

MODEL APPLICATION

Year	Model	Beginning Frame No.
2003	KVF360-A1	JKBVFHA1□3B500001 JKBVF360AAB600001
2003	KVF360-C1	JKBVFHC1□3B500001
2004	KVF360-A2	JKBVFHA1□4B529901 JKBVF360AAB602901
2004	KVF360-C2	JKBVFHC1□4B50361
2005	KVF360-A3	JKBVFHA1□5B539106 JKBVF360AAB604235
2005	KVF360-C3	JKBVFHC1□5B506600
2006	KVF360A6	JKBVFHA1□6B552400 JKBVF360AAB604801
2006	KVF360C6	JKBVFHC1□6B510201
2007	KVF360A7	JKBVFHA1□7B561830 JKBVF360AAB606501
2007	KVF360C7	JKBVFHC1□7B513201
2008	KVF360A8	JKBVFHA1□8B571300 JKBVF360AAB606700
2008	KVF360C8	JKBVFHC1□8B515700
2009	KVF360A9	JKBVFHA1□9B579001 JKBVF360AAB609201
2009	KVF360C9	JKBVFHC1□9B517901
2010	KVF360AA	JKBVFHA1□AB582801 JKBVF360AAB609901
2010	KVF360CA	JKBVFHC1□AB519201
2011	KVF360AB	JKBVFHA1□BB584201 JKBVF360AAB610201
2011	KVF360CB	JKBVFHC1□BB519701
2012	KVF360AC	JKBVFHA1□CB587200 JKBVF360AAB610801
2013	KVF360AD	JKBVFHA1□DB589201 JKBVF360AAB611301

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



KAWASAKI HEAVY INDUSTRIES, LTD.
Motorcycle & Engine Company

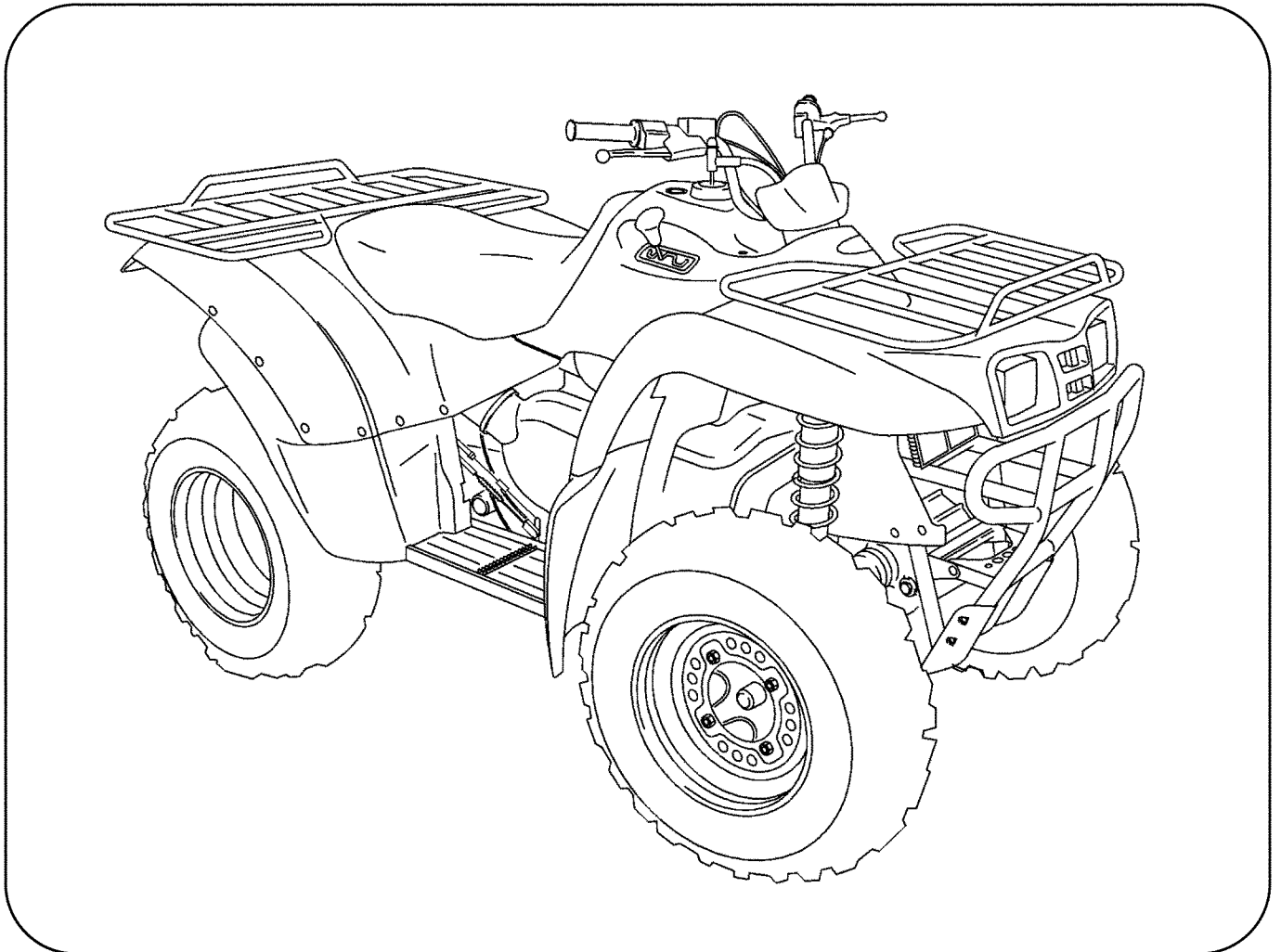
Part No.99924-1285-12

Printed in Japan



PRAIRIE 360 4x4

KVF 360 4x4



All Terrain Vehicle Service Manual

Quick Reference Guide

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LIST OF ABBREVIATIONS

A	ampere(s)	lb	pounds(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) Celcius	r	revolution
DC	direct current	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)	W	watt(s)
h	hour(s)	Ω	ohm(s)
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.

For the duration of the warranty period, we recommend that all repairs and scheduled maintenance be performed in accordance with this service manual. Any owner maintenance or repair procedure not performed in accordance with this manual may void the warranty.

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 Vehicle parts. Special tools, gauges, and testers that are necessary when servicing Kawasaki vehicles are introduced by the Service 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 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

○ *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

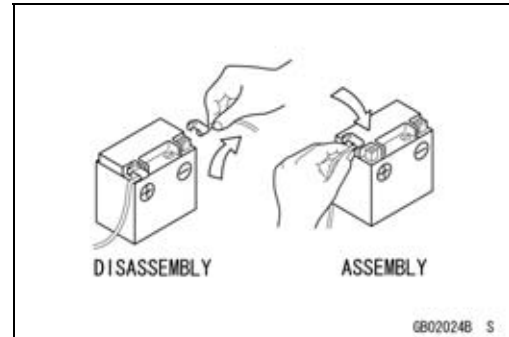
Before Servicing

Before starting to perform an inspection service or carry out a disassembly and reassembly operation on a vehicle, 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:

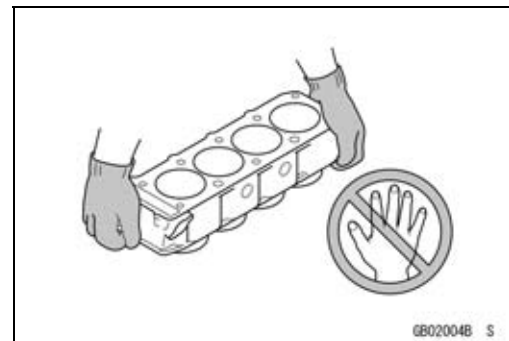
Battery Ground

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



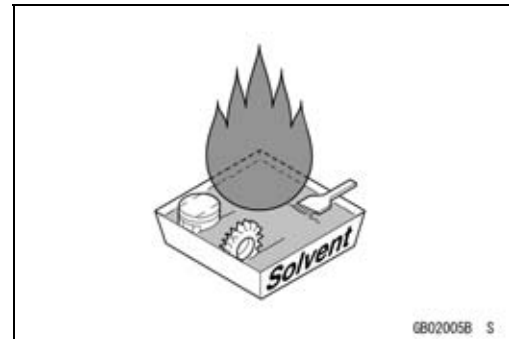
Edges of Parts

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



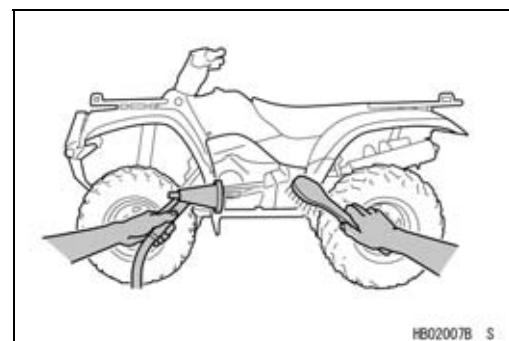
Solvent

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

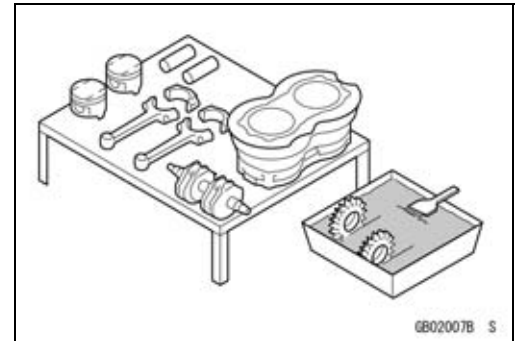
Clean the vehicle thoroughly before disassembly. Dirt or other foreign materials entering into sealed areas during vehicle disassembly can cause excessive wear and decrease performance of the vehicle.



Before Servicing

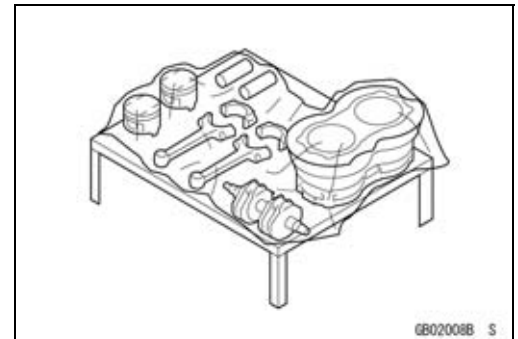
Arrangement and Cleaning of Removed Parts

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.



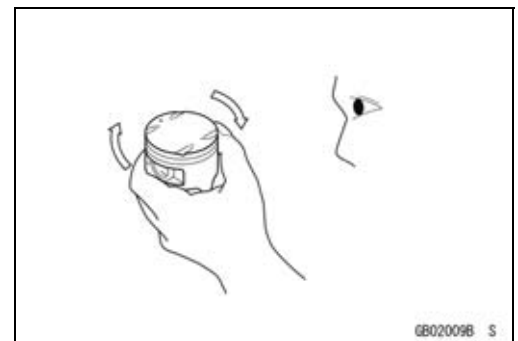
Storage of Removed Parts

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.



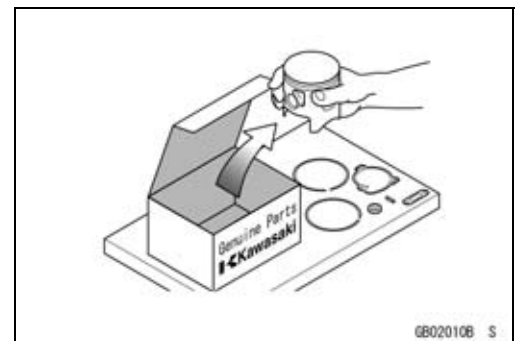
Inspection

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.



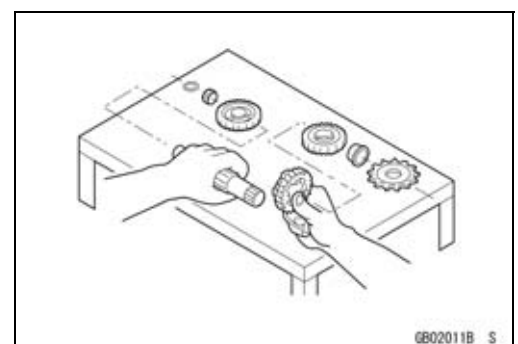
Replacement Parts

Replacement Parts must be KAWASAKI genuine or recommended by KAWASAKI. Gaskets, O-rings, Oil seals, Grease seals, circlips, cotter pins or self-locking nuts 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.

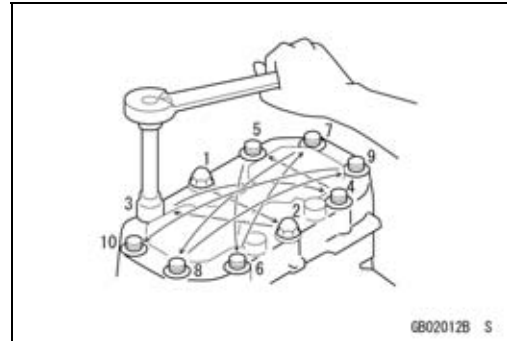


1-4 GENERAL INFORMATION

Before Servicing

Tightening Sequence

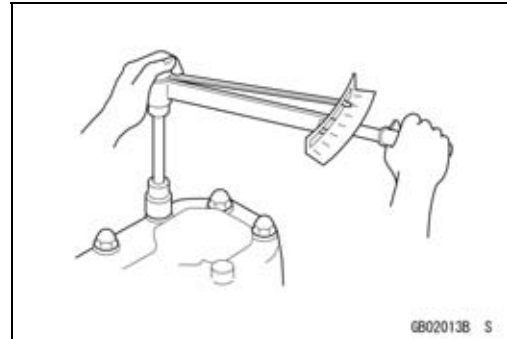
Generally, when installing a part with several bolts, nuts, or screws, start them all in their holes and tighten them to a snug fit. Then tighten them according to the specified sequence to prevent case warpage or deformation which can lead to malfunction. Conversely when loosening the bolts, nuts, or 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.



Tightening Torque

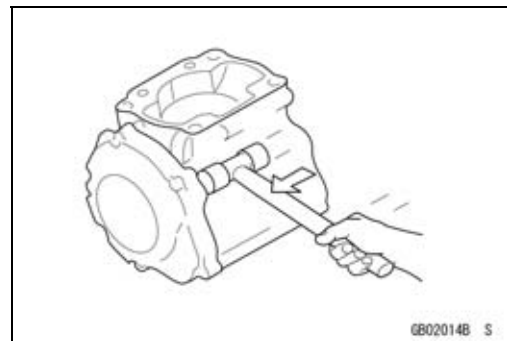
Incorrect torque applied to a bolt, nut, or screw may lead to serious damage. Tighten fasteners to the specified torque using a good quality torque wrench.

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



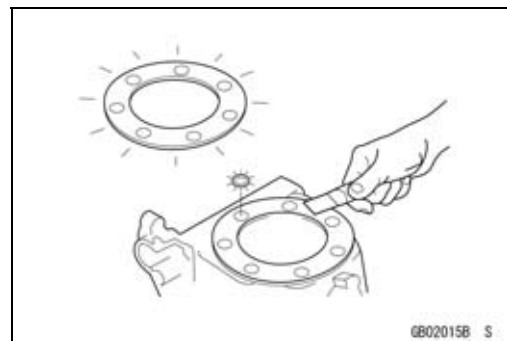
Force

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



Liquid Gasket, Locking Agent

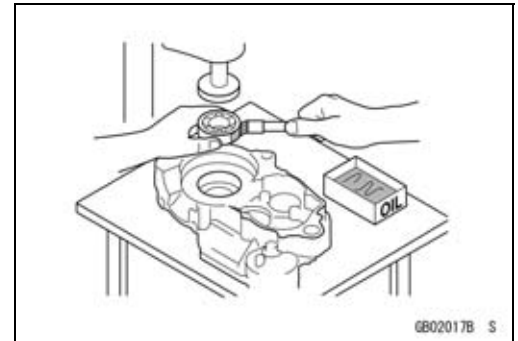
For applications that require Liquid Gasket or a Non-Permanent Locking agent, clean the surfaces so that no oil residue remains before applying liquid gasket or non-permanent locking agent. Do not apply them excessively. Excessive application can clog oil passages and cause serious damage.



Before Servicing

Press

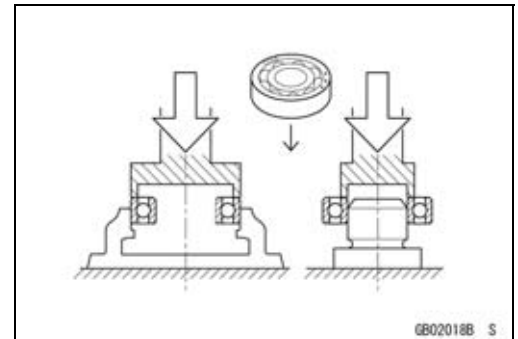
For items such as bearings or oil seals that must be pressed into place, apply small amount of oil to the contact area. Be sure to maintain proper alignment and use smooth movements when installing.



Ball Bearing and Needle Bearing

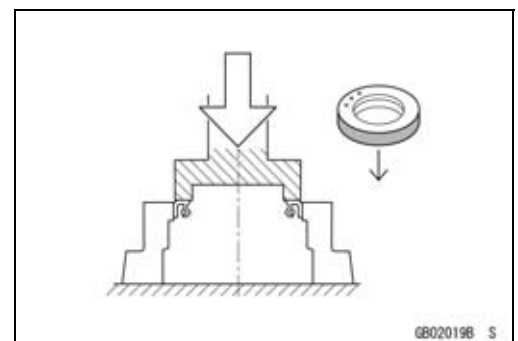
Do not remove pressed ball or needle unless removal is absolutely necessary. Replace with new ones whenever removed. Press bearings with the manufacturer and size marks facing out. Press the bearing into place by putting pressure on the correct bearing race as shown.

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

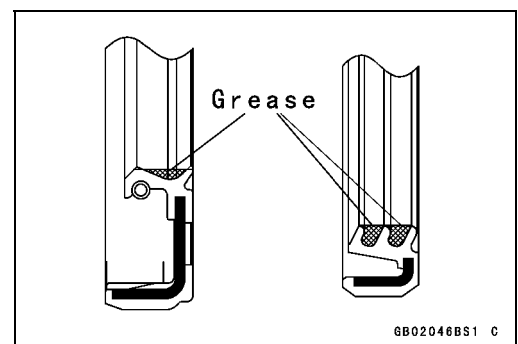


Oil Seal, Grease Seal

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.

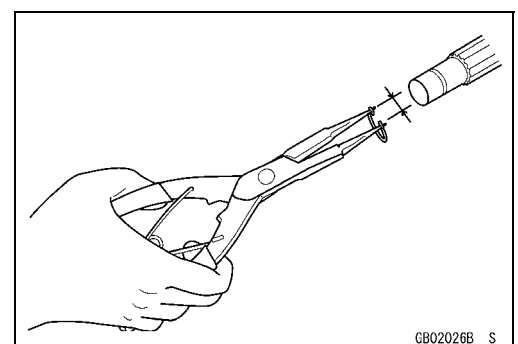


Apply specified grease to the lip of seal before installing the seal.



Circlips, Cotter Pins

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

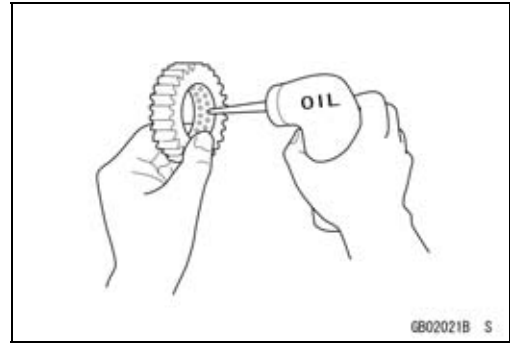


1-6 GENERAL INFORMATION

Before Servicing

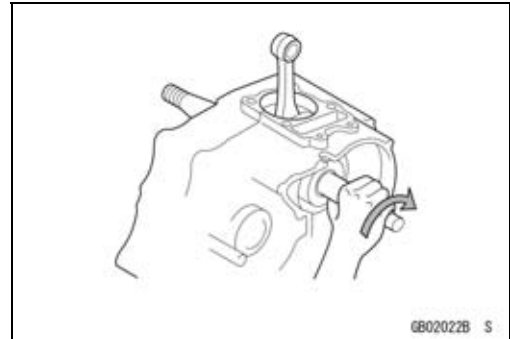
Lubrication

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.



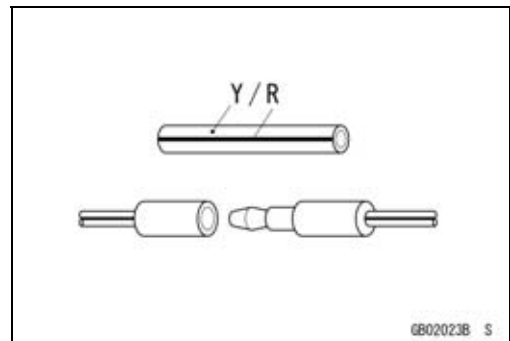
Direction of Engine Rotation

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).



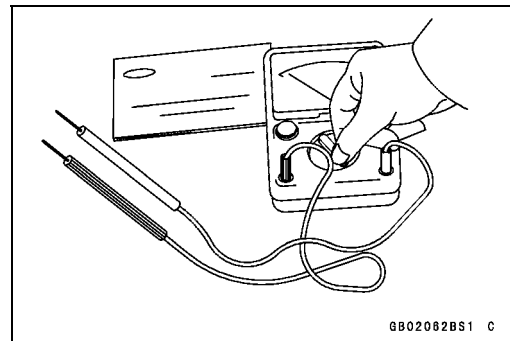
Electrical Leads

A two-color wire is identified first by the primary color and then the stripe color. Unless instructed otherwise, electrical leads 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.



Model Identification

KVF360-A1 Left Side



H603B004 P

KVF360-A1 Right Side



H603B005 P

1-8 GENERAL INFORMATION

Model Identification

KVF360-C1 Left Side



KVF360-C1 Right Side



General Specifications

Items	KVF360-A1 ~ A3, A6 ~ A8/C1 ~ C3, C6 ~ C8
Dimensions	
Overall Length	2 065 mm (81.30 in.)
Overall Width	1 205 mm (47.44 in.)
Overall Height	1 175 mm (46.26 in.)
Wheelbase	1 250 mm (49.21 in.)
Ground Clearance:	
Rear Final Gear Case	195 mm (7.68 in.)
Center of Frame	250 mm (9.84 in.)
Seat Height	910 mm (35.83 in.)
Dry Mass	274 kg (604 lb) KVF360-A1/C1 ~ A3/C3 274.5 kg (605 lb) KVF360A6/C6 ~
Curb Mass:	
Front	154 kg (340 lb) KVF360-A1/C1 ~ A3/C3 154.5 kg (341 lb) KVF360A6/C6 ~
Rear	135 kg (298 lb)
Fuel Tank Capacity	13.5 L (3.6 US gal)
Performance	
Minimum Turning Radius	3.1 m (10.17 ft)
Engine	
Type	4-stroke, SOHC, 1-cylinder
Cooling System	Air-cooled
Bore and Stroke	80.0 × 72.0 mm (3.15 × 2.83 in.)
Displacement	362 cm ³ (22.1 cu in.)
Compression Ratio	8.3 : 1
Maximum Horsepower	15.7 kW (21.4 PS) @7 000 r/min (rpm), (US) (CA) -
Maximum Torque	26.1 N·m (2.66 kgf·m, 19.25 ft·lb) @4 500 r/min (rpm)
Carburetion System	Carburetor, Keihin CVK34
Starting System	Electric Starter & Recoil Starter
Ignition System	DC-CDI (KVF360-A1/C1 ~, A6/C6) Digital DC-CDI (KVF360A7/C7 ~)
Timing Advance	Electronically advanced
Ignition Timing	From 10° BTDC @1 300 r/min (rpm) to 30° BTDC @5 000 r/min (rpm)
Spark Plug	NGK DPR8EA-9
Valve Timing:	
Inlet:	
Open	38° BTDC
Close	58° ABDC
Duration	276°
Exhaust:	
Open	68° BBDC
Close	28° ATDC
Duration	276°

1-10 GENERAL INFORMATION

General Specifications

Items	KVF360-A1 ~ A3, A6 ~ A8/C1 ~ C3, C6 ~ C8
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	2.3 L (2.17 US qt)
Drive Train	
Primary Reduction System:	
Type	Belt converter
Reduction Ratio	3.122 ~ 0.635
Transmission:	
Type	2-speed automatic and reverse
Gear Ratios:	
Forward:	
High	3.548 (30/26 × 29/18 × 21/11)
Low	5.536 (36/20 × 29/18 × 21/11)
Reverse	4.613 (16/12 × 18/16 × 29/18 × 21/11)
Final Drive System:	
Type	Shaft, 2WD/4WD
Reduction Ratio	4.375 (35/8)
Overall Drive Ratio:	
Forward:	
High	48.474 ~ 9.859
Low	75.619 ~ 15.380
Reverse	63.016 ~ 12.817
Front Final Gear Case Oil:	
Type	API SG, SH, SJ, SL or SM with JASO MA, MA1 or MA2
Viscosity	SAE 10W-40
Capacity	430 mL (0.45 US qt)
Rear Final Gear Case Oil:	
Type	MOBIL Fluid 424 or Kawa Chem Gear & Wet Brake Oil (CITGO TRANSGARD TRACTOR HYDRAULIC FLUID) or Exxon Hydraul 560
Capacity	900 mL (0.95 US qt)
Frame	
Type	Double cradle, tubular steel
Caster (rake angle)	2.5°
Camber	0.5°
King Pin Angle	14.5°
Trail	15 mm (0.59 in.)
Tread:	
Front	890 mm (35.04 in.)
Rear	895 mm (35.24 in.)

General Specifications

Items	KVF360-A1 ~ A3, A6 ~ A8/C1 ~ C3, C6 ~ C8
Front Tire: Type Size Rear Tire: Type Size Rim Size: Front Rear Suspension: Front: Type Wheel Travel Rear: Type Wheel Travel Brake: Front Rear	Tubeless AT25 × 8 - 12 Tubeless AT25 × 10 - 12 12 × 6.0 12 × 7.5 MacPherson strut 170 mm (6.69 in.) Swingarm 180 mm (7.09 in.) Disc × 2 Enclosed wet multi-plate
Electrical Equipment Battery Headlight: Type Bulb Brake/Tail Light: Bulb Alternator: Type Rated Output	12 V 14 Ah Semi-sealed beam 12 V 30/30 W × 2 12 V 18/5 W Three - phase AC 25 A, 14 V @8 000 r/min (rpm)

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

1-12 GENERAL INFORMATION

General Specifications

Items	KVF360A9 ~ AD/C9 ~ CB
Dimensions	
Overall Length	2 065 mm (81.30 in.)
Overall Width	1 205 mm (47.44 in.)
Overall Height	(KVF360A9/C9) 1 155 mm (45.28 in.)
	(KVF360AA ~/CA ~) 1 145 mm (45.08 in.)
Wheelbase	(KVF360A9/C9) 1 253 mm (49.33 in.)
	(KVF360AA ~/CA ~) 1 255 mm (49.41 in.)
Ground Clearance:	
Rear Final Gear Case	(KVF360A9/C9) 195 mm (7.68 in.)
	(KVF360AA ~/CA ~) 185 mm (7.28 in.)
Center of Frame	(KVF360A9/C9) 238 mm (9.37 in.)
	(KVF360AA ~/CA ~) 235 mm (9.25 in.)
Seat Height	(KVF360A9/C9) 905 mm (35.63 in.)
	(KVF360AA ~/CA ~) 895 mm (35.24 in.)
Curb Mass:	
(US, CA)	(KVF360A9/C9) 290 kg (639 lb)
	(KVF360AA ~/CA ~) 292 kg (644 lb)
(AU)	(KVF360A9 ~ AB) 290 kg (639 lb)
(EUR, GB)	(KVF360A9 ~) 291 kg (642 lb)
Front	
(US, CA)	(KVF360A9 ~/C9 ~) 156 kg (344 lb)
(AU)	(KVF360A9 ~) 156 kg (344 lb)
(EUR, GB)	(KVF360A9 ~) 157 kg (346 lb)
Rear	
(US, CA)	(KVF360A9/C9) 134 kg (295 lb)
	(KVF360AA ~/CA ~) 136 kg (300 lb)
(AU, EUR, GB)	(KVF360A9 ~) 134 kg (295 lb)
Fuel Tank Capacity	13.5 L (3.6 US gal)
Performance	
Minimum Turning Radius	3.1 m (10.17 ft)
Engine	
Type	4-stroke, SOHC, 1-cylinder
Cooling System	Air-cooled
Bore and Stroke	80.0 x 72.0 mm (3.15 x 2.83 in.)
Displacement	362 cm ³ (22.1 cu in.)
Compression Ratio	8.3 : 1
Maximum Horsepower	15.7 kW (21.4 PS) @7 000 r/min (rpm), (US) (CA) -
Maximum Torque	26.1 N·m (2.66 kgf·m, 19.25 ft·lb) @4 500 r/min (rpm)
Carburetion System	Carburetor, Keihin CVK34
Starting System	Electric Starter & Recoil Starter
Ignition System	Digital DC-CDI
Timing Advance	Electronically advanced
Ignition Timing	From 10° BTDC @1 300 r/min (rpm) to 30° BTDC @5 000 r/min (rpm)

General Specifications

Items	KVF360A9 ~ AD/C9 ~ CB
Spark Plug Valve Timing: Inlet: Open Close Duration Exhaust: Open Close Duration Lubrication System Engine Oil: Type Viscosity Capacity	NGK DPR8EA-9 38° BTDC 58° ABDC 276° 68° BBDC 28° ATDC 276° Forced lubrication (wet sump) API SG, SH, SJ, SL or SM with JASO MA, MA1 or MA2 SAE 10W-40 2.3 L (2.17 US qt)
Drive Train Primary Reduction System: Type Reduction Ratio Transmission: Type Gear Ratios: Forward: High Low Reverse Final Drive System: Type Reduction Ratio Overall Drive Ratio: Forward: High Low Reverse Front Final Gear Case Oil: Type Viscosity Capacity Rear Final Gear Case Oil: Type Capacity	Belt converter 3.122 ~ 0.635 2-speed automatic and reverse 3.548 (30/26 × 29/18 × 21/11) 5.536 (36/20 × 29/18 × 21/11) 4.613 (16/12 × 18/16 × 29/18 × 21/11) Shaft, 2WD/4WD 4.375 (35/8) 48.474 ~ 9.859 75.619 ~ 15.380 63.016 ~ 12.817 API SG, SH, SJ, SL or SM with JASO MA, MA1 or MA2 SAE 10W-40 430 mL (0.45 US qt) MOBIL Fluid 424 or Kawa Chem Gear & Wet Brake Oil (CITGO TRANSGARD TRACTOR HYDRAULIC FLUID) or Exxon Hydraul 560 900 mL (0.95 US qt)

1-14 GENERAL INFORMATION

General Specifications

Items	KVF360A9 ~ AD/C9 ~ CB
Frame	
Type	Double cradle, tubular steel
Caster (rake angle)	3°
Camber	0°
King Pin Angle	14°
Trail	17 mm (0.67 in.)
Tread:	
Front	(KVF360A9/C9) 894 mm (35.20 in.)
	(KVF360AA ~/CA ~) 895 mm (35.24 in.)
Rear	(KVF360A9/C9) 895 mm (35.24 in.)
	(KVF360AA ~/CA ~) 900 mm (35.43 in.)
Front Tire:	
Type	Tubeless
Size	AT25 x 8 - 12
Rear Tire:	
Type	Tubeless
Size	AT25 x 10 - 12
Rim Size:	
Front	12 x 6
Rear	12 x 7.5
Suspension:	
Front:	
Type	MacPherson strut
Wheel Travel	170 mm (6.69 in.)
Rear:	
Type	Swingarm
Wheel Travel	180 mm (7.09 in.)
Brake:	
Front	Disc x 2
Rear	Enclosed wet multi-plate
Electrical Equipment	
Battery	12 V 14 Ah
Headlight:	
Type	Semi-sealed beam
Bulb	12 V 30/30 W x 2
Brake/Tail Light:	
Bulb	12 V 18/5 W
Alternator:	
Type	Three - phase AC
Rated Output	25 A, 14 V @8 000 r/min (rpm)

AU: Australia

CA: Canada

GB: United Kingdom

EUR: Europe

US: United States

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	=	kg·m
N·m	×	0.7376	=	ft·lb
N·m	×	8.851	=	in·lb

kg·m	×	9.807	=	N·m
kg·m	×	7.233	=	ft·lb
kg·m	×	86.80	=	in·lb

Units of Pressure:

kPa	×	0.01020	=	kg/cm ²
kPa	×	0.1450	=	psi
kPa	×	0.7501	=	cmHg

kg/cm ²	×	98.07	=	kPa
kg/cm ²	×	14.22	=	psi
cmHg	×	1.333	=	kPa

Units of Speed:

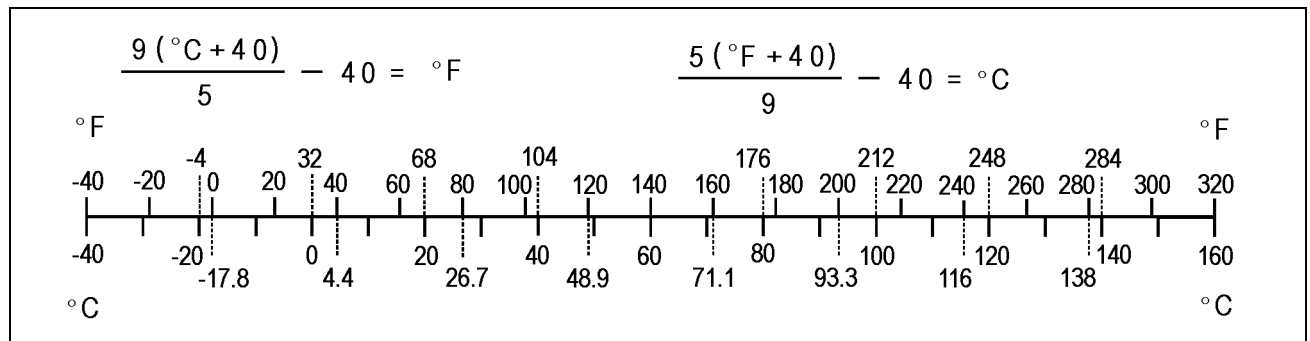
km/h	×	0.6214	=	mph
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Units of Power:

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 scheduled maintenance must be done in accordance with this chart to keep the vehicle in good running condition. **The initial maintenance is vitally important and must not be neglected.**

FREQUENCY	First Service	Regular Service			
	After 10 hrs. or 100 km (60 mi.) of use	Every 10 days or 200 km (120 mi.) of use	Every 30 days or 600 km (360 mi.) of use	Every 90 days or 1 700 km (1 100 mi.) of use, or when BELT indicator light comes on (100 hrs.) whichever comes first	Every year of use
OPERATION					
ENGINE					
Converter drive belt wear - inspect *				●	
Converter drive belt deflection - inspect *				●	
Drive belt failure detection system function - inspect*				● (NOTE)	
Engine brake control lever - inspect*				●	
Air cleaner - inspect*	●	●			
Throttle lever play - inspect	●	●			
Idle speed - inspect			●		
Valve clearance - inspect	●			●	
Fuel system cleanliness - inspect*	●			●	
Engine oil - change *	●			●	
Oil filter - replace*	●			●	
Spark plug - clean and gap	●			●	
Spark arrester - clean					●
Oil cooler- clean*	●	●			
Oil hoses and connections - inspect*					●
Fuel hoses and connections - inspect				●	
Fuel hose - replace	5 years				
CHASSIS					
Joint boots - inspect*	●	●			
Rear brake pedal and lever adjustment - inspect*	●	●			
Rear brake plates - change*	every 10 000 km (6 000 mi.)				
Cables adjustment*	●	●			
Bolts and nuts - tighten	●	●			
Front brake pad wear - inspect*	●		●		
Brake light switch - inspect*	●		●		
Battery - inspect	●		●		
Steering - inspect	●			●	
Differential control lever play- inspect	●	●			
Tire wear - inspect*			●		

Periodic Maintenance Chart

OPERATION	FREQUENCY	First Service	Regular Service			
		After 10 hrs. or 100 km (60 mi.) of use	Every 10 days or 200 km (120 mi.) of use	Every 30 days or 600 km (360 mi.) of use	Every 90 days or 1 700 km (1 100 mi.) of use, or when BELT indicator light comes on (100 hrs.) whichever comes first	Every year of use
Front and rear final gear case oil - change		●				●
General lubrication*				●		
Front brake fluid level - inspect		●		●		
Front brake fluid - change						●
Front brake master cylinder piston assembly and dust seal - replace			2 years			
Front caliper fluid seal and dust seal - replace			2 years			
Front brake hoses and connections- inspect					●	
Front brake hose - replace			4 years			

- *: Service more frequently when operated in mud, dust, or other harsh riding conditions, or when carrying heavy loads or pulling a trailer.
- : Clean, adjust, lubricate, torque, or replace parts as necessary.

NOTE

○ *When the drive belt failure detection system is activated, inspect the drive belt.*

2-4 PERIODIC MAINTENANCE

Torque and Locking Agent

The following tables list the tightening torque for the major fasteners, and the parts requiring use of a non-permanent locking agent or liquid gasket.

Letters used in the "Remarks" column mean:

L: Apply a non-permanent locking agent.

LB: Apply a non-permanent locking agent (ThreeBond TB2471, Blue).

MO: Apply molybdenum disulfide oil solution (mixture of the engine oil and molybdenum disulfide grease in a weight ratio 10:1).

EO: Apply engine oil.

M: Apply molybdenum disulfide grease.

SS: Apply silicone sealant (Liquid Gasket, TB1211: 56019-120).

Lh: Left-hand Threads

R: Replacement Parts

S: Follow the specific tightening sequence.

St: Stake the fasteners to prevent loosening.

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Fuel System				
Throttle Cable Locknut	1.3	0.13	11 in·lb	
Air Cleaner Duct Front Clamp Screw	1.4	0.14	12 in·lb	
Air Cleaner Duct Rear Clamp Screw	4	0.41	36 in·lb	
Air Cleaner Housing Mounting Bolts	6.9	0.70	61 in·lb	
Air Cleaner Intake Duct Clamp Screws	1.4	0.14	12 in·lb	
Engine Top End				
Valve Adjusting Cap Bolts	8.8	0.90	78 in·lb	
Cylinder Head Bolts (M11), first torque	25	2.5	18	MO, S
Cylinder Head Bolts (M11), final torque	44	4.5	33	S
Cylinder Head Bolts (M6)	12	1.2	104 in·lb	S
Camshaft Cover Bolts	8.8	0.90	78 in·lb	
Engine Breather Plate Screws	4.4	0.45	39 in·lb	
Camshaft Sprocket Bolts	14	1.4	10	L
Bearing Retainer Bolts	12	1.2	104 in·lb	
Rear Camshaft Chain Guide Bolt	9.8	1.0	87 in·lb	
Camshaft Chain Tensioner Mounting Bolts	8.8	0.90	78 in·lb	
Camshaft Chain Guard Bolts	8.8	0.90	78 in·lb	
Valve Adjusting Screw Locknuts (KVF360-A1, C1 ~ A6, C6)	12	1.2	104 in·lb	(M6)
(KVF360A7/C7 ~)	8.8	0.90	78 in·lb	(M5)
Rocker Shaft Holder Bolts	8.8	0.90	78 in·lb	
Muffler Mounting Bolts	26	2.7	20	
Converter System				
Drive Pulley Bolt	93	9.5	69	R, Lh
Driven Pulley Nut	93	9.5	69	R
Drive Pulley Cover Bolts	13	1.3	113 in·lb	
Ramp Weight Nuts	6.9	0.70	61 in·lb	R
Spider	275	28	203	Lh
Converter Cover Bolts	8.8	0.90	78 in·lb	S

Torque and Locking Agent

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Engine Brake Actuator Mounting Bolts	8.8	0.90	78 in·lb	S
Converter Air Duct Bolts	8.8	0.90	78 in·lb	
Recoil Starter				
Recoil Starter Mounting Bolts	5.9	0.60	52 in·lb	L
Engine Lubrication System				
Oil Cooler Mounting Bolts	8.8	0.90	78 in·lb	
Oil Pipe Joint Nuts	29	3.0	22	
Oil Cooler Fan Switch	16	1.6	12	
Oil Temperature Warning Light Switch	16	1.6	12	
Oil Hose Banjo Bolts	29	3.0	22	
Oil Pipe Bolts	8.8	0.90	78 in·lb	
Oil Filter	17.5	1.8	13	R
Oil Filter Mounting Bolt	25	2.5	18	L
Oil Pressure Relief Valve	15	1.5	11	L
Oil Pressure Switch	15	1.5	11	SS
Oil Pump Cover Screws	5.4	0.55	48 in·lb	
Oil Pump Cover Bolt	20	2.0	14	
Oil Line Plug	23	2.3	17	L
Engine Oil Drain Plug	20	2.0	14	
Oil Pressure Switch Terminal Bolt	1.5	0.15	13 in·lb	
Engine Removal/Installation				
Upper Engine Mounting Bracket Nut	42	4.3	31	
Lower Engine Mounting Bracket Bolts	25	2.5	18	
Lower Engine Mounting Nuts	42	4.3	31	
Upper Engine Mounting Nut	25	2.5	18	R
Crankshaft/Transmission				
Crankshaft Chain Guard Bolts	8.8	0.90	78 in·lb	
Oil Line Plugs	23	2.3	17	L
Engine Oil Drain Plug	20	2.0	14	
Crankcase Bolts (M8)	20	2.0	14	S, L (1)
Crankcase Bolts (M6) (~ KVF360A8/C8)	8.8	0.90	78 in·lb	
Crankcase Bolts (M6) (KVF360A9/C9 ~)	9.8	1.0	87 in·lb	
Bearing Position Plate Screws (KVF360-A3/C3 ~)	4.9	0.50	43 in·lb	L
Grip Hold Nut	9.8	1.0	87 in·lb	
Shift Lever Assembly Bracket Bolts	20	2.0	14	
Tie-Rod End Bolt	9.8	1.0	87 in·lb	
Tie-Rod End Locknut	20	2.0	14	
Shift Lever Assembly Nut	20	2.0	14	R
Tie-Rod End Front Locknut	9.8	1.0	87 in·lb	Lh
Tie-Rod End Rear Locknut	9.8	1.0	87 in·lb	
Tie-Rod End Nut	20	2.0	14	
Shift Shaft Cover Bolts	8.8	0.90	78 in·lb	
Neutral Position Switch	15	1.5	11	

2-6 PERIODIC MAINTENANCE

Torque and Locking Agent

Fastener	Torque			Remarks
	N-m	kgf-m	ft-lb	
Reverse Position Switch	15	1.5	11	
Shift Shaft Positioning Bolt	25	2.5	18	
Shift Shaft Spring Bolt	25	2.5	18	L
Wheels/Tires				
Tie-Rod Adjusting Sleeve Locknuts	37	3.8	27	
Wheel Nuts	52	5.3	38	S
Front Axle Nuts	196	20	145	
Rear Axle Nuts	265	27	195	
Final Drive				
(Output Bevel Gears)				
Output Driven Bevel Gear Housing Bolts	26	2.7	20	
Output Drive Bevel Gear Housing Bolts	26	2.7	20	
Output Driven Bevel Gear Bearing Holder	250	26	184	L
Bevel Gear Holder Nut	200	20	148	L
Output Drive Bevel Gear Bearing Holder	118	12	87	L
Output Shaft Holder Nut	200	20	148	L
Rotor Mounting Bolts	12	1.2	104 in-lb	
Output Drive Bevel Gear Cover Bolts	8.8	0.90	78 in-lb	
Forward/Reverse Detecting Sensor Mounting Bolts	15	1.5	11	
(Front Final Gear Case)				
Variable Front Differential Control Shift Shaft Lever Bolt	8.8	0.90	78 in-lb	
Front Final Gear Case Left Cover Bolts (M6)	9.8	1.0	87 in-lb	S, L (4)
Ring Gear Bolts	57	5.8	42	LB
Front Final Gear Case Center Cover Bolts (M8)	24	2.4	17	L, S
Front Final Gear Case Center Cover Bolts (M6)	9.8	1.0	87 in-lb	L, S
Oil Filler Cap	29	3.0	22	
Pinion Gear Bearing Holder Nut	127	13	94	St
Pinion Gear Bearing Holder	137	14	101	L
Front Final Gear Case Coupling Nut	20	2.0	14	
Oil Drain Plug (KVF360-A1/C1 ~ A2/C2)	24	2.4	17	
Oil Drain Plug (KVF360-A3/C3 ~)	15	1.5	11	
2WD/4WD Actuator Mounting Bolts	9.8	1.0	87 in-lb	L, S
Variable Differential Control Cable Locknut	17	1.7	12	
Variable Differential Control Lever Bolt	3.5	0.36	31 in-lb	
Parking Brake Lever Screw	2.2	0.22	19 in-lb	L
Front Final Gear Case Bolts and Nuts	42	4.3	31	R
(Rear Final Gear Case)				
Oil Filler Cap	29	3.0	22	
Oil Drain Plug	20	2.0	14	
Pinion Gear Bearing Holder	137	14	101	L
Pinion Gear Bearing Holder Nut	157	16	116	L
Trailer Hitch Bracket Bolt (M10)	49	5.0	36	L

PERIODIC MAINTENANCE 2-7

Torque and Locking Agent

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Rear Final Gear Case Bolts	42	4.3	31	S
Rear Final Gear Case Right Cover Bolts (M8)	24	2.4	17	L
Rear Final Gear Case Right Cover Bolts (M10)	49	5.0	36	L
Rear Final Gear Case Left Cover Bolts (M12)	93	9.5	69	L
Brakes				
Reservoir Cap Screws	1.5	0.15	13 in·lb	
Brake Lever Pivot Bolt	5.9	0.60	52 in·lb	
Brake Lever Pivot Bolt Locknut	5.9	0.60	52 in·lb	
Master Cylinder Clamp Bolts	8.8	0.90	78 in·lb	
Brake Switch Mounting Bolt	12	0.12	10 in·lb	
Brake Hose Banjo Bolts	25	2.5	18	
Pad Mounting Bolts	18	1.8	13	
Bleed Valves	7.8	0.80	69 in·lb	
Caliper Mounting Bolts	25	2.5	18	
Caliper Holder Shaft	18	1.8	13	
Caliper Holder Shaft (Allen Bolt)	23	2.3	17	L
Disc Mounting Bolts	37	3.8	27	L
Suspension				
Front Shock Absorber Clamp Bolts and Nuts	47	4.8	35	
Front Shock Absorber Mounting Nuts	74	7.5	54	
Rear Shock Absorber Mounting Nuts	62	6.3	46	
Steering Knuckle Joint Nuts	42	4.3	31	
Knuckle Joint Mounting Nuts (KVF360A6/C6 ~)	29	30	22	
Piston Rod Nut	49	5.0	36	
Suspension Arm Pivot Bolts	88	9.0	65	
Swingarm Pivot Right Shaft	152	15.5	112	L
Swingarm Pivot Left Shaft	20	2.0	14	L
Swingarm Pivot Left Nut	152	15.5	112	
Steering				
Steering Stem Bottom End Nut	62	6.3	46	
Steering Stem Clamp Bolts	25	2.5	18	
Tie-Rod End Nuts	42	4.3	31	R
Steering Knuckle Joint Nuts	42	4.3	31	
Knuckle Joint Mounting Nuts (KVF360A6/C6 ~)	29	30	22	
Front Shock Absorber Clamp Bolts and Nuts	47	4.8	35	
Tie-Rod Adjusting Sleeve Locknuts	37	3.8	27	
Handlebar Lower Holder Nuts	37	3.8	27	L, R
Handlebar Holder Bolts	27	2.8	20	S
Frame				
Rear Carrier Bolts and Nuts	25	2.5	18	R
Front Carrier Bolts	–	–	–	L
Front Guard Bolts	20	2.0	14	
Footboard Mounting Nuts	–	–	–	L

2-8 PERIODIC MAINTENANCE

Torque and Locking Agent

Fastener	Torque			Remarks
	N·m	kgf·m	ft·lb	
Electrical System				
Alternator Cover Bolts	8.8	0.90	78 in·lb	
Alternator Rotor Bolts	127	13	94	
Alternator Stator Bolts	14	1.4	10	
Spark Plug	14	1.4	10	
Ignition Coil Mounting Bolt	8.8	0.90	78 in·lb	
Crankshaft Sensor Mounting Bolts	5.9	0.60	52 in·lb	
Starter Motor Mounting Bolts	8.8	0.90	78 in·lb	
Starter Motor Terminal Nut (~ KVF360A8/C8)	4.9	0.50	43 in·lb	
Starter Motor Terminal Nut (KVF360A9/C9 ~)	6.8	0.69	60 in·lb	
Starter Motor Terminal Locknut (~ KVF360A8/C8)	6.9	0.70	61 in·lb	
Starter Motor Terminal Locknut (KVF360A9/C9 ~)	11	1.1	97 in·lb	
Starter Motor Bolts (~ KVF360A8/C8)	3.4	0.30	30 in·lb	
Starter Motor Bolt (KVF360A9/C9 ~)	5.0	0.51	44 in·lb	
Starter Motor Clutch Bolts	34	3.5	25	L
2WD/4WD Actuator Mounting Bolts	9.8	1.0	87 in·lb	L, S
Engine Brake Actuator Mounting Bolts	8.8	0.90	78 in·lb	S
Reverse Position Switch	15	1.5	11	
Forward/Reverse Detecting Sensor Mounting Bolt	15	1.5	11	
Neutral Position Switch	15	1.5	11	
Starter Relay Terminal Nuts	4.9	0.50	43 in·lb	
Igniter Mounting Bolts	2.3	0.23	20 in·lb	
Ignition Switch Nut	2.7	0.28	24 in·lb	
Oil Pressure Switch Terminal Bolt	1.5	0.15	13 in·lb	
Regulator/Rectifier Mounting Bolts	8.8	0.90	78 in·lb	
Speed Sensor Mounting Bolt	8.8	0.90	78 in·lb	

Torque and Locking Agent

The tables below, relating tightening torque to thread diameter, lists the basic torque for the bolts and nuts. Use this table for only the bolts and nuts which do not require a specific torque value. All of the values are for use with dry solvent-cleaned threads.

Basic Torque for General Fasteners of Engine Parts

Threads dia. mm (in.)	Mark of bolt head	Torque		
		N·m	kgf·m	ft·lb
5 (0.20)	4T	2.2 ~ 2.6	0.22 ~ 0.27	19 ~ 23 in·lb
6 (0.24)	9T	12 ~ 15	1.2 ~ 1.5	104 ~ 130 in·lb
6 (0.24)	7T	7.8 ~ 9.8	0.8 ~ 1.0	69 ~ 87 in·lb
6 (0.24)	4T	3.9 ~ 4.9	0.4 ~ 0.5	35 ~ 43 in·lb
8 (0.31)	7T	18 ~ 22	1.8 ~ 2.2	13 ~ 16
8 (0.31)	4T	10 ~ 14	1.0 ~ 1.4	87 ~ 122 in·lb
10 (0.39)	7T	39 ~ 44	4.0 ~ 4.5	29 ~ 33
10 (0.39)	4T	20 ~ 24	2.0 ~ 2.4	14 ~ 17

Basic Torque for General Fasteners of Frame Parts

Threads dia. mm (in.)	Torque		
	N·m	kgf·m	ft·lb
5 (0.20)	3.4 ~ 4.9	0.35 ~ 0.5	30 ~ 43 in·lb
6 (0.24)	5.9 ~ 7.8	0.6 ~ 0.8	52 ~ 69 in·lb
8 (0.31)	14 ~ 19	1.4 ~ 1.9	10.0 ~ 13.5
10 (0.39)	25 ~ 34	2.6 ~ 3.5	19.0 ~ 25
12 (0.47)	44 ~ 61	4.5 ~ 6.2	33 ~ 45
14 (0.55)	73 ~ 98	7.4 ~ 10.0	54 ~ 72
16 (0.63)	115 ~ 155	11.5 ~ 16.0	83 ~ 115
18 (0.71)	165 ~ 225	17.0 ~ 23.0	125 ~ 165
20 (0.79)	225 ~ 325	23 ~ 33	165 ~ 240

2-10 PERIODIC MAINTENANCE

Specifications

Item	Standard	Service Limit
Fuel System		
Throttle Lever Free Play	2 ~ 3 mm (0.08 ~ 0.12 in.)	---
Air Cleaner Element Oil	High-quality foam air filter oil	---
Engine Top End		
Valve Clearance:		
Exhaust	0.15 ~ 0.20 mm (0.0059 ~ 0.0079 in.)	---
Inlet	0.08 ~ 0.13 mm (0.0032 ~ 0.0051 in.)	---
Converter System		
Actuator Lever Guide Shoe Wear	---	6 mm (0.24 in.)
Belt Width		
(KVF360-A1/C1 ~ A2/C2)	29.9 ~ 31.1 mm (1.18 ~ 1.22 in.)	29.4 mm (1.16 in.)
(KVF360-A3/C3 ~)	29.7 ~ 30.3 mm (1.17 ~ 1.19 in.)	28.0 mm (1.10 in.)
Belt Deflection	22 ~ 27 mm (0.87 ~ 1.06 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	1.50 L (1.59 US qt) (When filter is not removed)	---
	1.74 L (1.84 US qt) (When filter is removed)	---
	2.3 L (2.43 US qt) (When engine is completely dry)	---
Wheels/Tires		
Tire Tread Depth:		
Front	---	3 mm (0.12 in.)
Rear	---	4 mm (0.16 in.)
Standard Tire:		
Front	AT 25 x 8-12 Dunlop, KT121, Tubeless (KVF360-A1/C1 ~ A9/C9) MAXXIS, M911Y, Tubeless (KVF360AA ~/CA ~)	---
Rear	AT 25 x 10-12 Dunlop, KT405C/KT127A, Tubeless (KVF360-A1/C1 ~ A9/C9) MAXXIS, M912Y, Tubeless (KVF360AA ~/CA ~)	---
Final Drive		
Front Final Gear Case:		
Gear Case Oil:		
Type	API SG, SH, SJ, SL or SM with JASO MA, MA1 or MA2	---
Viscosity	SAE 10W-40	---

Specifications

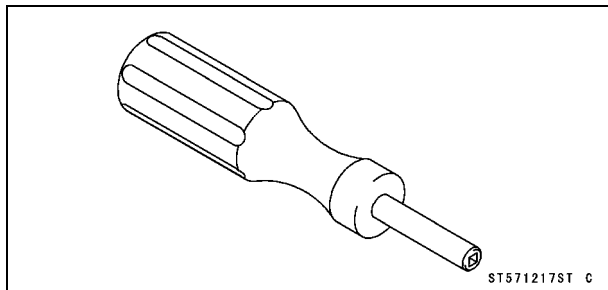
Item	Standard	Service Limit
Oil level	Filler opening bottom	---
Capacity	430 mL (0.45 US qt)	---
Rear Final Gear Case:		
Gear Case Oil:		
Type	MOBIL Fluid 424 or Kawa Chem Gear & Wet Brake Oil (CITGO TRANSGARD TRACTOR HYDRAULIC FLUID) or Exxon Hydraul 560	---
Oil level	Filler opening bottom	---
Capacity	900 mL (0.95 US qt)	---
Brakes		
Front Brake Fluid:		
Grade	DOT 3 or DOT 4	---
Front Disc Brake:		
Pad lining thickness	4.5 mm (0.18 in.)	1 mm (0.04 in.)
Rear Brake Lever, Pedal and Cables:		
Rear brake lever free play	1 ~ 2 mm (0.04 ~ 0.08 in.)	---
Brake pedal free play	15 ~ 25 mm (0.6 ~ 1.0 in.)	---
Electrical System		
Spark plug gap	0.8 ~ 0.9 mm (0.031 ~ 0.035 in.)	---
Rear brake light switch timing	On after 10 mm (0.4 in.) of pedal travel	---

2-12 PERIODIC MAINTENANCE

Special Tools

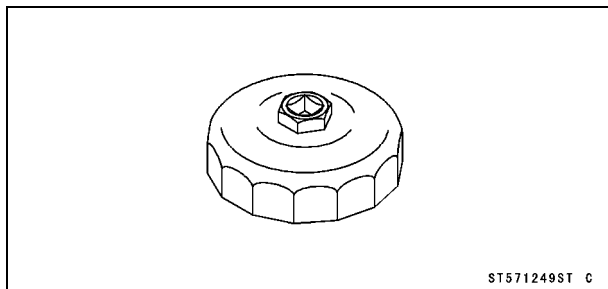
Valve Adjusting Screw Holder:

57001-1217



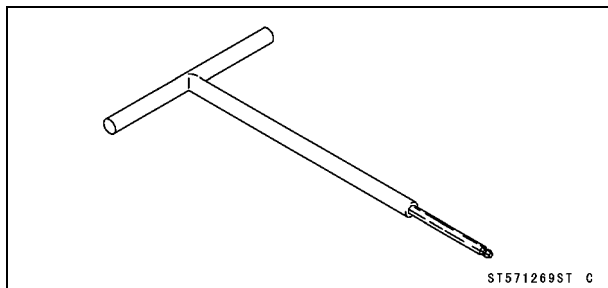
Oil Filter Wrench:

57001-1249



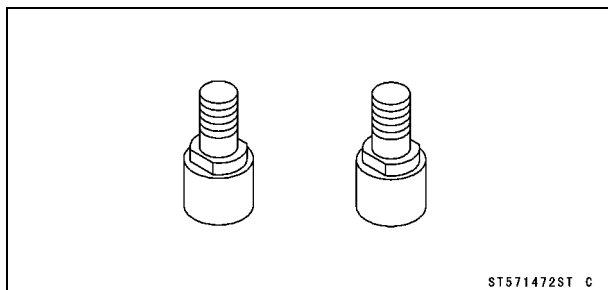
Carburetor Drain Plug Wrench, Hex 3:

57001-1269



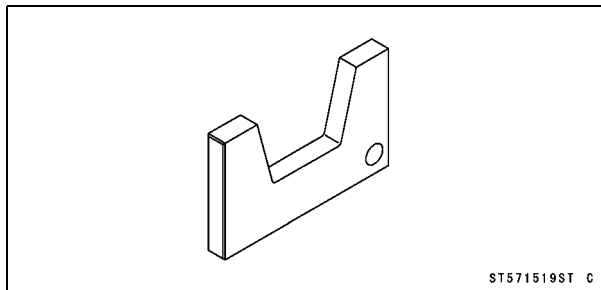
Pulley Holder Attachment:

57001-1472



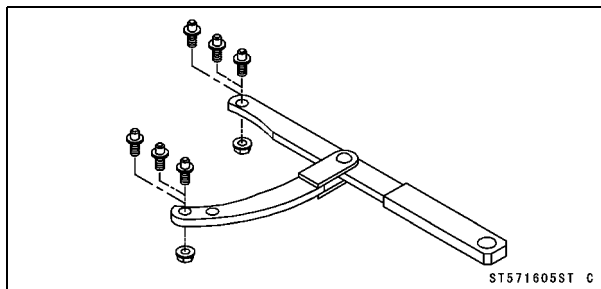
Belt Measuring Gauge:

57001-1519



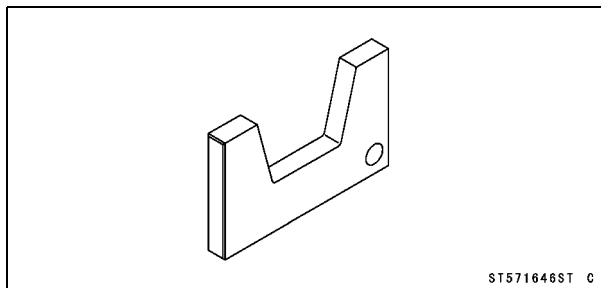
Flywheel & Pulley Holder:

57001-1605



Belt Measuring Gauge:

57001-1646

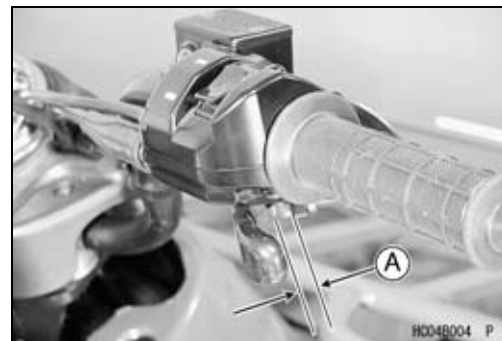


Periodic Maintenance Procedures

Fuel System

Throttle Lever Free Play Inspection

- Check that the throttle lever 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 lever does not return properly, check the throttle cable routing, lever free play, and for possible 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 increases, check the throttle lever free play and the cable routing.
- Stop the engine and check the throttle lever free play [A].



Throttle Lever Free Play

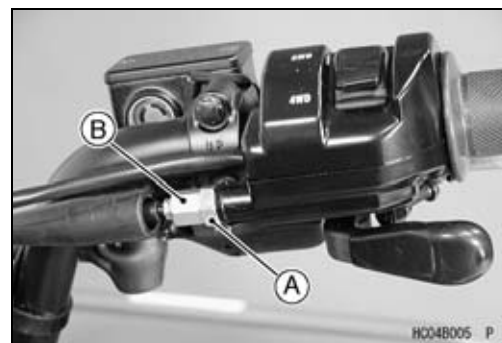
Standard: 2 ~ 3 mm (0.08 ~ 0.12 in.)

- ★ If the free play is not within the specified range, adjust the cable.

Throttle Lever Free Play Adjustment

- Slide the rubber cover off the adjuster at the throttle case.
- Loosen the locknut [A] and turn the throttle cable upper adjuster [B] until the cable has proper amount of play.
- Tighten the locknut and reinstall the rubber cover.

Torque - Throttle Cable Locknut: 1.3 N·m (0.13 kgf·m, 11 in·lb)



- ★ If the free play cannot be adjusted by using the upper cable adjuster, remove the throttle cable pulley cover and then use the cable adjusting nuts [A] at the lower end of the throttle cable and make the necessary free play.



2-14 PERIODIC MAINTENANCE

Periodic Maintenance Procedures

Idle Speed Inspection

- Start the engine and warm it up thoroughly.
- With the engine idling, turn the handlebar to both sides to check for any changes in the idle speed.
- ★ If handlebar movement changes the idle speed, the throttle cable may be improperly adjusted incorrectly routed, or damaged. Be sure to correct any of these conditions before riding.

⚠ 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 idle speed with a suitable tachometer.

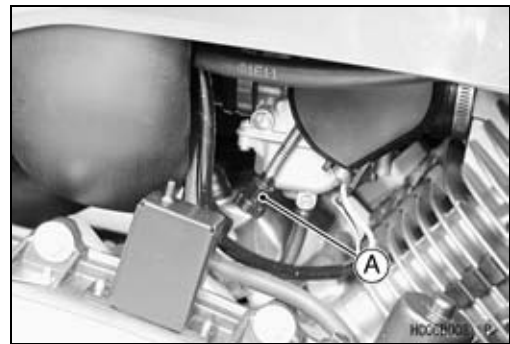
Idle Speed

Standard: 1 300 ±50 r/min (rpm)

- ★ If the idle speed is out of the specified range, adjust it.

Idle Speed Adjustment

- Start the engine and warm it up thoroughly.
- Turn the idle adjusting screw [A] until the idle speed is correct.
- Open and close the throttle a few times to make sure that the idle speed is within the specified range.



Fuel System Cleanliness Inspection

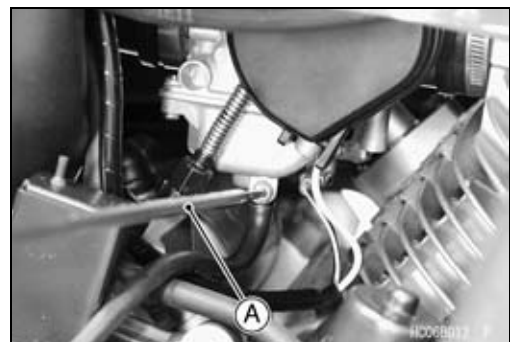
⚠ WARNING

Gasoline is extremely flammable and can be explosive under certain conditions. Turn the ignition switch OFF. Do not smoke. Make sure the area is well-ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light.

- Turn the fuel tap to the OFF position.
- Remove the check valve [A] at the end of the carburetor overflow hose.
- Run the lower end of the carburetor overflow hose to a suitable container.
- Turn out the carburetor drain plug a few turns and drain the fuel system.

Special Tool - Carburetor Drain Plug Wrench, Hex 3: 57001-1269 [A]

- Check to see if water or dirt comes out.
- Tighten the drain plug.
- ★ If any water or dirt appears during the above inspection, clean the fuel system (carburetor, tank, fuel hose).



Periodic Maintenance Procedures

Air Cleaner Element Cleaning and Inspection

NOTE

- *In dusty areas, the element should be cleaned more frequently than the recommended interval.*
- *After riding through rain or muddy terrains, the element should be cleaned immediately.*
- *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

Gasoline and low-flash point solvents can be flammable and/or explosive and cause severe burns. Clean the element in a well-ventilated area, and take care that there is no spark or flame anywhere near the working areas. Do not use gasoline or low-flash point solvents to clean the element.

- Remove the air cleaner element.
- Clean the element in a bath of 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.
- Inspect the element for damage.
- ★ If it is torn, punctured, or hardened, replace it.

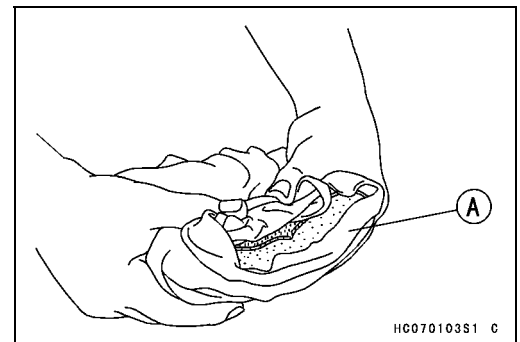
NOTE

- *Replace the element after cleaning it five times or if it is damaged.*
- After cleaning, saturate the element with a high-quality foam-air-filter oil, squeeze out the excess oil, then wrap it in a clean rag and squeeze it as dry as possible. Be careful not to tear the element.

Air Cleaner Draining

A drain tube [A] is connected to the bottom of the air cleaner housing to drain water or oil accumulated in the housing.

- Visually check the drain tube if the water or oil accumulates in the tube.
- ★ If any water or oil accumulates in the tube, drain it by taking off the tube. After draining, be sure to install the tube and clamp firmly.

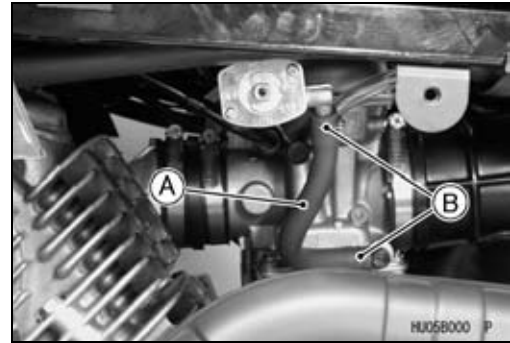


2-16 PERIODIC MAINTENANCE

Periodic Maintenance Procedures

Fuel Hose and Connection Check

- Turn the fuel tap to the OFF position.
- Remove:
 - Fuel Tank Cover (see Frame chapter)
 - Exhaust Cover (see Frame chapter)
- Check the fuel hose [A].
- ★ If the fuel hose is frayed, cranked, or bulged, replace the fuel hose.
- Check that the hose is securely connected and clamps [B] are tightened.
- ★ If the fuel hose has been sharply bent or kinked, replace the fuel hose.
- ★ If the clamps are loosened or damaged, replace the clamps.
- When installing the fuel hose, route the hose according to Cable, Wire, and Hose Routing section in 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.

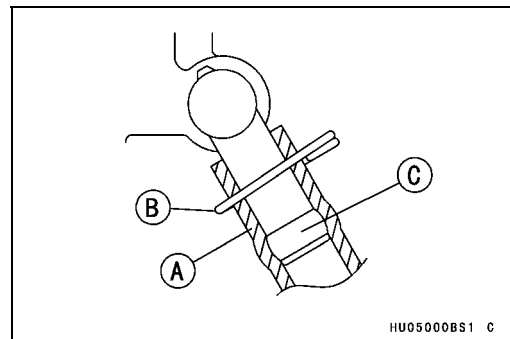
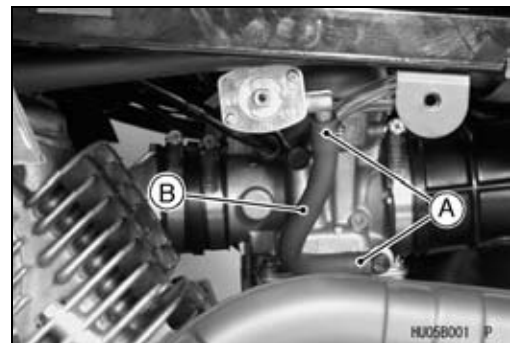


Fuel Hose Replacement

⚠ WARNING

Gasoline is extremely flammable and can be explosive under certain conditions. Turn the ignition switch OFF. Do not smoke. Make sure the area is well-ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light.

- Turn the fuel tap to the OFF position.
- Remove:
 - Fuel Tank Cover (see Frame chapter)
 - Exhaust Cover (see Frame chapter)
 - Clamps [A]
 - Fuel Hose [B]
- Fit the fuel hose [A] onto the pipe fully and install the clamps [B] beyond the raised rib [C].



Periodic Maintenance Procedures

Engine Top End

Valve Clearance Inspection

NOTE

○ Check the valve clearance only when the engine is cold (at room temperature).

- Remove:
 - Left Front Wheel (see Wheels/Tires chapter)
 - Left Front Inner Cover (see Frame chapter)
 - Fuel Tank (see Fuel System chapter)
 - Rubber Cover
 - Bolts [A] and Valve Adjusting Caps [B]
- Remove:
 - Recoil Starter (see Recoil Starter chapter)
 - Timing Inspection Plug
- Position the crankshaft at TDC of the end of the compression stroke (see Camshaft Sprocket Installation in Engine Top End chapter).
- Measure the clearance of each valve between the end of the valve stem and the adjusting screw on the rocker arm with a thickness gauge [A].

Valve Clearance (when cold)

Exhaust: 0.15 ~ 0.20 mm (0.0059 ~ 0.0079 in.)

Inlet: 0.08 ~ 0.13 mm (0.0032 ~ 0.0051 in.)

★ If the valve clearance is not correct, adjust it.

Valve Clearance Adjustment

- Remove the valve adjusting cap.
- Loosen the locknut [A] and turn the adjusting screw [B] until the clearance is correct.
- Hold the adjusting screw from turning and tighten the locknut to the specified torque.

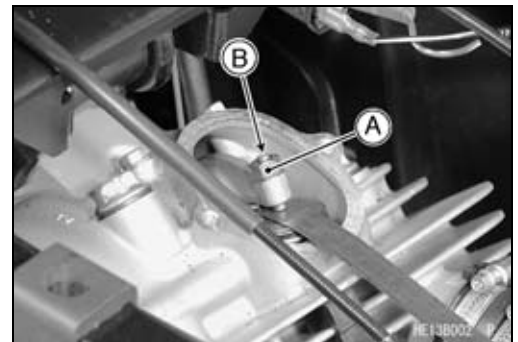
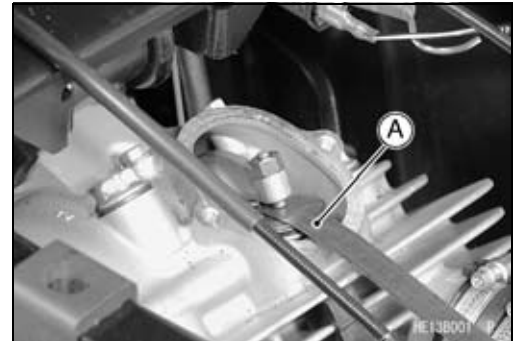
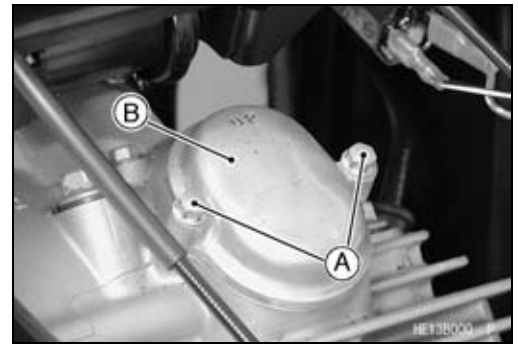
Torque - Valve Adjusting Screw Locknuts:

12 N·m (1.2 kgf·m, 104 in·lb) (KVF360-A1/C1 ~ A6/C6)

8.8 N·m (0.90 kgf·m, 78 in·lb) (KVF360A7/C7)

Special Tool - Valve Adjusting Screw Holder: 57001-1217 (AVF360A7/C7 ~)

- Recheck the clearance.
- ★ If the clearance is incorrect, repeat the adjustment procedure.
- ★ If the clearance is correct, perform the adjustment procedure on the other valve.



2-18 PERIODIC MAINTENANCE

Periodic Maintenance Procedures

- Apply grease to the O-ring [A].
- Install the valve adjusting cap so that the “UP” mark facing upward.
- Tighten:
 - Torque - Valve Adjusting Cap Bolts: 8.8 N-m (0.90 kgf-m, 78 in-lb)



Spark Arrester Cleaning

⚠ WARNING

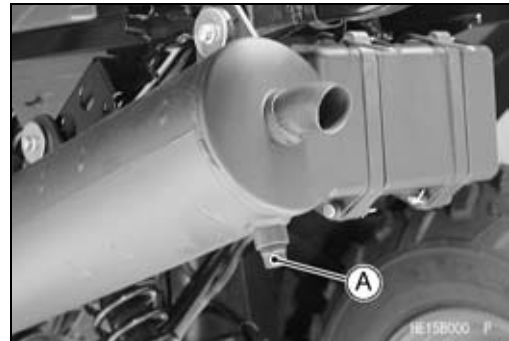
The muffler can become extremely hot during normal operation and cause severe burns. Since the engine must be running during this procedure, wear heat-resistant gloves while cleaning the spark arrester.

- Remove the drain plug [A] on the muffler.
- In an open area away from combustible materials, start the engine with the transmission in neutral.
- Raise and lower engine speed while tapping on the muffler with a rubber mallet until carbon particles are purged from the muffler.

⚠ DANGER

Exhaust gas contains carbon monoxide, a colorless, odorless poisonous gas. Inhaling carbon monoxide can cause serious brain injury or death. **DO NOT** run the engine in enclosed areas. Operate only in a well-ventilated area.

- Stop the engine.
- Apply molybdenum disulfide grease to the drain plug.
- Install the drain plug.



Converter System

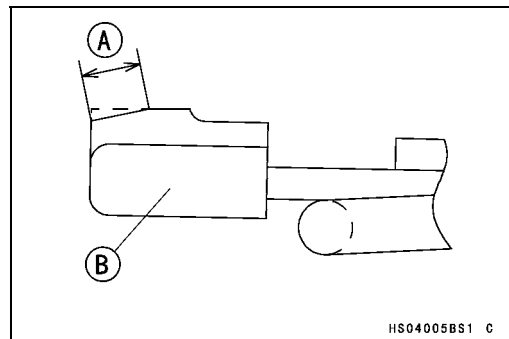
Actuator Lever (Engine Brake Control Lever) Assembly Inspection

- Measure the width [A] of the guide [B].

Actuator Lever Guide Shoe Wear

Service Limit: 6 mm (0.24 in.)

- ★ If the guide contact area width is greater than the service limit, replace the actuator lever assembly.




HS04005BS1 C

Periodic Maintenance Procedures

Drive Belt Inspection

Inspection of the drive belt is required at least every 90 days of vehicle use (average 12 mile/day) not to exceed 1 100 mile. More frequent inspection is necessary if the vehicle is subjected to hard usage.

 WARNING
<p>Neglect, abuse, or failure to maintain the transmission can result in a severely worn or damaged drive belt locking up the transmission and wheels. This can cause the operator to lose control and have an accident resulting in injury or death. Maintain according to periodic maintenance chart.</p>

KVF360-A1/C1 ~ A2/C2

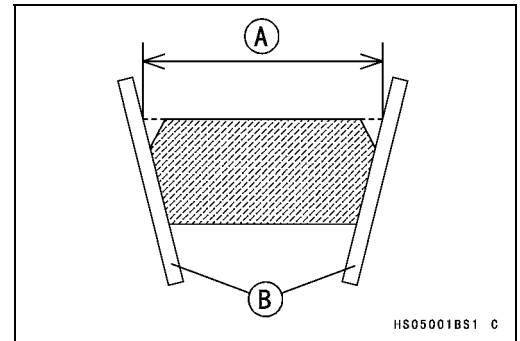
- Measure the width [A] of the belt at several locations with a suitable straightedge [B] as shown.

Belt Width

Standard: 29.9 ~ 31.1 mm (1.18 ~ 1.22 in.)

Service Limit: 29.4 mm (1.16 in.)

- ★ If any measurements exceed the service limit, replace the belt.

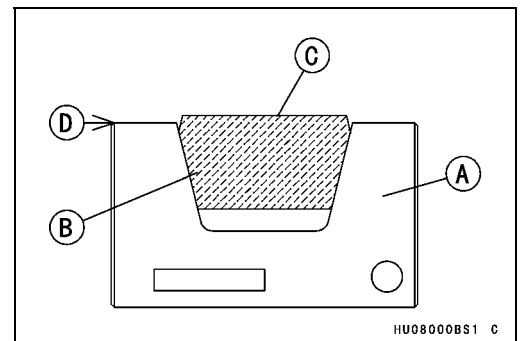


NOTE

○ Use the belt measuring gauge [A] in order to make easy to inspect the drive belt width.

Special Tool - Belt Measuring Gauge: 57001-1519

- Fit the belt measuring gauge [A] to the drive belt [B].
- ★ If the upper surface [C] of the belt sinks below the upper surface [D] of the gauge, replace the belt.



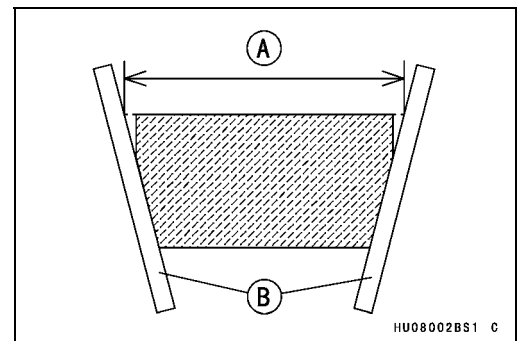
KVF360-A3/C3 ~

- Remove the torque converter cover (see Converter System chapter).
- Measure the width [A] of the belt at several locations with a pair of suitable straightedges [B] as shown.
- ★ If any measurements exceed the service limit, replace the belt.

Belt Width

Standard: 29.7 ~ 30.3 mm (1.17 ~ 1.19 in.)

Service Limit: 28.0 mm (1.10 in.)

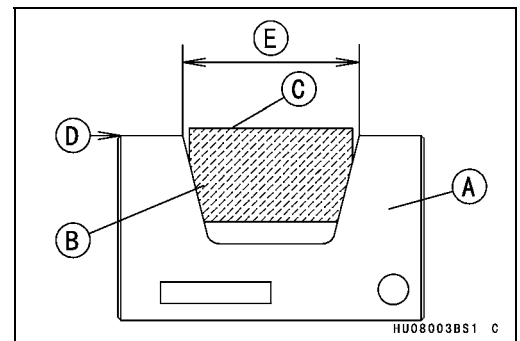


NOTE

○ Use the belt measuring gauge [A] in order to make easy to inspect the drive belt width.

Special Tool - Belt Measuring Gauge: 57001-1646

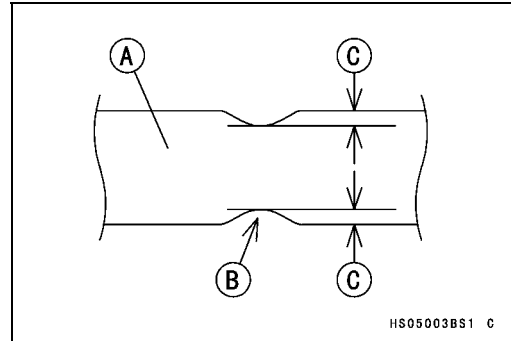
- Fit the belt measuring gauge [A] to the drive belt [B].
- ★ If the upper surface [C] of the belt sinks below the upper surface [D] of the gauge, replace the belt. [E] 28 mm (1.10 in.)



2-20 PERIODIC MAINTENANCE

Periodic Maintenance Procedures

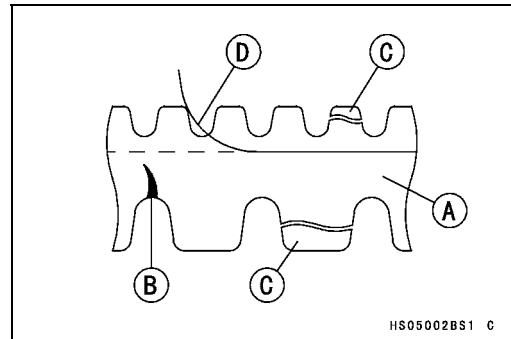
- Check the belt [A] for abnormal wear [B].
- Measure the width [C] of the belt at abnormal wear point.
- ★ If any measurements exceed 0.5 mm (0.02 in.), replace the belt.
- When using the belt of large abnormal wear, the drive belt failure detection switch could be activated.



- Check the belt for cracks, breaks, or peeling.
- ★ If necessary, replace the belt with a new one.
 - Belt [A]
 - Crack [B]
 - Broken [C]
 - Peeling [D]

NOTE

- Whenever the belt is replaced, inspect the drive and the driven pulleys.



Drive Belt Deflection Inspection

NOTE

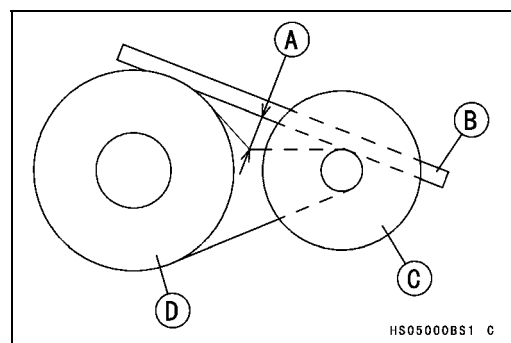
- If the drive belt failure detection system is activated by abnormal belt, the drive belt failure detection switch is damaged. Make sure to replace the torque converter cover.

- Remove the torque converter cover (see Torque Converter Cover Removal in Converter System chapter).
- Put the transmission in neutral and rotate the driven pulley by hand to make sure the belt is shifted all the way to the top of the driven pulley.
- Measure the belt deflection [A] as shown:
 - Place a straightedge [B] on top of the belt between the drive pulley [C] and the driven pulley [D].
 - Use a ruler to push the belt away from the straightedge. Push hard, but with no more force than 59 N (6 kgf, 13 lb).

Belt Deflection

Standard: 22 ~ 27 mm (0.87 ~ 1.06 in.)

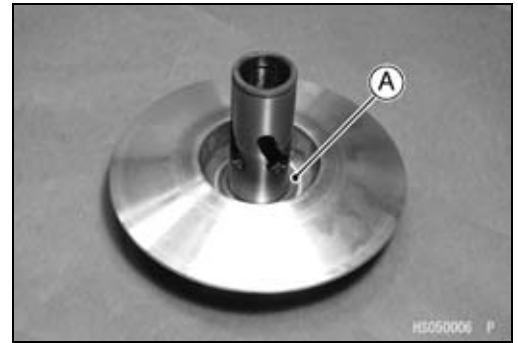
- ★ If the belt deflection is not within the specified range, first measure the drive belt width (see Drive Belt Inspection). Adjust the deflection by adding or removing spacers on the fixed sheave.
- When adjusting the deflection, less is better than more. Less deflection will maintain better performance for more time as the belt width decreases by normal wear, which causes the deflection to increase with usage.



Periodic Maintenance Procedures

Drive Belt Deflection Adjustment

- Disassemble the driven pulley (see Driven Pulley Disassembly in Converter System chapter).
- ★ If the belt deflection is more than 27 mm (1.06 in.), remove the spacers to decrease it.
- The rule-of-thumb is: 0.1 mm (0.004 in.) change in spacer thickness equals about 1.3 mm (0.051 in.) change in belt deflection.
- ★ If the belt deflection is less than 22 mm (0.87 in.), add the spacers [A] to increase it.
- The rule-of-thumb is: 0.1 mm (0.004 in.) change in spacer thickness equals about 1.6 mm (0.063 in.) change in belt deflection.



Spacers

Part No.	Thickness
92026-0034	0.3 mm (0.012 in.)
92026-1569	0.6 mm (0.024 in.)
92026-1617	0.8 mm (0.032 in.)
92026-1565	1.0 mm (0.039 in.)
92026-1570	1.4 mm (0.055 in.)

- Assemble the driven pulley (see Driven Pulley Assembly in Converter System chapter).
- With the transmission in neutral, rotate the driven pulley to allow the belt to return to the top of the sheaves before measuring the belt deflection.
- Measure the belt deflection again and repeat the above procedures until it is within the standard range.
- Replace the driven pulley nut with a new one.
- Using the flywheel & pulley holder and adapter, tighten the driven pulley nut.

Special Tools - Flywheel & Pulley Holder: 57001-1605
Pulley Holder Attachment: 57001-1472

Torque - Driven Pulley Nut: 93 N·m (9.5 kgf·m, 69 ft·lb)

NOTE

- *When some spacers are used to adjust the belt deflection, install the thinner one first to the fixed sheave.*



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