWASAKI genuine or recommended by KAWASAKI. Gaskets, O rings, Oil seals, Grease seals, circlips or cotter pins must be replaced with new ones whenever disassembled.



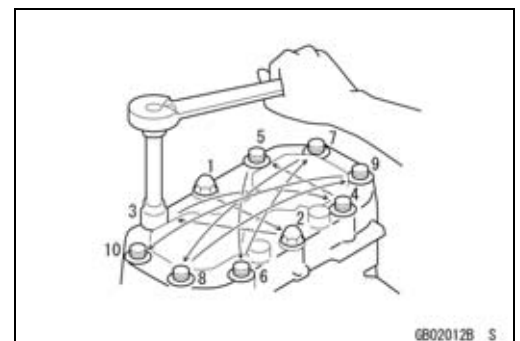
Assembly Order

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



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.



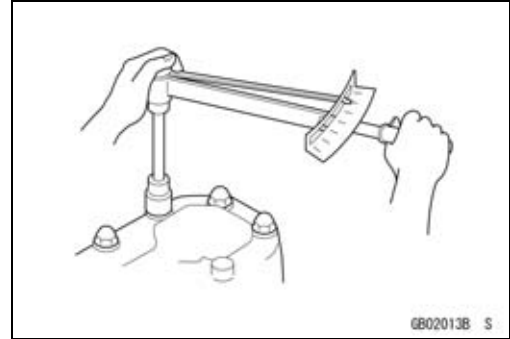
1-4 GENERAL INFORMATION

Before Servicing

Tightening Torque

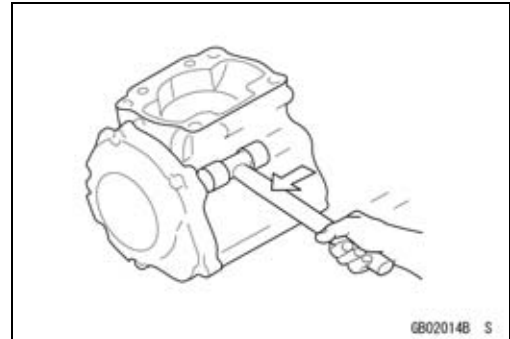
Incorrect torque applied to a bolt, nut, or screw may lead to serious damage. Tighten fasteners to the specified torque using a good quality torque wrench.

Often, the tightening sequence is followed twice-initial tightening and final tightening with torque wrench.



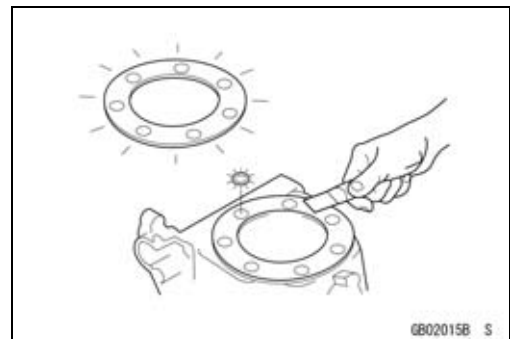
Force

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.



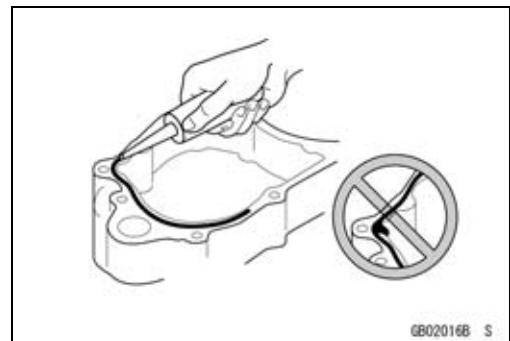
Gasket, Oring

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 new gaskets and replace used O-rings when re-assembling.



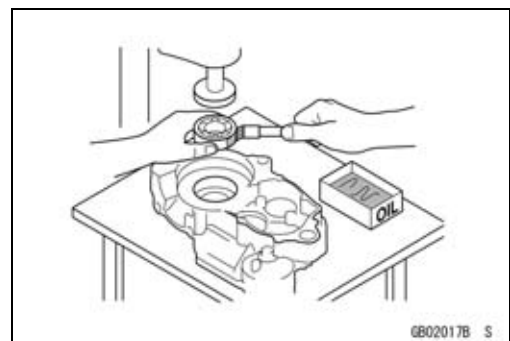
Liquid Gasket, Locking Agent

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



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.

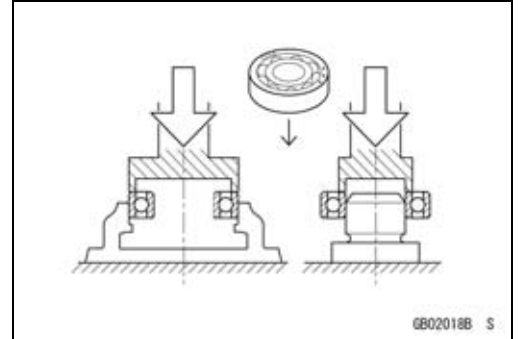


Before Servicing

Ball Bearing and Needle Bearing

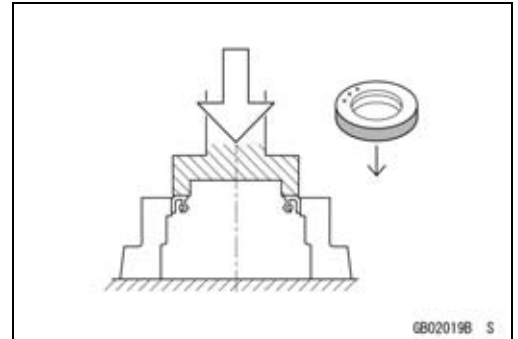
Do not remove pressed ball or needle unless removal is absolutely necessary. Replace with new ones whenever removed. Press bearings with the manufacturer and size marks facing out. Press the bearing into place by putting pressure on the correct bearing race as shown.

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

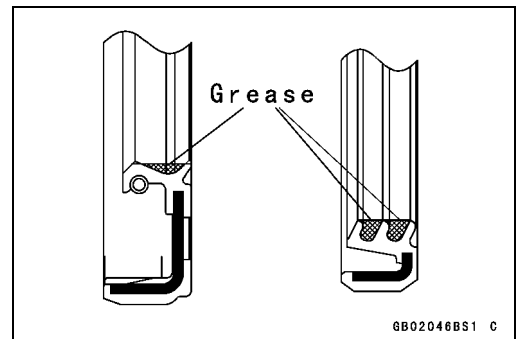


Oil Seal, Grease Seal

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.

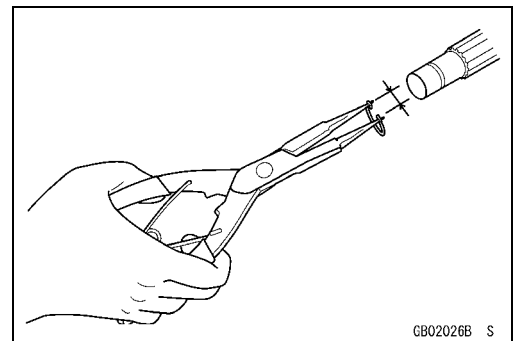


Apply specified grease to the lip of seal before installing the seal.



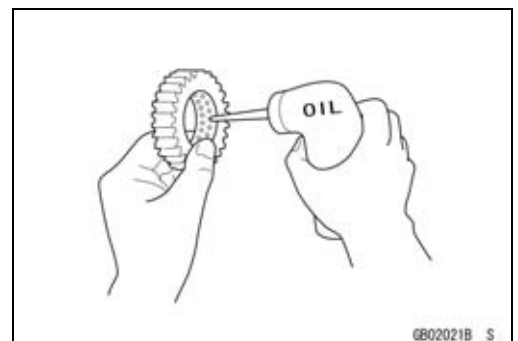
Circlips, Cotter Pins

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



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.

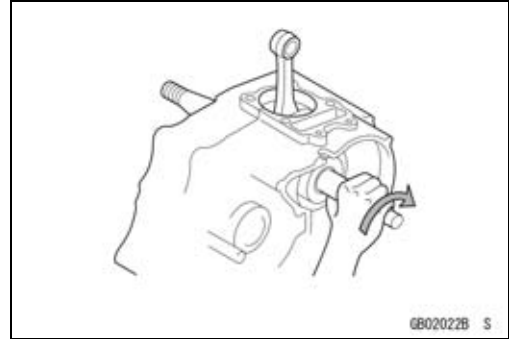


1-6 GENERAL INFORMATION

Before Servicing

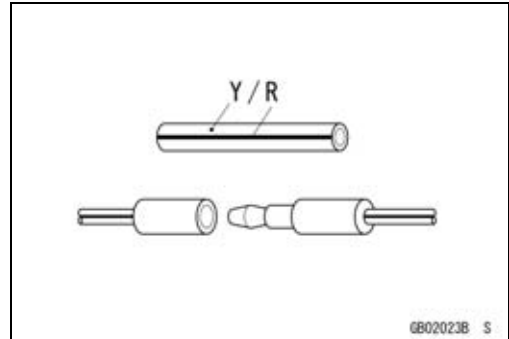
Direction of Engine Rotation

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.



Model Identification

KX250-N1 Left Side View



KX250-N1 Right Side View



1-8 GENERAL INFORMATION

General Specifications

Items	KX250-N1 ~
Dimensions Overall Length Overall Width Overall Height Wheelbase Road Clearance Seat Height Dry Mass Curb Mass: Front Rear Fuel Tank Capacity	2 170 mm (85.43 in.) 840 mm (33.1 in.) 1 270 mm (50 in.) 1 475 mm (8.07 in.) 340 mm (13.4 in.) 960 mm (37.8 in.) 92.5 kg (204 lb) 49.9 kg (110 lb) 52.6 kg (116 lb) 7.5 L (2.0 US gal)
Performance Minimum Turning Radius	–
Engine Type Cooling System Bore and Stroke Displacement Compression Ratio Maximum Horsepower Maximum Torque Carburetion System Starting System Ignition System Timing Advance Ignition Timing Spark Plug Valve Timing Inlet Open Close Duration Exhaust Open Close Duration Lubrication System Engine Oil: Type Viscosity Capacity	4-stroke, single cylinder, DOHC 4 valve Liquid-cooled 77.0 × 53.6 mm (3.03 × 2.11 in.) 249 mL (15.2 cu in.) 12.6 : 1 31.6 kW (43.0 PS) @11 000 r/min (rpm) 31.7 kW (PS) @11 000 r/min (rpm) (KX250-N2) 28.7 N·m (2.93 kgf·m, 6.45 in·lb) @8 500 r/min (rpm) Carburetor, KEIHIN FCR37 Primary kick Digital AC-CDI BTDC 8° @2 000 r/min (rpm) NGK CR8EB BTDC 49°, BTDC 46° (KX250-N2) ABDC 63°, ABDC 66° (KX250-N2) 292° BBDC 69° ATDC 49° 298° Forced lubrication (semi-dry sump) API SG, SH or SJ with JASO MA SAE 10W-40 1.5 L (1.6 USqt)

General Specifications

Items	KX250-N1 ~
<p>Drive Train</p> <p>Primary Reduction System: Type Reduction Ratio</p> <p>Clutch Type</p> <p>Transmission: Type Gear ratios: 1st 2nd 3rd 4th 5th</p> <p>Final Drive System: Type Reduction Ratio Overall Drive Ratio</p>	<p>Gear 3.350 (67/20)</p> <p>Wet, multi disc</p> <p>5-speed, constant mesh, return shift</p> <p>2.142 (30/14) 1.785 (25/14) 1.444 (26/18) 1.200 (24/20) 1.052 (20/19)</p> <p>Chain drive 3.692 (48/13) 13.020 @Top gear</p>
<p>Frame</p> <p>Type Steering Angle Caster (rake angle) Trail</p> <p>Front tire: Size Make/Type</p> <p>Rear tire: Size Make/Type</p> <p>Front suspension: Type Wheel travel</p> <p>Rear suspension: Type Wheel travel</p> <p>Brake type: Front and Rear</p> <p>Effective disc diameter: Front (effect. dia.) Rear (effect. dia.)</p>	<p>Tubular, semi-double cradle 42° to either side 26.5° 110 mm (4.33 in.)</p> <p>80/100-21 51M BRIDGESTONE M601, M401 (KX250-N2), Tube type BRIDGESTONE M201 (EU), Tube type</p> <p>100/90-19 57M BRIDGESTONE M602, M402 (KX250-N2), Tube type BRIDGESTONE M202 (EU), Tube type</p> <p>Telescopic fork (up side down) 300 mm (11.8 in.)</p> <p>Swingarm (New Uni-trak) 310 mm (12.2 in.)</p> <p>Single disc</p> <p>225 mm (8.86 in.) 215 mm (8.46 in.)</p>

EU: European Model

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

1-10 GENERAL INFORMATION

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	=	kgf
N	×	0.2248	=	lb
kgf	×	9.807	=	N
kgf	×	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/cm ²
kPa	×	0.1450	=	psi
kPa	×	0.7501	=	cm Hg
kgf/cm ²	×	98.07	=	kPa
kgf/cm ²	×	14.22	=	psi
cm Hg	×	1.333	=	kPa

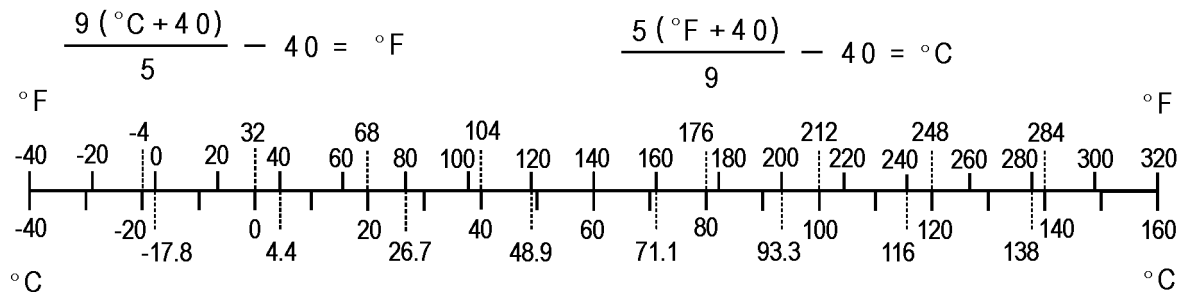
Units of Speed:

km/h	×	0.6214	=	mph
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Units of Power:

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

Units of Temperature:



Periodic Maintenance

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2-2 PERIODIC MAINTENANCE

Periodic Maintenance Chart

The maintenance must be done in accordance with this chart to keep the motorcycle in good running condition.

		FREQUENCY	Each race or 2.5 hr	Every 3 races or 7.5 hr	Every 6 races or 15 hr	Every 12 races or 30 hr	See Page
E N G I N E	Spark plug - clean, gap †		•				2-53
	Clutch - adjust		•				2-22
	Clutch and friction plates - inspect †			•	R		2-23
	Throttle cable - adjust		•				2-11
	Air cleaner element - clean		•				2-13
	Air cleaner element - replace			If damaged			2-13
	Carburetor - inspect and adjust		•				2-12
	Engine Oil - change				•		2-24
	Piston and piston ring - replace				•		2-20
	Cylinder head, cylinder - inspect				•		2-19
	Piston pin - replace					•	2-20
	Valve clearance - inspect †				•		2-17
	Hot start - adjust		•				2-12
	Oil filter - replace				•		2-25
	Silencer - clean and inspect †		•				2-21
	Silencer packing - change				•		2-21
	Kick pedal and shift pedal - clean		•				-
	Engine sprocket - inspect †		•				2-31
	Coolant - check †		•				2-15
	Radiator hoses and connections - inspect †		•				2-16
Crankshaft - inspect				•		2-27	
Breather hose - inspect		•				2-27	
C H A S S I S	Brake adjustment - inspect †		•				2-32
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	Brake hoses, connections - inspect †		•				2-41
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	Wheel bearing - inspect †		•				2-30
	Frame - inspect		•				2-53
	Drive chain wear - inspect †		•				2-30
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Front fork - inspect and clean		•				2-42	

PERIODIC MAINTENANCE 2-3

Periodic Maintenance Chart

OPERATION		FREQUENCY				See Page
		Each race or 2.5 hr	Every 3 races or 7.5 hr	Every 6 races or 15 hr	Every 12 races or 30 hr	
	Front fork oil - change			●		2-42
	Rear shock oil - replace			●		2-45
	Cable - inspect	●				2-54
	Fuel hose - replace	Every 4 years				2-11
	Fuel hose, connections - inspect †	●				2-11
	Steering play - inspect †	●				2-50
	Steering stem bearing - grease			●		2-52
	Swingarm and Uni-Trak linkage pivots - grease		●			2-50
	Swingarm and Uni-Trak linkage pivots - inspect †		●			2-50
	Nuts, bolts, fasteners - inspect †	●				2-55

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

R: Replace

2-4 PERIODIC MAINTENANCE

Torque and Locking Agent

Tighten all bolts and nuts to the proper torque using an accurate torque wrench. If insufficiently tightened, a bolt or nut may become damaged, strip an internal thread, or break and then fall out. The following table lists the tightening torque for the major bolts and nuts, and the parts requiring use of a non-permanent locking agent or liquid gasket.

When checking the tightening torque of the bolts and nuts, first loosen the bolt or nut by half a turn and then tighten to specified torque.

Letters used in the "Remarks" column mean:

AL: Tighten the two clamp bolts alternately two times to ensure even tightening torque.

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

Lh: Left-hand Threads

S: Tighten the fasteners following the specified sequence.

Basic Torque for General Fasteners

Threads dia. (mm)	Torque		
	N·m	kgf·m	ft·lb
5	3.4 ~ 4.9	0.35 ~ 0.50	30 ~ 43 in·lb
6	5.9 ~ 7.8	0.60 ~ 0.80	52 ~ 69 in·lb
8	14 ~ 19	1.4 ~ 1.9	10.0 ~ 13.5
10	25 ~ 34	2.6 ~ 3.5	19.0 ~ 25
12	44 ~ 61	4.5 ~ 6.2	33 ~ 45
14	73 ~ 98	7.4 ~ 10.0	54 ~ 72
16	115 ~ 155	11.5 ~ 16.0	83 ~ 115
18	165 ~ 225	17.0 ~ 23.0	125 ~ 165
20	225 ~ 325	23 ~ 33	165 ~ 240

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Fuel System				
Throttle Pulley Cover Bolt	3.4	0.3	30 in·lb	
Throttle Cable Locknut	7.0	0.7	61 in·lb	
Plunger Cap Bolt	1.0	0.1	10 in·lb	
Rear Frame Mounting Bolts	34	3.5	25	
Air Cleaner Duct Clamp Screw	2.0	0.2	17 in·lb	
Fuel Tap Plate Mounting Screws	0.8	0.08	7 in·lb	
Cooling System				
Right Engine Cover Bolt	9.8	1.0	87 in·lb	
Water Pipe Bolt	9.8	1.0	87 in·lb	
Water Pump Cover Bolts	9.8	1.0	87 in·lb	L (1)
Water Pump Cover Bolts (with washer)	9.8	1.0	87 in·lb	L (1)
Water Pump Impeller Bolt	7.0	0.7	61 in·lb	
Radiator Hose Clamp Screws	1.5	0.15	13 in·lb	
Radiator Screen Bolts	9.8	1.0	87 in·lb	
Coolant Drain Plug	7.0	0.7	61 in·lb	
Radiator Mounting Bolts	9.8	1.0	87 in·lb	
Radiator Shroud Bolts	9.8	1.0	87 in·lb	
Engine Top End				
Auto-Decompressor Bolt	12	1.2	104 in·lb	

PERIODIC MAINTENANCE 2-5

Torque and Locking Agent

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Cylinder Head Cover Bolts	9.8	1.0	87 in·lb	
Cylinder Head Bolts:				
M10	50	5.0	36	S
M6	12	1.2	104 in·lb	S
Camshaft Cap Bolts	9.8	1.0	87 in·lb	S
Carburetor Holder Clamp Screws	2.0	0.2	17 in·lb	
Plug	20	2.0	14	L
Lower Camshaft Chain Guide Bolt	9.8	1.0	87 in·lb	
Rear Camshaft Chain Guide Bolt	15	1.5	11	
Exhaust Pipe Stud	–	–	–	L (Planted side)
Chain Tensioner Mounting Bolts	9.8	1.0	87 in·lb	
Chain Tensioner Cap	20	2.0	14.5	
Cylinder Bolt M6	12	1.2	104 in·lb	S
Exhaust Pipe Cover Screws	12	1.2	104 in·lb	
Exhaust Pipe Holder Nuts	21	2.1	15	S
Muffler Mounting Bolts	21	2.1	15	S
Engine Right Side				
Primary Gear Nut	98	10	72	Lh
Shift Drum Cam Bolt	24	2.4	17	L
Clutch Spring Bolts	9.8	1.0	87 in·lb	
Clutch Hub Nut	98	10	72	
Gear Set Lever Nut	8.8	0.9	78 in·lb	
Gear Set Lever Pivot Stud	–	–	–	L (Planted Side)
Ratchet Plate Mounting Bolt	9.8	1.0	87 in·lb	L
Ratchet Plate Mounting Screw	6.4	0.65	56 in·lb	L
Kick Ratchet Guide Bolt	8.8	0.9	78 in·lb	L
Kick Pedal Bolt	25	2.5	18	L
Shift Pedal Bolt	9.8	1.0	87 in·lb	
Clutch Cover Bolts	9.8	1.0	87 in·lb	L (1)
Clutch Cover Bolt (with washer)	7.0	0.7	61 in·lb	L
Right Engine Cover Bolts	9.8	1.0	87 in·lb	
Engine Lubrication System				
Engine Oil Drain Bolt M10 (for crank room oil sump)	15	1.5	11	
Engine Oil Drain Bolt M6 (for transmission room oil sump)	7.0	0.7	61 in·lb	
Engine Oil Drain Bolt M6 (for oil filter chamber)	9.8	1.0	87 in·lb	
Oil Pump Mounting Bolts	7.0	0.7	61 in·lb	L
Water Pump Cover Bolts	9.8	1.0	87 in·lb	L (1)
Water Pump Cover Bolt (with washer)	9.8	1.0	87 in·lb	L (1)

2-6 PERIODIC MAINTENANCE

Torque and Locking Agent

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Right Engine Cover Bolts	9.8	1.0	87 in·lb	
Piston Oil Nozzle	2.5	0.25	22 in·lb	L
Breather Fitting	15	1.5	11	L
Clutch Cover Bolts	9.8	1.0	87 in·lb	
Oil Pump Idle Gear Shaft Screws	6.4	0.65	56 in·lb	L
Engine Removal/Installation				
Engine Mounting Bolt, Nuts	49	5.0	33	
Engine Bracket Bolt, Nuts	29	3.0	22	
Swingarm Pivot Shaft Nut	98	10	72	
Crankshaft/Transmission				
Breather Fitting	15	1.5	11	L
Reed Valve Screws	7.0	0.7	61 in·lb	
Piston Oil Nozzle	2.5	0.25	22 in·lb	L
Crankcase Bolts	9.8	1.0	87 in·lb	S
Engine Oil Drain Bolt (for crank room oil sump)	7.0	0.7	61 in·lb	
(for transmission room oil sump)	15	1.5	11	
Output Shaft Bearing Retaining Screw	6.4	0.65	56 in·lb	L
Drive Shaft Bearing Retaining Screw	6.4	0.65	56 in·lb	L
Shift Drum Bearing Retaining Bolts	9.8	1.0	87 in·lb	L
Gear Set Lever Nut	8.8	0.9	78 in·lb	
Shift Drum Cam Bolt	24	2.4	17	L
Neutral Switch	12	1.2	104 in·lb	
Wheels/Tires				
Front Axle	79	8.0	58	
Front Axle Clamp Bolts	20	2.0	14.5	AL
Rear Axle Nut	110	11.0	80	
Spoke Nipple	Not less than 2.2	Not less than 0.22	Not less than 19 in·lb	
Final Drive				
Rear Sprocket Nuts	34	3.5	25	
Engine Sprocket Cover Bolts	9.8	1.0	87 in·lb	
Brakes				
Brake Lever Pivot Locknut	5.9	0.6	52 in·lb	
Brake Reservoir Cap Screws	1.5	0.15	13 in·lb	
Brake Lever Pivot Bolt	5.9	0.6	52 in·lb	
Caliper Mounting Bolts (Front)	25	2.5	18	
Brake Hose Banjo Bolts	25	2.5	18	
Front Master Cylinder Clamp Bolts	8.8	0.9	78 in·lb	S
Rear Master Cylinder Mounting Bolts	9.8	1.0	87 in·lb	
Rear Master Cylinder Push Rod Locknut	17	1.7	12.5	
Brake Reservoir Cap Bolts	1.5	0.15	13 in·lb	

PERIODIC MAINTENANCE 2-7

Torque and Locking Agent

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Brake Disc Mounting Bolts:				
(Front)	9.8	1.0	87 in·lb	L
(Rear)	23	2.3	16.6	L
Caliper Bleed Valves (Front, Rear)	7.8	0.8	69 in·lb	
Front Caliper Holder Bolt	27	2.8	20	L
Rear Caliper Holder Bolt	27	2.8	20	
Caliper Pin Bolts	12	1.2	104 in·lb	L
Brake Pad Bolt	17	1.7	12.5	
Rear Brake Pad Bolt Plug	2.5	0.25	22 in·lb	
Brake Pedal Mounting Bolt	25	2.5	18	L
Suspension				
Front Fork Clamp Bolts (Upper, Lower)	20	2.0	14.5	AL
Front Fork Cylinder Valve Assembly	54	5.5	40	L
Front Fork Top Plug	29	3.0	22	
Push Rod Nut	28	2.85	20.6	
Swingarm Pivot Shaft Nut	98	10	72	
Rear Shock Absorber Mounting Nuts:				
(Upper)	39	4.0	29	
(Lower)	34	3.5	25	
Air Bleed Bolt	6.4	0.65	56 in·lb	
Tie-Rod Mounting Nut (Front, Rear)	83	8.5	61	
Rocker Arm Pivot Nut	83	8.5	61	
Steering				
Steering Stem Head Nut	79	8.0	58	
Steering Stem Locknut	4.9	0.5	43 in·lb	
Handlebar Clamp Bolts	25	2.5	18	S
Front Fork Clamp Bolts (Upper, Lower)	20	2.0	14.5	AL
Frame				
Rear Frame Mounting Bolts	34	3.5	25	
Electrical System				
Neutral Switch	12	1.2	104 in·lb	
Neutral Switch Lead Terminal Screw	1.3	0.13	12 in·lb	
Flywheel Nut	49	5.0	36	
Timing Inspection Cap	4.0	0.4	43 in·lb	
Stator Bolts	7.0	0.7	61 in·lb	
Crankshaft Sensor Bolts	7.0	0.7	61 in·lb	
Spark Plug	13	1.3	115 in·lb	
C.D.I. Unit Bolts	9.8	1.0	87 in·lb	
Magneto Cover Bolts				
L: 30	9.8	1.0	87 in·lb	
L: 35	9.8	1.0	87 in·lb	L
Ignition Coil Bolts	7.0	0.7	61 in·lb	

2-8 PERIODIC MAINTENANCE

Specifications

Item	Standard	Service Limit
Fuel System		
Throttle Grip Free Play	2 ~ 3 mm (0.08 ~ 0.12 in.)	---
Hot Start Lever Free Play	0.5 ~ 1.0 mm (0.02 ~ 0.04 in.)	---
Air Cleaner Element Oil	High quality foam air filter oil	---
Cooling System		
Coolant:		
Type (recommended)	Permanent type antifreeze	
Color	Green	
Mixed Ratio	Soft water 50% and coolant 50%	
Freezing Point	-35°C (-31°F)	
Total Amount	1.20 L (1.27 US qt)	
Engine Top End		
Valve Clearance:		
Exhaust	0.17 ~ 0.22 mm (0.0067 ~ 0.0087 in.)	---
Inlet	0.10 ~ 0.15 mm (0.0039 ~ 0.0059 in.)	---
Cylinder Head Warp	---	0.05 mm (0.0020 in.)
Cylinder Inside Diameter (see text)	77.000 ~ 77.012 mm (3.0315 ~ 3.0320 in.)	77.06 mm (3.0339 in.)
Piston/cylinder Clearance	0.030 ~ 0.057 mm (0.0012 ~ 0.0022 in.)	---
Engine Right Side		
Clutch Lever Free Play	2 ~ 3 mm (0.08 ~ 0.12 in.)	---
Friction Plate Thickness	2.72 ~ 2.88 mm (0.107 ~ 0.113 in.)	2.6 mm (0.102 in.)
Steel Plate Thickness	1.46 ~ 1.74 mm (0.057 ~ 0.069 in.)	1.36 mm (0.054 in.)
Friction Plate Warp	Not more than 0.15 mm (0.006 in.)	0.3 mm (0.012 in.)
Steel Plate Warp	Not more than 0.2 mm (0.008 in.)	0.3 mm (0.012 in.)
Engine Lubrication System		
Engine oil:		
Type	Castrol "R4 superbike" 5W-40 or API SG, SH or SJ with JASO MA	
Viscosity	SAE 10W-30, 10W-40, or 10W-50	
Capacity	1.5 L (0.74 US qt)	
Crankshaft/Transmission		
Connecting Rod Big End Side Clearance	0.25 ~ 0.35 mm (0.0098 ~ 0.0138 in.)	0.55 mm (0.0217 in.)
Wheels/Tires		
Rim Runout:		
Axial	Under 1.0 mm (0.039 in.)	2 mm (0.08 in.)
Radial	Under 1.0 mm (0.039 in.)	2 mm (0.08 in.)
Front and Rear Tires Air Pressure	100 kPa (1.0 kgf/cm ² , 14 psi)	
Standard Tire:		
Front:		
Size	80/100-21 51M	---

Specifications

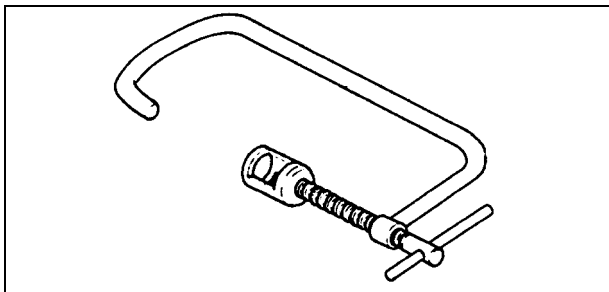
Item	Standard	Service Limit
Make Type Rear: Size Make Type	BRIDESTONE M601, Tube, M401 (KX250-N2), Tube (EU) M201, Tube 100/90-19 57M BRIDESTONE M602, Tube, M402 (KX250-N2), Tube (EU) M202, Tube	--- ---
Final Drive Drive Chain Slack Drive Chain 20 Link Length Rear Sprocket Warp	52 ~ 58 mm (2.05 ~ 2.28 in.) 317.5 ~ 318.2 mm (12.50 ~ 12.53 in.) Under 0.4 mm (0.016 in.)	--- 323 mm (12.72 in.) 0.5 mm (0.020 in.)
Brakes Brake Lever Free Play Brake Fluid: Type: Front Rear Brake pad lining thickness: Front Rear	(to suit rider) DOT3 or DOT4 DOT4 3.8 mm (0.150 in.) 6.4 mm (0.252 in.)	--- --- --- 1 mm (0.04 in.) 1 mm (0.04 in.)
Suspension Fork Oil: Oil Viscosity Oil Capacity (per unit) Oil Level (fully compressed, spring removed)	KAYABA 01 or SAE 5W20 568 ±4 mL (19.20 ±0.14 US oz.) 575 ±4 mL (19.44 ±0.14 US oz.) (Except EU) (KX250-N2) 95 mm (3.7 in.) 90 mm (3.5 in.) (Except EU) (KX250-N2)	--- (Adjustable range) 70 ~ 120 mm (2.8 ~ 4.7 in.)
Electrical System Spark Plug Gap	0.7 ~ 0.8 mm (0.028 ~ 0.031 in.)	---

TIR: Total Indicator Readings

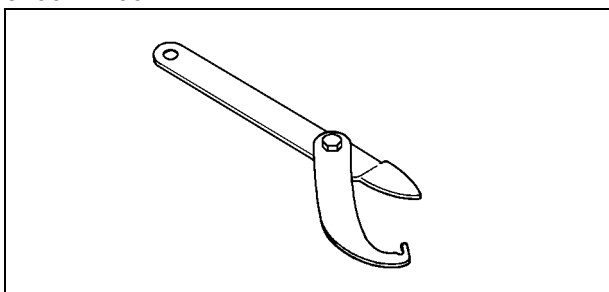
2-10 PERIODIC MAINTENANCE

Special Tools

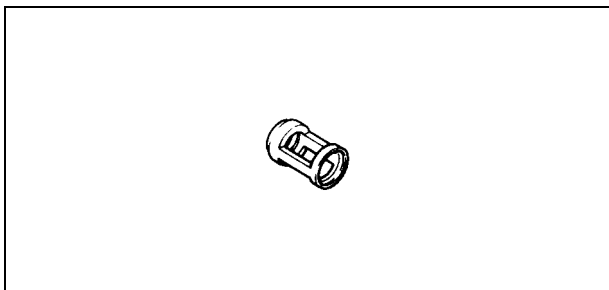
Valve Spring Compressor Assembly:
57001-241



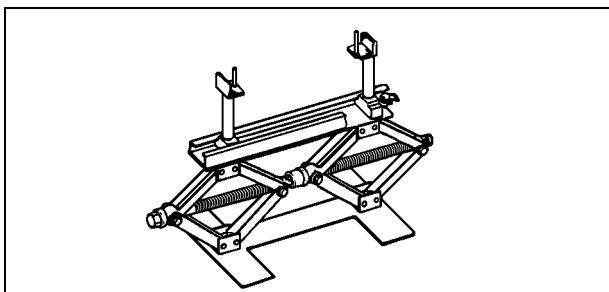
Steering Stem Nut Wrench:
57001-1100



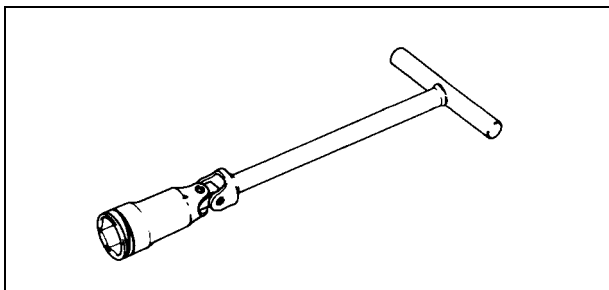
Valve Spring Compressor Adapter, $\phi 20$:
57001-1154



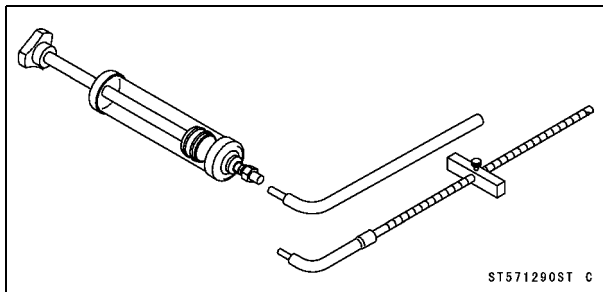
Jack:
57001-1238



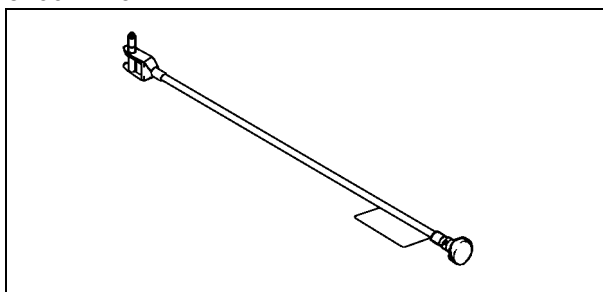
Spark Plug Wrench, Hex 16:
57001-1262



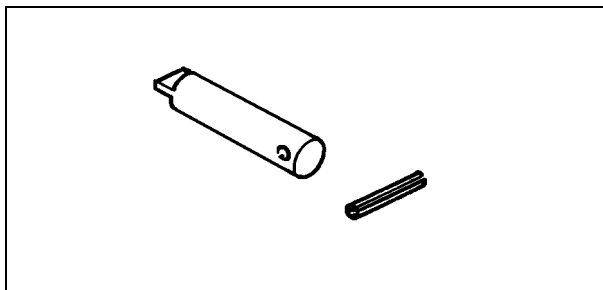
Fork Oil Level Gauge:
57001-1290



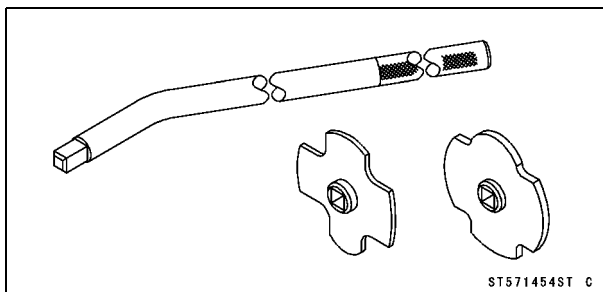
Pilot Screw Adjuster, C:
57001-1292



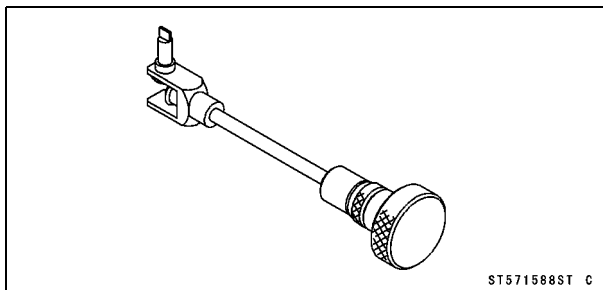
Pilot Screw Adjuster Adapter, $\phi 4$:
57001-1371



Filler Cap Driver:
57001-1454



Pilot Screw Adjust, D:
57001-1588



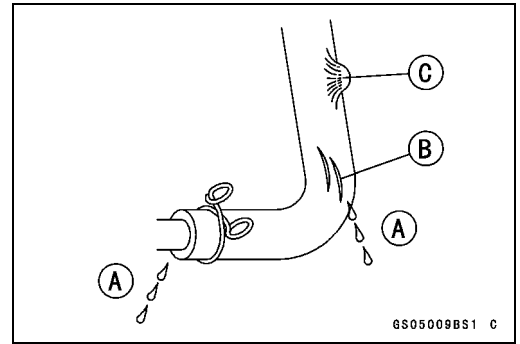
Periodic Maintenance Procedures

Fuel System

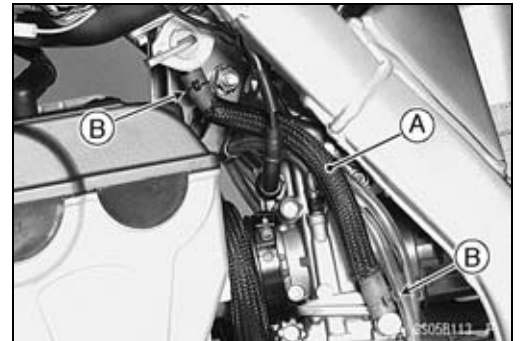
Fuel Hose and Connection Inspection

○The fuel hoses are designed to be used throughout the motorcycle's life without any maintenance, however, if the motorcycle is not properly handled, the inside the fuel line can cause fuel to leak [A] or the hose to burst.

- Check the fuel hose.
- ★ Replace the fuel hose if any fraying, cracks [B] or bulges [C] are noticed.

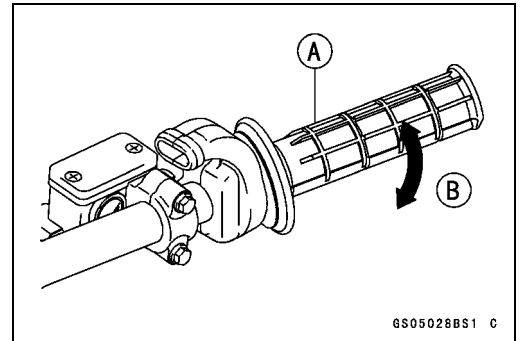


- Check that the hose [A] are securely connected and clamps [B] are tightened correctly.
- When installing, route the hose according to Cable, Wire, and Hose Routing section in the Appendix chapter.
- When installing the fuel hose, avoid sharp bending, kinking, flattening or twisting, and route the fuel hose with a minimum of bending so that the fuel flow will not be obstructed.
- ★ Replace the hose if it has been sharply bent or kinked.



Throttle Grip Free Play Inspection

- Check throttle grip free play [B] by lightly turning the throttle grip [A] back and forth.
- ★ If the free play is improper, adjust the throttle cable.



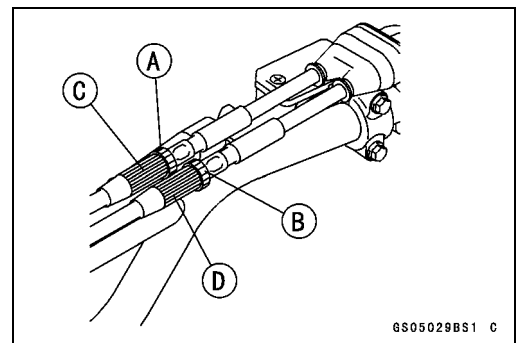
Throttle Grip Free Play

Standard: 2 ~ 3 mm (0.08 ~ 0.12 in.)

- Check that the throttle grip moves smoothly from full open to close, and the throttle closes quickly and completely in all steering positions by the return spring.
- ★ If the throttle grip does not return properly, check the throttle cable routing, grip free play, and cable damage. Then lubricate the throttle cable.
- Run the engine at the idle speed, and turn the handlebar all the way to the right and left to ensure that the idle speed does not change.
- ★ If the idle speed increase, check the throttle cable free play and the cable routing.

Throttle Grip Free Play Adjustment

- Loosen the locknuts [A] [B] at the upper end of the throttle cable.
- Screw both throttle cable adjuster [C] [D] to give the throttle grip plenty of play.
- Turn out the decelerator adjuster [C] until there is no play when the throttle grip is 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].



2-12 PERIODIC MAINTENANCE

Periodic Maintenance Procedures

- ★ If the throttle grip free play cannot be adjusted with the adjusters at the upper end of the throttle cables, use the cable adjusters [A] at the carburetor.
- Make the necessary free play adjustment at the lower cable adjusters, tighten the locknuts [B].
- ★ If the throttle grip free play cannot be adjusted with the lower adjuster, replace the throttle cables.
- Turn the handlebar from side to side while idling the engine. If idle speed varies, the throttle cable may be poorly routed or it may be damaged.

⚠ WARNING

Operation with an improperly adjusted, incorrectly routed, or damaged cable could result in an unsafe riding condition.

Hot Start Lever Free Play Inspection

- Slide the clutch lever dust cover [A] back.
- Check the hot start lever play [B] when pulling the start lever [C] lightly.

Hot Start Lever Free Play

Standard: 0.5 ~ 1.0 mm (0.02 ~ 0.04 in.)

- ★ If the free play is improper, adjust the hot start cable.

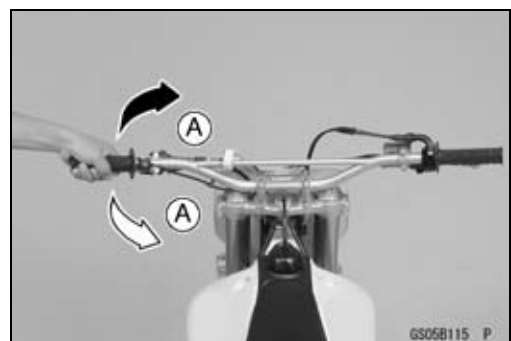
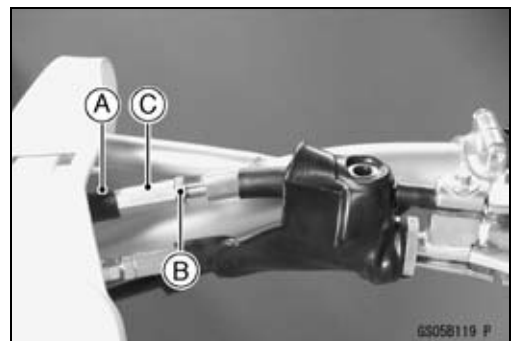
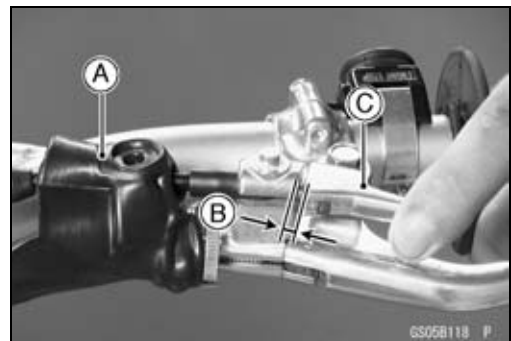
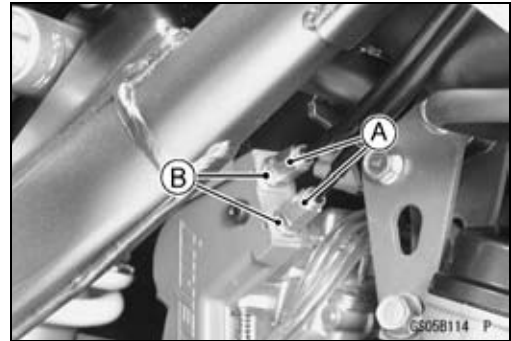
- Slide the adjuster cover [A] back.
- Loosen the locknut [B] and turn the adjuster [C] to obtain the proper lever free play.
- Tighten the locknut securely.
- Check that the hot start lever moves smoothly from full open to close, and the lever closes quickly and completely in all steering positions by the return spring.
- ★ If the hot start lever does not return properly, check the hot start cable routing, free play and cable damage. Then lubricate the hot start cable.

Idle Speed Inspection

- Start the engine and warm it up thoroughly.
- With the engine idling, turn the handlebar to both sides [A].
- ★ If handlebar movement changes the idle speed, the throttle cable may be improperly adjusted or incorrectly routed, or it may be damaged. Be sure to correct any of these conditions before riding (see Cable, Harness, Hose Routing in the Appendix chapter).

⚠ WARNING

Operation with an improperly adjusted, incorrectly routed, or damaged cable could result in an unsafe riding condition.



Periodic Maintenance Procedures

- Check the idle speed, using the engine revolution tester [A] for high accuracy.
- ★ If the idle speed is out of specified range, adjust it.

Idle Speed:

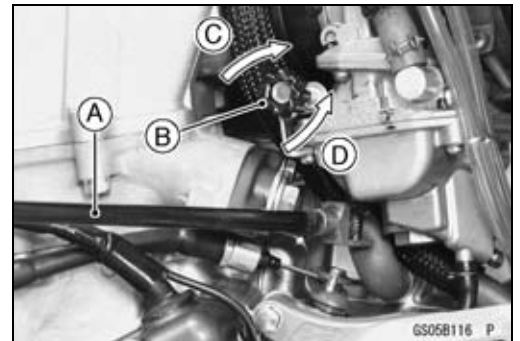
Standard: 2 000 ±50 r/min (rpm)



Idle Speed Adjustment

- First, turn in the air screw using the pilot screw adjuster [A], until it seats lightly, and back it out the specified number of turns. (see specifications in the Fuel System chapter)

**Special Tool - Pilot Screw Adjuster, C: 57001-1292
 (or Pilot Screw Adjuster, D: 57001-1588)
 Pilot Screw Adjuster Adapter, φ4: 57001-1371**



- Start the engine and warm it up thoroughly.
- Turn the idle adjusting screw [B] until the idle speed is correct.
 - To increase idle speed [C]
 - To decrease idle speed [D]
- Open and close the throttle a few times to make sure that the idle speed is within the specified range. Readjust if necessary.

Air Cleaner Element Cleaning and Inspection

NOTE

- *In dusty areas, the element should be cleaned more frequently than recommended interval.*
- *After riding through rain or on muddy roads, the element should be cleaned immediately.*
- *Since repeated cleaning opens the pores of the element, replace it with a new one in accordance with the Periodic Maintenance Chart. Also, if there is a break in the element material or any other damage to the element, replace the element with a new one.*

⚠ WARNING

Clean the element in a well-ventilated area, and take care that there are no sparks or flame anywhere near the working area; this includes any appliance with a pilot light. Because of the danger of highly flammable liquids, do not use gasoline or a low flash-point solvent to clean the element.

2-14 PERIODIC MAINTENANCE

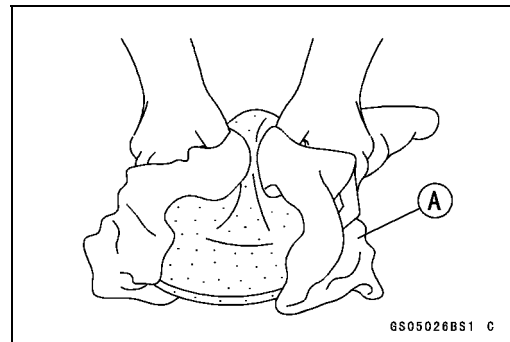
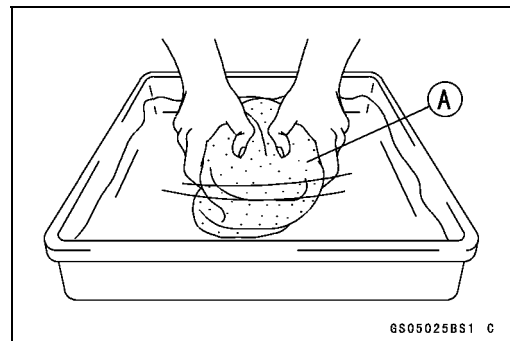
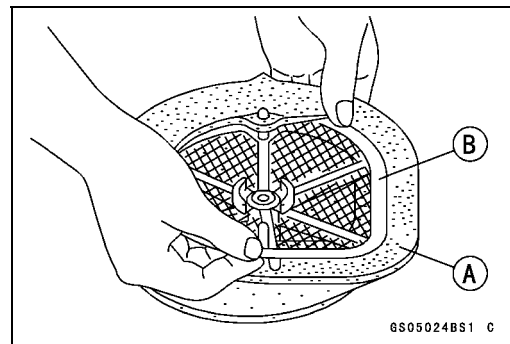
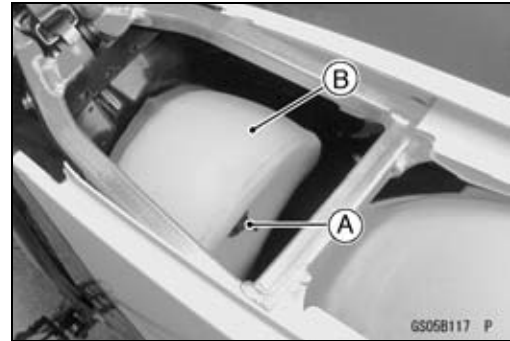
Periodic Maintenance Procedures

- Remove:
 - Seat (see Frame chapter)
 - Wing Bolt [A]
 - Air Cleaner Element [B]
- Stuff a clean, lint-free towel into the carburetor so no dirt is allowed to enter the carburetor.
- Wipe out the inside of the air cleaner housing with a clean damp towel.

CAUTION

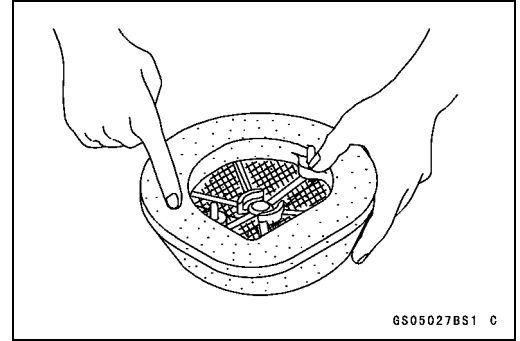
Check inside of the inlet tract and carburetor for dirt. If dirt is present, clean the intake tract and carburetor thoroughly. You may also need to replace the element and seal the housing and inlet tract.

- Separate the element [A] from the frame [B].
- Clean the element [A] in a bath of a high-flash-point solvent using a soft bristle brush.
- Squeeze it dry in a clean towel [A]. Do not wring the element or blow it dry; the element can be damaged.
- Check all the parts of the element for visible damage.
- ★ If any of the parts of the element are damaged, replace them.
- After cleaning, saturate the element with a high-quality foam-air-filter oil, squeeze out the excess, then wrap it in a clean towel and squeeze it as dry as possible.
- Be careful not to tear the sponge filter.
- Assemble the element.
- Remove the towel from the carburetor.

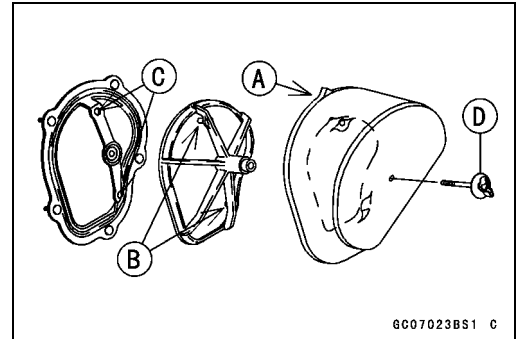


Periodic Maintenance Procedures

- Apply grease to all connections and screw holes in the air cleaner housing and intake tract.
- Install the element onto its frame, and coat the element lip and lip seat with a thick layer of all-purpose grease to assure a complete seal.



- Install the air cleaner element so that its tab faces [A] upward and its projections [B] align with the holes [C] in the housing.
- Tighten the wing bolt [D]
- Install the seat.



Cooling System

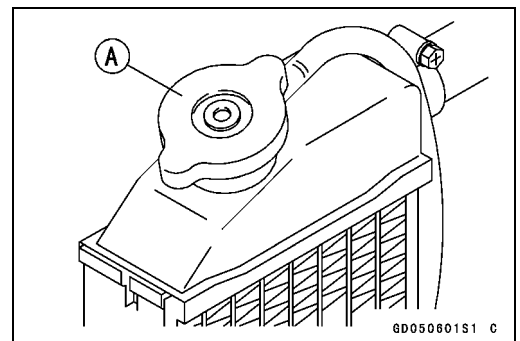
⚠ WARNING

To avoid burns, do not remove the radiator cap or try to change the coolant when the engine is still hot. Wait until it cools down. Coolant on tires will make them slippery and can cause an accident and injury. Immediately wash away any coolant that spills on the wheels. Since coolant is harmful to the human body, do not use for drinking.

Coolant Level Inspection

NOTE

- Check the level when the engine is cold (room or ambient temperature).
- Lean the motorcycle slightly to the right until the radiator cap is level to the ground so that the radiator cap is located uppermost in order to exhaust the air accumulated in the radiator.
- Remove the radiator cap [A].



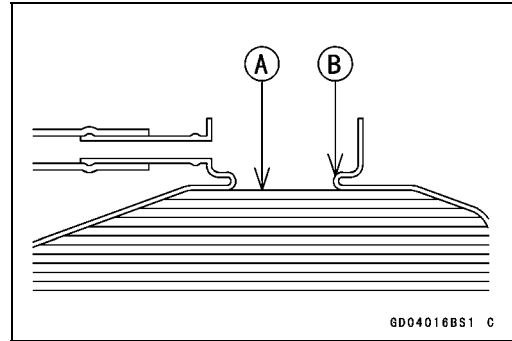
NOTE

- Remove the radiator cap in two steps. First turn the cap counterclockwise to the first stop and wait there for a few seconds. Then push down and turn it further in the same direction and remove the cap.

2-16 PERIODIC MAINTENANCE

Periodic Maintenance Procedures

- Check the coolant level. The coolant level [A] should be at the bottom of the filler neck [B].
- ★ If the coolant level is low, add coolant through the filler opening to the bottom of the filler neck. Install the cap.



Recommended coolant:

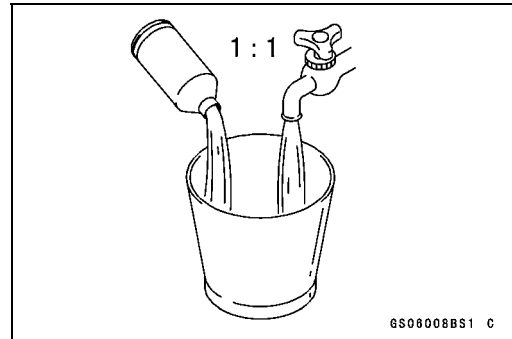
Permanent type of antifreeze (soft water and ethylene glycol plus corrosion and rust inhibitor chemicals for aluminum engines and radiators)

Water and coolant mixture ratio:

1:1 (water 50%, Coolant 50%)

Total amount:

1.2 L (1.27 US qt.)

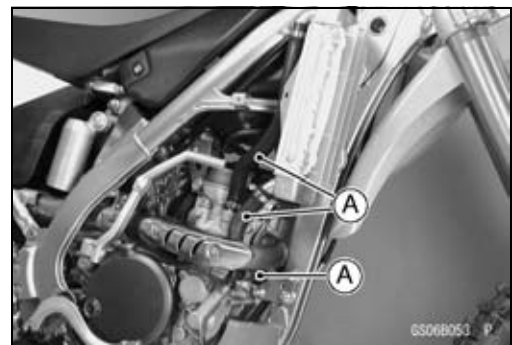


Coolant Deterioration Inspection

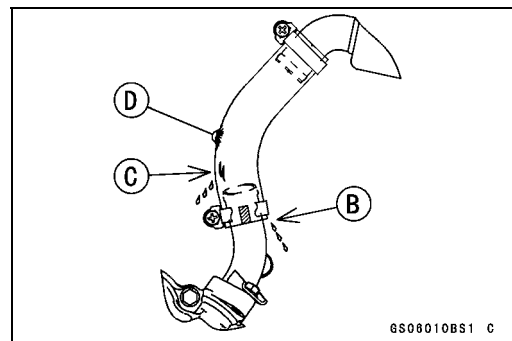
- Visually inspect the coolant.
- ★ If whitish cotton-like wafts are observed, aluminum parts in the cooling system are corroded. If the coolant is brown, iron or steel parts are rusting. In either case, flush the cooling system.
- ★ If the coolant gives off an abnormal smell, check for a cooling system leak. It may be caused by exhaust gas leaking into the cooling system.

Radiator Hoses and Connections Inspection

- The high pressure inside the radiator hose [A] can cause coolant to leak [B] or the hose to burst if the line is not properly maintained. Visually inspect the hoses for signs of deterioration. Squeeze the hoses. A hose should not be hard and brittle, nor should it be soft or swollen.
- ★ Replace the hose if any fraying, cracks [C] or bulges [D] are noticed.
- Check that the hoses are securely connected and clamps are tightened correctly.



Torque - Radiator Hose Clamp Screws: 1.5 N·m (0.15 kgf·m, 13 in·lb)



Periodic Maintenance Procedures

Engine Top End

Valve Clearance Inspection

NOTE

○ Valve clearance must be checked and adjusted when the engine is cold (at room temperature).

- Remove:
 - Cylinder Head Cover (see Engine Top End chapter)
 - Timing Inspection Cap [A]
 - Flywheel Cap [B]

Special Tool - Filler Cap Driver: 57001-1454

- First, bring the piston to the top-dead-center of its compression stroke to inspect the valve clearance (the position at the end of the compression stroke), when the cam lobe faces outside of the camshaft.
- Place a wrench over the flywheel nut and turn it counterclockwise to align the TDC mark [A] with the center of the groove [B] of the inspection hole.

- Using a thickness gauge [A], measure the clearance between each cam lobe and valve lifter for all four valves.
- For the purpose of adjusting the valve clearances, record the measured values.

Valve clearance: between cam and valve lifter

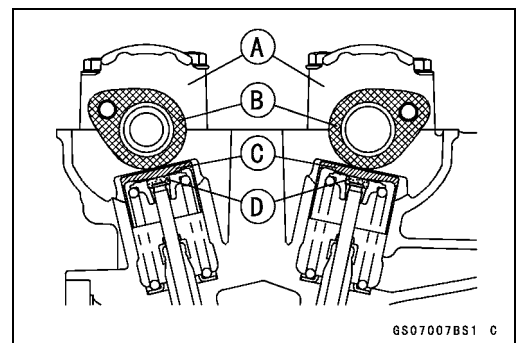
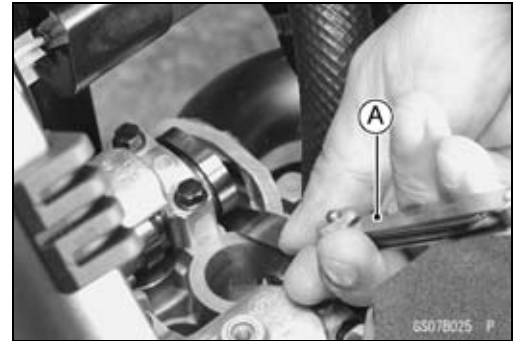
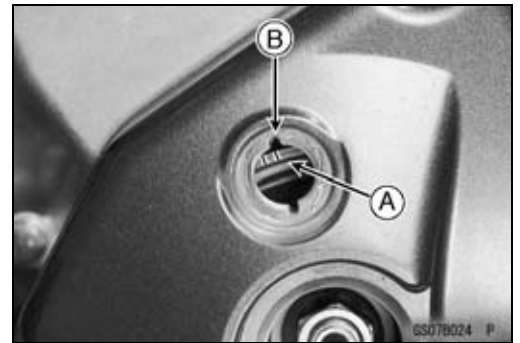
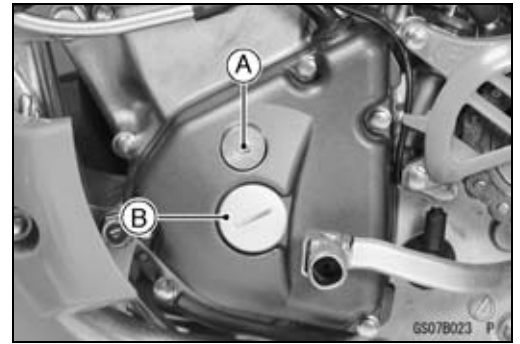
Standard:

Exhaust	0.17 ~ 0.22 mm (0.0067 ~ 0.0087 in.)
Inlet	0.10 ~ 0.15 mm (0.0039 ~ 0.0059 in.)

- ★ If the valve clearance is not within the specified range, adjust it.

Valve Clearance Adjustment

- Remove the camshaft caps [A] (see Engine Top End chapter).
- Remove the camshafts [B] (see Engine Top End chapter).
- Remove the valve lifters [C] of the applicable valve.
- Remove the shim [D] from the top of the spring retainer.

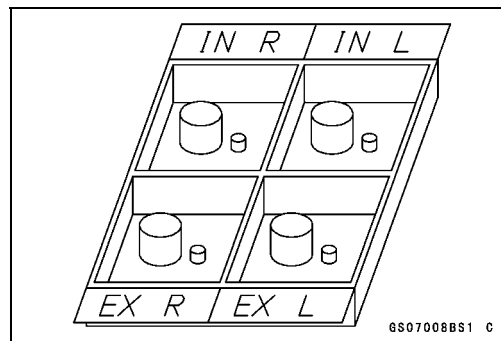


2-18 PERIODIC MAINTENANCE

Periodic Maintenance Procedures

NOTE

○Mark and record the locations of the valve lifters and shims so that they can be reinstalled in their original positions.



- Clean the shim to remove any dust or oil.
- Measure the thickness of the removed shim [A].
- Select a new shim thickness calculation as follows.

$$A = (B - C) + D$$

[A] Replace Shim Thickness

[B] Measured Valve Clearance

[C] Specified Valve Clearance

[D] Present Shim Thickness

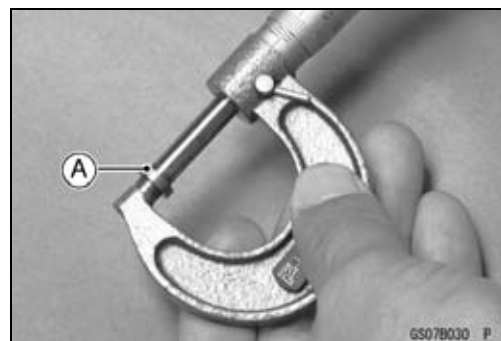
Exam-

ple:

$$(0.31 \text{ mm} - 0.10 \sim 0.15 \text{ mm}) + 2.60 \text{ mm} =$$

$$2.81 \sim 2.76 \text{ mm}$$

○Exchange the shims for the 2.775 or 2.800 size shim.



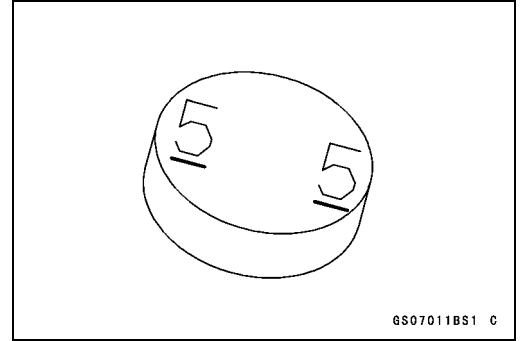
CAUTION

Don't use the shims for another models. This could cause wear of the valve stem end, and valve stem damage.

Periodic Maintenance Procedures

Adjustment shims

Thick-ness	P/No.	Mark	Thick-ness	P/No.	Mark
2.500	92180-0023	50	3.025	92180-0044	03
2.525	92180-0024	53	3.050	92180-0045	05
2.550	92180-0025	55	3.075	92180-0046	08
2.575	92180-0026	58	3.100	92180-0047	10
2.600	92180-0027	60	3.125	92180-0048	13
2.625	92180-0028	63	3.150	92180-0049	15
2.650	92180-0029	65	3.175	92180-0050	18
2.675	92180-0030	68	3.200	92180-0051	20
2.700	92180-0031	70	3.225	92180-0052	23
2.725	92180-0032	73	3.250	92180-0053	25
2.750	92180-0033	75	3.275	92180-0054	28
2.775	92180-0034	78	3.300	92180-0055	30
2.800	92180-0035	80	3.325	92180-0056	33
2.825	92180-0036	83	3.350	92180-0057	35
2.850	92180-0037	85	3.375	92180-0058	38
2.875	92180-0038	88	3.400	92180-0059	40
2.900	92180-0039	90	3.425	92180-0060	43
2.925	92180-0040	93	3.450	92180-0061	45
2.950	92180-0041	95	3.475	92180-0062	48
2.975	92180-0042	98	3.500	92180-0063	50
3.000	92180-0043	00			



CAUTION

Be sure to remeasure the clearance after selecting a shim. The clearance can be out of the specified range because of the shim tolerance.

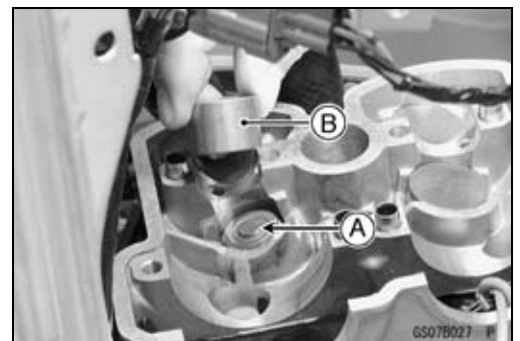
○ If there is no valve clearance, use a shim that is a few sizes smaller, and remeasure the valve clearance.

- When installing the shim, face the marked side [A] toward the valve lifter [B]. At this time, apply engine oil to the shim or the valve lifter to keep the shim in place during camshaft installation.

CAUTION

Do not put shim stock under the shim. This may cause the shim to pop out at high rpm, causing extensive engine damage.

Do not grind the shim. This may cause it to fracture, causing extensive engine damage.



- Apply engine oil to the valve lifter surface and install the lifter.
- Install the camshaft (see Engine Top End chapter).
- Recheck the valve clearance and readjust if necessary.
- Install the cylinder head cover (see Engine Top End chapter), timing inspection cap, and the flywheel cap.

Torque - Timing Inspection Cap: 4 N·m (0.4 kgf·m, 35 in·lb)
Flywheel Cap: 5 N·m (0.5 kgf·m, 43 in·lb)

2-20 PERIODIC MAINTENANCE

Periodic Maintenance Procedures

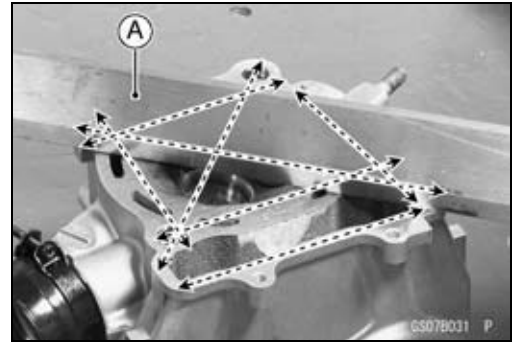
Cylinder Head Warp Inspection

- Remove the cylinder head (see Engine Top End chapter).
- Lay a straightedge [A] across the lower surface of the head at several different points, and measure warp by inserting a thickness gauge between the straightedge and the head.
- ★ If warp exceeds the service limit, repair the mating surface. Replace the cylinder head if the mating surface is badly damaged.

Cylinder Head Warp

Service Limit: 0.05 mm (0.0020 in.)

- Remove the valves (see Engine Top End chapter).
- Scrape the carbon out of the combustion chamber and exhaust port with a scraper [A] or a suitable tool.
- Clean the cylinder head, using high-flash point solvent.
- Blow out any particles which may obstruct the oil passage in the cylinder head using compressed air.
- Install the valves (see Valve Installation).



Cylinder Wear Inspection

NOTE

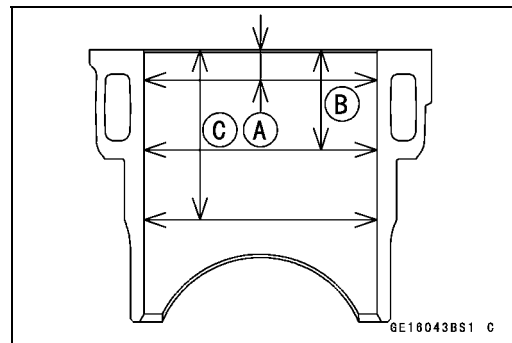
○ Measure the cylinder inside diameter when the cylinder is cold (room or ambient temperature).

- Visually inspect the inside of the cylinder for scratches and abnormal wear.
- ★ If the cylinder is damaged or badly worn, replace it with a new one.
- Since there is a difference in cylinder wear in different directions, take a side-to-side and a front-to-back measurement shown in the figure.
- ★ If any of the cylinder inside diameter measurements exceeds the service limit, the cylinder must be replaced with a new one since the PLATING cylinder cannot be bored or honed.

(A): 10 mm (0.39 in.)

(B): 25 mm (0.98 in.)

(C): 60 mm (2.36 in.)



Cylinder Inside Diameter

Standard 77.000 ~ 77.012 mm (3.0315 ~ 3.0320 in.), and less than 0.01 mm (0.0004 in.) difference between any two measurements.

Service Limit 77.06 mm (3.0339 in.), or more than 0.05 mm (0.020 in.) difference between any two measurements.



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