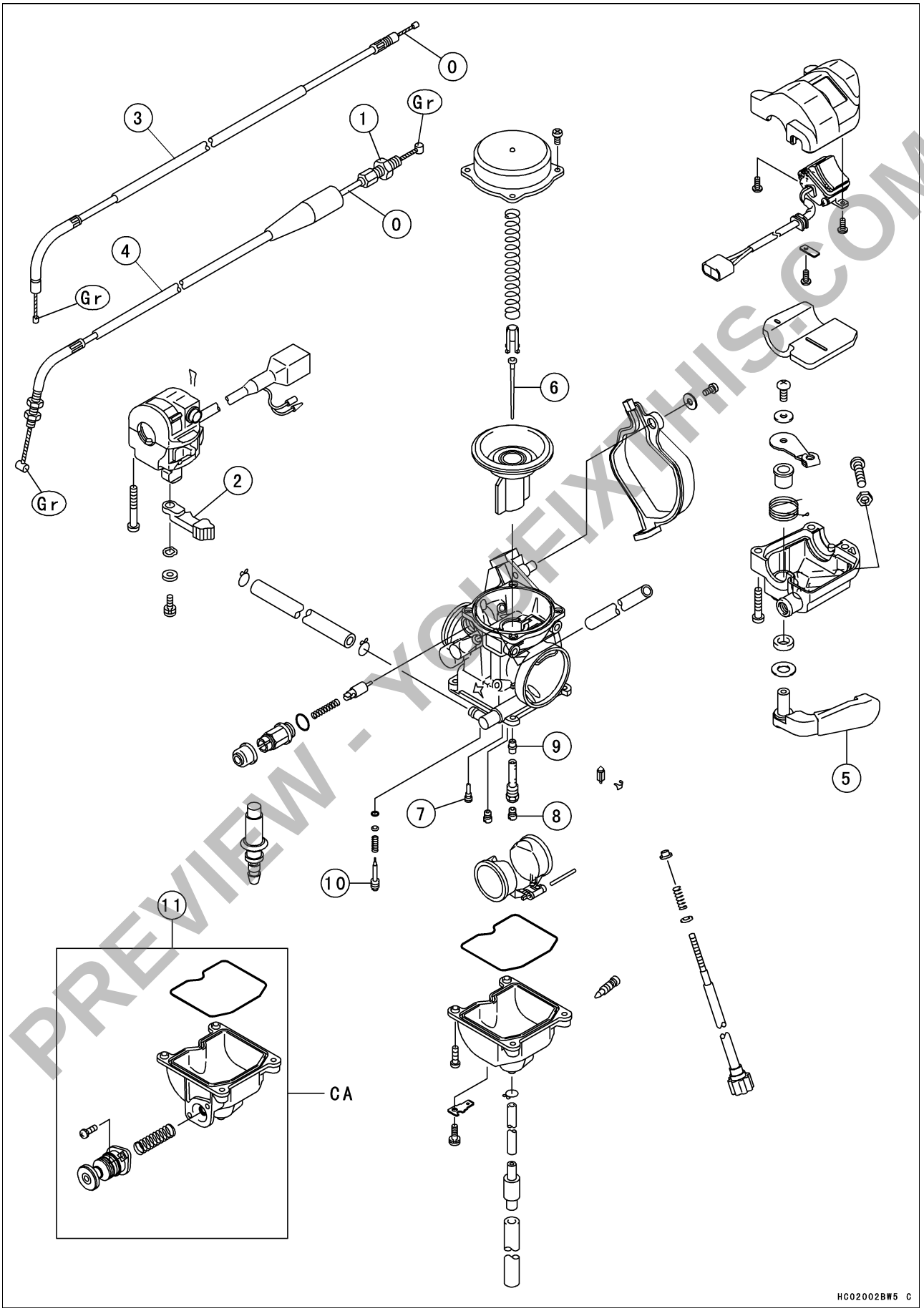
Exploded View



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

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-permanet locking agent (Three Bond TB2471, Blue)

PREVIEW - YOUFIXTHIS.COM

Blurred on purpose. The manual you buy has this page in full quality.

Download full manual at youfixthis.com

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].

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

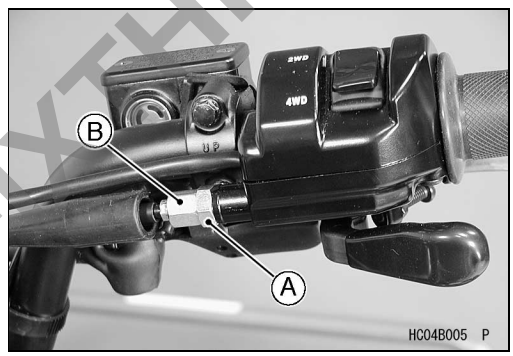


Throttle Lever Free Play
Standard: 2 ~ 3 mm (0.08 ~ 0.12 in.)

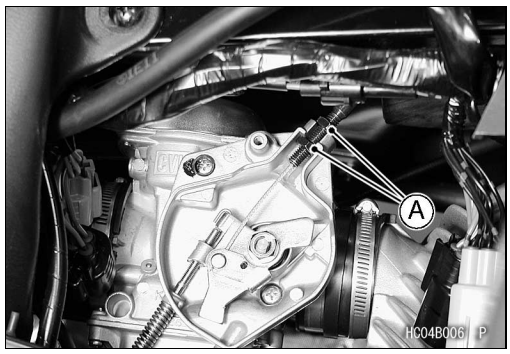
Throttle Lever Free Play Adjustment

- 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: 13 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.

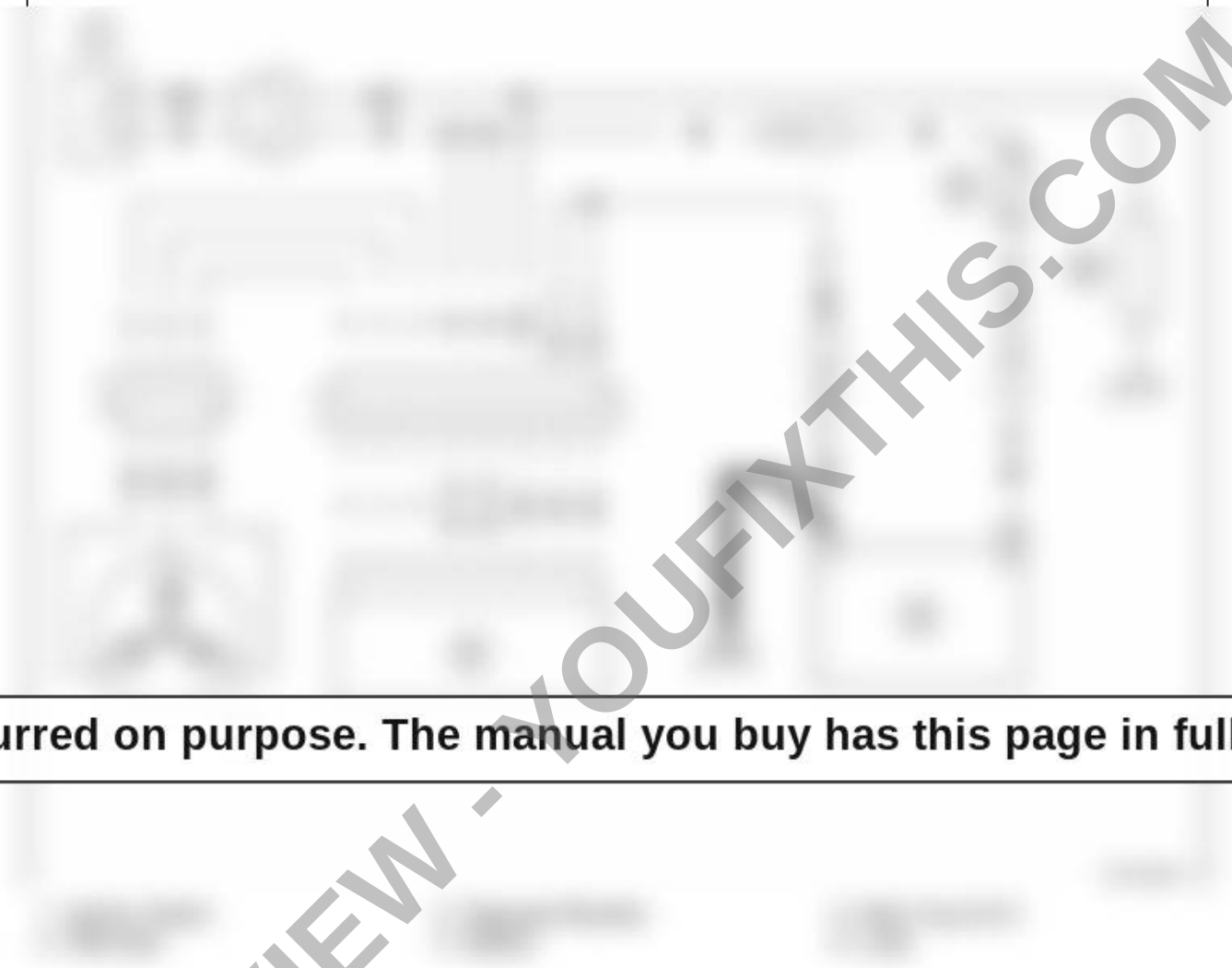


PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Charging System

Charging System Circuit



Blurred on purpose. The manual you buy has this page in full quality.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Troubleshooting Guide

NOTE

○ *This is not an exhaustive list, giving every possible cause for each problem listed. It is meant simply as a rough guide to assist the troubleshooting for some of the more common difficulties.*

Engine Doesn't Start, Starting Difficulty:

Starter motor not rotating:
- Neutral switch trouble
- Starter motor trouble
- Battery voltage low
- Relays not contacting or operating
- Starter button not contacting
- Wiring open or shorted
- Ignition switch trouble
- Engine stop switch trouble
- Fuse blown

Starter motor rotating but engine doesn't turn over:
- Starter motor clutch trouble

Recoil starter not operating
- Recoil starter spring broken
- Recoil starter pawl not engaging

Engine won't turn over:
- Valve seizure
- Rocker arm seizure
- Cylinder, piston seizure
- Crankshaft seizure
- Connecting rod small end seizure
- Connecting rod big end seizure
- Transmission gear or bearing seizure
- Camshaft seizure
- Balancer bearing seizure

No fuel flow:
- Fuel tank air vent obstructed
- Fuel tap clogged
- Fuel line clogged
- Float valve clogged

Engine flooded:
- Fuel level too high
- Float valve worn or stuck open
- Starting technique faulty
  (When flooded, crank the engine with the throttle fully opened to allow more air to reach the engine.)

Fuel/air mixture incorrect:
- Pilot screw and/or idle adjusting screw maladjusted
- Pilot jet or air passage clogged
- Air cleaner clogged, poorly sealed, or missing
- Starter jet clogged

No spark; spark weak:
- Spark plug dirty, broken, or maladjusted
- Spark plug cap or spark plug lead trouble
- Spark plug cap not in good contact
- Spark plug incorrect
- Pickup coil trouble
- Igniter trouble
- Ignition coil trouble
- Battery voltage low
- Ignition or engine stop switch shorted
- Wiring shorted or open
- Fuse blown

Compression Low:
- Spark plug loose
- Cylinder head not sufficiently tightened down
- No valve clearance
- Cylinder, piston worn
- Piston ring bad (worn, weak, broken, or sticking)
- Piston ring/groove clearance excessive
- Cylinder head gasket damaged
- Cylinder head warped
- Valve spring broken or weak
- Valve not seating properly (valve bent, worn, or carbon accumulation on the seating surface)
- Compression release cam (K.A.C.R.) sticks open (Engine stalls when moving off)

Poor Running at Low Speed:

Spark weak:
- Spark plug dirty, broken, or maladjusted
- Spark plug cap or spark plug lead trouble
- Spark plug cap shorted or not in good contact
- Spark plug incorrect
- Igniter trouble
- Pickup coil trouble
- Ignition coil trouble
- Battery voltage low

Fuel/air mixture incorrect:
- Pilot screw and/or idle adjusting screw maladjusted
- Pilot jet or air passage clogged
- Starter plunger stuck open
- Air cleaner clogged, poorly sealed, or missing
- Fuel level too high or too low
- Fuel tank air vent obstructed
- Carburetor holder loose
- Air cleaner duct loose

Compression low:
- Spark plug loose
- Cylinder head not sufficiently tightened down
- No valve clearance
- Cylinder, piston worn
- Piston ring bad (worn, weak, broken, or sticking)
- Piston ring/groove clearance excessive
- Cylinder head gasket damaged
- Cylinder head warped
- Valve spring broken or weak
- Valve not seating properly (valve bent, worn, or carbon accumulation on the seating surface)
- Compression release cam (K.A.C.R.) sticks open (Engine stalls when moving off)

Other:
- Carburetor vacuum piston doesn't slide smoothly
- Engine oil viscosity too high
- Brake dragging
- Igniter trouble
- Front or rear final gear case oil viscosity too high

Poor Running or No Power at High Speed:

Firing incorrect:
- Spark plug dirty, broken, or maladjusted
- Spark plug cap or spark plug lead trouble
- Spark plug cap shorted or not in good contact
- Spark plug incorrect
- Pickup coil trouble
- Igniter trouble
- Ignition coil trouble
- Drive belt failure detection switch activated

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

General Specifications

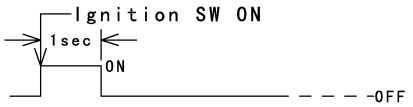
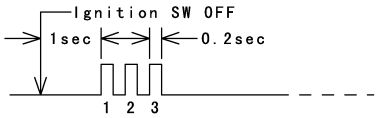
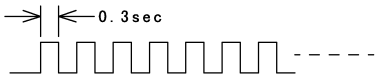
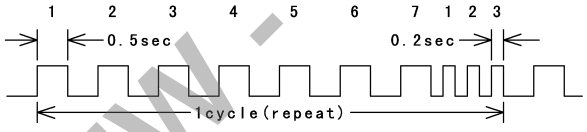
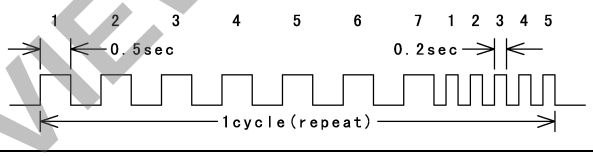
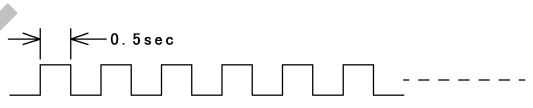
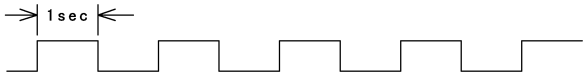
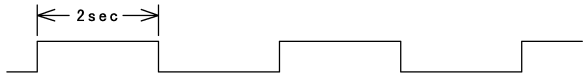
Items	KVF360-A1
Dimensions:	
Overall length	2065 mm (81.30 in.)
Overall width	1205 mm (47.44 in.)
Overall height	1175 mm (46.26 in.)

PREVIEW - YOUFIXTHIS.COM

Blurred on purpose. The manual you buy has this page in full quality.

Download full manual at youfixthis.com

LED Indicator

LED	Indication Pattern	Condition	Check
BELT and 4WD		Ignition Switch ON Normal	1
BELT and 4WD		Ignition Switch OFF Normal	2
BELT		Drive Failure Detecting Switch OFF (Belt Failure)	3
BELT		Total 100 hours of use	4
BELT and 4WD		Drive Belt Failure Mode Memory Clearing Procedure	5
BELT and 4WD		Ignition Switch OFF Memory Writing Failure	6
BELT		Memory Writing Time Limit (one hundred thousand)	7
BELT		Memory Reading Failure	8
4WD		2WD/4WD Actuator Failure	9
4WD		Engine Brake Actuator Failure	10
4WD		Both 2WD/4WD Actuator and Engine Brake Actuator Failure	11

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

1

General Information

Table of Contents

Before Servicing 1-2
Model Identification 1-4
General Specifications 1-6
Special Tools and Sealant 1-8
Unit Conversion Table 1-14

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PLEASE DO NOT TAMPER WITH NOISE CONTROL SYSTEM (US MODEL only)

To minimize the noise emissions from this product, Kawasaki has equipped it with effective intake and exhaust silencing systems. They are designed to give optimum performance while maintaining a low noise level. Please do not remove these systems, or alter them in any which results in an increase in noise level.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Steering

Steering Inspection

● Turn the handlebar left and right, and check the steering action.

★ If the steering action is not smooth, or if the steering binds or catches before the stop, lubricate the steering stem bearing.

NOTE

○ *The cables and wires will have some effect on the steering action which must be taken into account.*

● Check the steering action again.

★ If steering stem bearing lubrication does not remedy the problem, inspect the steering stem for straightness, steering stem clamps, and tie-rod bearings.

★ If you feel looseness, or if the steering rattles as it turns, check the tightness of the steering bolts and nuts.

● Tighten loose bolts and nuts to the specified torque (see Exploded View), and check the steering action again.

★ If the steering action does not change by tightening the bolts and nuts, inspect the steering stem clamps, steering stem bearings, tie-rod bearings, and steering knuckle joints.

Electrical System

Battery Inspection

● Refer to Battery section in Electrical System chapter for Battery Inspection.

Spark Plug Cleaning / Inspection

● Clean the spark plug, preferably in a sandblasting device, and then clean off any abrasive particles. The plug may also be cleaned using a wire brush or other suitable tool.

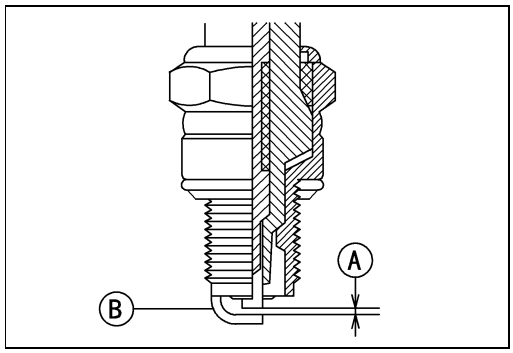
★ If the spark plug electrodes are corroded or damaged, or if the insulator is cracked, replace the plug. Use the standard spark plug or its equivalent.

Spark Plug Gap Inspection

● Measure the gap [A] with a wire-type thickness gauge.

★ If the gap is incorrect, carefully bend the side electrode [B] with a suitable tool to obtain the correct gap.

Spark Plug Gap
0.8 ~ 0.9 mm (0.031 ~ 0.035 in.)

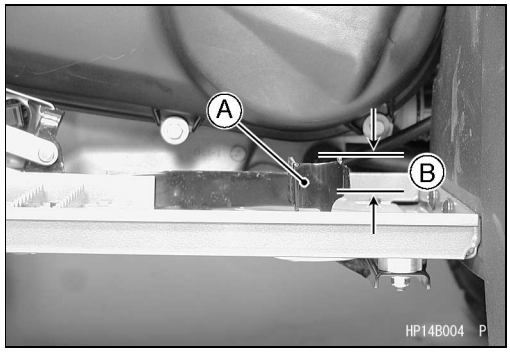


Drive Belt Failure Detection System Inspection

Refer to Drive Belt Failure Detection System section in Electrical System chapter.

Brake Light Switch Adjustment

● Check the operation of the brake light switch by depressing the brake pedal [A]. The brake light should go on after about 10 mm (0.4 in.) of pedal travel [B].



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

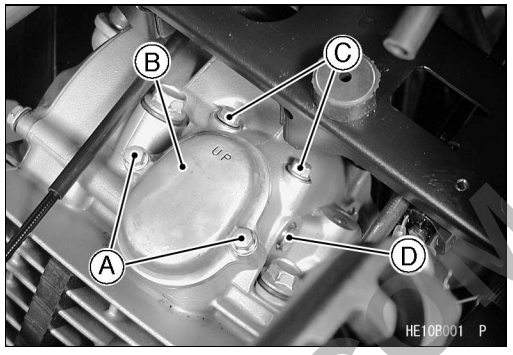
Rocker Arms and Shafts

Rocker Arm and Shaft Removal

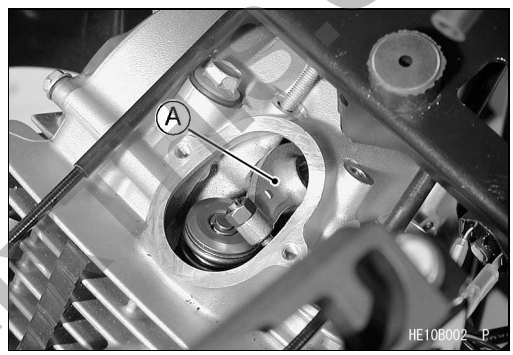
- Remove:
  Recoil Starter (see Recoil Starter chapter)
- Position the crankshaft at TDC of the end of the compression stroke (see Camshaft Sprocket Installation).

Rear Side:

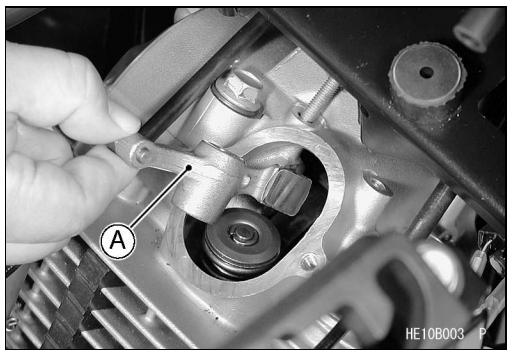
- Remove:
  Fuel Tank (see Fuel System chapter)
  Rubber Cover
  Valve Adjusting Cap Bolts [A]
  Valve Adjusting Cap [B]
  Rocker Shaft Holder Bolts [C]
  Rocker Shaft [D]
  Washers



- Push the rocker arm [A] in the rocker case, and turn it in place.

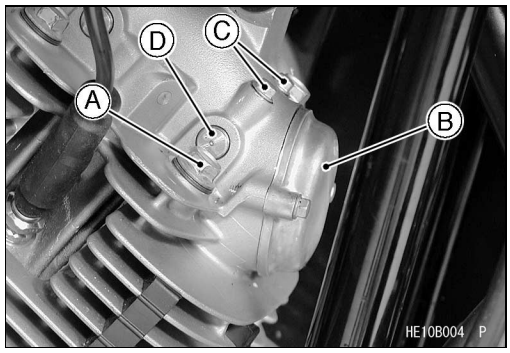


- Remove the rocker arm [A].



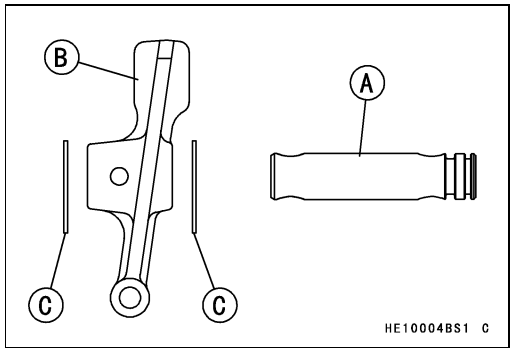
Front Side:

- Remove:
  Right Front Inner Cover (see Frame chapter)
  Converter Air Intake Duct
  Cylinder Head Bolt [A]
  Valve Adjusting Cap [B]
  Rocker Shaft Holder Bolts [C]
  Rocker Shaft [D]
  Washers
- Remove the rocker arm in the same manner as above.



Rocker Arm and Shaft Installation

- Apply molybdenum disulfide oil to the rocker shaft [A].
- Install:
  Rocker Arm [B]
  Washers [C]
  Rocker Shaft



PREVIEW - YOUFIXTHIS.COM

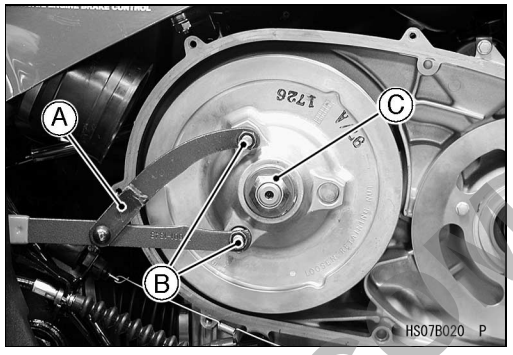
Download full manual at youfixthis.com

Driven Pulley

Driven Pulley Removal

- Remove:
  Torque Converter Cover (see Torque Converter Cover)
  Drive Pulley (see Drive Pulley Removal)
  Drive Belt (see Drive Belt Removal)
- Using a flywheel & pulley holder [A] and adapter [B], remove the driven pulley nut [C] and washers. (Nut has R/H threads.)

  Special Tools - Flywheel & Pulley Holder: 57001–1343
  Pulley Holder Attachment: 57001–1472



- Remove:
  Driven Pulley

Driven Pulley Disassembly

- Hold the drive & driven pulley holder [A] in a vise.

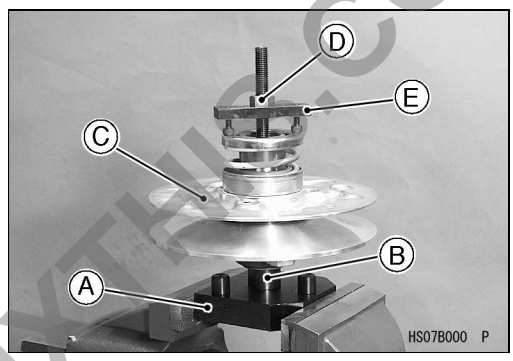
  Special Tool - Drive Pulley Holder: 57001–1473

- Screw the guide bar [B] into the holder.

  Special Tool - Spring Holder Set: 57001–1483

- Put the driven pulley [C] on the guide bar.
- Tighten nut [D], and compress the spring with the spring holder [E].

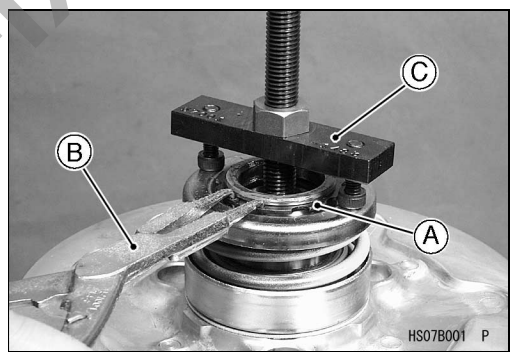
  Special Tool - Spring Holder Set: 57001–1483



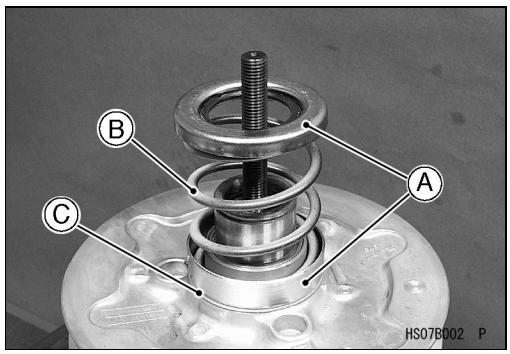
- Remove circlip [A] with circlip pliers [B].

  Special Tool - Circlip Pliers: 57001–154

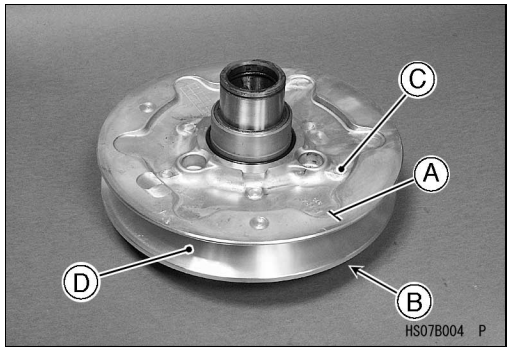
- Remove nut and spring holder [C].



- Remove:
  Spring Seats [A]
  Spring [B]
  Spring Spacer (if used, for high altitude setting)
  Thrust Plate [C]



- Make match-marks [A] and [B] on the sheaves so that it can be installed later in the same position.
  Movable Shoe [C]
  Fixed Sheave [D]



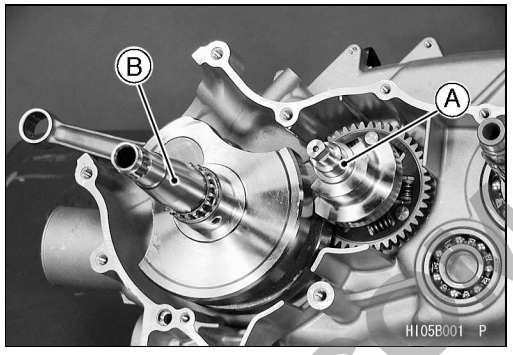
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Crankshaft/Balancer Shaft and Connection Rod

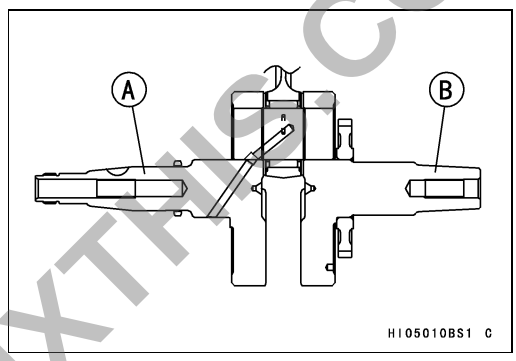
Crankshaft/Balancer Shaft Removal

- Split the crankcase (see Crankcase Disassembly).
- Remove:
  Balancer Shaft [A]
  Transmission Shaft Assemblys
- Remove the crankshaft [B] from the crankcase using a press.

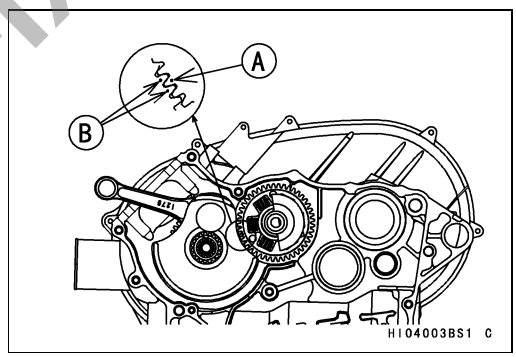


Crankshaft/Balancer Shaft Installation

- The left shaft [A] of the crankshaft is longer than the right shaft [B].
- Apply engine oil to the both main journals and teeth of the sprocket.
- Insert the right crankshaft tapered end (the shorter end) into the right crankcase using a press.



- Align the punch mark [A] on the balancer shaft gear with the punch marks [B] on the crankshaft gear as shown.



Crankshaft Disassembly

CAUTION

Since assembly of the crankshaft demands exacting tolerances, the disassembly and reassembly of the crankshaft should only be performed by experienced mechanics with the necessary tools and equipment.
The crankshaft left main bearing, chain sprocket, and left crankshaft are available separately as spare parts, however, it is recommended that the crankshaft assembly be replaced rather than attempting to replace the components.

- Press the crankpin out of the crank halves to separate the crank halves, connecting rod, spacers, crankpin needle bearing, and crankpin.

PREVIEW - YOUFIXTHIS.COM

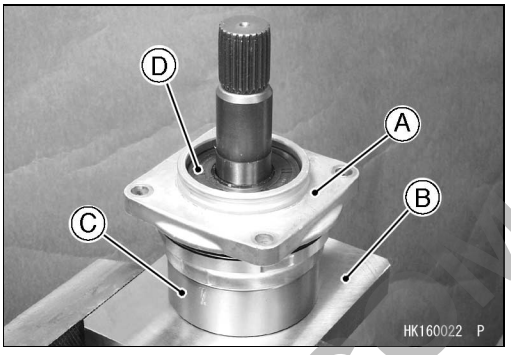
Download full manual at youfixthis.com

Output Bevel Gears

- Hold the housing assembly [A] with the output shaft holder [B] & spacer [C] in a vise.

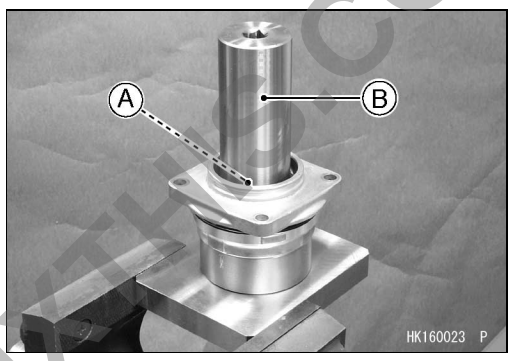
  Special Tool - Output Shaft Holder & Spacer: 57001-1479

- Remove:
  Oil Seal [D]



- Remove:
  Output Shaft Holder Nut [A]

  Special Tool - Socket Wrench [B]: 57001-1482



- Hold the housing assembly [A] with the holder [B] in a vise.

  Special Tool - Holder & Guide Arbor : 57001-1476

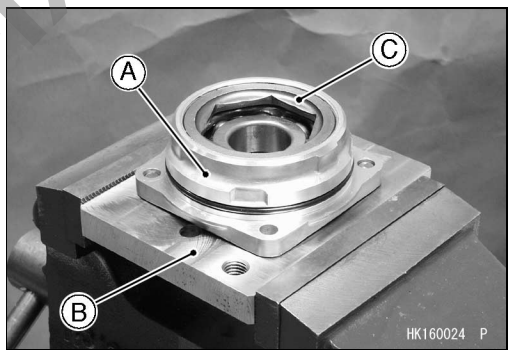
- Remove:
  Bearing Holder [C]

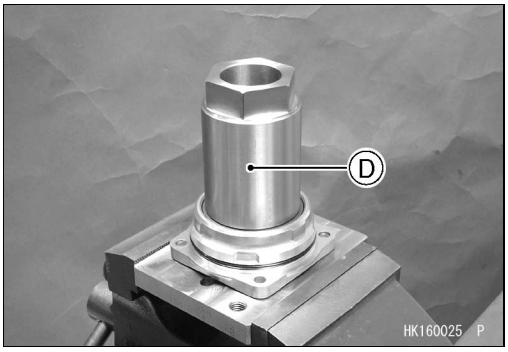
  Special Tool - Socket Wrench [D], Hex 50: 57001-1478

○ If the holder seems too difficult to break free, apply heat to softer the locking agent.

- Remove:
  Ball Bearing

  Special Tool - Oil Seal & Bearing Remover: 57001-1058

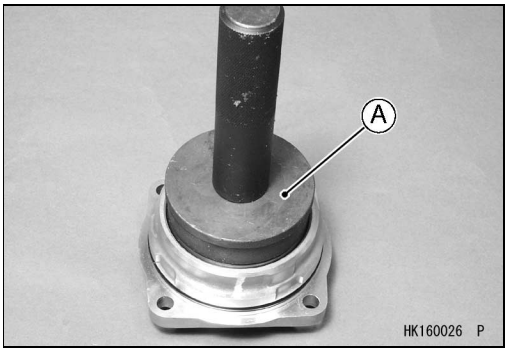




Output Driven Bevel Gear Assembly

- Press the new ball bearing until it is bottomed.

  Special Tool - Bearing Driver Set [A]: 57001-1129



PREVIEW - YOUFIXTHIS.COM

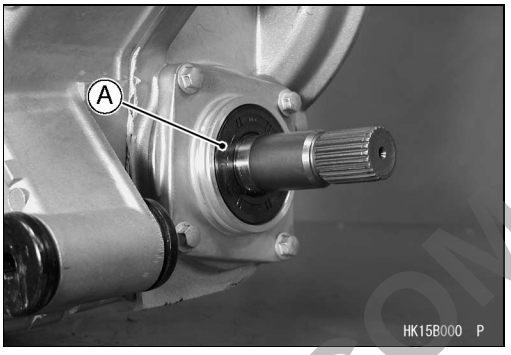
Download full manual at youfixthis.com

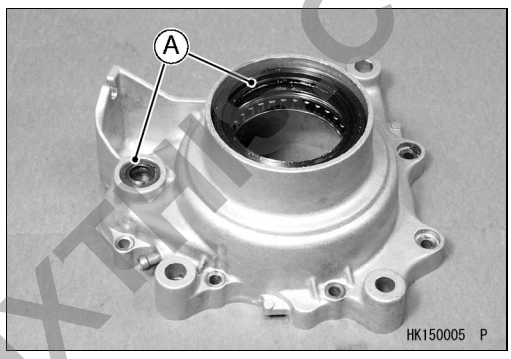
Bearing and Oil Seal

Oil Seal Inspection

- Inspect the oil seals [A].

★Replace any if the lips are misshapen, discolored (indicating that the rubber has deteriorated), hardened, or been otherwise damaged.

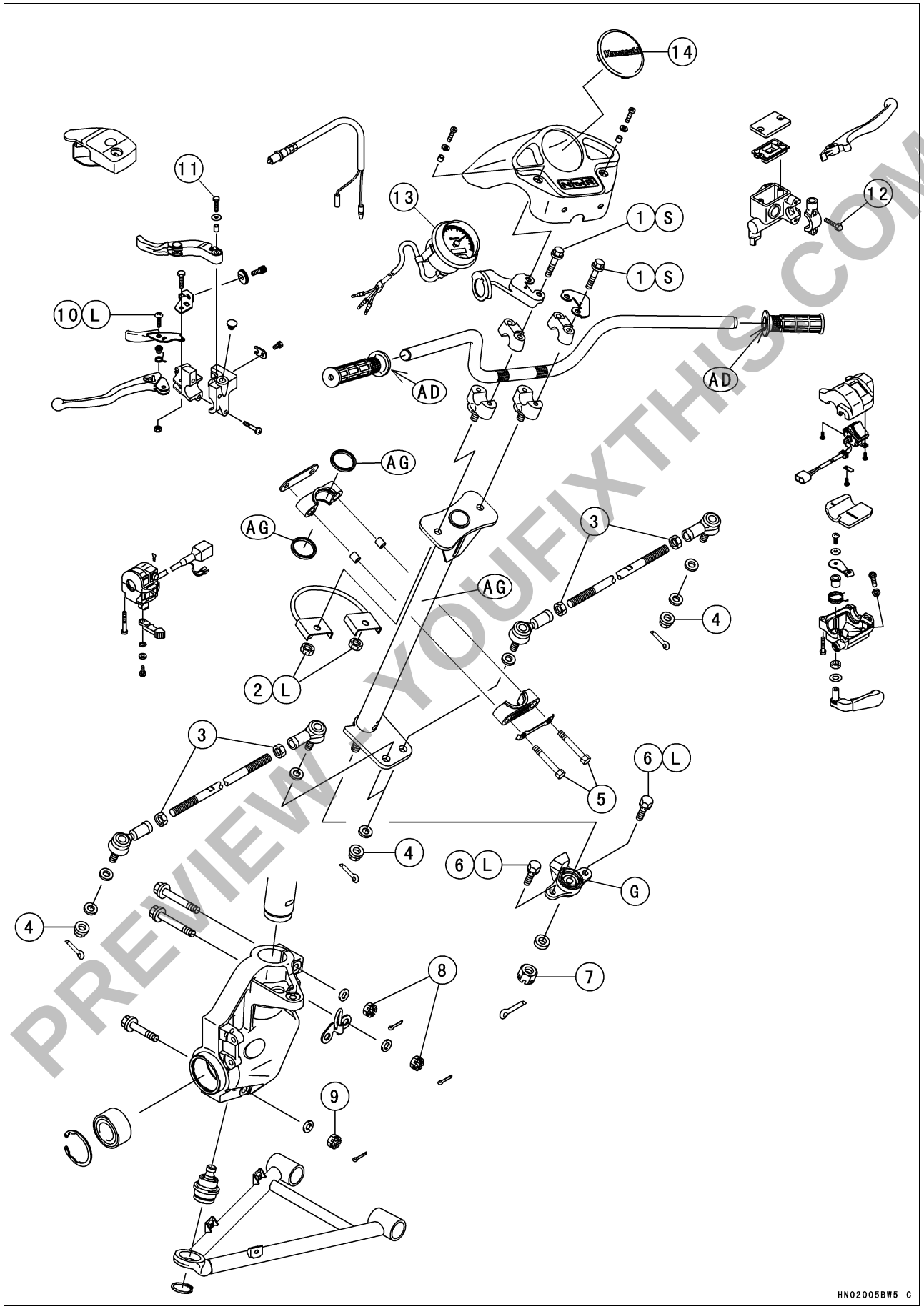




PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

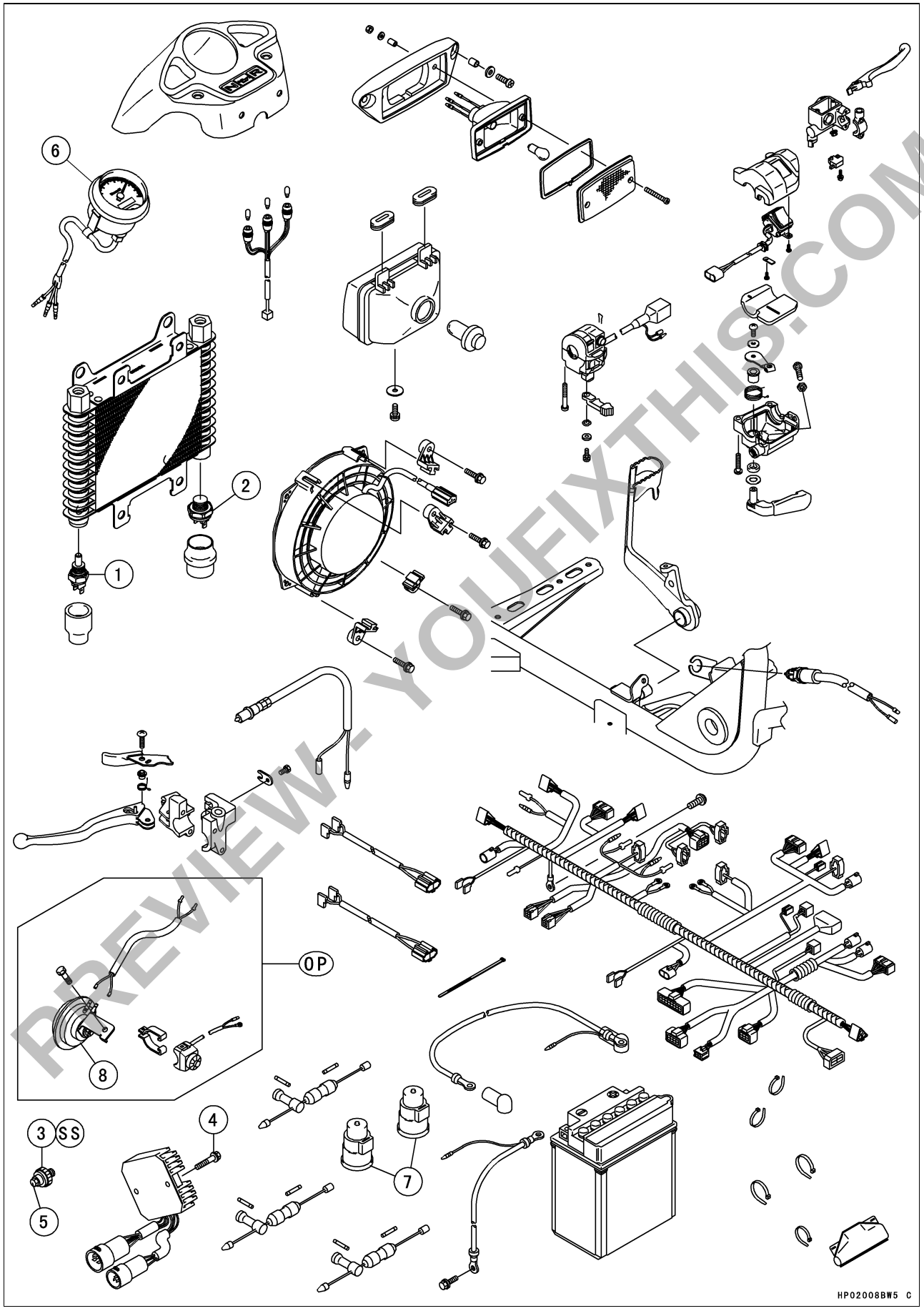
Exploded View



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Exploded View



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

LED Indicator

- Disconnect the mismatched 5 pin connector sets and reconnect them normally. (Black to black, gray to gray) [A]
- Connect the belt switch 2 pin connector [B].

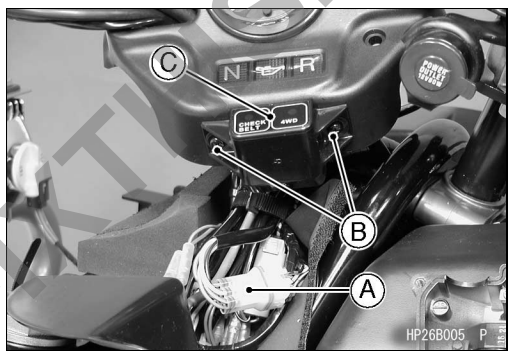


- Turn on the ignition switch.
- Confirm that no warning lights are flashing.

○ The LED lights go on for one second.

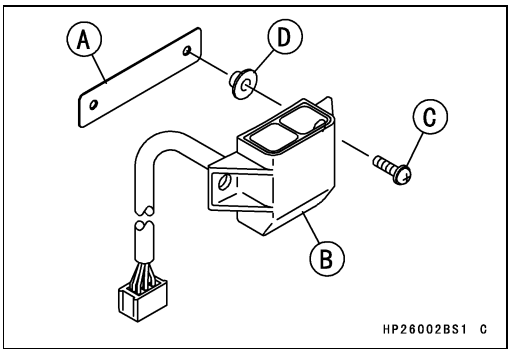
LED Indicator Removal

- Remove:
  Front Fender (see Frame chapter)
  Handlebar Cover
- Disconnect:
  LED Indicator Lead Connector [A]
- Remove:
  Screws [B] and Collars
  LED Indicator [C] and Bracket



LED Indicator Installation

- Install:
  Bracket [A]
  LED Indicator [B]
  Screws [C] and Collars [D]



LED Indicator Inspection

Flashing Pattern Inspection

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 18 of 408 pages

The full manual includes:

- All 408 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Kawasaki KVF360, PRAIRIE 360, KVF360-A1 Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual