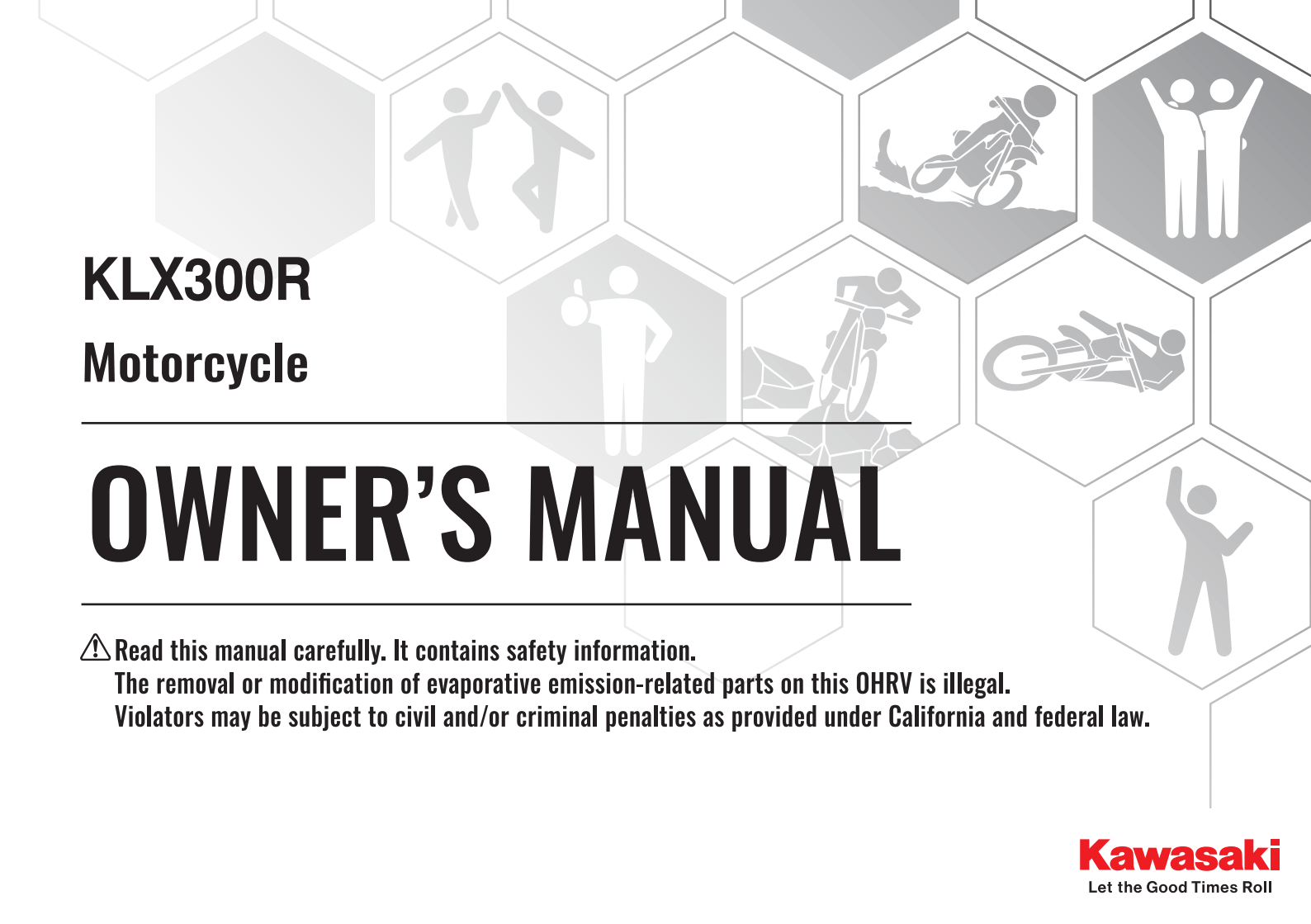




KLX300R

Motorcycle

OWNER'S MANUAL

 Read this manual carefully. It contains safety information.

The removal or modification of evaporative emission-related parts on this OHRV is illegal.

Violators may be subject to civil and/or criminal penalties as provided under California and federal law.



WARNING

Operating, servicing and maintaining a passenger vehicle or off-road vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to www.P65warnings.ca.gov/passenger-vehicle.

For more information about safe riding (Movie and/or Booklets) on your Kawasaki products, please scan this 2D barcode with your camera equipped mobile device or visit this website at <https://www.kawasaki.com/en-us/owner-center/safety-resources>



Quick Reference Guide

This Quick Reference Guide will assist you in finding the information you're looking for.

GENERAL INFORMATION

MAINTENANCE AND ADJUSTMENT

TROUBLESHOOTING GUIDE

STORAGE

A Table of Contents is included after the Foreword.

IMPORTANT INFORMATION
● This vehicle is designed for the operator only, no passengers. ● This vehicle is an off-road motorcycle only and was not manufactured for use on public streets, roads or highways. ● Respect the environment and the rights of other people. ● Read owner's manual.

Whenever you see the symbols shown below, 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.

NOTE

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

IMPORTANT

Off-road motorcycling is a wonderful sport, and we hope you will enjoy it to the fullest. However, if improperly conducted, this sport has the potential to cause environmental problems as well as conflicts with other people.

Responsible use of your off-road motorcycle will ensure that these problems and conflicts do not occur. **TO PROTECT THE FUTURE OF YOUR SPORT, MAKE SURE YOU USE YOUR MOTORCYCLE LEGALLY, SHOW CONCERN FOR THE ENVIRONMENT, AND RESPECT THE RIGHTS OF OTHER PEOPLE.**

 WARNING

- **THIS VEHICLE IS AN OFF-ROAD VEHICLE ONLY AND WAS NOT MANUFACTURED FOR USE ON PUBLIC STREETS, ROADS, OR HIGH-WAYS.**
- **USE YOUR BIKE LEGALLY.**
- **RESPECT THE ENVIRONMENT AND THE RIGHTS OF OTHER PEOPLE.**

FOREWORD

We wish to thank you for choosing this Kawasaki motorcycle. It is the end product of Kawasaki's advanced engineering, exhaustive testing, and continuous striving for superior reliability, and performance. By giving your motorcycle the proper care and maintenance outlined in this manual, you will be helping to ensure it a long, trouble-free life.

Before starting to ride your motorcycle, please read this manual thoroughly in order to know your motorcycle's capabilities, its limitations, and above all, how to operate it safely.

Due to improvements in design and performance made during production, in some cases there may be minor discrepancies between the actual vehicle and the illustrations and text in this manual. Any updated information is available in the on-line Owner's Manual on Kawasaki's website.

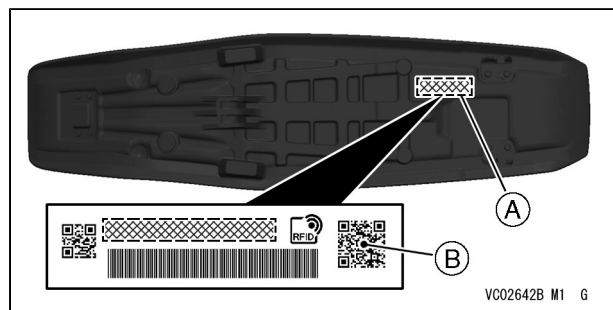
[Owner's Manual]

https://pws.ktivs.net/dispBook?file=99814-0275&manual_kind=OM&lang_code=EN&mark=KLX300CV



998140275EN

You can obtain vehicle information by scanning the right-hand QR code in the label located on the back of the seat.



A. Vehicle Information Label

B. QR Code

NOTE

- *QR code is a registered trademark of DENSO WAVE INC.*

KAWASAKI MOTORS, LTD.

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10 SPECIFICATIONS

SPECIFICATIONS

DIMENSIONS

Fuel Tank Capacity	7.9 L (2.1 US gal)
--------------------	--------------------

ENGINE

Spark Plug	NGK CR8E
------------	----------

Spark Plug Gap	0.7 – 0.8 mm (0.028 – 0.031 in.)
----------------	----------------------------------

Engine Oil:	
-------------	--

Capacity	1.3 L (1.4 US qt)
----------	-------------------

Type	API SG, SH, SJ, SL or SM with JASO MA, MA1 or MA2
------	---

Viscosity	SAE 10W-40
-----------	------------

Coolant Capacity	1.2 L (1.3 US qt)
------------------	-------------------

TRANSMISSION

Gear Ratios:	
--------------	--

1st	3.000 (30/10)
-----	---------------

2nd	2.000 (30/15)
-----	---------------

3rd	1.500 (27/18)
-----	---------------

4th	1.250 (25/20)
-----	---------------

5th	1.050 (21/20)
-----	---------------

6th	0.952 (20/21)
-----	---------------

Primary Reduction Ratio	2.800 (84/30)
-------------------------	---------------

Final Reduction Ratio	3.571 (50/14)
-----------------------	---------------

Overall Drive Ratio (top gear)	9.524
--------------------------------	-------

FRAME

Tire Size, Type:

Front 80/100-21 51M, DUNLOP GEOMAX MX52F

Rear 100/100-18 59M, DUNLOP GEOMAX MX52

Front Fork Oil:

Type Kawasaki Fork Oil KHL15-10

Amount (per fork leg) 522 – 530 mL (17.6 – 17.9 US oz.)

ELECTRICAL EQUIPMENT

Battery 12 V 5.0 Ah (10 HR)

For detailed full information, any updated information are available in the Kawasaki's website. Also, specifications are subject to change without notice.

[Specifications]

https://pws.ktivs.net/dspeBook?file=99888-0102-01&lang_code=EN

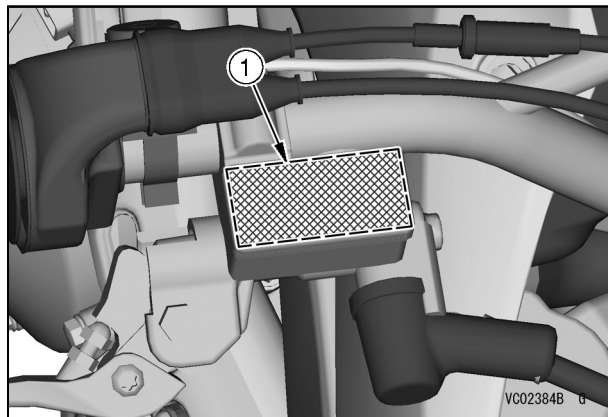


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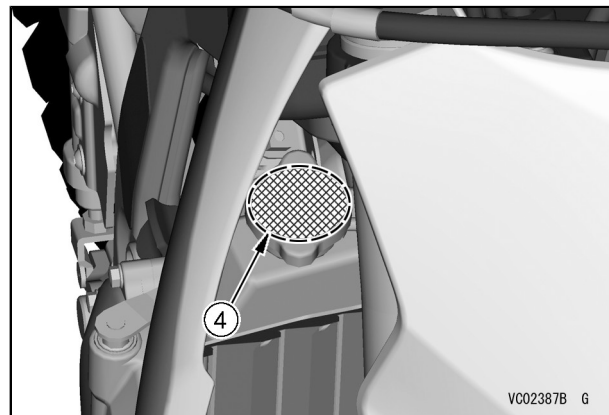
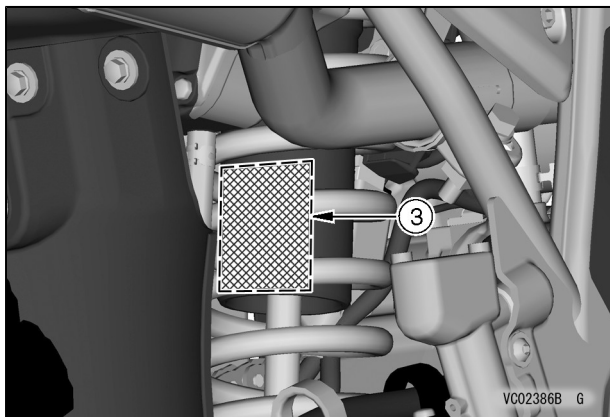
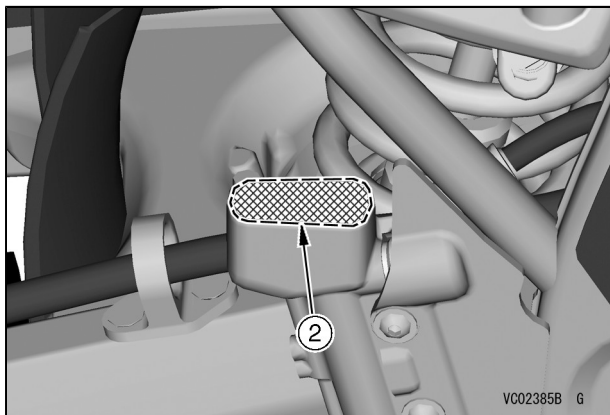
GENERAL INFORMATION

Location of Labels

All warning labels which are on your vehicle are repeated here. Read labels on your vehicle and understand them thoroughly. They contain information which is important for your safety and the safety of anyone else who may operate your vehicle. Therefore, it is very important that all warning labels be on your vehicle in the locations shown. If any label is missing, damaged, or worn, get a replacement from your Kawasaki dealer and install it in the correct position.

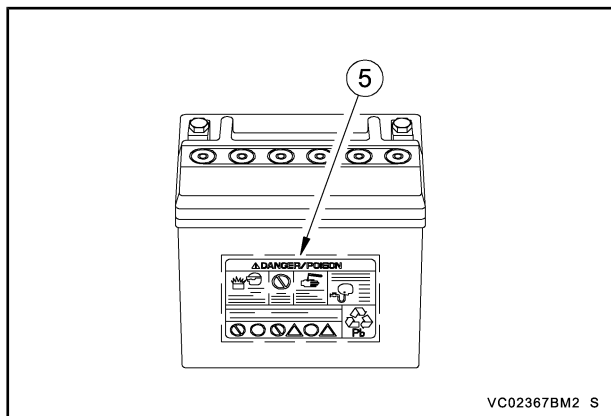


1. Brake Fluid (Front)

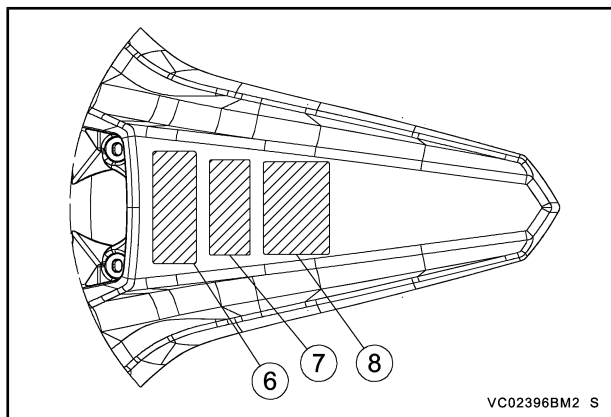


- 2. Brake Fluid (Rear)**
- 3. Rear Shock Absorber Warning**
- 4. Radiator Cap Danger**

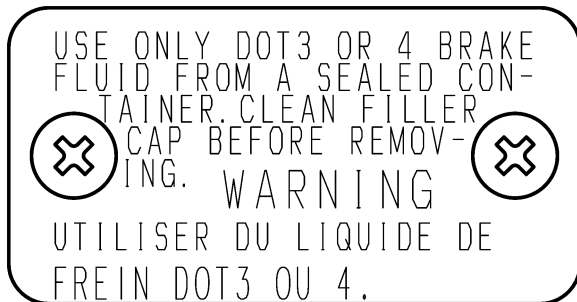
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- 5. Battery Poison/Danger
- 6. Important Information
- 7. Noise Emission Control Information
- 8. Vehicle Emission Control Information

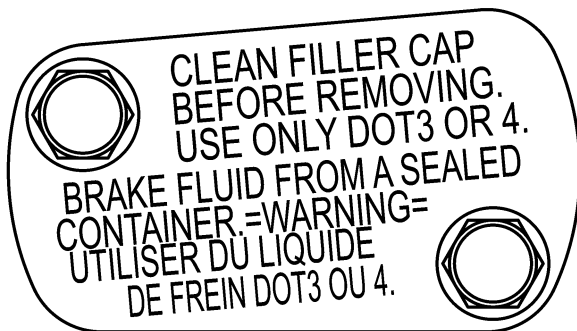


1)



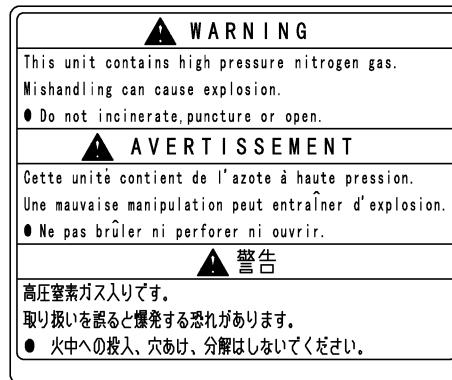
VC02074B S

2)



VC02096B S

3)



BD03238CM2 C

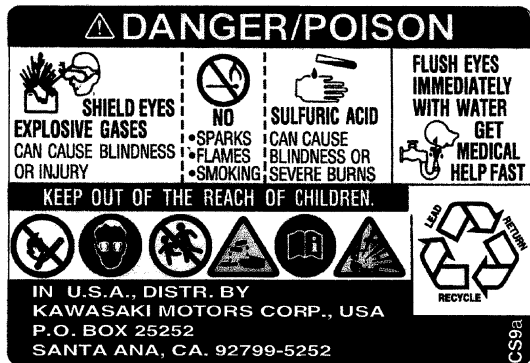
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VC02252B S

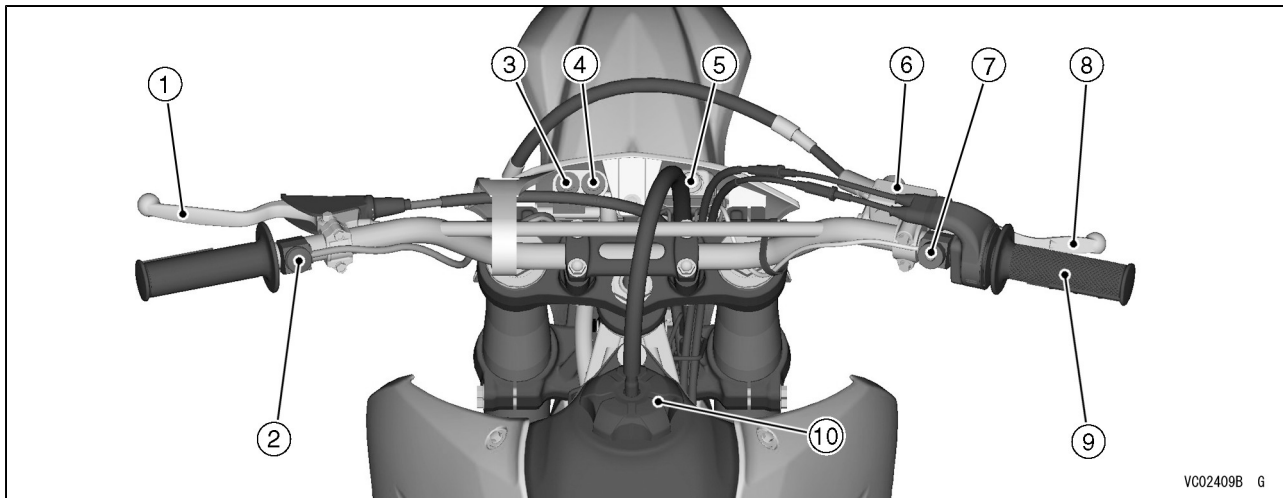
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5)



VC02265B S

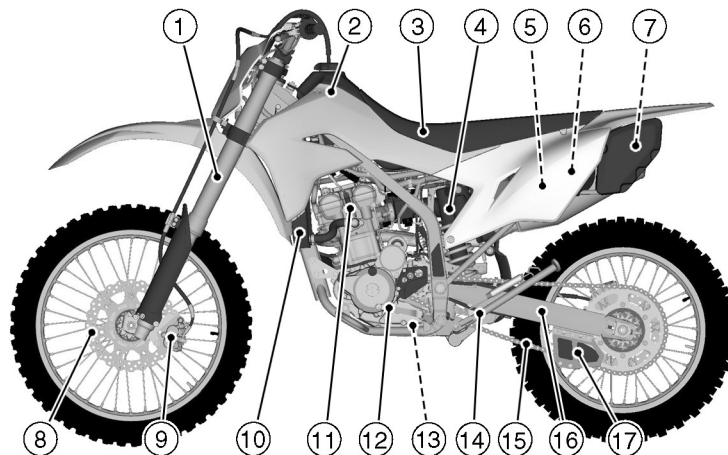
Location of Parts



VC02409B G

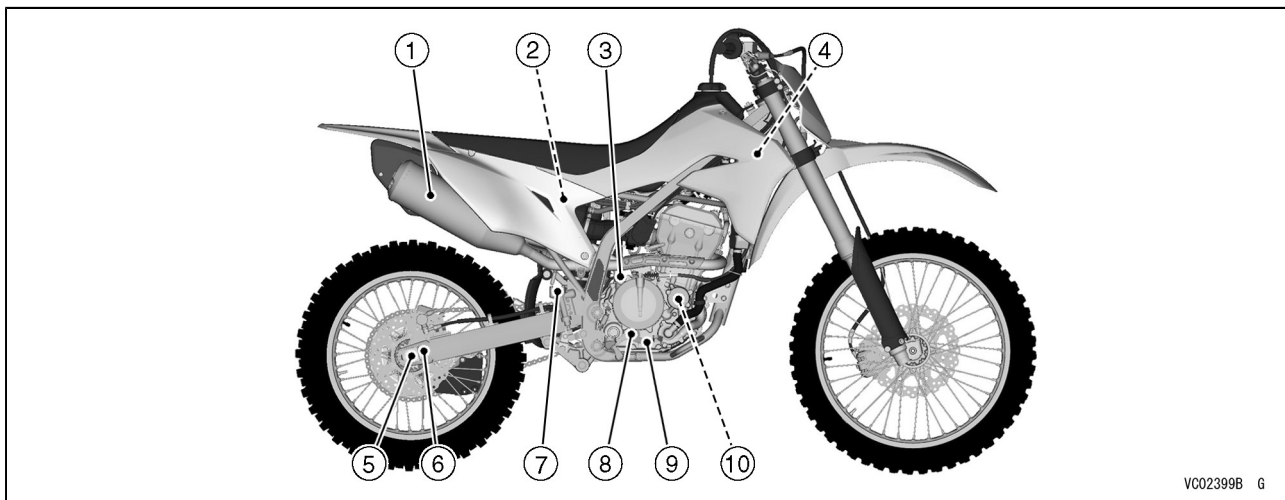
1. Clutch Lever
2. Engine Stop Button
3. Yellow Fuel Level Warning Indicator Light
4. Yellow Engine Warning Indicator Light
5. Main Switch
6. Front Brake Fluid Reservoir
7. Starter Button
8. Front Brake Lever
9. Throttle Grip
10. Fuel Tank Cap

18 GENERAL INFORMATION



VG02398B G

1. Front Fork
2. Fuel Tank
3. Seat
4. Rear Shock Absorber
5. Main Fuse
6. Battery
7. Canister (California Model)
8. Front Brake Disc
9. Front Brake Caliper
10. Radiator
11. Spark Plug
12. Shift Pedal
13. Engine Oil Drain Bolt
14. Side Stand
15. Drive Chain
16. Swingarm
17. Chain Guide



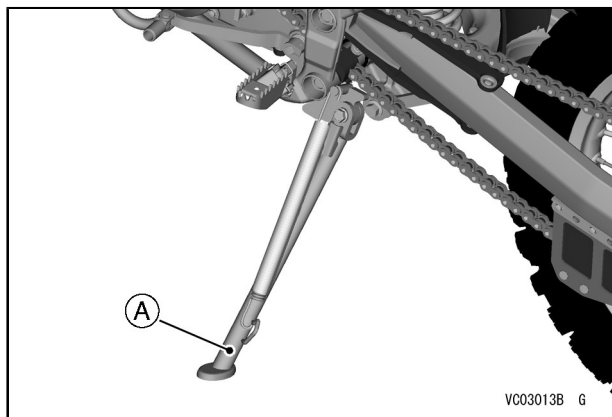
VC02399B G

1. Muffler
2. Air Cleaner Element
3. Oil Filler Cap
4. Radiator Cap
5. Rear Axle Nut
6. Chain Adjuster
7. Rear Brake Fluid Reservoir
8. Oil Level Inspection Window
9. Rear Brake Pedal
10. Oil Filter

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Side Stand

The motorcycle is equipped with a side stand.



A. Side Stand

Do not sit on the motorcycle while it is on its side stand. Always kick the stand fully up before sitting on the motorcycle.



WARNING

Riding with the side stand down could cause an accident resulting in serious injury or death. Always be sure the side stand is fully raised before riding.

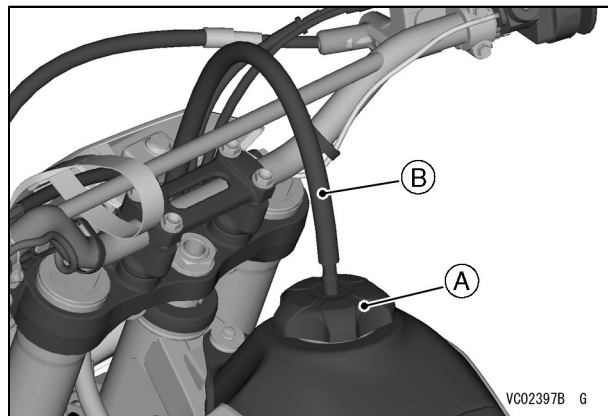
Fuel

The required of fuel is specified under “Fuel Requirements.”

The capacity of the fuel tank is 7.9 L (2.1 US gal). To open the fuel tank cap, pull out the breather hose from the hole in the steering shaft, and turn the tank cap counterclockwise.

NOTE

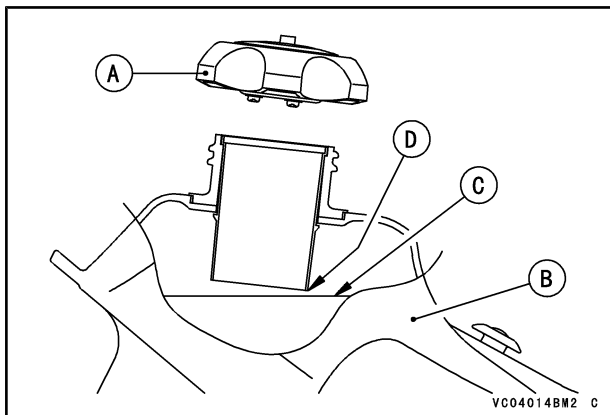
- On the California model, turn the tank cap counterclockwise without disconnecting the breather hose to open the fuel tank cap.



- A. Fuel Tank Cap
- B. Breather Hose

Avoid filling the tank in the rain or where heavy dust is blowing so that the fuel does not get contaminated.

After refueling, make sure the filler cap is closed securely.



- A. Tank Cap
- B. Fuel Tank
- C. Top Level
- D. Filler Neck

WARNING

Gasoline is extremely flammable and can be explosive under certain conditions, creating the potential for serious burns. Always stop the engine and 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. Never fill the tank completely to the top. As the fuel expands in a warm tank, it may overflow through the vents in the tank cap. After refueling, make sure the fuel tank cap is closed securely. If gasoline is spilled on the fuel tank, wipe it off immediately.

NOTICE

California models only: Never fill the tank so the fuel level rises into the filler neck. If the tank is overfilled, heat may cause the fuel to expand and flow into the Evaporative Emission Control System resulting in hard starting, engine hesitation and non-compliance with the emission regulation.

Fuel Requirements:

Fuel Type

Use clean, fresh unleaded gasoline with a minimum Antiknock index of 87. The Antiknock Index is

22 GENERAL INFORMATION

posted on service station pumps in the U.S.A. The octane rating of a gasoline is a measure of its resistance to detonation or “knocking.” The Antiknock Index is an average of the Research Octane Number (RON) and the Motor Octane Number (MON) as shown in the table below.

Octane Rating Method	Minimum Rating
Antiknock Index $\frac{(\text{RON} + \text{MON})}{2}$	87

NOTICE

If engine “knocking” or “pinging” occurs, use a different brand of gasoline of a higher octane rating. If this condition is allowed to continue it can lead to severe engine damage.

Gasoline quality is important. Fuels of low quality or not meeting standard industry specifications may result in unsatisfactory performance. Operating problems that result from the use of poor quality or non-recommended fuel may not be covered under your warranty.

Fuels Containing Oxygenates

Gasoline frequently contains oxygenates (alcohols and ethers) especially in areas of the U.S. and Canada which are required to sell such

reformulated fuels as part of a strategy to reduce exhaust emissions.

The types and volume of fuel oxygenates approved for use in unleaded gasoline by the U.S. Environmental Protection Agency include a broad range of alcohols and ethers, but only two components have seen any significant level of commercial use.

Gasoline/Alcohol Blends - Gasoline containing up to 10% ethanol (alcohol produced from agricultural products such as corn), also known as “gasohol” is approved for use.

NOTICE

Avoid using blends of unleaded gasoline and methanol (wood alcohol) whenever possible, and never use “gasohol” containing more than 5% methanol. Fuel system damage and performance problems may result.

Gasoline/Ether Blends - The most common ether is methyl tertiary butyl ether (MTBE). You may use gasoline containing up to 15% MTBE.

NOTE

- Other oxygenates approved for use in unleaded gasoline include TAME (up to 16.7%) and ETBE (up to 17.2%). Fuel containing these oxygenates can also be used in your Kawasaki.

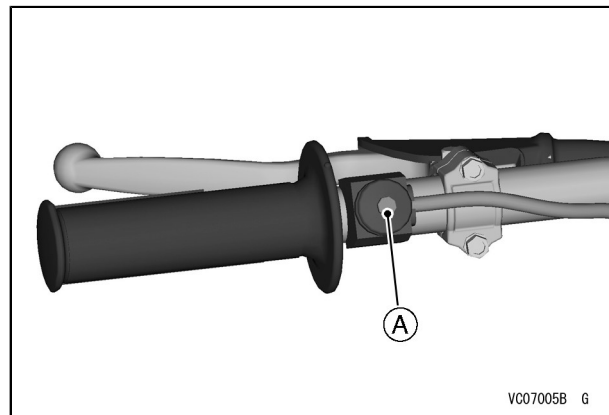
NOTICE

Never use gasoline with an octane rating lower than the minimum specified by Kawasaki. Never use “gasohol” with more than 10% ethanol, or more than 5% methanol. Gasoline containing methanol must also be blended with cosolvents and corrosion inhibitors. Certain ingredients of gasoline may cause paint fading or damage. Be extra careful not to spill gasoline or gasoline oxygenate blends during refueling.

When not operating your Kawasaki for 30 to 60 days, mix a fuel stabilizer (such as STA-BIL) with the gasoline in the fuel tank. Fuel stabilizer additives inhibit oxidation of the fuel which minimizes gummy deposits. Never store this product with “gasohol” in the fuel system. Before storage it is recommended that you drain all fuel from the fuel system. See the Storage section in this manual.

Engine Stop Button

The engine stop button is located on the left side of the handlebars. To stop the engine, press the button until the engine stops.

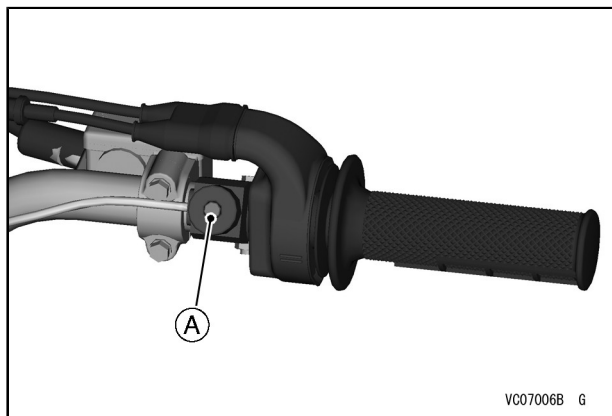


A. Engine Stop Button

Starter Button

The starter button is located on the right side of the handlebars. The starter button operates the electric starter while the transmission is in neutral or the clutch lever pulled in, after pushing the main switch to the “ON” position.

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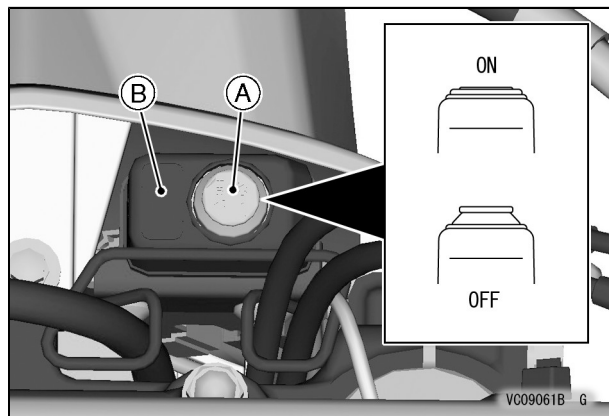
A. Starter Button

Starting the Engine

- Shift the transmission into neutral.

NOTE

- The motorcycle is equipped with a starter lockout switch. This switch is designed so that the engine does not start if the transmission is in gear. However, the engine can be started if the clutch lever is pulled.
- Push the main switch to the “ON” position, the red main switch indicator light (LED) turns on.



A. Main Switch

B. Red Main Switch Indicator light (LED)

- Leaving the throttle completely closed, push the starter button until the engine starts.

NOTE

- While the engine is cold, the fast idle system automatically raises the engine idle speed.
- The motorcycle is equipped with a vehicle-down sensor which causes the engine to stop automatically if the motorcycle falls down. The yellow engine warning indicator light () blinks when the starter button is pressed if the engine cannot be started. After righting the motorcycle, first turn the main switch off and then back to on before starting the engine.

**WARNING**

Riding with the side stand in the down position can cause a crash resulting in injury. Do not start the engine or attempt to ride the motorcycle when the side stand is down.

NOTICE

Do not operate the starter continuously for more than 5 seconds or the starter will overheat. Wait 15 seconds between each operation of the starter to let it cool.

NOTICE

This motorcycle's radiator does not incorporate a cooling fan. Prolonged idling of the engine with no airflow through the radiator can cause coolant loss and engine overheating resulting in possible engine damage. Any riding conditions that increase engine temperature will further reduce idling time before coolant loss occurs. These conditions include high ambient temperature, sandy or muddy terrain, or other conditions causing high engine loads at low speeds. Furthermore, warming the engine up excessively before operation, or leaving idling with the hot engine temperature after operation results in the engine overheating, too.

Moving Off

- Check that the side stand is up.
- Pull in the clutch lever.
- Shift into 1st gear.
- Open the throttle a little, and start to let out the clutch lever very slowly.
- As the clutch starts to engage, open the throttle a little more, giving the engine just enough fuel to keep it from stalling.

NOTE

- *Warm up the engine thoroughly before the riding or revving the engine.*

Shifting Gears

This motorcycle is equipped with a 6-speed "return shift" transmission. The neutral is located halfway between 1st and 2nd gear. "Return shift" means that when shifting up or down, each gear must be engaged before the next higher or lower gear may be selected.

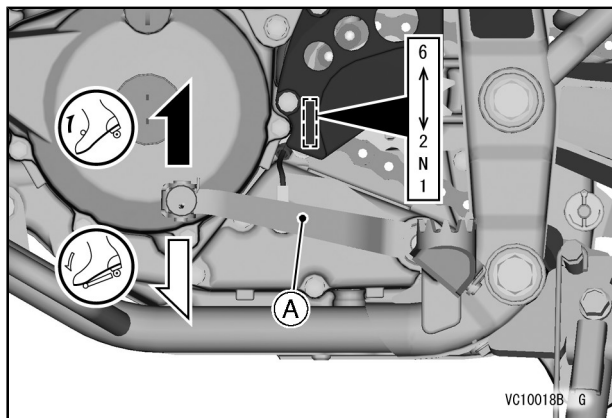
- To engage first gear from the neutral position, pull in the clutch lever and push down on the shift pedal, gently release the clutch lever, then release the shift pedal.
- To shift up to the next gear, pull in the clutch lever, lift the shift pedal with your toes, gently release the clutch lever, and then release the shift pedal.

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- To shift down to the next gear, pull in the clutch lever, push the shift pedal down as far as it will go, gently release the clutch lever, then release the shift pedal.

NOTICE

When changing gears, press firmly on the shift pedal to ensure proper shifting. Careless, incomplete shifting can cause the transmission to jump out of gear and lead to engine damage.



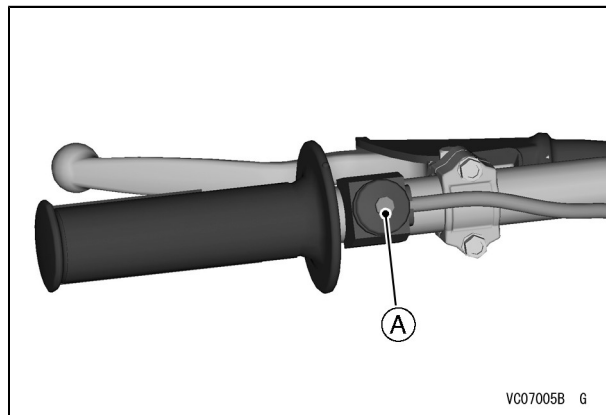
A. Shift Pedal

Stopping the Motorcycle

For maximum deceleration, close the throttle and apply both front and rear brakes. Pull in the clutch lever as the motorcycle comes to a stop. Independent use of the front or rear brake may be advantageous in certain circumstances. Shift down progressively to ensure good engine response at all speeds.

Stopping the Engine

- Shift the transmission into the neutral position.
- Close the throttle completely and push the engine stop button until the engine stops.
- Push the main switch to the "OFF" position.



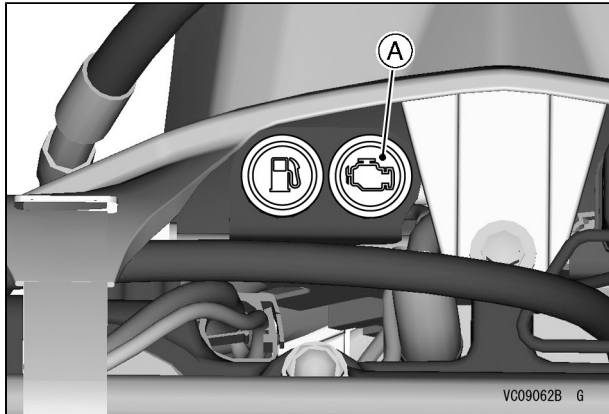
A. Engine Stop Button

NOTE

- To avoid battery discharging, check that the main switch is in the “OFF” position and the red main switch indicator light (LED) goes off, when the motorcycle is not used.

Warning Indicator Lights**Yellow Engine Warning Indicator Light**

When the main switch is turned on, the yellow engine warning indicator light should turn on about 2 seconds for bulb check. If the indicator does not turn on at this time, have it checked by an authorized Kawasaki dealer.



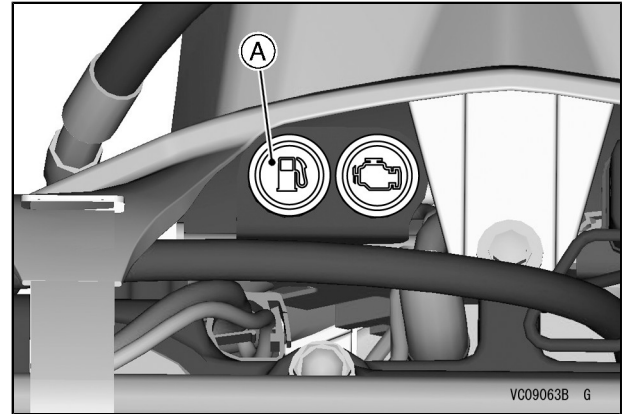
A. Yellow Engine Warning Indicator Light

If this indicator turns on again after the bulb check is completed, the DFI system has malfunctioned. Have it checked by an authorized Kawasaki dealer.

If this indicator blinks while pushing the starter button, the vehicle-down sensor has been tripped and the engine cannot be started. Turn the main switch off and then back on to start the engine.

Yellow Fuel Level Warning Indicator Light

If this indicator goes on while the main switch is turned on, remaining usable fuel is approximately 1.7 L (0.4 US gal) or less. Refuel as soon as possible.



A. Yellow Fuel Level Warning Indicator Light

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Catalytic Converter

This motorcycle is equipped with a catalytic converter in the exhaust system. The converter reacts with carbon monoxide, hydrocarbons and nitrogen oxides to convert them into carbon dioxide, water, nitrogen and oxygen resulting in much cleaner exhaust gases to be discharged into the atmosphere.

For proper operation of the catalytic converter, the following cautions must be observed.



WARNING

Operating or parking the vehicle near flammable materials can cause a fire, and can result in property damage or severe personal injury.

Do not idle or park your vehicle in an area where tall or dry vegetation, or other flammable materials could come into contact with the muffler or exhaust pipe.



WARNING

The engine and exhaust system get extremely hot during normal operation and can cause serious burns. Never touch a hot engine, exhaust pipe, or muffler during operation or after stopping the engine.

- Use only unleaded gasoline. Never use leaded gasoline. Leaded gasoline significantly reduces the capability of the catalytic converter.
- Do not operate the motorcycle with the engine misfiring. Under this conditions, unburned air/fuel mixture flows out of engine excessively accelerating the reaction in the converter allowing the converter to overheat and become damaged when the engine is hot, or reduces converter performance when the engine is cold.

Break-In

A brief break-in procedure must be carried out to obtain the proper operating clearances in the engine and transmission, which are necessary for performance and reliability.

NOTICE

For the first hour or 20 km (12 mile) of operation, run the engine at low and moderate engine speeds. See details below.

Break in the engine as follows.

- Start the engine and let it idle until it is thoroughly warmed up.
- Ride the motorcycle for about 20 minutes within 1/2 throttle opening.
- Stop and let the engine cool completely. Be sure to check the tightness of nuts and bolts, oil leakage, coolant leakage and any irregularities.

- Start the engine and ride the motorcycle for about 40 minutes within 3/4 throttle opening.
- Stop and let the engine cool completely. Be sure to fully check the tightness of nuts and bolts, oil leakage, and any irregularities, especially, each cable elongation, brake play, chain slack and spoke tightness.
- Change the engine oil, oil filter and front fork/rear shock absorber oil to the new one.
- After the break-in procedure has been properly carried out, the motorcycle is ready for regular operation. Using the proper riding skills and techniques and avoiding recklessly high engine speeds will keep the engine trouble-free.

NOTICE

When any following parts have been replaced, the same break-in procedure as the new motorcycle must be carried out for one hour or 20 km (12 mile):

Cylinder, Piston, Piston pin, Piston ring, Valve, Rocker arm, Camshaft, Crankshaft, Transmission gear, etc.

30 GENERAL INFORMATION

Daily Pre-Ride Checks

Check the following items each day before you ride. The time required is minimal, and habitual performance of these checks will help ensure a safe, reliable ride.

If any irregularities are found during these checks, contact an authorized Kawasaki dealer. Temporary measures methods are described on each page.



WARNING

Failure to perform these checks before operation may result in serious damage or an accident. Always perform daily checks before operation.



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.

Engine

Engine Oil	No leakage Level correct
Coolant	No leakage Level correct (engine cold)
Radiator Cap	Properly installed
Clutch	Functions properly Lever play correct
Spark Plug	Correctly torqued
Air Cleaner	Clean Apply oil to air cleaner element if dry
Muffler	Properly installed No damage Properly installed

Engine Sprocket	Not worn or damaged
Frame	
Tires	Overall condition good No damage or excessively wear Air pressure correct Air valve cap installed Bead protector nut properly tightened
Spokes	No looseness
Drive Chain	Overall condition good Chain slack correct Lubricate if necessary
Front and Rear Brakes	Function properly Lever and pedal play correct No fluid leakage
Throttle	Functions properly Throttle grip returns smoothly
Steering	Smooth but not loose from lock to lock No binding due to control cables
Front Fork	Functions properly No oil leakage
Rear Shock Absorber	Functions properly No oil leakage
Fuel Tank	Mounted securely No fuel leakage
Rear Sprocket	No wear or damage
Electrical equipment	Functions properly
Engine Stop Button	Functions properly
Main Switch	Functions properly
Side stand	Return to its fully up position by spring tension Return spring not weak or not damaged
Nuts, Bolts, Fasteners	Properly tightened

MAINTENANCE AND ADJUSTMENT

The maintenance and adjustments outlined in this chapter must be carried out in accordance with the Periodic Maintenance Chart to keep the vehicle in good running condition. **The initial maintenance is vitally important and must not be neglected.**

Although items other than daily maintenance are described, this maintenance and repair work should be done by qualified technicians. Kawasaki does not recommend doing this work without knowledge and proper tools. Please note that Kawasaki cannot assume any responsibility for damage resulting from incorrect or improper adjustment made by the owner.

EMISSION CONTROL INFORMATION

To protect the environment in which we all live, Kawasaki has incorporated crankcase emission (1) and exhaust emission (2) control systems in compliance with applicable regulations of the United States Environmental Protection Agency and California Air Resources Board. Additionally, Kawasaki has incorporated an evaporative emission control system (3) in compliance with applicable regulations of the United States Environmental Protection Agency and California Air Resources Board.

1. Crankcase Emission Control System

This system eliminates the release of crankcase vapors into the atmosphere. Instead, the vapors are routed through an oil separator to the intake side of the engine. While the engine is operating, the vapors are drawn into the combustion chamber, where they are burned along with the fuel and air supplied by the fuel injection system.

2. Exhaust Emission Control System

This system reduces the amount of pollutants discharged into the atmosphere by the exhaust of this vehicle. The fuel and ignition systems of this vehicle have been carefully designed and constructed to ensure an efficient engine with low exhaust pollutant levels.

3. Evaporative Emission Control System

The evaporative emission control system for this vehicle consists of low permeation fuel hoses and a fuel tank.

3. Evaporative Emission Control System (California Model)

Vapors caused by fuel evaporation in the fuel system are not vented into the atmosphere. Instead, fuel vapors are routed into the running engine to be burned, or stored in a canister when the engine is stopped. Liquid fuel is caught by a vapor separator and returned to the fuel tank.

An add-on or modified part must be compliant with applicable ARB evaporative emission control standards. A violation of this requirement is punishable by civil and/or criminal punishment.

MAINTENANCE

Proper maintenance is necessary to ensure that your vehicle will continue to have low emission levels. This Owner's Manual contains maintenance operations recommended for your vehicle. Maintenance operations necessary to ensure compliance with the applicable emission standards are noted in the Periodic Maintenance Chart. As the owner of this vehicle, you have the responsibility to make sure that the recommended maintenance is carried out according to the instructions in this Owner's Manual at your own expense.

You should keep a maintenance record for your vehicle. To assist you in keeping this record, we have provided space at the end of this manual where an authorized Kawasaki dealer, or someone equally competent, can record the maintenance. You should also retain copies of maintenance work orders, receipts, etc., as verification of this maintenance.

Warranty

This vehicle is designed, built, and equipped in compliance with applicable regulation of the United States Environmental Protection Agency (EPA) and California Air Resources Board (CARB) at the time of sale. The EPA and CARB requires that your vehicle comply with certain emissions regulation during a portion of its useful life and is free from defects in material and workmanship which could cause the vehicle to fail to conform with applicable regulation. Please read your Kawasaki Limited Emission Control Systems Warranty delivered with this Owner's Manual carefully and keep it valid by complying with the owner's obligations it contains. To obtain warranty service, the Kawasaki Limited Emission Control Systems Warranty requires that you return your vehicle to an authorized Kawasaki dealer for remedy under warranty.

TAMPERING WITH EMISSION CONTROL SYSTEM PROHIBITED:

Federal regulations and California State law prohibit the following acts or the causing thereof: (1) the removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new vehicle for the purposes of emission control prior to its

34 MAINTENANCE AND ADJUSTMENT

sale or delivery to the ultimate purchaser or while it is in use, or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

Do not tamper with the original emission related parts:

- Throttle body
- Spark plug
- Magneto ignition system
- Air cleaner element

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED:

Federal law prohibits the following acts or the causing thereof: (1) the removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use, or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

- Replacement of the original exhaust system or muffler with a component not in compliance with Federal regulations.
- Removal of the muffler or any internal portion of the muffler.
- Removal of the air box or air box cover.
- Modifications to the muffler or air intake system by cutting, drilling, or other means if such modifications result in increased noise levels.

Periodic Maintenance Chart

The maintenance and adjustments outlined in this chapter are easily carried out and must be done in accordance with the Periodic Maintenance Chart to keep the motorcycle in good running condition.

K : Should be serviced by referring to the Service Manual or an authorized Kawasaki dealer.

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

(e) : Emission Related Item

(f) : Perform after the first break-in period.

1. Periodic Inspection (Engine Related Item)

OPERATION		FREQUENCY	Initial	Every				See Page
			2.5 hours	12.5 hours	25.0 hours	50.0 hours		
	Check for error codes and perform dynamic inspection using Kawasaki diagnostic tool		•	•	•	•	–	
	Throttle cable (e) - adjust		•	•	•	•	57	
	Clutch cable - adjust		•	•	•	•	59	
	Air cleaner element (e) - clean †		Every 5 hours				54	
	Engine sprocket - inspect †				•	•	67	
	Coolant level - inspect †		•	•	•	•	44	
	Radiator hoses and connections - inspect †				•	•	43	
	Evaporative emission control system -inspect (e) (California model)		•	•	•	•	50	
K	Clutch and friction plates - inspect †				•	•	–	
	Spark arrester - clean		Every 120 hours				61	
	Spark plug (e) - clean, gap †		•	•	•	•	50	

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OPERATION		FREQUENCY	Initial	Every			See Page
		2.5 hours	12.5 hours	25.0 hours	50.0 hours		
	Idle speed (e) - inspect				●	●	59
K	Valve clearance - inspect †					●	—

2. Periodic Inspection (Chassis Related Item)

OPERATION		FREQUENCY	Initial	Every				See Page
		2.5 hours	12.5 hours	25.0 hours	50.0 hours			
	Brake adjustment - inspect †		●	●	●	●	71	
	Brake fluid level - inspect †			●	●	●	72	
	Brake pad wear - inspect †			●	●	●	74	
	Drive chain - inspect †	Every 5 hours					63	
	Drive chain - lubricate		●	●	●	●	67	
	Drive chain wear - inspect †		●	●	●	●	65	
	Drive chain guide and slipper - inspect †		●	●	●	●	66	
	Rear sprocket - inspect †			●	●	●	67	
K	Fuel system - clean		●	●	●	●	—	
	Fuel hose - inspect †		●	●	●	●	85	
	Steering play - inspect †		●	●	●	●	75	
K	Steering stem bearing - lubricate					●	—	
	Front fork - clean and inspect		●	●	●	●	77	
	Rear shock absorber - inspect			●	●	●	79	

OPERATION		FREQUENCY	Initial	Every				See Page
			2.5 hours	12.5 hours	25.0 hours	50.0 hours		
K	Swingarm and UNI-TRAK linkage pivots - inspect †			●	●	●	—	
K	Swingarm and UNI-TRAK linkage pivots - lubricate			●	●	●	—	
	Frame - inspect		●	●	●	●	—	
K	Wheel bearing - inspect †					●	—	
	Wheels/tires - inspect		●	●	●	●	82	
	Spoke tightness and rim runout - inspect †		●	●	●	●	83, 84	
	General lubrication - perform		●	●	●	●	101	
	Cable - inspect		●	●	●	●	102	
	Nuts, bolts, fasteners - inspect †		●		●	●	94	

3. Periodic Replacement (Engine and Chassis Related Item)

OPERATION		FREQUENCY	Initial	Every			See Page
		2.5 hours	12.5 hours	25.0 hours	50.0 hours		
	Engine oil - change (f)	●		●	●	40	
	Oil filter - replace (f)	●		●	●	40	
	Coolant - change	Every 2 years				45	
K	Brake fluid - change	Every 2 years				—	
K	Brake master cylinder cup and dust cover - replace	Every 2 years				—	
K	Brake caliper piston seal and dust seal - replace	Every 2 years				—	
K	Brake hoses - replace	Every 4 years				—	

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OPERATION		FREQUENCY	Initial	Every			See Page
		2.5 hours	12.5 hours	25.0 hours	50.0 hours		
K	Front fork oil - change		Every year			–	
K	Fuel hose - replace		Every 4 years			–	
	Air cleaner element (e) - replace		If damaged			52	

Engine Oil

In order for the engine, transmission and clutch to function properly, maintain the engine oil at the proper level, and change the oil and oil filter in accordance with the Periodic Maintenance Chart.

Not only do dirt and metal particles collect in the oil, but the oil itself loses its lubricative quality if used too long.



WARNING

Motorcycle operation with insufficient, deteriorated, or contaminated engine oil will cause accelerated wear and may result in engine or transmission seizure, accident, and injury. Check the oil level before each ride and change the oil according to the periodic maintenance chart in the Owner's Manual.

NOTICE

Racing the engine before the oil reaches every part can cause engine seizure.

Oil Level Inspection

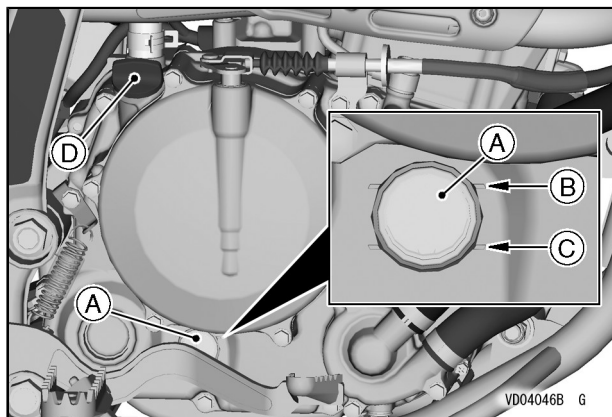
- If the oil has just been changed, let the motorcycle sit a few minutes allowing the oil to settle.
- Start the engine and run it for several minutes **at idle speed. Do not run the engine at high engine speed.**

- Stop the engine and wait several minutes for the oil to settle.
- Check the engine oil level with the motorcycle vertical through the oil level inspection window on the lower right side of the engine. The oil level should come up between the high and low level lines next to the oil level inspection window.

NOTE

- *If the oil level is too high, remove the excess oil using a syringe or other suitable device.*
- *If the oil level is too low, add the correct amount of oil through the oil filler opening. Use oil of the same type and brand as those of the one that is already in the engine.*
- *If no oil appears in the oil level inspection window, tip the motorcycle slightly to the right until oil is visible then return to an upright position. If no oil appears even when tipped at an extreme angle, remove the drain bolt to empty any oil that may be in the transmission and crankcase, reinstall the drain bolt and refill with the specified amount of oil.*

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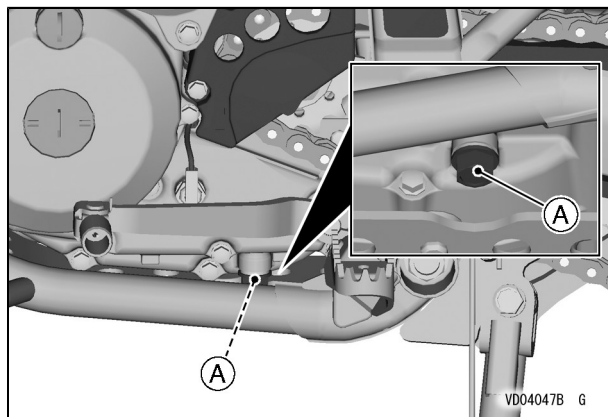


- A. Oil Level Inspection Window
- B. High Level Line
- C. Low Level Line
- D. Oil Filler Cap

Oil and/or Oil Filter Change

The engine oil and/or oil filter should be changed periodically to ensure long engine life.

- Warm up the engine thoroughly so that the oil will pick up any sediment and drain easily.
- Stop the engine, and place a container beneath it.
- Remove the oil filler cap.
- Remove the oil drain bolt and gasket, and position the vehicle by using the side stand to allow all the oil to drain.

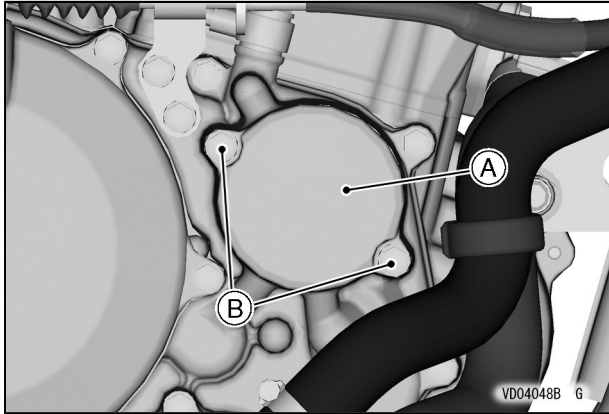


- A. Engine Oil Drain Bolt/Gasket

WARNING

Engine oil is a toxic substance. Dispose of used oil properly. Contact your local authorities for approved disposal methods or possible recycling.

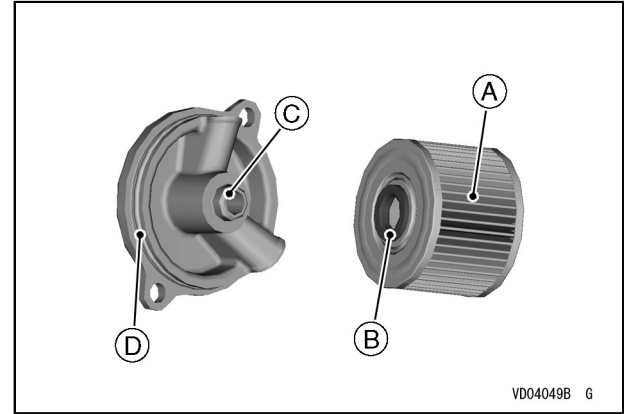
- When the oil filter is replaced, remove the oil filter cover bolts, cover with O-ring and spring.



A. Oil Filter Cover

B. Oil Filter Cover Bolts

- Replace the oil filter element and O-ring with new ones.
- Apply grease to the grommet and O-ring.
- Install the oil filter element so that the grommet should be inserted into the projection on the cap.



A. Oil Filter Element

B. Grommet

C. Projection

D. O-ring

NOTICE

Inside-Out installation stop oil flow, the causing engine seizure.

- Place the spring on the oil filter element.

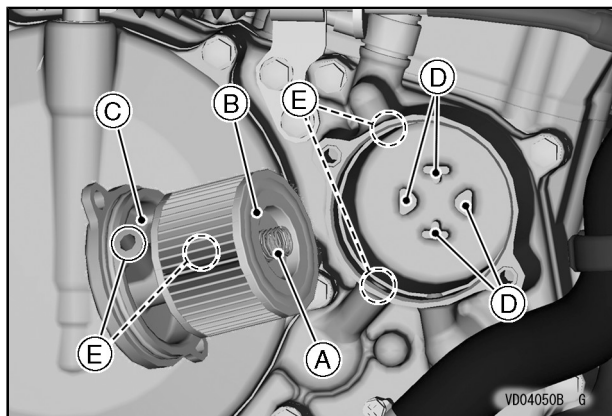
NOTE

- *Apply small amount of grease to the spring end so that the spring holding onto the filter element.*
- Install the spring, filter element and cap into the clutch cover as a set.

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NOTE

- *Be sure to fit the spring should be placed between the projections on the clutch cover.*
- *Install the oil filter cover while aligning the oil holes between the cover and case.*



- A. Spring
- B. Oil Filter Element
- C. Cap
- D. Tabs
- E. Oil Holes

- Tighten the oil filter cover bolts to the specified torque.

Tightening Torque

Oil Filter Cover Bolts:
9.8 N·m (1.0 kgf·m, 89 in·lb)

- After the oil has completely drained out, install the drain bolt with its new gasket. Proper torque for it is shown in the table.

Tightening Torque

Engine Oil Drain Bolt:
15 N·m (1.5 kgf·m, 11 ft·lb)

NOTE

- *Replace the gasket and O-ring with new ones.*
- Fill the engine up to the upper level line with good quality engine oil specified in the table.

Recommended Engine Oil

Type: Kawasaki Performance 4-Stroke Motorcycle Oil*
Kawasaki Performance 4-Stroke Semi-Synthetic Oil*
Kawasaki Performance 4-Stroke Full Synthetic Oil*
or other 4-stroke oils with API SG, SH, SJ, SL, SM and JASO MA, MA1, MA2 rating

Viscosity: SAE 10W-40

*Kawasaki Performance Oils and Lubricants have been specifically engineered for your vehicle. Consistent use of these products meets or exceeds warranty and service requirements and can help to extend the life of your Kawasaki.

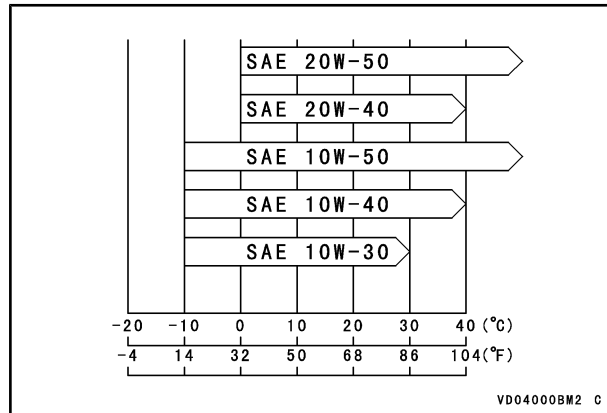
NOTE

- Do not add any chemical additive to the oil. Oils fulfilling the above requirements are fully formulated and provide adequate lubrication for both the engine and the clutch.

Engine Oil Capacity

1.0 L (1.1 US qt)	[When filter is not removed]
1.1 L (1.2 US qt)	[When filter is removed]
1.3 L (1.4 US qt)	[When engine is completely dry]

Although 10W-40 engine oil is the recommended oil for most conditions, the oil viscosity may need to be changed to accommodate atmospheric conditions in your riding area.



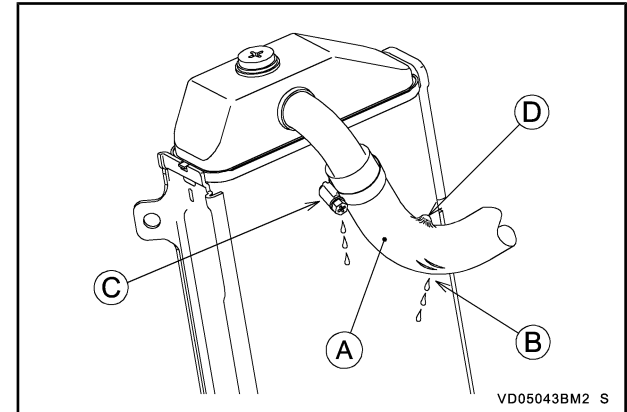
- Install the oil filler cap.

- Start the engine.
- Check the oil level and oil leakage.

Cooling System

Radiator Hoses and Connections

Check the water hoses for leakage, cracks, bulges, deterioration or loose connection in accordance with the Periodic Maintenance Chart.



- A. Water Hose
- B. Cracks
- C. Leakage
- D. Bulges

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Radiator

Check the radiator fins for obstruction by insects or mud. Clean off any obstructions with a low-pressure stream of water.

NOTICE

Using high-pressure water, as from a car wash facility, could damage the radiator fins and impair the radiator's effectiveness.

Do not obstruct or deflect airflow by installing unauthorized accessories in front of the radiator.

Interference with the cooling airflow can lead to overheating and consequent engine damage.

Coolant

Coolant absorbs excessive heat from the engine and transfers it to the air through the radiator. If the coolant level becomes low, the engine overheats and may suffer severe damage. Check the coolant level each day before riding the motorcycle, and replenish coolant if the level is low.



WARNING

Hot engine coolant can cause serious burns. To avoid burns, do not remove the radiator cap or try to inspect the coolant level or change the coolant when the engine is still hot. Wait until it cools down.

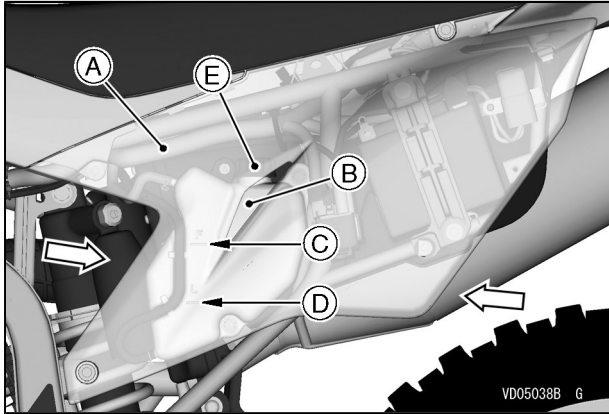
NOTE

- *The coolant originally filled into the cooling system contains 50% of a permanent, ethylene-glycol-based antifreeze, has a freezing point of -35°C (-31°F) and a green appearance.*

Coolant Level Inspection

NOTE

- *Inspect the coolant level when the engine is cold (room or atmospheric temperature).*
- *Check the coolant level with the motorcycle held perpendicular on the level ground.*
- Check the coolant level with the level lines on the reserve tank behind the left side cover viewed from front or rear of the reserve tank. The coolant level should be between the F (FULL) and L (LOW) level lines.

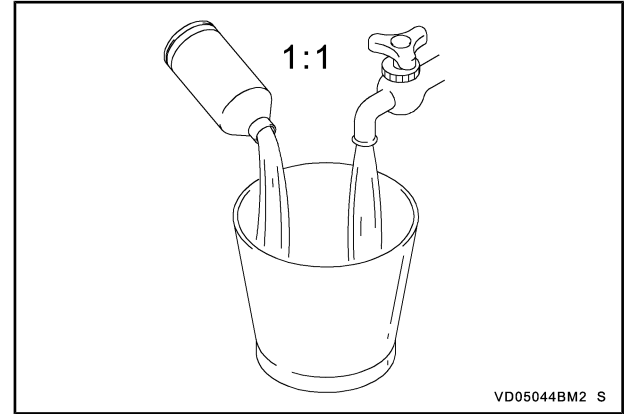


- A. Left Side Cover
- B. Reserve Tank
- C. F (FULL) Level Line
- D. L (LOW) Level Line
- E. Tank Cap

- If the coolant level is low, remove the left side cover (see page 88) and add coolant as follows.
- Remove the tank cap and add recommended coolant which diluted in properly mixing ratio through the filler opening between the F (FULL) and L (LOW) level lines.

Water and Antifreeze Mixing Ratio

1 : 1 (water : antifreeze)



Recommended Antifreeze

Permanent type of antifreeze (ethylene glycol base plus corrosion and rust inhibitors for aluminum engines and radiators)

Coolant Total Amount

1.2 L (1.3 US qt)

- Install the tank cap.

Coolant Change

The coolant should be changed periodically to ensure long engine life.

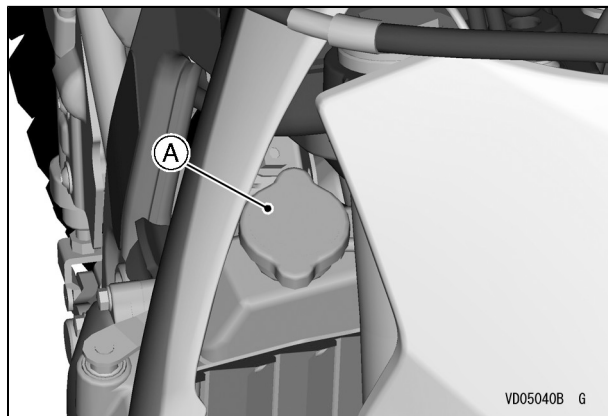
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WARNING

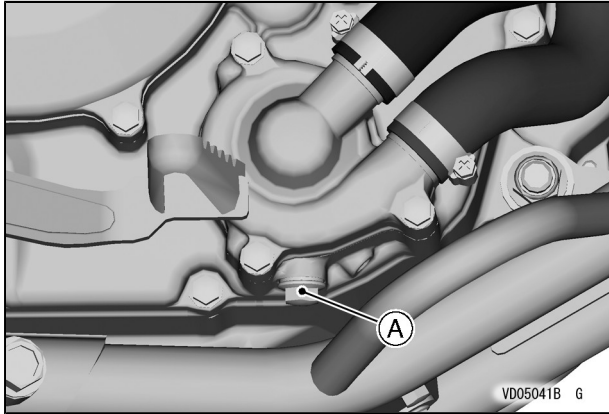
The cooling system is pressurized and can get extremely hot during normal operation and cause serious burns. To prevent burns, do not touch the radiator when it is hot. Do not attempt to open the radiator cap when hot since steam and hot coolant can forcefully erupt when the cap is even loosened slightly.

- Wait for the engine to cool completely.
- Situate the motorcycle perpendicular to the ground.
- First, turn the radiator cap counterclockwise to the first stop and wait there for a few seconds.
- Then, push and turn the radiator cap further in the same direction and remove it.



A. Radiator Cap

- Place a container under the coolant drain bolt on the clutch cover.
- Remove the drain bolt and sealing washer to drain the coolant.



A. Coolant Drain Plug

NOTICE

Immediately wash away any coolant that spills on the frame, engine, or wheel.

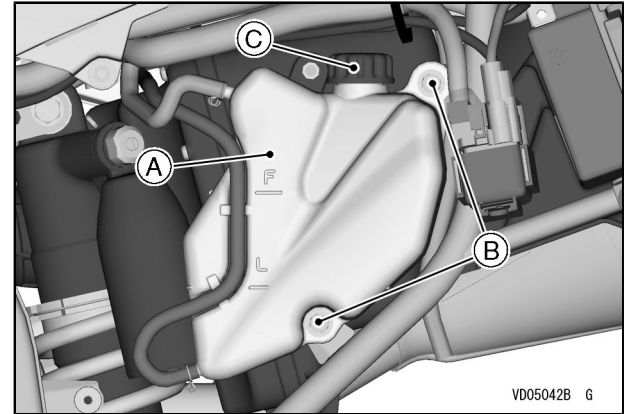


WARNING

Coolant on tires will make them slippery and can cause loss of traction resulting in an accident and injury. Thoroughly clean any coolant that might have splashed on the tires.

- Remove the left side cover (see page 88).
- Remove the reserve tank mounting bolts and pull out the reserve tank from the frame.

- Remove the tank cap and drain the coolant to a container.



A. Reserve Tank

B. Mounting Bolts

C. Tank Cap

- Install the reserve tank to the frame.

Tightening Torque

Reserve Tank Mounting Bolts:
6.9 N·m (0.70 kgf·m, 61 in·lb)

- Visually inspect the old coolant.
- If whitish cotton-like wafts are observed, aluminum parts in the cooling system are corroded and the system must be flushed.
- If the coolant is brown, iron or steel parts are rusting and the system must be flushed.

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- Install the coolant drain bolt and new sealing washer to the clutch cover and tighten it with the specified torque.

NOTE

- *Always replace the sealing washer with a new one.*

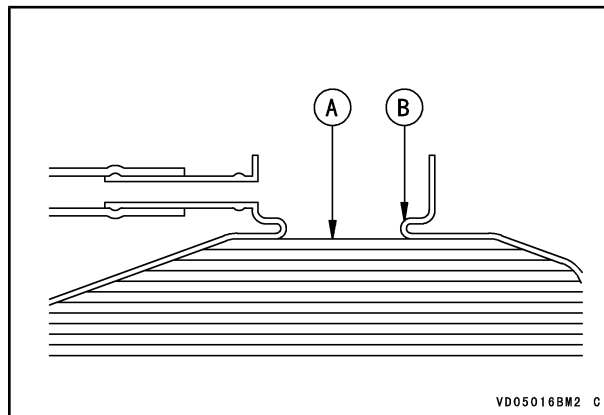
Tightening Torque

Coolant Drain Bolt:
25 N·m (2.5 kgf·m, 18 ft·lb)

- Add coolant to the reserve tank between the F (FULL) and L (LOW) level lines, and install the tank cap.
- Fill the radiator up to the bottom of the radiator filler neck with recommended coolant.

NOTE

- *Pour in the coolant slowly so that it can expel the air from the engine and radiator.*
- Squeeze the water hoses several times to aid flow out the air bubbles accumulated in the cooling system.



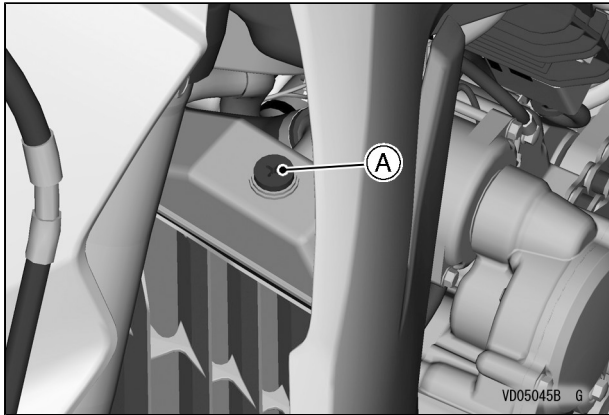
A. Coolant Level
B. Filler Neck

- Situate the motorcycle perpendicular to the ground until the radiator filler neck is level to the ground so that the filler neck is located uppermost in order to exhaust the air accumulated in the radiator.

NOTICE

Use coolant containing corrosion inhibitors made specifically for aluminum engines and radiators in accordance with the instruction of the manufacture. Soft or distilled water must be used with the antifreeze in the cooling system. If hard water is used in the system, it causes scale accumulation in the water passages, and considerably reduces the efficiency of the cooling system.

- Loosen the air bleeder screw on the top of the left radiator until the coolant begins to flow out from the air bleeder screw hole.



A. Air Bleeder Screw

- Replace the O-ring of the air bleeder screw with a new one.
- Tighten the air bleeder screw to specified torque.

Tightening Torque

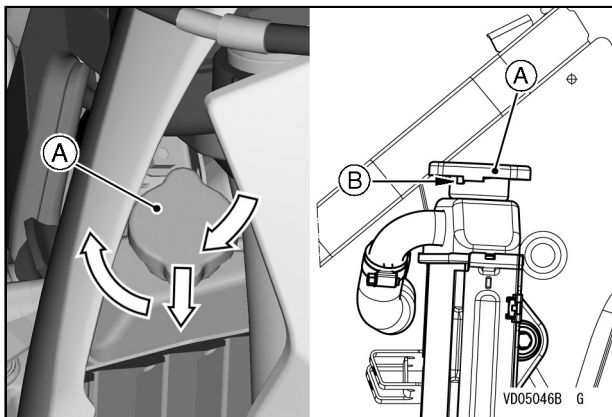
Air Bleeder Screw:

1.6 N·m (0.16 kgf·m, 14 in·lb)

NOTE

- *Pour in the coolant slowly so that it can expel the air from the engine and radiator.*
- The radiator cap should be installed in two steps. Turn the cap clockwise to the first stop. Then push down and further turn the cap until it stops against the stopper.
- Make sure that the radiator cap has been installed properly.

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A. Radiator Cap
B. Stopper

- Start the engine and warm up thoroughly, then stop it.
- Check the coolant level in the reserve tank after the engine has cooled down. If the coolant level is low, add coolant between the F (FULL) and L (LOW) level lines.
- Check the cooling system for leaks.
- Install the left side cover.

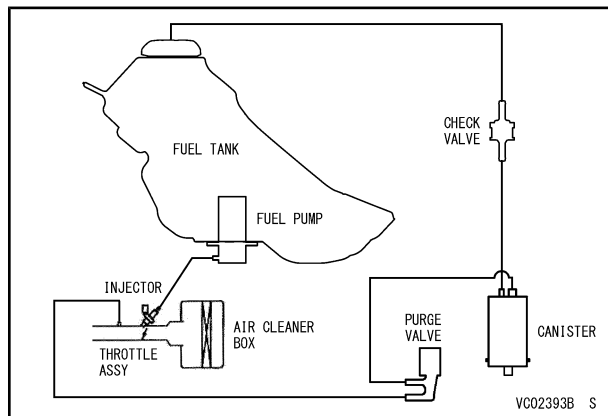
Evaporative Emission Control System (California model only)

This system routes fuel vapors from the fuel system into the running engine or stores the vapors in a canister when the engine is stopped. Although no

adjustments are required, a thorough visual inspection must be made at the intervals specified by the Periodic Maintenance Chart.

Inspection

- Check that the hoses are securely connected.
- Replace any kinked, deteriorated, or damaged hoses.

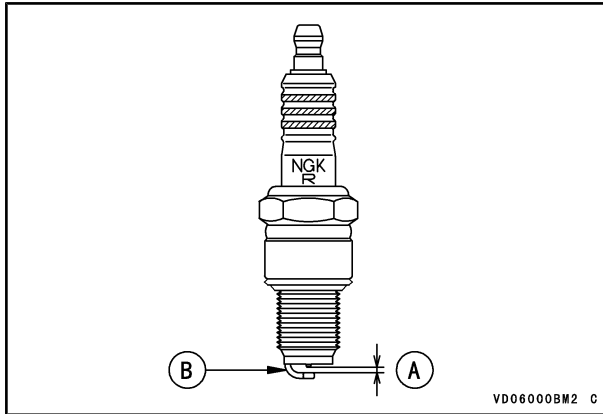


Spark Plug

The spark plug should be taken out periodically for inspection and regapping. Measure the gap with a wire-type thickness gauge. If incorrect, adjust the gap to the specified value by bending the outer electrode.

Spark Plug Gap

CR8E	0.7 – 0.8 mm (0.028 – 0.031 in.)
------	----------------------------------



- A. Gap**
B. Outer Electrode

If the plug is oily or has carbon built up on it, clean it. The plug may also be cleaned using a high flash-point solvent and a nonmetal brush (nylon etc.). If the spark plug electrodes are corroded, or damaged, or if the insulator is cracked, replace the plug. The standard spark plug is shown in the table below.

Standard Spark Plug

NGK CR8E

NOTE

- If the spark plug is replaced, use the genuine Kawasaki spark plug.

Spark Plug Removal and Installation

- Clean the cylinder head around the spark plug cap hole before removing the spark plug.
- Pull the spark plug cap off the plug.

NOTICE

When removing the spark plug cap, do not pull the lead. The lead could be broken off or damaged the wires inside.

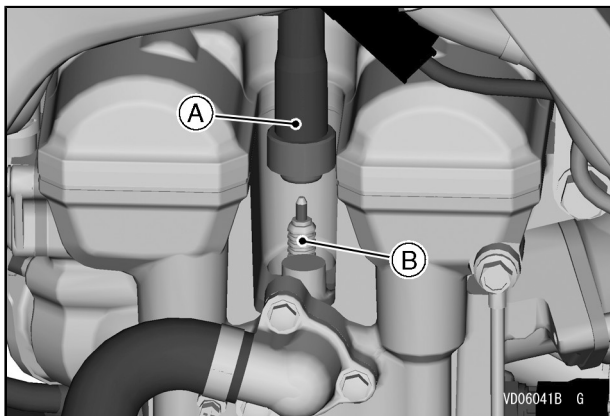
- Apply a suitable wrench to the spark plug.
- Loosen and remove the spark plug.
- When reinstalling the spark plug, torque it to specification.

Tightening Torque

Spark Plug:
13 N·m (1.3 kgf·m, 115 in·lb)

- Fit the spark plug cap securely onto the spark plug, and pull the cap lightly to make sure that it is properly installed.
- Check the spark plug cap lead is not damaged, or correctly routed.

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A. Spark Plug Cap
B. Spark Plug

Air Cleaner

A clogged air cleaner restricts the air intake, increases fuel consumption, reduces engine power, and can cause spark plug fouling. Inspect the air intake system, which includes the air filter and air duct to the throttle body assy, before each race or practice session.



WARNING

If dirt or dust is allowed to pass through into the throttle body assembly, the throttle may become stuck, possibly causing accident. Be sure to keep the dust from entering during cleaning.

NOTICE

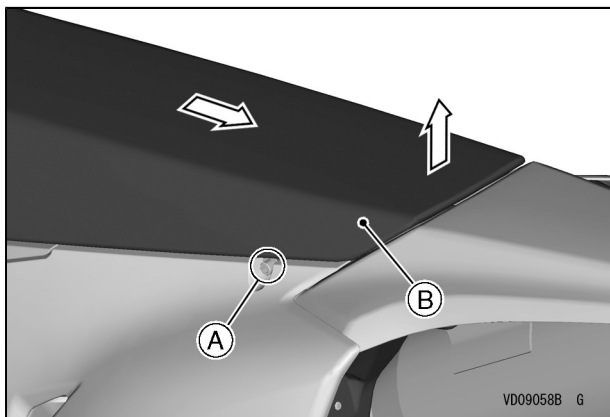
A clogged air cleaner will affect fuel mixture to the engine and reduce engine power and cause spark plug fouling.

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.

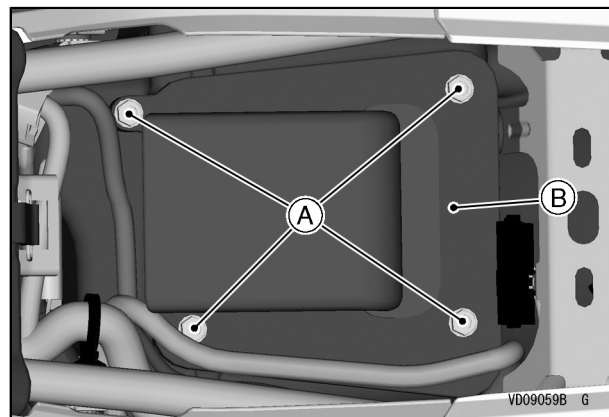
Element Removal

- Remove the seat mounting bolt and washer on both sides.
- Slide the seat rearward and pull the rear of the seat upward to remove the seat from the frame.



A. Seat Mounting Bolt and Washer (Both Sides)
B. Seat

- Remove the bolts and air cleaner intake cap.



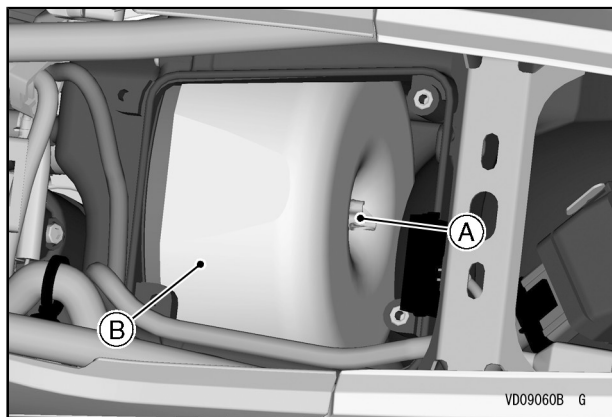
A. Bolts
B. Air Cleaner Intake Cap

- Remove the wing bolt and washer.
- Remove the element from the air cleaner case.
- Put a clean, lint-free towel over the air cleaner housing to keep dirt or other foreign material from entering.

NOTICE

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

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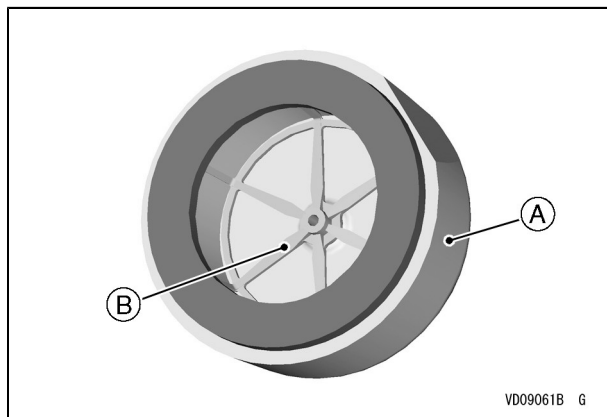
A. Wing Bolt and Washer
B. Element

- Remove the air cleaner element from the element frame.

NOTICE

Do not twist or wring the air cleaner element, as it gets easily torn or damaged.

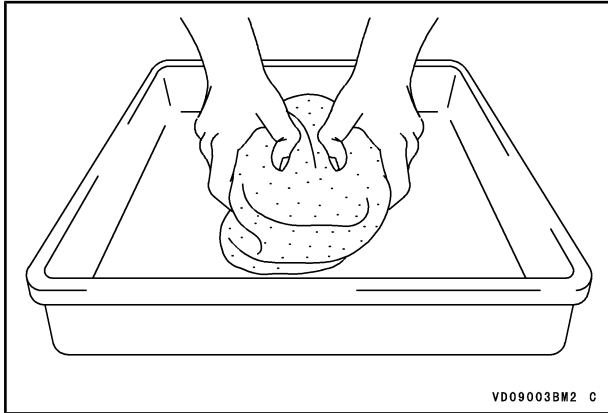
- Clean the air cleaner element if it is dirty.
- Check the air cleaner element for condition. If there is any damage, tears or deteriorations, the element must be replaced.



A. Air Cleaner Element
B. Element Frame

Element Cleaning and Installation

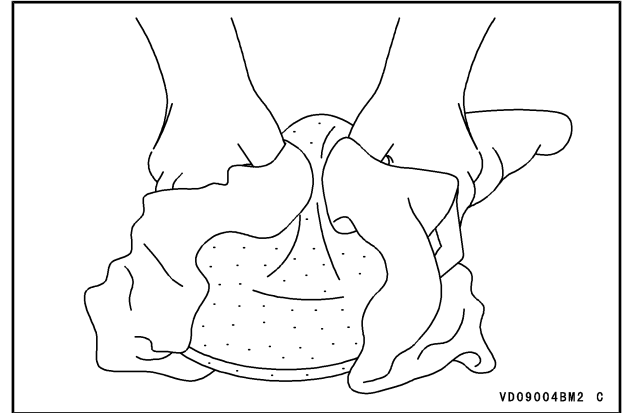
- Clean the element in a bath of a high flash-point solvent or hot soapy water. Rinse the element with clear water to remove all traces of the cleaning solution.



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.

- Squeeze the element dry in a clean towel.



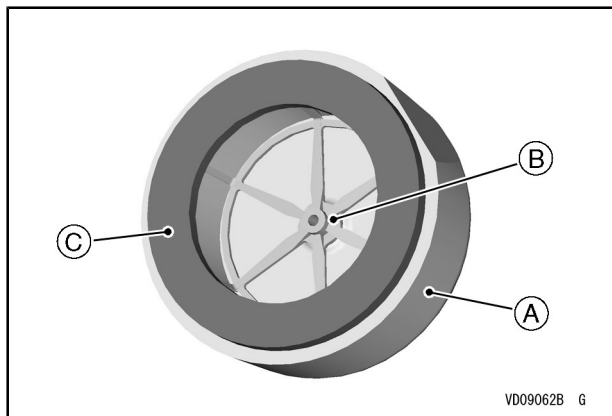
NOTICE

Do not twist, wring or blow the element dry to avoid damaging it.

- After cleaning, let the filter dry completely.
- Saturate the element with a high-quality foam air filter oil and make sure that the oil is evenly applied throughout the element.
- Squeeze out the excess oil, but do not wring the element as this could cause tearing. In this case, too much oil is better than too little.
- Finally pat the inside of the element with a paper towel to remove any excess oil.
- Install the air cleaner element onto element frame.

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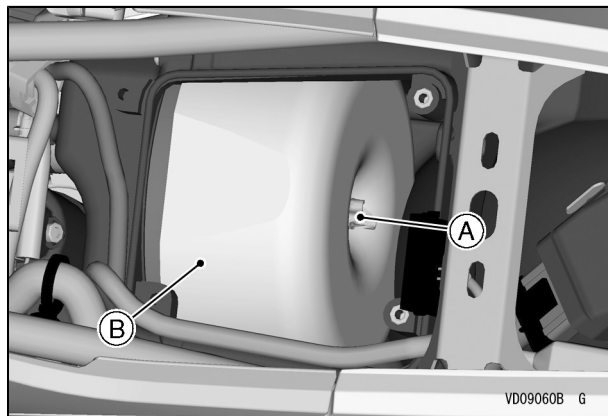
- Coat the element lip and lip seat with a thick layer of all-purpose grease to assure a complete seal.



- A. Air Cleaner Element
- B. Element Frame
- C. Element Lip (Apply grease)

NOTE

- *Element installation is performed in the reverse order of removal.*
- Remove the towel from the air cleaner housing.
- Clean inside of the cleaner housing thoroughly.
- Install the air cleaner element, washer and wing bolt and tighten the wing bolt with your hand securely.
- Install the air cleaner intake cap and tighten the bolts.



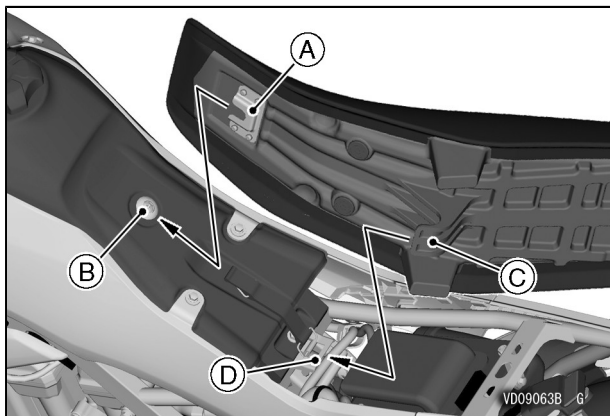
- A. Wing Bolt and Washer
- B. Element

- Insert the hooks of the seat under the flange collar and frame.

NOTICE

Be careful not to damage the side covers with the rear bracket of seat.

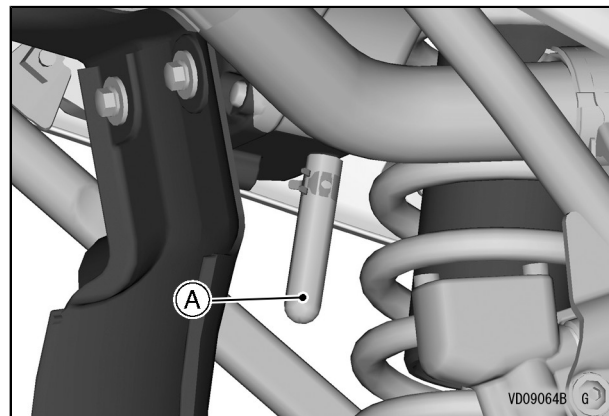
- Tighten the seat mounting bolt on both sides.



- A. Hook
- B. Flange Collar
- C. Hook
- D. Frame

Oil Draining

- Inspect the drain plug to see if any oil or water has run down.



A. Drain Plug

- If there are any oil, remove the drain plug and drain the oil.

WARNING

Oil on tires will make them slippery and can cause an accident and injury. Be sure to install the plug on the air cleaner housing after draining.

Throttle Cable

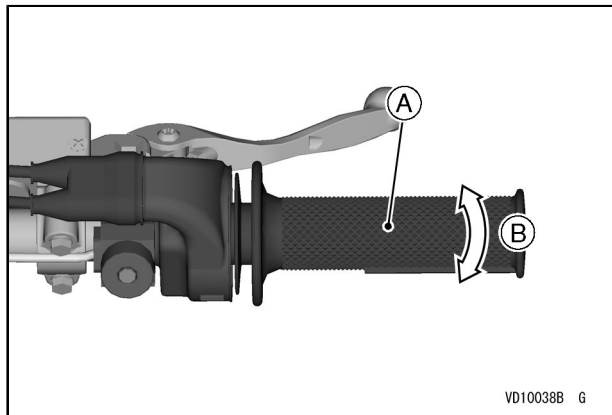
Throttle Cable Adjustment

Inspect the throttle grip for smooth operation in all steering positions. Check and adjust the throttle

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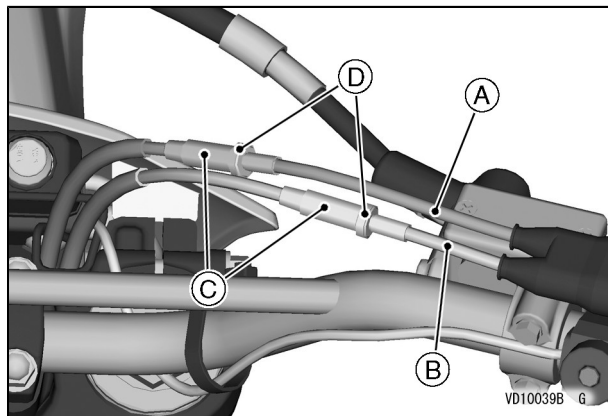
cable in accordance with the Periodic Maintenance Chart.

- Check that the throttle grip has 2 – 3 mm (0.08 – 0.12 in.) of play and turns smoothly.



A. Throttle Grip
B. 2 – 3 mm (0.08 – 0.12 in.)

- If there is improper play, adjust it.
- Loosen the locknuts at the upper ends of the throttle cables, and screw both throttle cable adjusters completely so as to give the throttle grip plenty of play.
- Turn the decelerator cable adjuster until there is no play when the throttle grip is completely closed. Tighten the locknut.



A. Decelerator Cable
B. Accelerator Cable
C. Adjusters
D. Locknuts

- Turn the accelerator cable adjuster until 2 – 3 mm (0.08 – 0.12 in.) of throttle grip free play is obtained. Tighten the locknut.
- If the throttle cables cannot be adjusted with the adjuster at the upper end of the throttle cable, further adjustment of the throttle cables should be done by an authorized Kawasaki dealer.
- With the engine idling, turn the handlebars to each side. If handlebar movement changes the idle speed, the throttle cables may be improperly adjusted or incorrectly routed, or they may be damaged. Be sure to correct any of these conditions before riding.



WARNING

Operation with an improperly adjusted, incorrectly routed, or damaged cables could result in an unsafe riding condition. Be sure the control cables are adjusted and routed correctly, and are free from damage.

Idle Speed

The idle speed inspection should be performed in accordance with the Periodic Maintenance chart.

This motorcycle is equipped with the Idle Speed Control System. Inspection of the idle speed should be done by an authorized Kawasaki dealer.

NOTE

- While the engine is cold, the fast idle system automatically raises the engine idle speed.

Idle Speed

1 800 ±50 r/min (rpm)

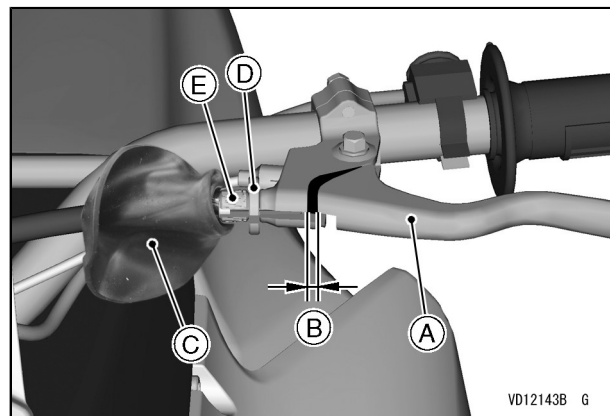
Clutch

Clutch Lever Adjustment

Proper clutch lever play is 2 – 3 mm (0.08 – 0.12 in.). Lever play increases with cable stretch and friction plate wear, requiring periodic adjustment.

When the clutch lever play is out of specification, first try adjusting it at the clutch lever as follows.

- Slide the clutch lever dust cover.
- Loosen the locknut, turn the adjuster to obtain the proper amount of clutch lever play, then tighten the locknut.



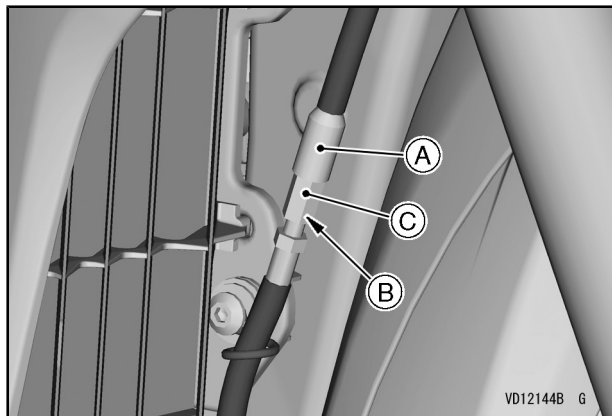
- A. Clutch Lever
- B. 2 – 3 mm (0.08 – 0.12 in.)
- C. Clutch Lever Dust Cover
- D. Locknut
- E. Adjuster

If the clutch lever free play cannot be adjusted at the clutch lever, make the adjustment further down the cable as follows.

- Loosen the locknut at the clutch lever.
- Turn the adjuster in all the way, then tighten the locknut.
- Slide the dust cover back and loosen the locknut in the middle of the clutch cable.

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- Turn the adjusting nut so that the clutch lever free play is 2 – 3 mm (0.08 – 0.12 in.).



- A. Dust Cover**
B. Locknut
C. Adjusting Nut

- Tighten the locknut.
- Slide the dust cover back into place.
- Start the engine, check that the clutch does not slip and it releases properly.



WARNING

Too much cable play can prevent clutch disengagement and cause an accident resulting in serious injury or death. When adjusting the clutch or replacing the cable, be sure the upper end of the clutch outer cable is fully seated in its fitting, or it could slip into place later, creating enough cable play to prevent clutch disengagement.

Valve Clearance

Valve and valve seat wear decreases valve clearance, upsetting valve timing.

NOTICE

If valve clearance is left unadjusted, wear will eventually cause the valves to remain partly open, which lowers performances, burns the valves and valve seats, and may cause serious engine damage.

Valve clearance for each valve should be checked and adjusted in accordance with the Periodic Maintenance Chart. Inspection and adjustment should be done only by an authorized Kawasaki dealer.

Spark Arrester

This vehicle is equipped with a spark arrester. It must be properly maintained to ensure its efficiency. In accordance with the Periodic Maintenance Chart, clean the spark arrester.

NOTICE

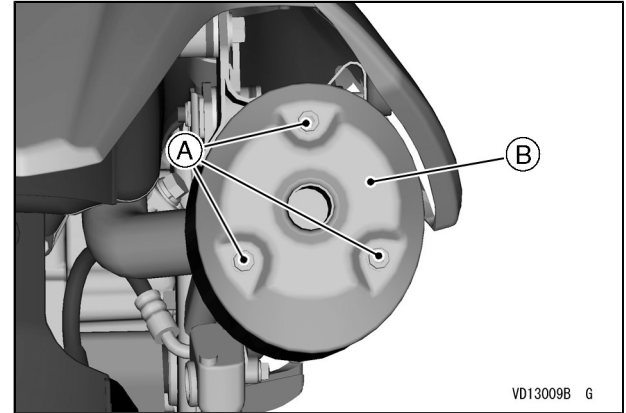
The spark arrester must be installed correctly and functioning properly to provide adequate fire protection.

Spark Arrester Cleaning

⚠ WARNING

Hot exhaust system parts can cause serious burns. The exhaust system becomes very hot soon after the engine is started. To avoid burns, be sure the exhaust system is cold before cleaning the spark arrester.

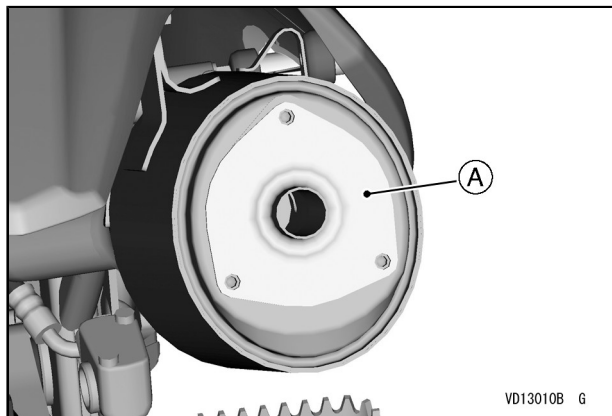
- Remove the muffler end cover bolts and muffler end cover.



- A. Muffler End Cover Bolts
- B. Muffler End Cover

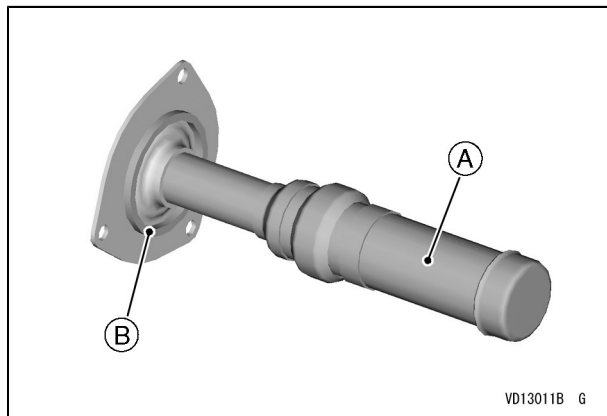
- Insert a flat tip screwdriver between the spark arrester plate and muffler to pry up the spark arrester evenly and gradually.

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A. Spark Arrester and Spacer

- Remove the spark arrester and spacer from the muffler.



A. Spark Arrester

B. Gasket

- With a wire brush, remove the carbon off the inside of the spark arrester and muffler.
- Replace the gasket with a new one.
- Install the spark arrester and spacer into the rear end of the muffler so that aligns three bolt holes.
- Install the muffler end cover over the spark arrester.
- Tighten the muffler end cover bolts in two times with the specified torque.

Tightening Torque

Muffler End Cover Bolts:

15 N·m (1.5 kgf·m, 11 ft·lb)

Drive Chain

For safety and to prevent excessive wear, the drive chain must be checked, adjusted, and lubricated before riding. If the chain becomes badly worn or maladjusted - either too loose or too tight - it could jump off the sprockets or break.

WARNING

A chain that breaks or jumps off the sprockets could snag on the engine sprocket or lock the rear wheel, severely damaging the motorcycle and causing it to go out of control. Inspect the chain for damage and proper adjustment before each ride.

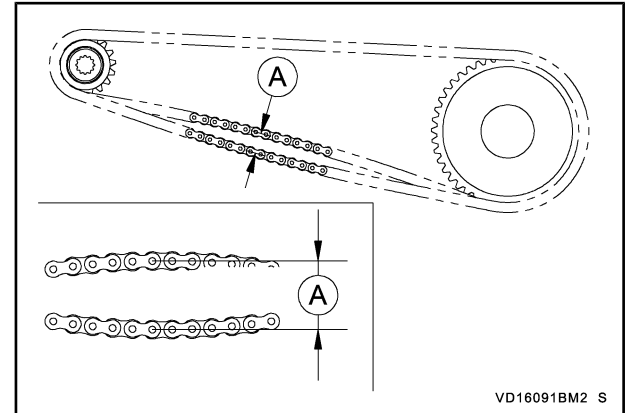
Chain Slack Inspection

- Raise the rear wheel off the ground using a suitable stand.
- Rotate the rear wheel to find the position where the chain is tightest and measure the maximum chain slack by pulling up and pushing down the chain midway between the engine sprocket and rear wheel sprocket.

Drive Chain Slack

Standard	30 – 40 mm (1.2 – 1.6 in.)
----------	----------------------------

- Adjust the drive chain if its slack is out of specification.



A. Chain Slack

- In addition to checking the slack, rotate the rear wheel to inspect the drive chain for damaged rollers, loose pins and links and the sprockets for unevenly or excessively worn and damaged teeth.
- If there are any such defects, replace the drive chain and/or the sprockets.

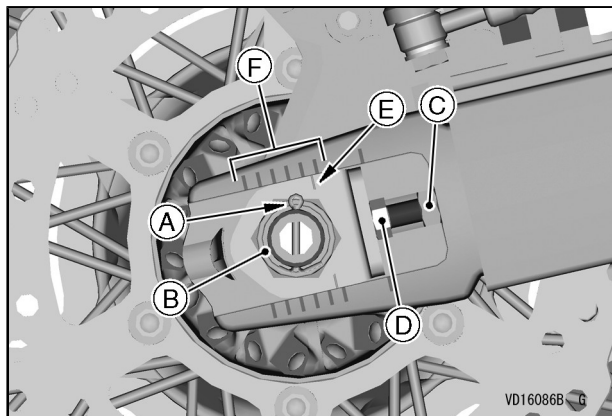
Chain Slack Adjustment

- Remove the cotter pin from the rear axle.
- Loosen the rear axle nut and both chain adjuster locknuts.
- Turn both chain adjusting bolts evenly until obtain the standard chain slack. To keep the chain and wheel properly aligned, the notch on the indicator plate should aligned with same scale reading on both sides.

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Drive Chain Slack

30 – 40 mm (1.2 – 1.6 in.)



- A. Cotter Pin
- B. Axle Nut
- C. Locknut
- D. Adjusting Bolt
- E. Notch
- F. Scale Mark

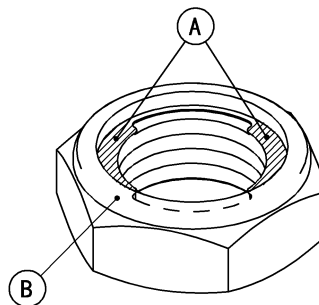
NOTE

- *Wheel alignment can also be checked using the straightedge or string method.*

WARNING

Misalignment of the wheel will result in abnormal wear, and may result in an unsafe riding condition. Align the rear wheel using the marks on the swingarm or measuring the distance between the center of the axle and swingarm pivot.

- Visually inspect the rear axle nut for deformation or damage at the friction ring and caulking. If it is deformed or damaged, replace the axle nut with a new one.



- A. Friction Ring
- B. Caulking

- Tighten both chain adjuster locknuts.

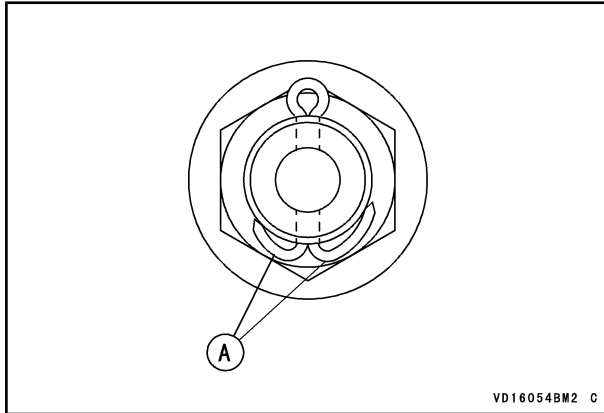
- Hold the axle so that its hole for the cotter pin faced vertically and tighten the rear axle nut to the specified torque.

Tightening Torque

Rear Axle Nut:

110 N·m (11.2 kgf·m, 81 ft·lb)

- Rotate the wheel, measure the chain slack again at the tightest position, and readjust it if necessary.
- Insert new cotter pin through the axle from top and spread its ends.



A. Cotter Pin



WARNING

A loose axle nut can lead to an accident resulting in serious injury or death. Tighten the axle nut to the proper torque and install a new cotter pin.

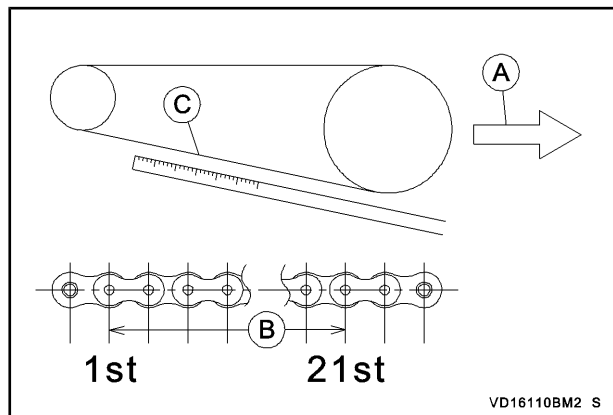
- Check the rear brake effect.

Chain Wear Inspection

When the chain has reached its wear limit (i.e., when it has stretched by 0.5% of its original length), it is no longer safe for use and should be replaced. Since it is impractical to measure the entire length of the chain, determine the degree of wear by measuring a 20-link section of the chain.

- The drive chain may wear unevenly, so check the chain slack by changing the position, and position the loosest part of the drive chain lower side.
- Loosen the rear axle shaft, and pull the rear wheel rearward to stretch the drive chain steady.
- Measure the length of 20-link on the straight part of the lower side of chain from the pin center of the 1st pin to the pin center of the 21st pin. If the length exceeds the service limit, the chain should be replaced. Since worn sprockets will cause a new chain to wear faster, inspect both the engine and rear sprockets whenever the chain is replaced, and replace them if necessary.

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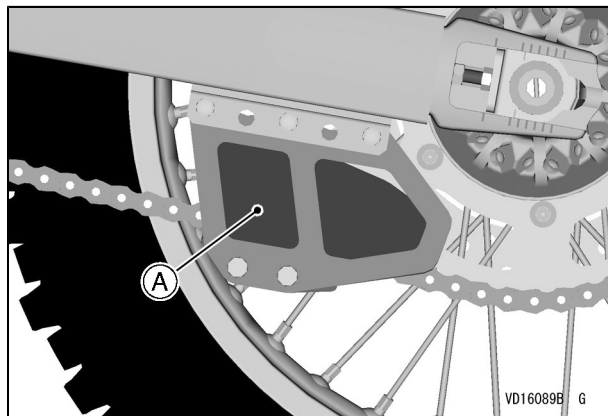
- A. Pull
- B. 20-Link Length
- C. Straight Part

Drive Chain 20-Link Length

Standard length	317.5 – 318.2 mm (12.50 – 12.53 in.)
Wear limit	319 mm (12.6 in.)

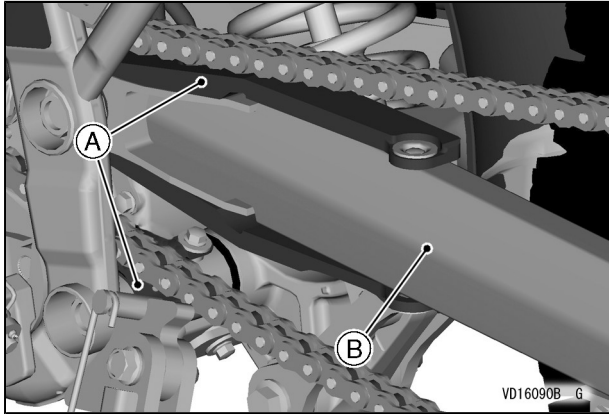
Chain Guide and Slipper Wear Inspection

- Visually inspect the drive chain guide and replace it if excessively worn or damaged.



A. Chain Guide

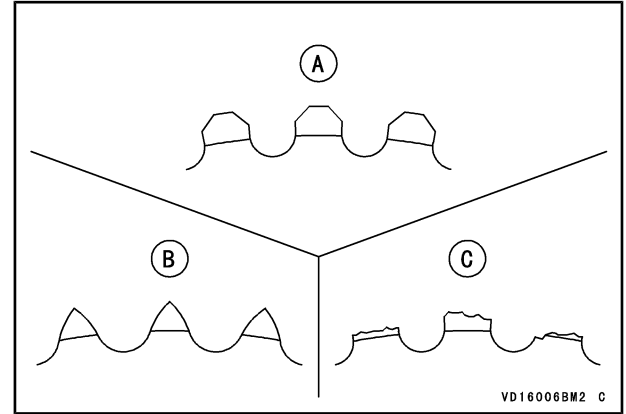
- Visually inspect the chain slippers on the swing-arm and replace them if worn or damaged.



A. Chain Slippers
B. Swingarm

Sprocket Wear Inspection

- Visually inspect the sprocket teeth and replace the sprocket if its teeth are worn or damaged.



A. Good Teeth
B. Worn Teeth
C. Damaged Teeth

NOTE

- Sprocket wear is exaggerated in the illustration.*

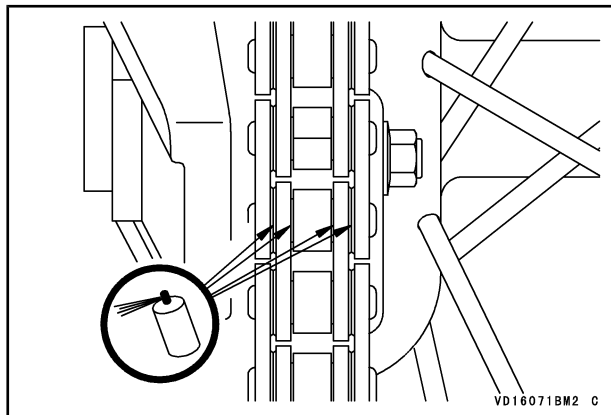
Chain Lubrication

Lubrication is necessary after riding through rain or on wet roads, or any time that the chain appears dry.

Use a lubricant for sealed chains to prevent deterioration of chain seals. If the chain is especially dirty, clean it using a cleaner for sealed chains following the instructions supplied by the chain cleaner manufacturer.

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- Apply lubricant to the sides of the rollers so that it will penetrate to the rollers and bushings. Apply lubricant to the seals so that the seals will be coated with lubricant.



- Wipe off any excess lubricant.

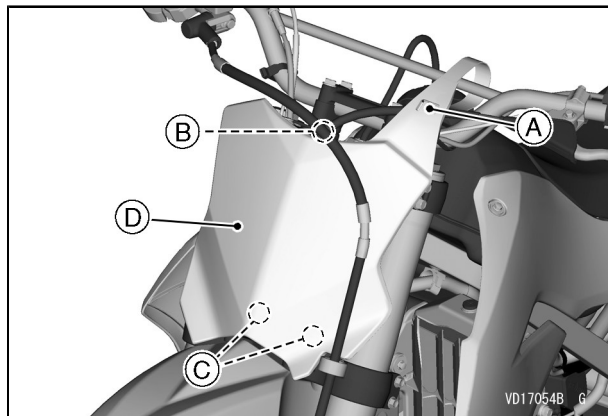
Adjustable Ergonomic

To suit various riding positions, the handlebar holder position can be changed and the handlebar can be adjusted by turning the handlebar holders around (180°).

Handlebar Position Adjustment

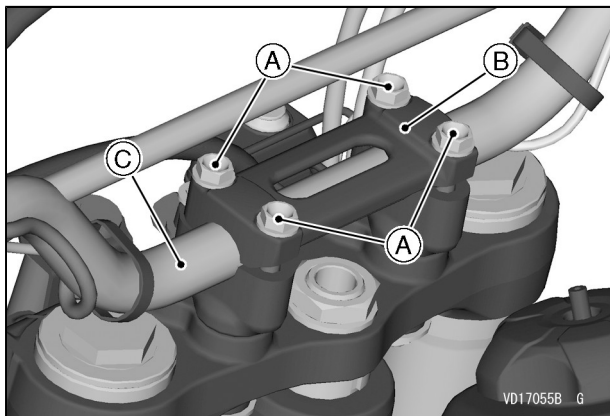
- Unlock the clamp of the number plate.
- Remove the number plate mounting bolt.

- Pull up the number plate to clear the projections and remove the number plate.



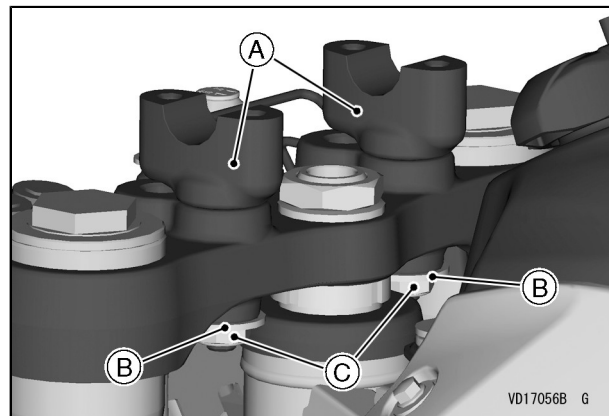
- A. Clamp**
- B. Bolt**
- C. Projections**
- D. Number Plate**

- Remove the handlebar clamp bolts and clamp.
- Check the handlebar for damage or cracks.
- Pull up the handlebar assembly and move it aside.



- A. Handlebar Clamp Bolts**
- B. Handlebar Clamp**
- C. Handlebars**

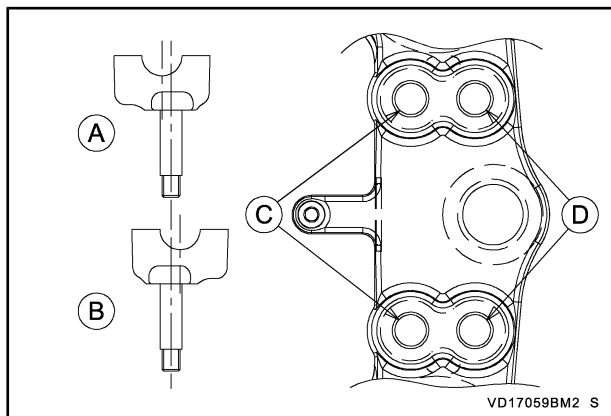
- Remove the handlebar holder nuts, washers and handlebar holders.



- A. Handlebar Holders**
- B. Washer**
- C. Handlebar Holder Nuts**

- Select the handlebar position to suit the rider's preference.

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Handlebar Holder		Handlebar Position
Direction	Position	
A	C	Far
B	C	↑
A*	D*	↓
B	D	Near

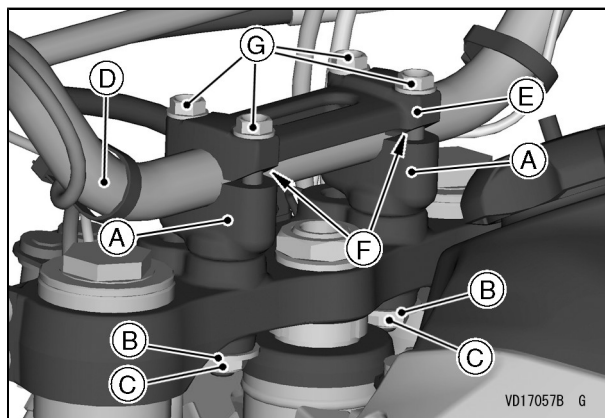
*: Standard position in combination

- Install the handlebar holders into the steering stem head with properly settings.
- Replace the handlebar holder nuts with new ones.
- Install the washers and the handlebar holder nuts loosely.
- Put the handlebar on the handlebar holders.

- Install the handlebar clamp with its chamfer side facing rear.
- Hand tighten the handlebar clamp bolts.
- Tighten the handlebar holder nuts to the specified torque.

Tightening Torque

Handlebar Holder Nuts:
34 N·m (3.5 kgf·m, 25 ft·lb)

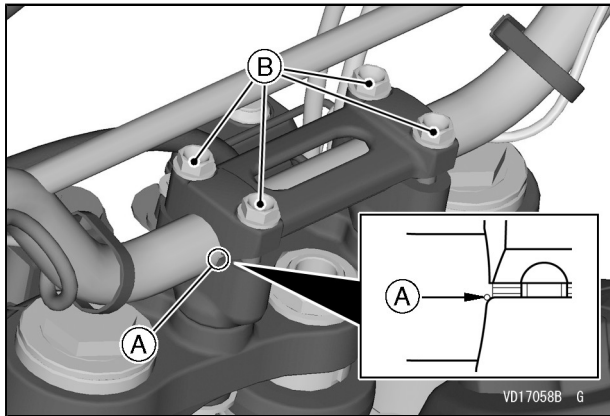


- A. Handlebar Holders**
- B. Washers**
- C. Handlebar Holder Nuts**
- D. Handlebar**
- E. Handlebar Clamp**
- F. Chamfers**
- G. Handlebar Clamp Bolts**

- Position the handlebar so that its punch mark with the edge of the left handlebar holder as shown.
- Tighten the front handlebar clamp bolts first then the rear ones with the specified torque.

Tightening Torque

Handlebar Clamp Bolts:
25 N·m (2.5 kgf·m, 18 ft·lb)



A. Punch Mark
B. Handlebar Clamp Bolts

- Check the front brake for the proper brake effect, or no brake drag.
- Reinstall the removed parts.

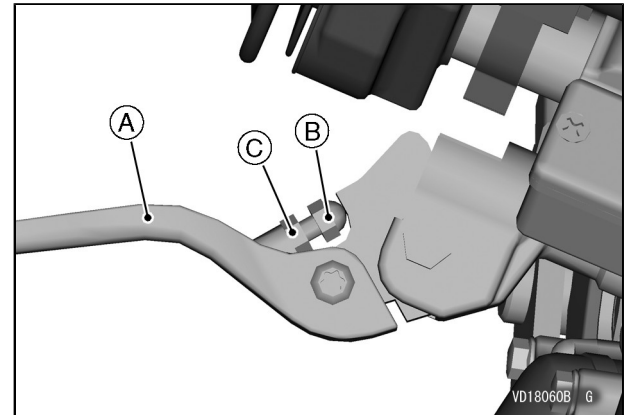
Brakes

Disc and disc pad wear is automatically compensated for and has no effect on the brake lever or pedal action. There are no parts on the brakes that require adjustment except brake lever position.

Brake Lever Position Adjustment

The brake lever position can be adjusted to suit the rider's preference.

- To adjust the brake lever position and loosen the locknut, then turn the adjuster to either side with a wrench.
- After adjustment, tighten the locknut securely.



A. Brake Lever
B. Adjuster
C. Locknut

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- Test the braking power and check that there is no brake drag.



WARNING

Air in the brake lines diminish braking performance and can cause an accident resulting in injury or death. If the brake lever or pedal feels mushy when it is applied, there might be air in the brake lines or the brake may be defective. Have the brake checked immediately by an authorized Kawasaki dealer.

Disc Brake Fluid

Inspect the brake fluid level in the front and rear brake reservoirs and change the brake fluid in accordance with the Periodic Maintenance Chart. The brake fluid should also be changed when contaminated with dirt or water.

Use only heavy-duty brake fluid as follows.

Front/Rear Brake Fluid : DOT 3 or DOT 4

NOTE

- *The motorcycle is shipped with brake fluid DOT4 in the brake system.*

NOTICE

Brake fluid quickly damages painted surfaces; any spilled fluid should be completely washed out or wiped up immediately.

Do not use fluid from a container that has been left open or that has been unsealed for a long time.

Check for fluid leakage around the brake system fittings.

Check for brake hose damage.

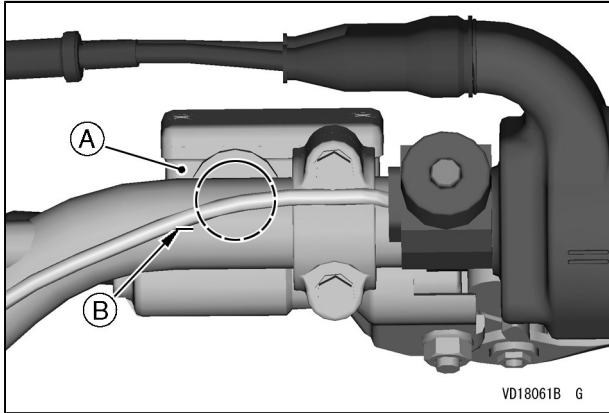


WARNING

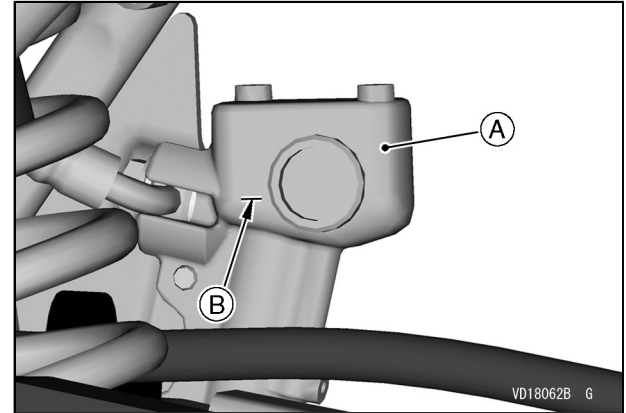
Clean filler cap before removing. Use only DOT4 or DOT3 fluid from a sealed container.

Brake Fluid Level Inspection (Front and Rear Brake Reservoirs)

With the front or rear brake reservoir positioned horizontally, the brake fluid must always be above the lower level line.



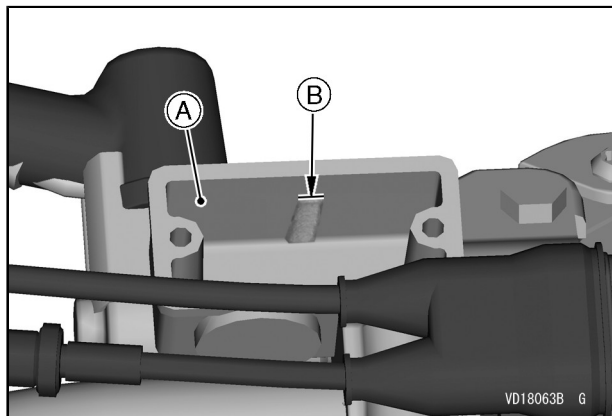
A. Front Brake Reservoir
B. Lower Level Line



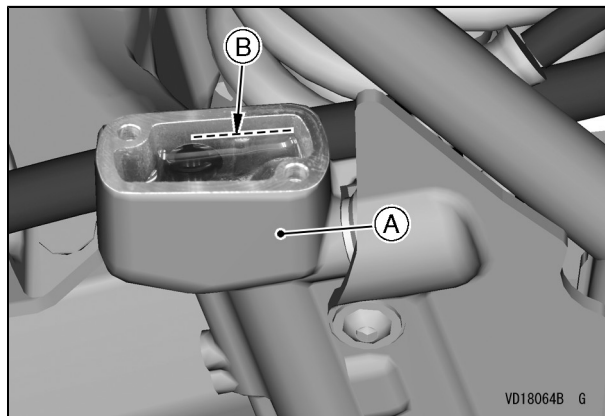
A. Rear Brake Reservoir
B. Lower Level Line

- If the brake fluid in the front or rear brake reservoir is below the lower level line, check for fluid leaks in the brake line and fill the reservoir to the upper level line. (The step inside the front and rear brake reservoirs indicate the upper level.)

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A. Front Brake Reservoir
B. Upper Level Line



A. Rear Brake Reservoir
B. Upper Level Line

WARNING

Mixing brands and types of brake fluid can reduce the brake system's effectiveness and cause an accident resulting in injury or death. Do not mix two brands of brake fluid. Change the brake fluid in the brake line completely if the brake fluid must be refilled but the type and brand of the brake fluid that is already in the reservoir are unidentified.

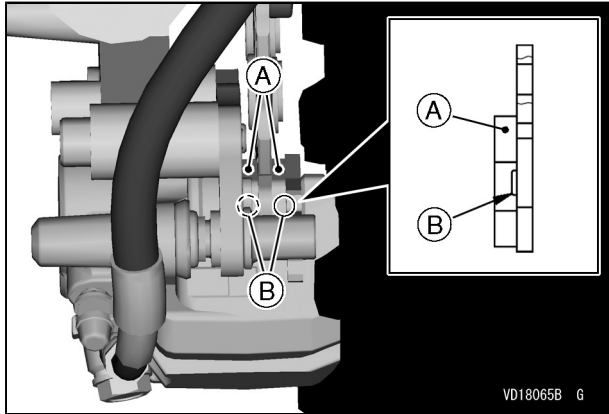
Brake Pad Wear Inspection

For each front and rear disc brake caliper, inspect the brake pads for wear after cleaning around the

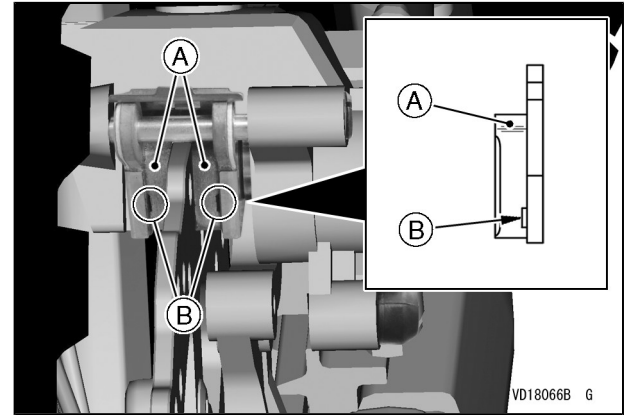
brake calipers thoroughly. If either brake pad has been worn until the wear indicator (recess on the pad end), the remaining brake pad lining thickness is 1 mm (0.04 in.) or less, so both pads in the caliper should be replaced as a set. Pad replacement should be done by an authorized Kawasaki dealer.

Lining Thickness Service Limit

Front/Rear	1.0 mm (0.04 in.)
------------	-------------------



A. Front Brake Pads
B. Wear Indicator (Recess)



A. Rear Brake Pads
B. Wear Indicator (Recess)

Steering

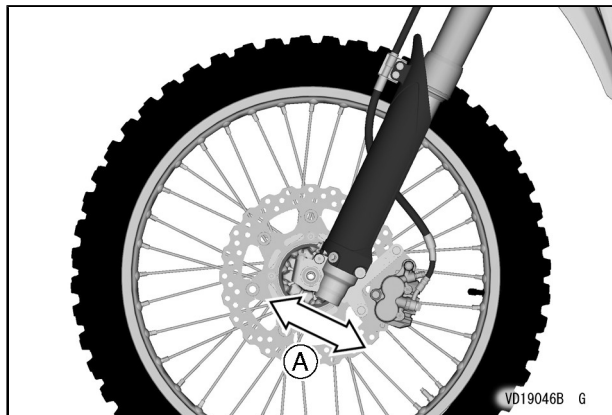
The steering should always be kept adjusted so that the handlebar will turn freely but not have excessive play.

Steering Inspection

- To check the steering adjustment, raise the front wheel off the ground using a suitable stand.
- Push the handlebar lightly to either side. If the handlebar continues moving under its own momentum, the steering is not too tight.

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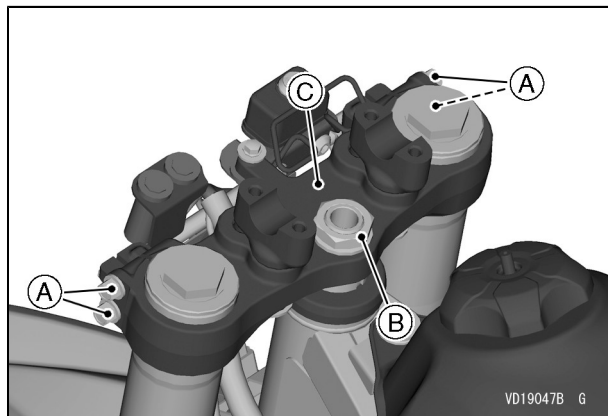
- Squatting in front of the motorcycle, grasp the lower ends of the front fork at the axle, and push and pull the front fork back and forth as shown. If play is felt, the steering is too loose and needs to be adjusted.



A. Push and Pull

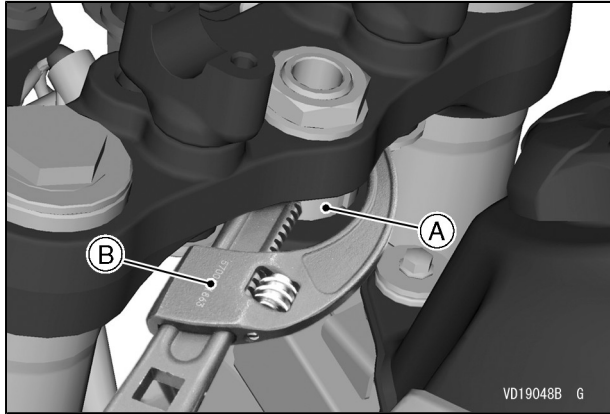
Steering Adjustment

- Raise the front wheel off the ground using a suitable stand.
- Remove the handlebar ([see page 68](#)).
- Loosen the left and right front fork clamp bolts (upper).
- Loosen the steering stem head nut, and raise the steering stem head.



- A. Front Fork Clamp Bolts (Upper)**
- B. Steering Stem Head Nut**
- C. Steering Stem Head**

- Turn the steering stem nut with a stem nut wrench (Special Tool: 57001-1100 or 57001-1863) to obtain the proper adjustment.



A. Steering Stem Nut

B. Stem Nut Wrench (Special Tool: 57001-1100 or 57001-1863)

- Install the steering stem head to the original position.
- Apply the specified torques to the steering stem head nut and front fork clamp bolts (upper).

Tightening Torque

Steering Stem Head Nut:

44 N·m (4.5 kgf·m, 32 ft·lb)

Front Fork Clamp Bolt (Upper):

20 N·m (2.0 kgf·m, 15 ft·lb)

NOTE

- *Tighten the two clamp bolts alternately two times to ensure even tightening torque.*

- Install the handlebar ([see page 68](#)), and apply the specified torque, check the steering again and readjust it if necessary.
- Check the front brake for the proper brake effect, or no brake drag.

Front Suspension

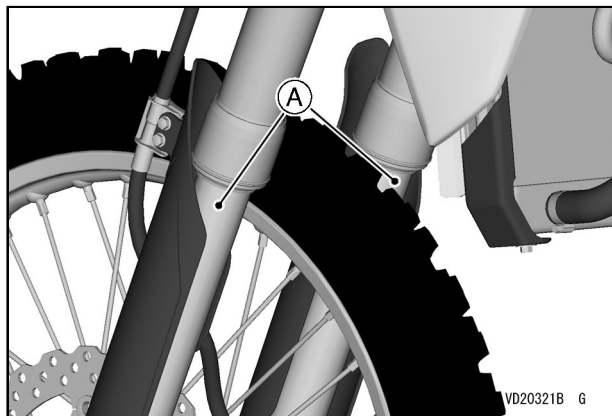
Front Fork Inspection

NOTICE

Sticking muds or dusts on the sliding surface of the front fork could damage the oil seal, leading to an oil leak. Clean the sliding surface after each ride.

- Squeezing the brake lever, pump the front fork up and down manually to check for smooth operation.
- Visually inspect the front fork for oil leakage, scoring or scratches on the outer surface of the inner tube.
- If necessary, repair or replace by an authorized Kawasaki dealer.

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A. Inner Tube

NOTICE

If the inner tube is badly bent or creased, replace it. Excessive bending, followed by subsequent straitening, can weaken the inner tube.

Front Fork Adjustment

The front fork has the compression damping adjuster which can be made to tune the front suspension to the rider's weight and the condition of the track.

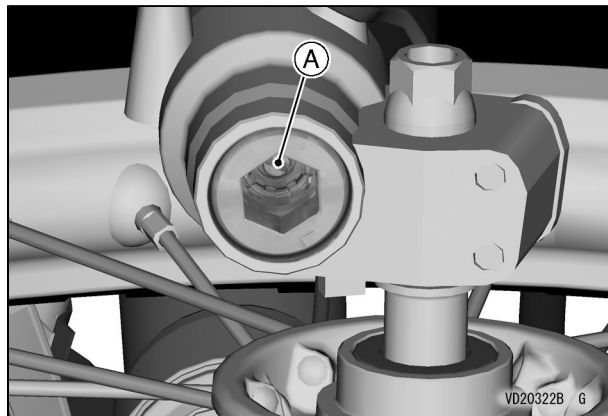
Compression Damping Adjustment

- Clean the bottom of the fork tubes.

- To adjust the compression damping, turn the adjuster on the front fork cylinder valves with a flat tip screwdriver. Adjust the compression damping to suit your preference under certain conditions.

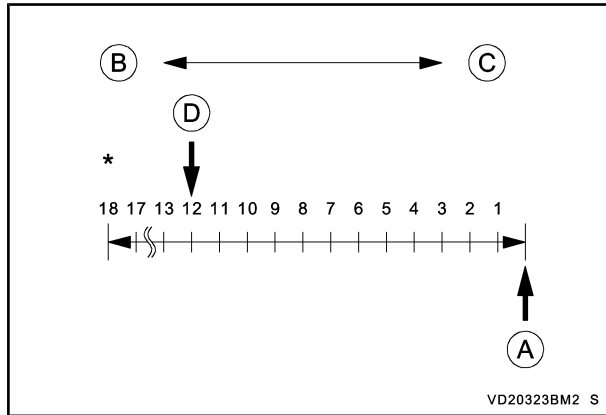
NOTICE

Do not force the compression damping adjuster beyond the fully seated position, or the adjusting mechanism may be damaged.



A. Compression Damping Adjuster

Compression Damping Adjuster Settings



- A. Seated Position (Adjuster Turned Fully Clockwise)**
- B. Softer (Counterclockwise)**
- C. Harder (Clockwise)**
- D. Standard Setting**

*: Number of turns counterclockwise usable range-18 clicks or less. Although you can turn the adjuster beyond the adjustable range, effecting no changes to damping force, use it within the adjustable range.

Standard Compression Damping Adjuster Setting

12 clicks *

* Counterclockwise from the fully seated position

Rear Suspension

Rear Shock Absorber Inspection

NOTICE

Sticking muds or dusts on the sliding surface of the rear shock absorber could damage the oil seal, leading to an oil leak. Clean the sliding surface after each ride.

- Pump the seat down and up by 4 or 5 times, and inspect the smooth stroke.
- If it does not smoothly or noise is found, inspect the oil leak and rear shock absorber mounting.
- Visually inspect the rear shock absorber for oil leakage.
- If necessary, replace by an authorized Kawasaki dealer.

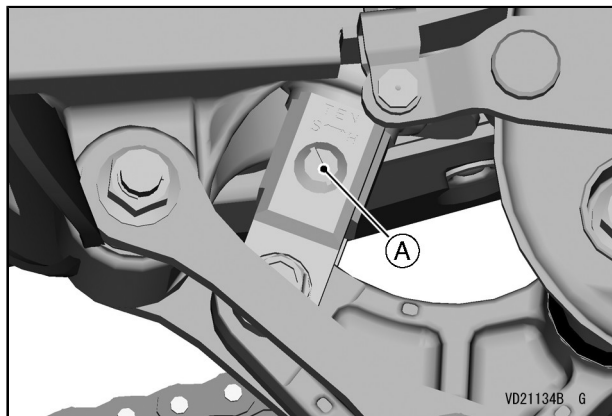
Rear Shock Absorber Adjustment

Any of the following shock absorber adjustments can be made to tune the rear suspension to the rider's weight and the condition of the track.

Rebound Damping Adjustment

To adjust the rear shock absorber rebound damping, turn the rebound damping adjuster at the bottom of the rear shock absorber with a flat tip screwdriver.

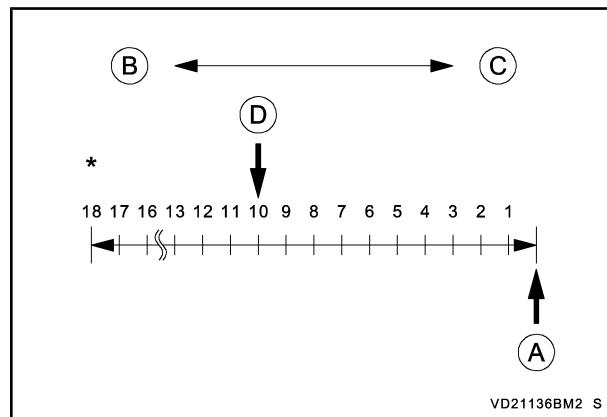
80 MAINTENANCE AND ADJUSTMENT



A. Rebound Damping Adjuster

If the damping feels too soft or too stiff, adjust it in accordance with the following table.

Rebound Damping Adjuster Settings



A. Seated Position (Adjuster Turned Fully Clockwise)

B. Softer (Counterclockwise)

C. Harder (Clockwise)

D. Standard Setting

*: Number of turns counterclockwise usable range 18 clicks or less. Although you can turn the adjuster beyond the adjustable range, effecting no changes to damping force, use it within the adjustable range.

Standard Rebound Damping Adjuster Setting

10 clicks*

*: Counterclockwise from the fully seated position

NOTICE

Do not force the rebound damping force adjuster beyond the fully seated position, or the adjusting mechanism may be damaged.

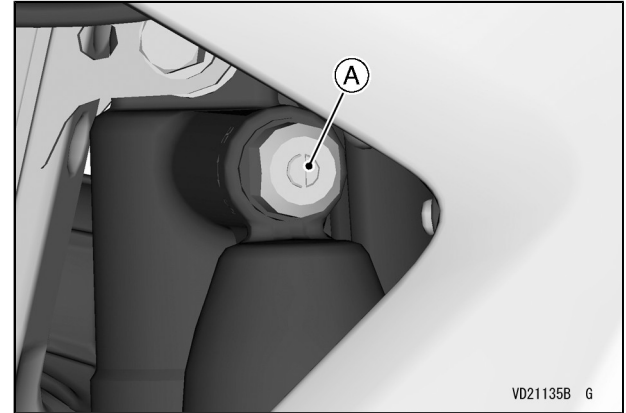
NOTE

- Adjustment of the rebound damping adjuster for the rear suspension will slightly affect the compression damping force. Always make any damping adjustments in small steps and test their effects before using them in competition.

Compression Damping Adjustment (Gas Reservoir)

There are two adjustments you can make to the rear shock absorber gas reservoir.

To adjust the compression damping, turn the compression damping adjuster with a flat tip screwdriver.

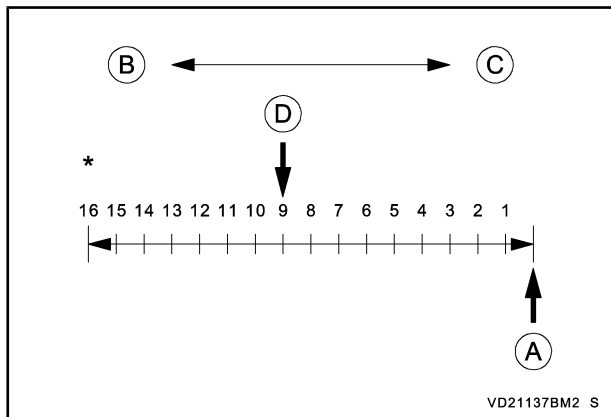


A. Compression Damping Adjuster

If the damping feels too soft or too stiff, adjust it in accordance with the following table.

82 MAINTENANCE AND ADJUSTMENT

Compression Damping Adjuster Settings



- A. Seated Position (Adjuster Turned Fully Clockwise)**
- B. Softer (Counterclockwise)**
- C. Harder (Clockwise)**
- D. Standard Setting**

*: Number of turns counterclockwise usable range 16 clicks or less. Although you can turn the adjuster beyond the adjustable range, effecting no changes to damping force, use it within the adjustable range.

Standard Compression Damping Adjuster Setting

9 clicks*

*: Counterclockwise from the fully seated position

NOTICE

Do not force the compression damping force adjuster beyond the fully seated position, or the adjusting mechanism may be damaged.

NOTE

- *Adjustment of the compression damping adjuster for the rear suspension will slightly affect the rebound damping force. Always make any damping adjustments in small steps and test their effects before using them in competition.*

Spring Preload Adjustment

The rear shock absorber can be adjusted by changing the spring preload for various riding and loading conditions. If the spring action feels too soft or too stiff, have it adjusted by an authorized Kawasaki dealer.

Wheels

Tire Air Pressure

Tire air pressure affects traction, handling, and tire life. Adjust the tire air pressure to suit track conditions and rider preference, but keep it close within the recommended range.

- To check the tire air pressure, remove the air valve cap, and make sure to tighten the cap securely after checking the tire pressure.

- Reduce the tire air pressure to increase the tire tread surface on the ground when riding on a wet, muddy, sandy or slippery track.
- Increase the tire air pressure to prevent damage or punctures (though the tires will skid more easily) when riding on a pebbly or hard track.

Tire Air Pressure Adjustable Range

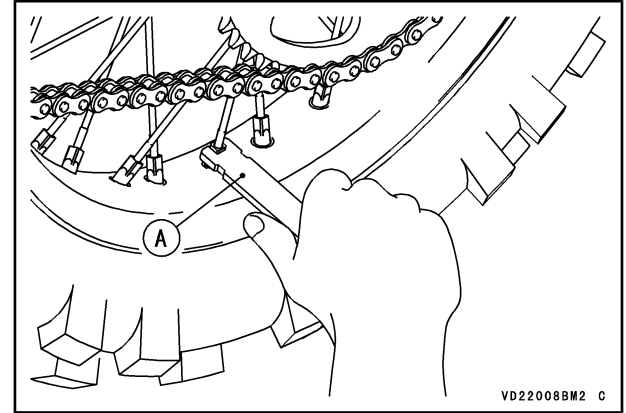
80 – 100 kPa (0.8 – 1.0 kgf/cm², 12 – 14 psi)

NOTE

- *Tire air pressure should be checked when the tires are cold, before you ride the motorcycle.*

Spokes and Rims

The spokes on both wheels must all be securely and evenly tightened and not be allowed to loosen. Unevenly tightened or loose spokes will cause the rim to warp, the nipples and spokes to fatigue more quickly, and the spokes to break.

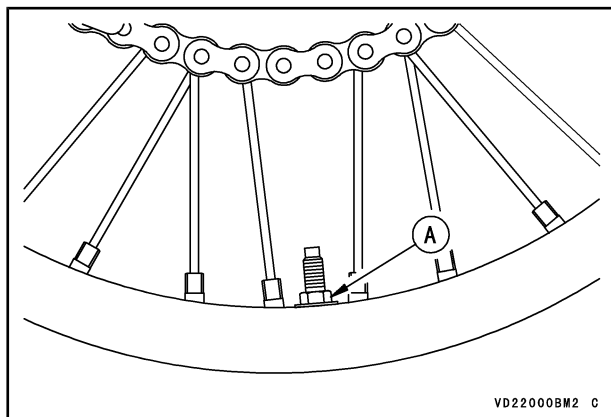


A. Spoke Wrench

Bead Protector

There is a bead protector nut on the both wheels. The bead protector nut prevents the tire and tube from slipping on the rim and damaging the valve stem. Valve stem damage may cause the tube to leak, necessitating tube replacement. In order to keep the tire and tube in position on the rim, inspect the bead protector nut before riding and tighten it if necessary. Tighten the valve stem nut finger tight only.

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A. Bead Protector Nut

Rim Runout

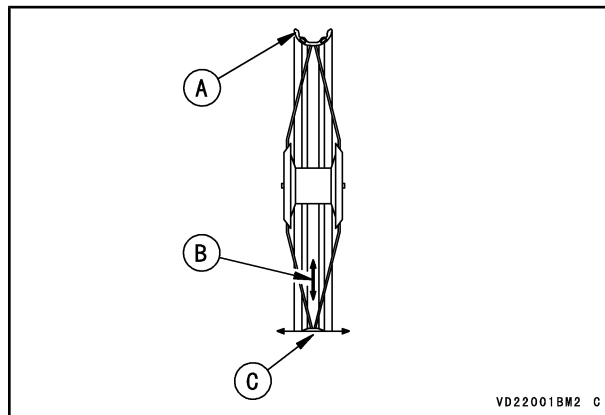
Set up a dial gauge on the side of the rim and rotate the wheel to measure its axial runout. The difference between the highest and lowest readings is the amount of runout.

- Set up the dial gauge on the inner circumference of the rim and rotate the wheel to measure its radial runout. The difference between the highest and lowest readings is the amount of runout.
- A certain amount of rim warpage (runout) can be corrected by recentering the rim, that is, by loosening some spokes and tightening other to change the position of certain portions of the rim. If the rim is badly bent, however, it should be replaced.

NOTE

- The welding spot of the rim may show excessive runout. Disregard this when measuring rim runout.

Rim Runout

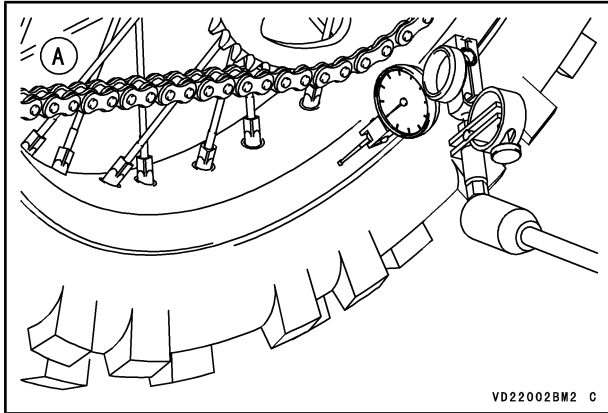


- A. Rim**
B. Radial Runout
C. Axial Runout

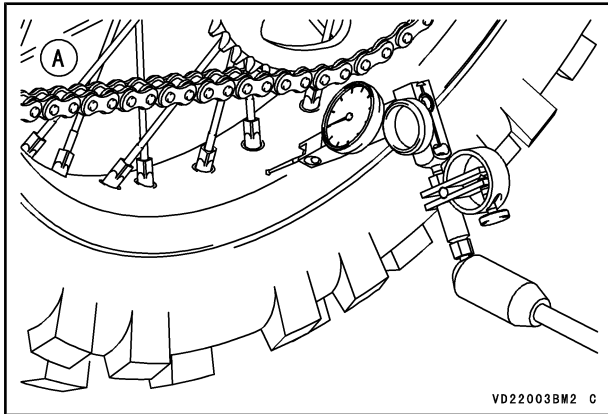
Rim Runout Maximum Limit

Axial	*TIR 2.0 mm (0.08 in.)
Radial	

*: Total Indicator Reading



A. Axial Rim Runout Measurement

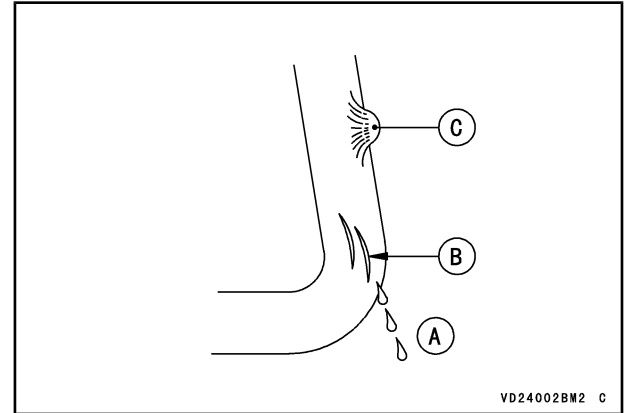


A. Radial Rim Runout Measurement

Hoses Inspection

Check the brake and fuel hoses for cracks or deterioration, and the connections for looseness in accordance with the Periodic Maintenance Chart.

- Inspect the brake hose and fittings for deterioration, cracks and signs of leakage by bending or twisting the hoses.
- If damaged, replace the hoses.



- A. Leak**
- B. Cracks**
- C. Bulges**

- Check the hose are securely connected and clamps are tightened correctly.

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Battery

The battery installed in this motorcycle is a sealed type, so it is not necessary to check the battery electrolyte level or add distilled water.

However, in order to maximize battery life and ensure that it will provide the power needed to start the motorcycle you must properly maintain the battery's charge. When used regularly, the charging system in the motorcycle helps keep the battery fully charged. If your motorcycle is only used occasionally or for short periods of time, the battery is more likely to discharge.

Due to their internal composition, batteries continually self discharge. The discharge rate depends on the type of battery and ambient temperature. As temperatures rise, so does the discharge rate.

Electrical accessories, such as digital clocks and computer memory, also draw current from the battery even when the engine stops. Combine such "engine-stop" draws with hot temperature, and a battery can go from fully charged to completely discharged in a matter of days.

Self-discharge		
Temperature	Approx. number of days from 100% charged to 100% discharged	
	Lead-Antimony Battery	Lead-Calcium Battery
40°C (104°F)	100 Days	300 Days
25°C (77°F)	200 Days	600 Days
0°C (32°F)	550 Days	950 Days

Current Drain		
Discharging Ampere	Days from 100% charged to 50% discharged	Days from 100% charged to 100% discharged
7 mA	60 Days	119 Days
10 mA	42 Days	83 Days
15 mA	28 Days	56 Days
20 mA	21 Days	42 Days
30 mA	14 Days	28 Days

In extremely cold weather the fluid in an inadequately charged battery can easily freeze, which can crack the case and buckle the plates. A fully charged battery can withstand sub-freezing temperatures with no damage.

Battery Sulfation

A common cause of battery failure is sulfation.

Sulfation occurs when the battery is left in a discharged condition for an extended time. Sulfate is a normal by product of the chemical reactions within a battery. But when continuous discharge allows the sulfate to crystallize in the cells, the battery plates become permanently damaged and will not hold a charge. Battery failure due to sulfation is not warrantable.

Battery Maintenance

It is the owner's responsibility to keep the battery fully charged. Failure to do so can lead to battery failure and leave you stranded.

If you are riding your vehicle infrequently, inspect the battery voltage weekly using a voltmeter. If it drops below 12.6 volts, the battery should be charged using an appropriate charger (check with your Kawasaki dealer). If you will not be using the motorcycle for longer than two weeks, the battery should be charged using an appropriate charger. Do not use an automotive-type quick charger that may overcharge the battery and damage it.

NOTE

- *Leaving the battery connected causes the electrical components to make the battery discharged, resulting the over discharge of the battery. In this case, the repair or replacement of the battery is not included in the warranty. If you do not drive for four weeks or more, disconnect the battery from the vehicle.*

Kawasaki-recommended chargers are:

- Battery Mate 150-9
- OptiMate 4
- Yuasa MB-2040/206
- Christie C10122S

If the above chargers are not available, use equivalent one.

For more details, ask your Kawasaki dealer.

Battery Charging

- Remove the battery from the motorcycle (see page 88).
- Attach the leads from the charger and charge the battery at a rate (amperage × hours) that is indicated on the battery. If it is not possible to read the rate, charge the battery at an amperage that is about 1/10th of the battery capacity.
- The charger will keep the battery fully charged until you are ready to reinstall the battery in the motorcycle (see page 89).

NOTICE

Do not install a conventional battery in this motorcycle, or the electrical system cannot work properly.

Make	Siam Furukawa
Type	FTZ6V

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NOTE

- If you charge the sealed battery, never fail to observe the instructions shown in the label on the battery.

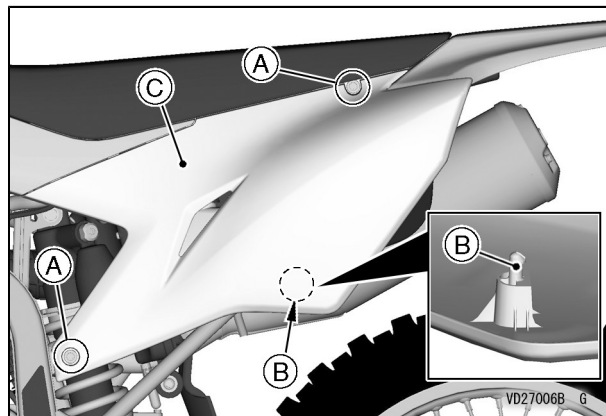


WARNING

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Battery Removal

- Remove the bolts and washers.
- Pull the left side cover outward to clear the projections.

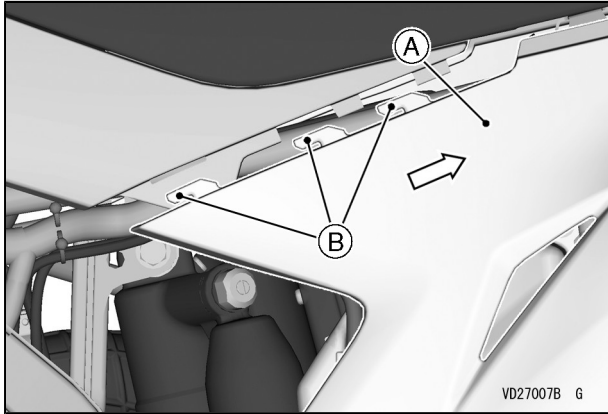


A. Bolts and Washers

B. Projection

C. Left Side Cover

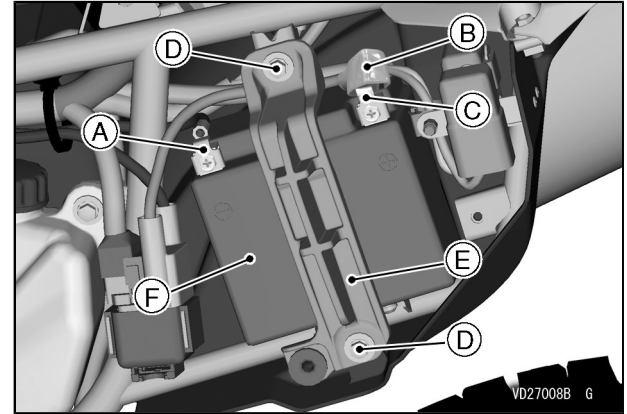
- Pull the left side cover backward to clear the hooks and remove the left side cover.



A. Left Side Cover

B. Hooks

- Disconnect the negative (–) cable from the (–) terminal.
- Slide the red cap from the positive (+) terminal.
- Disconnect the positive (+) cable from the (+) terminal.
- Remove the bolts and battery holder.



A. (–) Terminal

B. Red Cap

C. (+) Terminal

D. Bolts

E. Battery Holder

F. Battery

- Remove the battery from the case.
- Clean the battery using a solution of baking soda and water. Be sure that the cable connections are clean.

Battery Installation

- Place the battery in the battery case.
- Install the battery holder and bolts.
- Connect the positive (+) cable to the (+) terminal, and then connect the negative (–) cable to the (–) terminal.

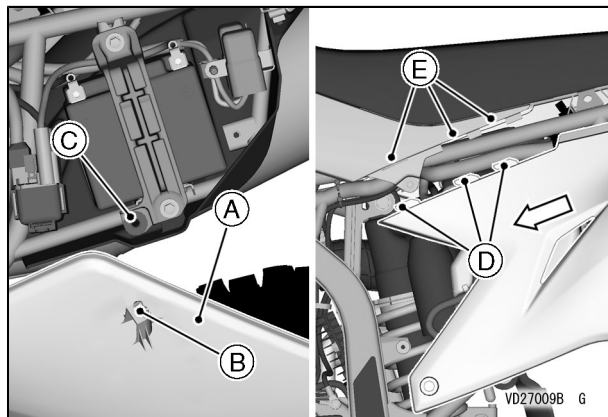
90 MAINTENANCE AND ADJUSTMENT

NOTICE

Connecting the cables to the battery with reversed polarity can seriously damage the electrical system.

NOTE

- When connecting the battery negative (–) cable, be sure to tighten the terminal bolt while pressing the battery cable terminal against the battery terminal.
- Put a light coat of grease on the terminals to prevent corrosion.
- Cover the positive (+) terminal with the red cap.
- Install the hooks of the left side cover to the slots of fuel tank cover.
- Insert the projections of the left side cover into the grommets.



- A. Left Side Cover
- B. Projections
- C. Grommets
- D. Hooks
- E. Slots

- Tighten the bolts with washers.

Electrical Accessory Connectors

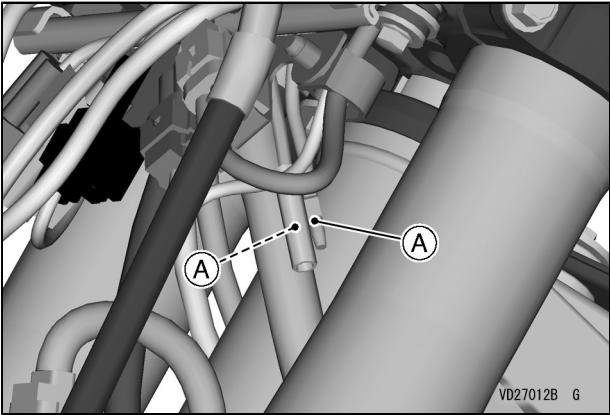
The electric power of the battery can be used through the electrical accessory connectors.

NOTE

- Some models require a relay to use the electrical accessory connectors.
- The electrical accessory connection to the connectors should be done by an authorized Kawasaki dealer.

Accessory Connectors

Location	Purpose	Polarity	Wire Color
Back of Number Plate	Accessory Parts	(+)	White/Black
		(-)	Black/Yellow
Maximum Current: 7 A			



A. Accessory Connectors (Taped to the Harness)

NOTICE

This accessory circuit has 15 A fuse for the accessory connectors. Always install a fuse 15 A or less for the circuit. Do not connect more than 85 W of load to this accessory circuit or the battery may become discharge, even with the engine running.

Fuse

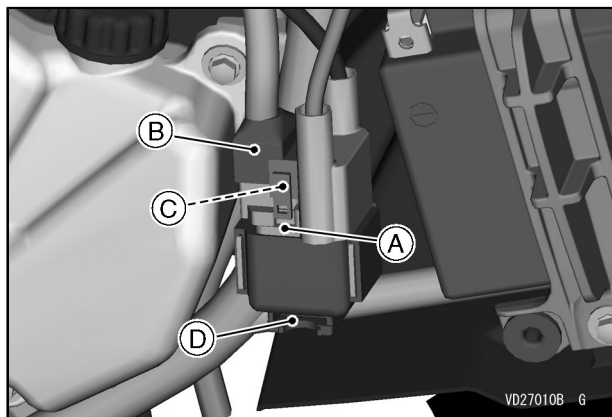


Substituting fuses can cause wiring to over-heat, catch fire and/or fail. Do not use any substitute for the standard fuse. Replace the blown fuse with a new one of the correct capacity, as specified on the fuse box and main fuse.

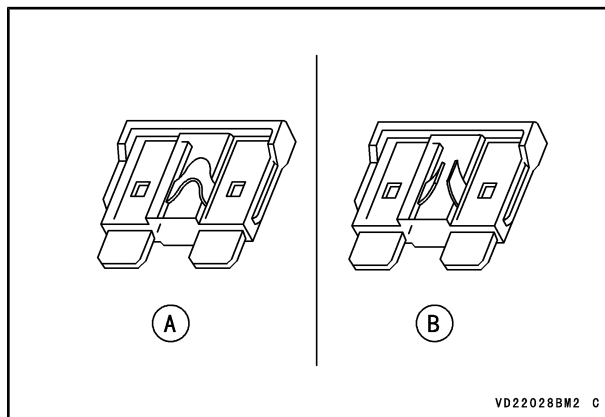
Main Fuse

The main fuse is placed in the starter relay behind the left side cover. To access the main fuse, disconnect the negative (-) cable from the battery terminal to prevent electrical short, then disconnect the connector from the starter relay. If a fuse blows during operation, inspect the electrical system to determine the cause, and then replace it with a new fuse of proper amperage.

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- A. Fuse Box
- B. Connector
- C. Main Fuse
- D. Spare Fuse



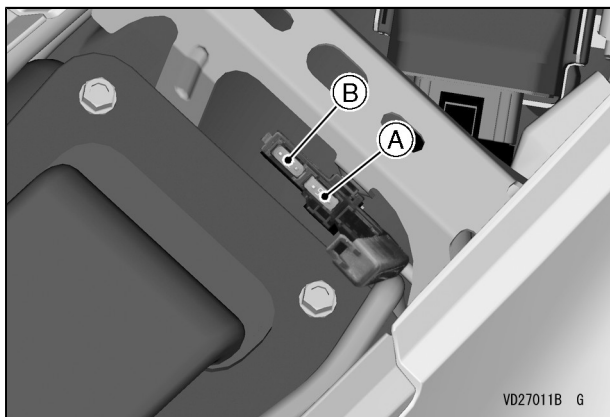
- A. Normal
- B. Failed

Accessory Fuse

Fuse for an electrical accessory is arranged in the fuse box located under the seat. If the fuse blows during operation, inspect the electrical system to determine the cause, and then replace it with a new fuse of proper amperage.

NOTE

- *The electrical accessory connection to the connectors should be done by an authorized Kawasaki dealer.*

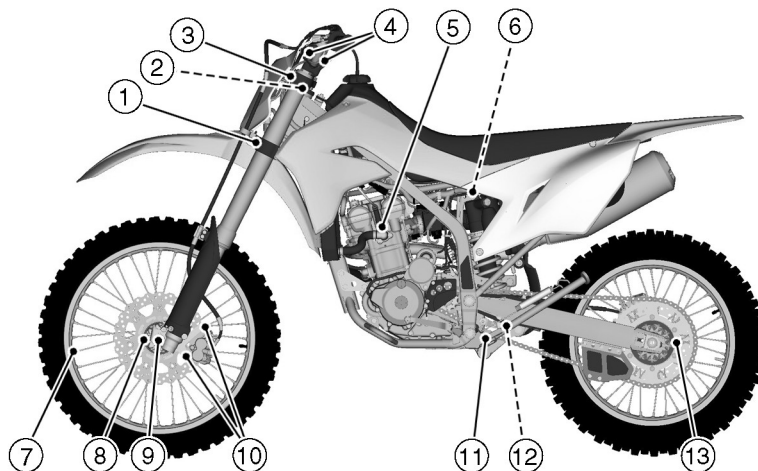


- A. Accessory Fuse**
- B. Spare Fuse**

Tightening Torques of Nuts and Bolts

Location of nuts and bolts

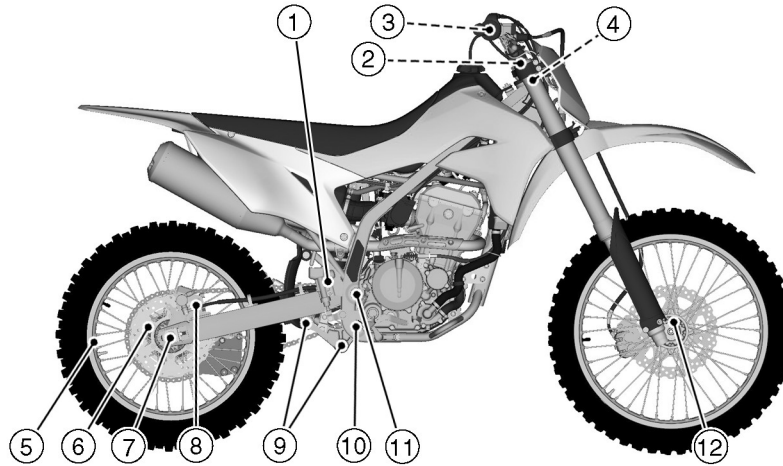
Before the first ride of each day of operation, check the tightness of the nuts and bolts shown below. Check also that all cotter pins are in place and in good condition.



VD23038B G

1. Front Fork Clamp Bolts (Lower)
2. Handlebar Holder Nuts
3. Front Fork Clamp Bolts (Upper)
4. Handlebar Clamp Bolts
5. Spark Plug
6. Rear Shock Absorber Bolt (Upper)
7. Front Wheel Spoke Nipples
8. Front Brake Disc Mounting Bolts
9. Front Axle

10. Front Caliper Mounting Bolts
11. Side Stand Bolt
12. Rear Shock Absorber Bolt (Lower)
13. Rear Sprocket Nut



VD23039B 6

1. Rear Master Cylinder Mounting Bolts
2. Steering Stem Head Nut
3. Front Master Cylinder Clamp Bolts
4. Steering Stem Nut
5. Rear Wheel Spoke Nipples
6. Rear Brake Disc Mounting Bolts
7. Rear Axle Nut
8. Rear Caliper Mounting Bolt
9. Tie-Rod Mounting Nuts
10. Rocker Arm Pivot Nut
11. Swingarm Pivot Shaft Nut
12. Front Axle Clamp Bolts

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Torque table

Tighten all nuts and bolts to the proper torque using an accurate torque wrench. An insufficiently tightened nut or bolt may become damaged or fall out, possibly resulting in damage to the motorcycle and injury to the rider. An overtightened nut or bolt may become damaged, broken, or fall out.

Part Name	N·m	kgf·m	ft·lb	Remarks
Front Fork Clamp Bolts (Lower)	20	2.0	15	AL
Handlebar Holder Nuts	34	3.5	25	R
Front Fork Clamp Bolts (Upper)	20	2.0	15	AL
Handlebar Clamp Bolts	25	2.5	18	S
Spark Plug	13	1.3	(115 in·lb)	
Rear Shock Absorber Bolt (Upper)	39	4.0	29	
Front Wheel Spoke Nipples	4.0	0.41	(35 in·lb)	
Front Brake Disc Mounting Bolts	23	2.3	17	L, S
Front Axle Nut	88	9.0	65	
Front Caliper Mounting Bolts	25	2.5	18	
Side Stand Bolt	44	4.5	32	
Rear Shock Absorber Bolt (Lower)	39	4.0	29	
Rear Sprocket Nuts	34	3.5	25	R, S
Rear Master Cylinder Mounting Bolts	7.8	0.80	(69 in·lb)	
Steering Stem Head Nut	44	4.5	32	
Front Master Cylinder Clamp Bolts	8.8	0.90	(78 in·lb)	S
Steering Stem Nut	4.9	0.50	(43 in·lb)	
Rear Wheel Spoke Nipples	4.0	0.41	(35 in·lb)	
Rear Brake Disc Mounting Bolts	23	2.3	17	L, S

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Part Name	N·m	kgf·m	ft·lb	Remarks
Rear Axle Nut	110	11.2	81	
Rear Caliper Mounting Bolt	27	2.8	20	
Tie-Rod Mounting Nuts	83	8.5	61	2T, R
Rocker Arm Pivot Nut	98	10.0	72	2T, R
Swingarm Pivot Shaft Nut	88	9.0	65	
Front Axle Clamp Bolts	20	2.0	15	AL

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

G: Apply grease.

L: Apply a non-permanent locking agent.

R: Replacement Parts

S: Follow the specified tightening sequence.

2T: Apply 2-stroke oil.

Cleaning Your Motorcycle

General Precautions

Frequent and proper care of your Kawasaki motorcycle will enhance its appearance, optimize overall performance, and extend its useful life. Covering your motorcycle with a high quality, breathable motorcycle cover will help protect its finish from harmful UV rays, pollutants, and reduce the amount of dust reaching its surfaces.



WARNING

Build-up of debris or flammable material in and around the vehicle chassis, engine, and exhaust can cause mechanical problems and increase the risk of fire.

When operating the vehicle in conditions that allow debris or flammable material to collect in and around the vehicle, inspect the engine, electrical component and exhaust areas frequently. If debris or flammable materials have collected, park the vehicle outside and stop the engine. Allow the engine to cool, then remove any collected debris. Do not park or store the vehicle in an enclosed space prior to inspecting for build-up of debris or flammable materials.

- Be sure the engine and exhaust are cool before washing.

- Avoid applying degreaser to seals, brake pads, and tires.
- Avoid all harsh chemicals, solvents, detergents, and household cleaning products such as ammonia-based window cleaners.
- Gasoline, brake fluid, and coolant will damage the finish of painted and plastic surfaces: wash them off immediately.
- Avoid wire brushes, steel wool, and all other abrasive pads or brushes.
- Use care when washing the plastic parts as they can easily be scratched.
- Avoid using pressure washers; water can penetrate seals and electrical components and damage your motorcycle.
- Avoid spraying water in delicate areas such as in air intakes, throttle body assy, brake components, electrical components, muffler outlets, and fuel tank openings.

Washing Your Motorcycle

NOTICE

Do not use a high-pressure stream of water.

- Rinse your bike with cold water from a garden hose to remove any loose dirt.

- Mix a mild neutral detergent (designed for motorcycles or automobiles) and water in bucket. Use a soft cloth or sponge to wash your motorcycle. If needed, use a mild degreaser to remove any oil or grease build up.
- After washing, rinse your motorcycle thoroughly with clean water to remove any residue (residue from the detergent can damage parts of your motorcycle).
- Use a soft cloth to dry your motorcycle. As you dry, inspect your motorcycle for chips and scratches. Do not let the water air dry as this can damage the painted surfaces.
- Start the engine and let it idle for several minutes. The heat from the engine will help dry moist areas.
- Carefully ride your motorcycle at a slow speed and apply the brakes several times. This helps dry the brakes and restores them to normal operating performance.
- Lubricate the drive chain to prevent rusting.

NOTE

- *After riding in an area where the roads are salted or near the ocean, immediately wash your motorcycle with cold water. Do not use warm water as it accelerates the chemical reaction of the salt. After drying, apply a corrosion protection spray on all metal and chrome surfaces to prevent corrosion.*

Semi-gloss Finish

- To clean the semi-gloss finish;
- When washing the motorcycle, always use a mild neutral detergent and water.
- The semi-gloss finish effect may be lost when the finish is excessively rubbed.
- If any doubt, consult an authorized Kawasaki dealer.

Painted Surfaces

After washing your motorcycle, coat painted surfaces, both metal and plastic, with a commercially available motorcycle/automotive wax. Wax should be applied once every three months or as conditions require. Avoid surfaces with “satin” or “flat” finishes. Always use non-abrasive products and apply them according to the instructions on the container.

Plastic Parts

After washing use a soft cloth to gently dry plastic parts. When dry, treat the non-painted plastic parts with an approved plastic cleaner/polisher product.

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NOTICE

Plastic parts may deteriorate and break if they come in contact with chemical substances or household cleaning products such as gasoline, brake fluid, window cleaners, thread-locking agents, or other harsh chemicals. If a plastic part comes in contact with any harsh chemical substance, wash it off immediately with water and a mild neutral detergent, and then inspect for damage. Avoid using abrasive pads or brushes to clean plastic parts, as they will damage the part's finish.

Chrome and Aluminum

Chrome and uncoated aluminum parts can be treated with a chrome/aluminum polish. Coated aluminum should be washed with a mild neutral detergent and finished with a spray polish. Aluminum wheels, both painted and unpainted can be cleaned with special non-acid based wheel spray cleaners.

Leather, Vinyl, and Rubber

If your motorcycle has leather accessories, special care must be taken. Use a leather cleaner/treatment to clean and care for leather accessories. Washing leather parts with detergent and water will damage them, shortening their life.

Vinyl parts should be washed with the rest of the motorcycle, then treated with a vinyl treatment.

The sidewalls of tires and other rubber components should be treated with a rubber protectant to help prolong their useful life.



WARNING

Rubber protectants can be slippery and, if used on the tread area, cause loss of traction resulting in accident causing injury or death. Do not apply rubber protectant to any tread area.

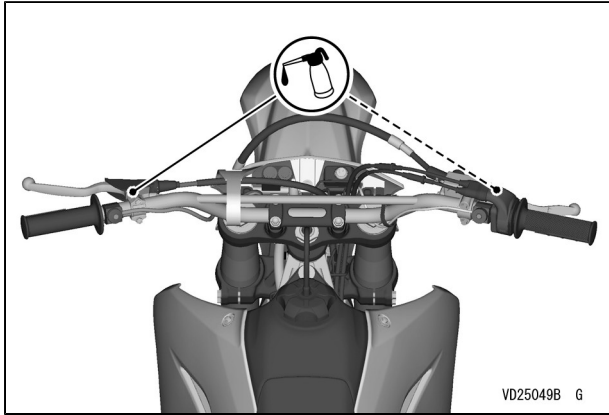
Lubrication

Lubricate the areas shown in the illustrations of this section with either motor oil or regular grease, after each race and whenever the vehicle has been operated under wet or rainy conditions, especially after using a high-pressure spray washer. Before lubricating a part, clean off any rust with rust remover and wipe off any grease, oil, dirt, or grime.

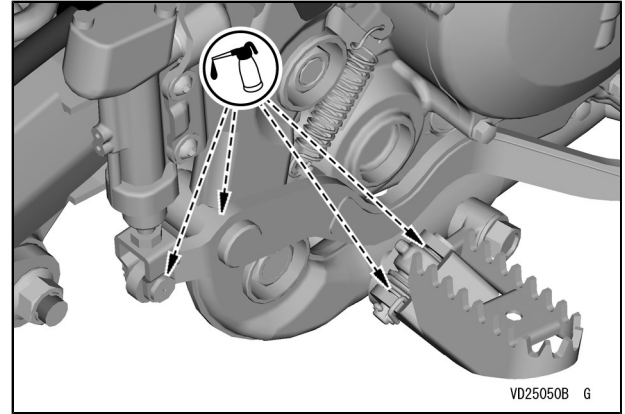
General Lubrication

Apply motor oil or grease to the following pivots:

- Clutch lever
- Front brake lever

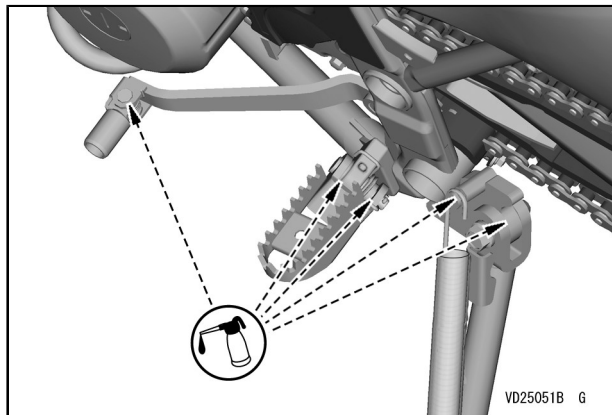


- Rear brake pedal
- Rear Master Cylinder Joint Pin
- Footpeg



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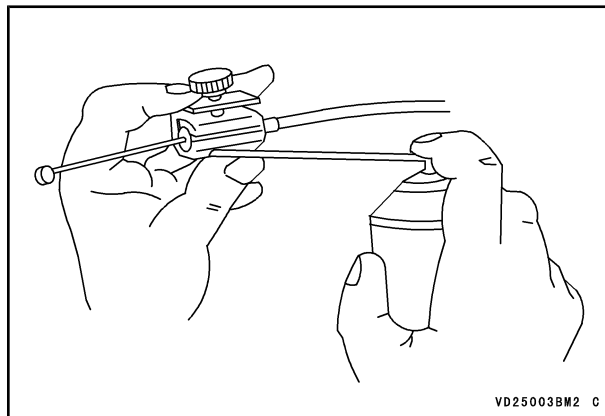
- Shift Pedal
- Side Stand
- Footpeg
- Spring Pin



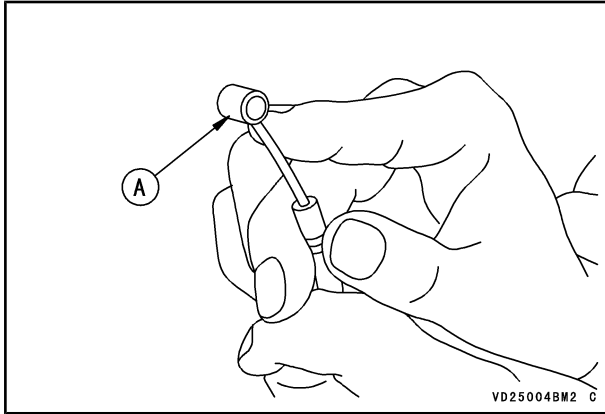
Cable Lubrication

Apply an aerosol cable lubricant with a pressure lubricator on all cables:

- Clutch Cable
- Throttle Cables



- Apply grease to the following points:
- Clutch Inner Cable Upper End
 - Throttle Inner Cable Upper Ends



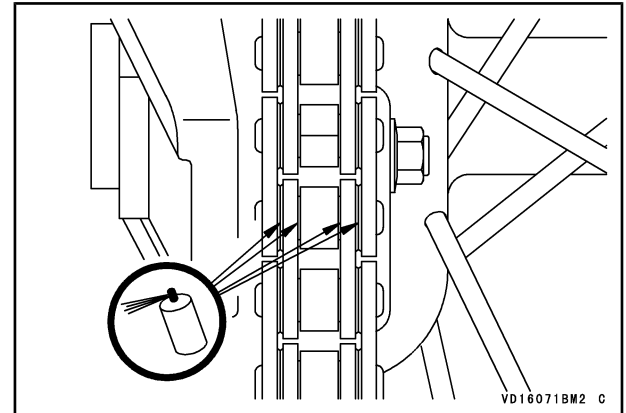
A. Upper End

Drive Chain Lubrication

Lubrication is necessary after riding through rain or on wet roads, or any time that the chain appears dry.

Use a lubricant for sealed chains to prevent deterioration of chain seals. If the chain is especially dirty, clean it using a cleaner for sealed chains following the instructions supplied by the chain cleaner manufacturer.

- Apply lubricant to the sides of the rollers so that it will penetrate to the rollers and bushings. Apply lubricant to the seals so that the seals will be coated with lubricant. Wipe off any excess lubricant.



- Wipe off any lubricant that gets on the tire surface.

TROUBLESHOOTING GUIDE

NOTE

- *This troubleshooting guide is not exhaustive and does not give every possible cause for each problem listed. It is meant simply as a quick guide to assist you in troubleshooting for some of the more common difficulties.*

Starting failure or difficulties -

Starter motor does not rotating:

- Main switch not "ON" position
- Starter lockout switch trouble
- Starter motor trouble
- Battery voltage low
- Starter relay not contacting or operating
- Starter button not contacting
- Starter system wiring shorted or open
- Engine stop button trouble
- Main fuse 20 A blown

Starter motor rotating but engine does not turn over:

- Starter clutch trouble
- Starter idle gear trouble

Engine does not turn over:

- Valve seized
- Rocker arm seized
- Cylinder or piston seized
- Crankshaft seized
- Connecting rod small end seized
- Connecting rod big end seized
- Camshaft seized
- Transmission gear or bearing seized
- Improper installation of vehicle-down sensor

Fuel does not flow:

- No fuel in tank
- Fuel tank cap air vent obstructed
- Fuel line clogged
- Brake down of a fuel pump
- Brake down of a fuel injector

Spark missing or weak:

- Spark plug dirty, broken, or gap improperly adjusted
- Spark plug cap or high-tension wiring defective
- Spark plug cap not contacting properly
- Spark plug type incorrect
- Crankshaft sensor defective
- ECU defective
- Ignition coil defective
- Engine stop button wiring defective
- Alternator damaged
- Wiring shorted or interrupted

Fuel/air mixture incorrect:

- Air cleaner element clogged, poorly sealed, or not installed

Compression low:

- Spark plug loose
- Cylinder head insufficiently tightened
- Cylinder or piston worn
- No valve clearance
- Crankshaft oil seal leak
- Valve spring broken or weak
- Valve not seating properly (valve bent, worn, or carbon accumulation on the seating surface)
- Piston ring worn, weak, broken, or sticking
- Piston ring side clearance excessive
- Cylinder head gasket damaged
- Cylinder head warped
- Cylinder gasket damaged
- Decompression trouble

Poor low-speed performance -**Spark weak:**

- Spark plug dirty, broken, or gap improperly adjusted
- Spark plug cap or high-tension wiring defective
- Spark plug cap shorted or not contacting properly
- Spark plug type incorrect
- ECU defective
- Ignition coil defective
- Crankshaft sensor defective
- Alternator defective
- Wiring connector not in good contact

Fuel/air mixture incorrect:

- Air cleaner element clogged, poorly sealed, or not installed
- Fuel tank cap air vent obstructed
- Throttle body assy holder loose
- Air cleaner duct loose
- Fuel pump defective

Compression low:

- Spark plug loose
- Cylinder head insufficiently tightened
- Cylinder or piston worn
- No valve clearance
- Valve spring broken or weak
- Valve not seating properly (valve bent, worn, or carbon accumulation on the seating surface)
- Piston ring worn, weak, broken, or sticking
- Piston ring side clearance excessive
- Cylinder head gasket damaged
- Cylinder head warped
- Cylinder gasket damaged
- Decompression trouble

Other:

- ECU defective
- Brake dragging
- Clutch slipping
- Engine over heating
- Engine oil level too high
- Engine oil viscosity too high
- Drive chain trouble

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Poor or no high-speed performance -

Firing incorrect:

- Spark plug dirty, broken, or gap improperly adjusted
- Spark plug cap or ignition coil defective
- Spark plug cap shorted or not contacting properly
- Spark plug type incorrect
- ECU defective
- Crankshaft sensor defective
- Alternator defective
- Wiring connector not in good contact

Fuel/air mixture incorrect:

- Air cleaner element clogged, poorly sealed, or not installed
- Fuel contaminated with water or foreign matter
- Fuel tank cap air vent obstructed
- Throttle body assembly holder loose
- Air cleaner duct loose
- Fuel line clogged
- Fuel pump defective

Compression low:

- Spark plug loose
- Cylinder head insufficiently tightened
- Cylinder or piston worn
- No valve clearance
- Valve spring broken or weak
- Valve not seating properly (valve bent, worn, or carbon accumulation on the seating surface)
- Piston ring worn, weak, broken, or sticking
- Piston ring side clearance excessive
- Cylinder head gasket damaged
- Cylinder head warped
- Cylinder gasket damaged
- Decompression trouble

Improper acceleration:

- Throttle valve does not fully open
- Air cleaner element clogged
- Muffler clogged
- Fuel contaminated with water or foreign matter
- Brake dragging
- Clutch slipping
- Engine overheating
- Engine oil level too high
- Engine oil viscosity too high
- Crankshaft bearing worn or damaged
- Crankshaft sensor defective

Knocking:

- Carbon built up in combustion chamber
- Fuel quality poor or type incorrect
- Spark plug type incorrect
- ECU defective

Engine overheating -**Firing incorrect:**

- Spark plug dirty, broken, or gap improperly adjusted
- Spark plug type incorrect
- ECU defective

Fuel/air mixture incorrect:

- Throttle body assy holder loose
- Air cleaner element clogged, poorly sealed, or not installed
- Air cleaner duct poorly sealed

Compression high:

- Carbon built up in combustion chamber

Engine overloaded:

- Brake dragging
- Clutch slipping
- Engine oil level too high
- Engine oil viscosity too high
- Drive chain trouble

Lubrication inadequate:

- Engine oil level too low
- Engine oil quality poor or type incorrect

Coolant inadequate:

- Coolant level too low
- Coolant deteriorated

Cooling system component defective:

- Radiator clogged
- Radiator cap defective
- Water pump not rotating

Clutch operation faulty -**Clutch slipping:**

- No clutch lever play
- Clutch cable improperly adjusted
- Clutch cable defective
- Clutch plate worn or warped
- Clutch spring broken or weak
- Clutch release mechanism defective
- Clutch hub or housing unevenly worn

Clutch not disengaging properly:

- Clutch lever play excessive
- Clutch spring tension uneven
- Engine oil deteriorated
- Engine oil viscosity too high
- Engine oil level too high
- Clutch housing frozen on drive shaft
- Clutch release mechanism defective
- Clutch hub nut loose
- Clutch plate warped or rough
- Clutch hub spline damaged

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Gear shifting faulty -

Transmission does not go into gear; shift pedal does not return:

- Clutch not disengaging
- Shift fork bent or seized
- Gear stuck on the shaft
- Shift mechanism arm spring broken
- Shift mechanism arm broken
- Shift return spring broken or weak
- Shift return spring pin loose
- Shift pawl broken
- Shift drum broken
- Gear positioning lever operation defective

Transmission jumps out of gear:

- Shift fork worn
- Gear groove worn
- Gear dogs and/or dog grooves worn
- Shift drum groove worn
- Gear positioning lever spring broken or weak
- Shift fork pin worn
- Drive shaft, output shaft, and/or gear splines worn

Transmission skips gears:

- Gear positioning lever spring broken or weak
- Shift mechanism arm spring broken or weak

Engine noise abnormal -

Knocking:

- Carbon built up in combustion chamber
- Fuel quality poor or type incorrect
- Spark plug type incorrect
- Engine overheating
- ECU defective

Piston slap:

- Piston clearance excessive
- Cylinder or piston worn
- Connecting rod bent
- Piston pin or piston pin holes worn

Valve noise:

- Valve clearance incorrect
- Valve spring broken or weak
- Camshaft bearing or cam face worn
- Rocker arm worn

Other noise:

- Connecting rod small end clearance excessive
- Connecting rod big end clearance excessive
- Piston ring worn, broken or stuck
- Piston seized or damaged
- Cylinder head gasket leaking
- Exhaust pipe leaking at cylinder head
- Crankshaft runout excessive
- Engine mounts loose
- Crankshaft bearing worn
- Camshaft chain tensioner trouble
- Camshaft chain, sprocket, chain guide worn
- Alternator rotor loose

Abnormal drive train noise -**Clutch noise:**

- Clutch housing/friction plate clearance excessive
- Clutch housing gear excessive
- Metal chip jammed in clutch housing gear teeth

Transmission noise:

- Crankcase bearing worn or damaged
- Transmission gear worn or chipped
- Metal chip jammed in gear teeth
- Engine oil level or viscosity too low

Drive chain noise:

- Drive chain slack improperly adjusted
- Drive chain worn
- Rear and/or engine sprocket(s) worn
- Drive chain inefficiently lubricated
- Rear wheel misaligned

Frame noise abnormal -**Front fork noise:**

- Oil level or viscosity too low
- Spring broken or weak

Rear shock absorber noise:

- Shock absorber damaged

Disc brake noise:

- Pad installed incorrectly
- Pad surface glazed
- Brake disc warped
- Brake caliper defective
- Brake cylinder damaged

Other noise:

- Bracket, nut, bolt, etc. improperly mounted or tightened

Exhaust smoke -**Excessively white:**

- Piston oil ring worn
- Cylinder worn
- Valve oil seal damaged
- Valve guide worn
- Engine oil level too high

Black smoke:

- Air cleaner element clogged

Brownish:

- Air cleaner duct loose
- Air cleaner poorly sealed or missing

Poor handling and/or stability -**Handlebar hard to turn:**

- Cable, hose, wiring incorrectly routed
- Steering stem nut too tight
- Steering stem bearing damaged
- Steering stem bearing inadequately lubricated
- Steering stem bent
- Tire air pressure too low

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Handlebar shakes or vibrates excessively:

- Tire worn
- Swingarm sleeve or needle bearing damaged
- Rim warped or out of balance
- Front and/or rear axle runout excessive
- Wheel bearing worn
- Handlebar clamp loose
- Steering stem head nut loose
- Spoke loose

Handlebar pulls to one side:

- Frame bent
- Rear wheel misaligned
- Swingarm bent or twisted
- Swingarm pivot shaft runout excessive
- Steering maladjusted
- Steering stem bent
- Front fork bent
- Right/left front fork oil level uneven

Shock absorption unsatisfactory (suspension too hard):

- Front fork oil excessive
- Front fork oil viscosity too high
- Front fork bent
- Tire air pressure too high
- Rear shock absorber improperly adjusted

Shock absorption unsatisfactory (suspension too soft):

- Front fork oil level insufficient and/or front fork leaking oil
- Front fork oil viscosity too low
- Front fork and/or rear shock absorber spring weak
- Rear shock absorber leaking oil or gas
- Rear shock absorber improperly adjusted
- Tire air pressure too low

Poor braking performance -

- Air in the brake line
- Brake pad or disc worn
- Brake fluid leaking
- Brake disc warped
- Brake pads contaminated
- Brake fluid deteriorated
- Brake master cylinder primary and/or secondary cup(s) damaged
- Brake master cylinder scratched
- Brake maladjusted (lever or pedal play excessive)

Battery trouble -

Battery discharged:

- Charge insufficient
- Battery faulty (too low terminal voltage)
- Battery cable making poor contact
- Alternator trouble
- Wiring faulty
- Regulator trouble

Battery overcharged:

- Alternator magneto trouble
- Regulator trouble
- Battery faulty

STORAGE

Before Storage

When the motorcycle is to be stored for any length of time, it should be prepared for storage as follows.

- Clean the entire vehicle thoroughly.
- Run the engine for about five minutes to warm the oil, then stop it and drain the engine oil.



WARNING

Engine oil is a toxic substance. Dispose of used oil properly. Contact your local authorities for approved disposal methods or possible recycling.

- Install the oil drain bolt and fill in fresh engine oil.
- Empty the fuel tank (Fuel will deteriorate if left for a long time.).



WARNING

Gasoline is extremely flammable and can be explosive under certain conditions, creating the potential for serious burns. Always stop the engine and never smoke while handling fuel. Make sure the area is well ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light. Make sure the engine is cold before working. Wipe any fuel off the engine before starting it. Gasoline is a toxic substance. Dispose of gasoline properly. Contact your local authorities for approved disposal methods.

- Remove the spark plug and spray fogging oil directly into the cylinder. Crank the engine several times with the starter button to coat the cylinder wall. Install the spark plug.
- Lubricate the drive chain and all the cables.
- Spray oil on all unpainted metal surfaces to prevent rusting. Avoid getting oil on rubber parts and on the brakes.
- Remove the battery, and store it where it will not be exposed to direct sunlight, moisture, or freezing temperatures. During storage it should be given a slow charge (one ampere or less) about once a month. Keep the battery well charged especially during cold weather.

- Lift the motorcycle on a box or stand so that both wheels are raised off the ground. (If this cannot be done, put boards under the front and rear wheels to keep dampness away from the tire rubber.)
- Tie a plastic bag over the muffler to prevent moisture from entering.
- Cover the motorcycle to keep dust and dirt away from it.

After Storage

- Remove the plastic bag from the muffler.
- Make sure the spark plug is tight.

NOTE

- *Fit the plug cap securely onto the spark plug, and pull the cap lightly to make sure that it is properly installed.*
- Fill the fuel tank with fuel.
- Check all the points listed in the Daily Pre-Ride Checks section.
- Perform a lubrication procedure in the Lubrication section.

ENVIRONMENTAL PROTECTION

Kawasaki subscribes to the guidelines of Tread Lightly! a program dedicated to protecting the great outdoors through education and fostering responsible enjoyment of public lands. When using your Kawasaki motorcycle, please follow these Tread Lightly! guidelines:

Tread Lightly!

Travel responsibly on designated roads and trails or in permitted areas.

Respect the rights of others including private property owners and all recreational trail users, campers and others to allow them to enjoy their recreational activities undisturbed.

Educate yourself by obtaining travel maps and regulations from public agencies, planning for your trip, taking recreation skills classes, and knowing how to use and operate your equipment safely.

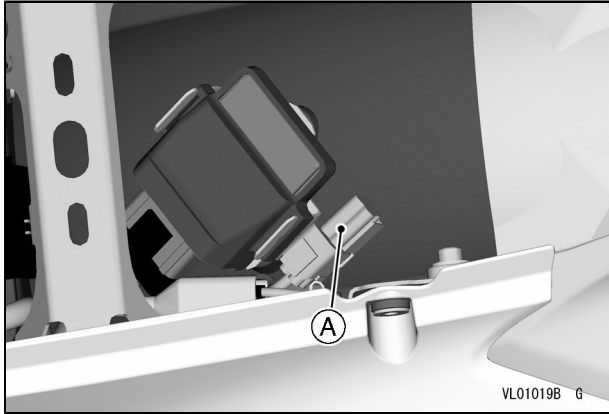
Avoid sensitive areas such as meadows, lakeshores, wetlands and streams, unless on designated routes. This protects wildlife habitat and sensitive soils from damage.

Do your part by leaving the area better than you found it, properly disposing of waste, minimizing the use of fire, avoiding the spread of invasive species, restoring degraded areas, and joining a local enthusiast organization.

Properly discard used batteries, tires, engine oil, other vehicle components, or the entire vehicle that you might dispose of in the future. Consult your authorized Kawasaki dealer or local environmental waste agency for their proper disposal procedure.

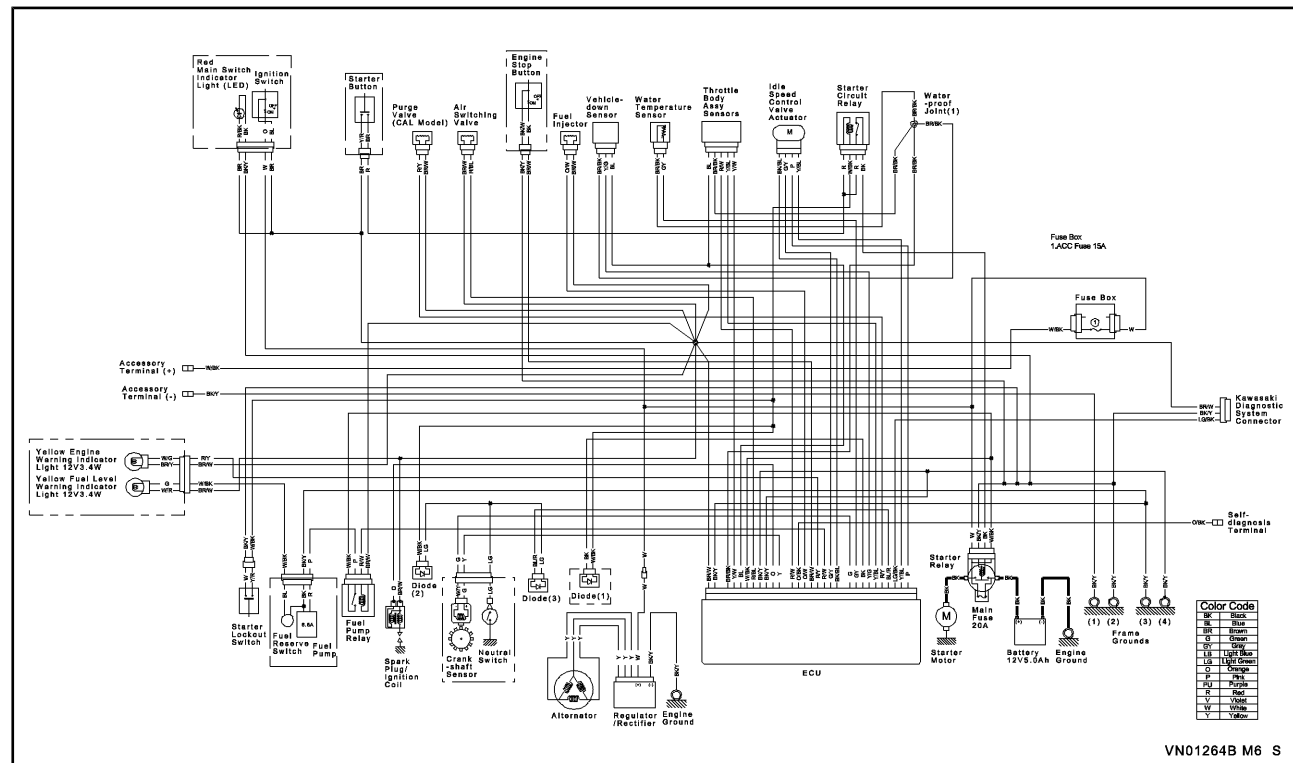
Location of DFI System Diagnostic Connector

The DFI system diagnostic connector is located under the seat.



A. DFI System Diagnostic Connector

WIRING DIAGRAM



VN01264B M6 S

YOUR WARRANTY/OWNER SATISFACTION

Welcome to the Kawasaki family!

Congratulations on buying your Kawasaki vehicle. You've chosen a great, high-quality product with state-of-the-art features and built to Kawasaki's high standards. Your satisfaction is important to your authorized Kawasaki dealer and to Kawasaki Motors Corp., U.S.A. Here is some important information regarding your vehicle's limited warranty.

Frequently Asked Questions

What is a Limited Warranty?

The most important thing to know about your warranty is that it protects you from manufacturing defects in material or workmanship during the warranty period. You can find the warranty period in the Kawasaki Limited Warranty Certificate your Kawasaki dealer provided to you at the time of sale. The warranty does not cover the cost of regularly-scheduled maintenance. The warranty also does not apply to the normal wear of items such as tires, brake pads, transmission drive belts, chains, sprockets, etc.

What is the Kawasaki Protection Plus?

Much of the warranty coverage offered by the limited warranty can be extended by purchasing the Kawasaki Protection Plus (KPP). See your Kawasaki dealer or go to Kawasaki.com for more information if you don't already have the KPP.

What Am I Responsible For?

You are responsible for maintaining your vehicle according to the maintenance schedule shown in this owner's manual.

You are responsible for notifying your dealer immediately if there is a problem, and you, as the owner, will need to authorize the dealer to inspect the unit.

118 YOUR WARRANTY/OWNER SATISFACTION

You will be responsible for paying for routine maintenance, including the first scheduled service. You can have the required servicing done by your Kawasaki dealer (recommended) or an equally-qualified service facility. You can also do your own maintenance work if you have the proper tools, service references, and mechanical skills. However, if a failure is found to be caused by improper servicing, it would not be covered by the limited warranty.

You may purchase a Kawasaki Service Manual and any necessary special tools directly from your Kawasaki dealer.

You will be responsible for paying for repairs needed because of an accident, to replace worn parts such as tires, chains, brakes, and for repairs needed because of a lack of maintenance, misuse or racing.

Whether you do it yourself or take your vehicle to a Kawasaki dealer, be sure to record your service in the Maintenance Record section of this Owner's Manual. Keep all receipts for the service and/or items necessary to perform the maintenance so that in the event of a failure you can document the service history.

What Are The Dealership's Responsibilities?

Your Kawasaki dealer offers a wide range of services, parts, accessories, and information on your product and on Kawasaki.

Each dealer is independently owned and operated and is responsible for the dealership's operations, its repair, warranty, and service work, and its personnel.

Your dealer is responsible for completing the set up and pre-delivery service of your new Kawasaki vehicle. The dealership should also explain its operation, maintenance, and warranty provisions so you understand them at the time of purchase or at any other time you have questions.

The dealership is responsible for inspecting your Kawasaki vehicle if there is a failure, investigating the cause of the problem, and getting any needed authorization from Kawasaki if the repair is one that will be covered by the limited warranty. The dealership will also file all necessary paperwork. The dealership is responsible for correctly completing any necessary repairs, whether they are covered by the limited warranty or not.

How Do I Get Warranty Service?

If there is a problem with your vehicle within the limited warranty period, you will need to schedule a service appointment and provide any maintenance records to an authorized Kawasaki dealer for inspection and diagnosis. You can go to any Kawasaki dealer for warranty repairs. Your Kawasaki dealer will inspect your vehicle and give you the results of the inspection. The dealer will perform the repairs at no cost to you if it is determined that the problem is covered by the warranty.

Kawasaki will work with your dealer to resolve any warranty issues. No authorization for warranty work can be given until your vehicle has been inspected by a Kawasaki dealer.

What if I am not Satisfied With My Warranty Service?

If you aren't satisfied with your dealership's repair work or operations, it is best to discuss the situation with the appropriate dealership manager. If you have already done this, then contact the dealership's owner or general manager to request a review of the issue.

If you are unable to resolve a problem after consulting with the dealership management and need further assistance, contact Kawasaki Motors Corp., U.S.A. at the address below. Please be certain to provide the model, vehicle identification number (VIN), mileage or hours of use, accessories, dates that events occurred and what action has been taken by both you and your dealer. Include the name and address of the dealership. To assist us in resolving your inquiry, please include copies of related receipts and any other pertinent information including the name of the dealership personnel with whom you have been working. Upon receipt of your correspondence, Kawasaki Motors Corp., U. S. A. will contact the dealership and work with it in resolving your problem.

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Want to Contact Kawasaki?

This owner's manual should answer most of your questions about your Kawasaki. Your Kawasaki dealer should either be able to answer any other questions you might have immediately or be able to find the answer for you.

Please send your correspondence to:

Consumer Services
Kawasaki Motors Corp., U.S.A.
P.O. Box 25252
Santa Ana, CA 92799-5252
(949) 460-5688

REGULATORY INFORMATION

USA:

Each radio frequency device installed in the vehicle conforms to the requirements and standards of the regulation below:

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CR01000B S

Canada:

Each radio frequency device installed in the vehicle conforms to the requirements and standards of the regulation below:

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s).

Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Chaque dispositif de radiofréquence installé dans le véhicule est conforme aux exigences et aux normes du règlement ci-dessous:

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CR01001B S

BATTERY INFORMATION SUPPLEMENT

General Information for Batteries

This Battery Information Supplement provides additional information about the motor drive battery pack, 12 V battery, coin battery installed in the vehicle. Read carefully to understand the battery before use.

DANGER

Getting the electrolyte on clothing, skin or eyes can cause serious injury or death. If it gets on clothing, skin or eyes, immediately wash with plenty of water for at least 5 minutes (15 minutes for eyes) and seek medical specialist attention.

WARNING

Improper handling the battery can cause electric shock, severe burns, and serious injury or death. Observe the precautions listed below.

- **Keep away from sparks, fire, or heat sources that can cause high temperatures.**
- **Keep out of reach of children or pets.**
- **Do not drop or shock.**
- **Do not touch or connect the terminals with metal.**
- **Do not splash water or touch with wet hands.**
- **Do not disassemble or modify.**
- **Never use if damaged, deformed or submerged.**
- **If you notice smoke or smell something, stop using immediately.**

NOTICE

Improper handling the battery can damage them. Observe the precautions listed below.

- Do not drop, shock, puncture or deform.
- Do not place heavy objects on top.
- Keep away from sparks, fire, or heat sources that can cause high temperatures.
- Never plug the battery exhaust holes.

NOTICE

If the battery is used or stored in an environment where the outside air is cold or hot, it may freeze or overheat, causing damage. Do not use or store in an environment where outside air is cold or hot.

NOTICE

Short circuits with other batteries or metal products can cause leakage, heat generation, burst, or fire. For storage, transportation, and disposal, insulate the terminals with tape.

NOTICE

Putting the battery in a microwave oven or high-pressure container can cause the battery to heat generation, burst, or fire. Do not put in microwave oven or high pressure container.

NOTICE

If you mix batteries of different brands or types, or new and old batteries, the batteries may leak, heat up, or burst due to differences in characteristics. Do not mix.

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NOTICE

Reversing or underconnecting the battery can damage the battery or electrical system. To prevent damage, make sure the connection is correct.

NOTICE

Continued charging beyond the specified charging time may cause leakage, heat generation, burst, or fire. If charging is not completed within the specified time, it is considered to be a problem with the battery or charger, so stop charging.

NOTICE

If the battery is exposed to static electricity, it may explode due to static electricity. Before inspection or maintenance, touch the metal parts of the vehicle with your bare hands to release static electricity.

NOTICE

Cleaning the battery with organic solvents such as benzene, thinner, gasoline, or detergents can cause deterioration of the battery and leakage. Do not use them to clean.

NOTE

- *Use a battery with the specifications and performance described in the Owner's Manual.*

Postscript on Coin Battery

DANGER

Swallowing batteries can cause chemical burns and penetration of mucosal tissues, resulting in serious injury or death. Keep them out of reach of children. If the battery is swallowed, it needs to be removed, so seek medical specialist attention immediately.

NOTICE

Charging the battery may cause gas or damage to the internal structure, resulting in leakage, heat generation, rupture, or ignition. Never charge the battery.

NOTICE

If the device is left connected for a long period of time, gas generated from the battery may cause the battery to leak, heat, burst, ignite, or damage the device. If you do not use the device for a long time, or if the battery is used up, remove it from the device.

NOTICE

Soldering batteries directly can cause them to leak, heat, burst, or fire due to heat damage. Do not solder directly.

NOTICE

Depending on the device, the metal part of the battery holder may come into contact with the (+) and (–) terminals of the battery. Attach the battery to the device so that it does not short out.

MAINTENANCE RECORD

Owner Name

Address

Phone Number

Engine Number

Vehicle Number

Selling Dealer Name

Address

Phone Number

Warranty Start Date

Note: Keep this information and a spare key in a secure location.

[illegible]

MAINTENANCE RECORD 127

[illegible]

128 MAINTENANCE RECORD

[illegible]

MAINTENANCE RECORD 129[illegible]

130 MAINTENANCE RECORD

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KLX300C

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