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 motorcycle in good running condition. **The initial maintenance is vitally important and must not be neglected.**

With a basic knowledge of mechanics and the proper use of tools, you should be able to carry out many of the maintenance items described in this chapter. If you lack proper experience or doubt your ability, all adjustments, maintenance, and repair work should be completed by a qualified technician.

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 Envitonmental 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 motorcycle. The fuel, ignition and exhaust systems of this motorcycle have been carefully designed and constructed to ensure an efficient engine with low exhaust pollutant levels. The exhaust system of this model motorcycle includes a catalytic converter system.

3. Evaporative Emission Control System

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

3. Evaporative Emission Control System (California)

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.

High Altitude Performance Adjustment Information

High Altitude adjustment is not required.

MAINTENANCE AND WARRANTY

Proper maintenance is necessary to ensure that your motorcycle will continue to have low emission levels. This Owner's Manual contains those maintenance recommendations for your motorcycle. Those items identified by the Periodic Maintenance Chart are necessary to ensure compliance with the applicable standards.

As the owner of this motorcycle, 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.

The Kawasaki Limited Emission Control System Warranty requires that you return your motorcycle to an authorized Kawasaki dealer for remedy under warranty. Please read the warranty carefully, and keep it valid by complying with the owner's obligations it contains.

You should keep a maintenance record for your motorcycle. To assist you in keeping this record, we have provided space on pages 213 through 218 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, bills, etc., as verification of this maintenance.

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(s) or any internal portion of the muffler(s).
* Removal of the air box or air box cover.
* Modifications to the muffler(s) or air intake system by cutting, drilling, or other means if such modifications result in increased noise levels.

Periodic Maintenance Chart

K : Should be serviced by an authorized Kawasaki dealer.
* : For higher odometer readings, repeat at the frequency interval established here.
# : Service more frequently when operating in severe conditions: dusty, wet, muddy, high speed, or frequent starting/stopping.
(e) : Emission Related Item

1. Periodic Inspection (Engine Related Items)

Frequency / Operation (Engine Items)	Whichever comes first ↓ / Every	*Odometer Reading km × 1 000 (mile × 1 000) → 1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)	36 (22.5)	See Page
K Valve clearance - inspect (e)						●			131
Throttle control system (play, smooth return, no drag) - inspect (e)	year	●		●		●		●	139
K Engine vacuum synchronization - inspect (e)				●		●		●	141
Idle speed - inspect (e)		●		●		●		●	142
K Fuel leak (fuel hose and pipe) - inspect	year	●		●		●		●	–
K Fuel hoses damage - inspect	year	●		●		●		●	–

	Frequency / Operation (Engine Items)	Whichever comes first ↓ / Every	*Odometer Reading km × 1 000 (mile × 1 000) → 1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)	36 (22.5)	See Page
K	Fuel hoses installation condition - inspect	year	●		●		●		●	–
	Coolant level - inspect		●		●		●		●	125
	Coolant leak - inspect	year	●		●		●		●	123
	Radiator hose damage - inspect	year	●		●		●		●	123
	Radiator hoses installation condition - inspect	year	●		●		●		●	123

	Frequency / Operation (Engine Items)	Whichever comes first ↓ / Every	*Odometer Reading km × 1 000 (mile × 1 000) 1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)	36 (22.5)	See Page
	Evaporative emission control system - function (California model only) (e)		●	●	●	●	●	●	●	130
K	Air suction system damage - inspect (e)				●		●		●	132

2. Periodic Inspection (Chassis Related Items)

Frequency / Operation (Chassis Items)	Whichever comes first ↓ / Every	*Odometer Reading km × 1000 (mile × 1000) → 1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)	36 (22.5)	See Page
Clutch and drive train:									
Clutch operation (play, engagement, disengagement) - inspect		●		●		●		●	142
Clutch fluid level - inspect	6 months	●	●	●	●	●	●	●	142
Clutch fluid leak - inspect	year	●	●	●	●	●	●	●	–
Clutch hose damage - inspect	year	●	●	●	●	●	●	●	–

	Frequency	Whichever comes first →	*Odometer Reading km × 1000 (mile × 1000)							See Page
	Operation (Chassis Items)	Every ↓	1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)	36 (22.5)	
	Clutch hose installation condition - inspect	year	●	●	●	●	●	●	●	–
	Drive chain lubrication condition - inspect #	every 600 km (400 mile)								150
	Drive chain slack - inspect #	every 1 000 km (600 mile)								144
	Drive chain wear - inspect #				●		●		●	148
K	Drive chain guide wear - inspect				●		●		●	–
Wheels and tires:										
	Tire air pressure - inspect	year			●		●		●	171

	Frequency / Operation (Chassis Items)	Whichever comes first ↓ / Every	*Odometer Reading km × 1000 (mile × 1000) → 1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)	36 (22.5)	See Page
	Wheels/tires damage - inspect				●		●		●	172
	Tire tread wear, abnormal wear - inspect				●		●		●	172
K	Wheel bearings damage - inspect	year			●		●		●	–
Brake system:										
	Brake fluid leak - inspect	year	●	●	●	●	●	●	●	152
	Brake hoses and pipe damage - inspect	year	●	●	●	●	●	●	●	152
	Brake pad wear - inspect #			●	●	●	●	●	●	152

Frequency / Operation (Chassis Items)	Whichever comes first ⬇ / Every	*Odometer Reading km × 1000 (mile × 1000) ➡ 1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)	36 (22.5)	See Page
Brake hose installation condition - inspect	year	●	●	●	●	●	●	●	152
Brake fluid level - inspect	6 months	●	●	●	●	●	●	●	153
Brake operation (effectiveness, play, drag) - inspect	year	●	●	●	●	●	●	●	154
Brake light switch operation - inspect		●	●	●	●	●	●	●	155
Suspensions:									
Front forks/rear shock absorber operation (damping and smooth stroke) - inspect				●		●		●	157/ 165

	Frequency / Operation (Chassis Items)	Whichever comes first ↓ / Every	*Odometer Reading km × 1000 (mile × 1000) → 1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)	36 (22.5)	See Page
	Front forks/rear shock absorber oil leak - inspect	year			●		●		●	157/ 165
K	Rocker arm operation - inspect				●		●		●	–
K	Tie rods operation - inspect				●		●		●	–
Steering system:										
K	Steering play - inspect	year	●		●		●		●	–
K	Steering stem bearings - lubricate	2 years					●			–

Frequency / Operation (Chassis Items)	Whichever comes first ➡ / Every ⬇	*Odometer Reading km × 1000 (mile × 1000) 1 (0.6)	6 (3.75)	12 (7.5)	18 (11.25)	24 (15)	30 (18.75)	36 (22.5)	See Page
Electrical system:									
Lights and switches operation - inspect	year			●		●		●	–
Headlight aiming - inspect	year			●		●		●	185
Side stand switch operation - inspect	year			●		●		●	–
Engine stop switch operation - inspect	year			●		●		●	–
Chassis:									
K Chassis parts - lubricate	year			●		●		●	–
K Bolts and nuts tightness - inspect		●		●		●		●	–

3. Periodic Replacement

	Frequency / Change/Replacement Items	Whichever comes first ⬇ / Every	➡ *Odometer Reading km × 1 000 (mile × 1 000) 1 (0.6)	12 (7.5)	24 (15)	36 (22.5)	48 (30)	See Page
	Air cleaner element # - replace	every 18 000 km (11 250 mile)						133
K	Engine oil # - change	year	●	●	●	●	●	120
K	Oil filter - replace	year	●	●	●	●	●	120
K	Fuel hoses - replace	5 years						–
K	Coolant - change	3 years				●		129
K	Radiator hoses and O-rings - replace	3 years				●		–
K	Brake hoses and pipe - replace	4 years					●	–
K	Brake fluid (front and rear) - change	2 years			●		●	154

	Frequency / Change/Replacement Items	Whichever comes first ⬇ / Every	➡ *Odometer Reading km × 1 000 (mile × 1 000) 1 (0.6)	12 (7.5)	24 (15)	36 (22.5)	48 (30)	See Page
K	Rubber parts of master cylinder and caliper - replace	4 years					●	–
K	Clutch hoses - replace	4 years					●	–
K	Clutch slave cylinder piston seal - replace	4 years					●	–
K	Clutch fluid - change	2 years			●		●	–
K	Spark plug - replace			●	●	●	●	129

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 replace the 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.

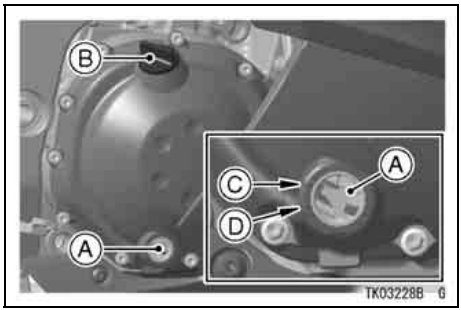
Oil Level Inspection

- If the oil has just been changed, start the engine and run it for several minutes at idle speed. This fills the oil filter with oil. Stop the engine, then wait several minutes until the oil settles.

NOTICE

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

- If the motorcycle has just been used, wait several minutes for all the oil to drain down.
- Check the engine oil level through the oil level inspection window. With the motorcycle held level, the oil level should come up between the upper and lower level lines next to the inspection window.

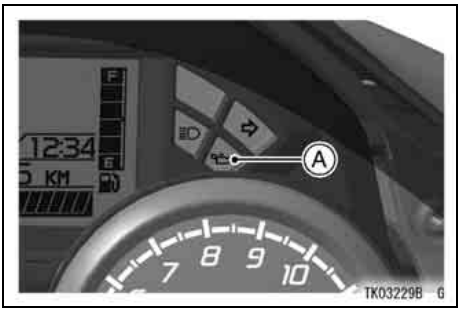


A. Oil Level Inspection Window
B. Oil Filler Cap
C. Upper Level Line
D. Lower Level Line

- If the oil level is too high, remove the excess oil through the oil filler opening using a syringe or some other suitable device.
- If the oil level is too low, add oil to reach the correct level. Use the same type and brand of oil that is already in the engine.

NOTICE

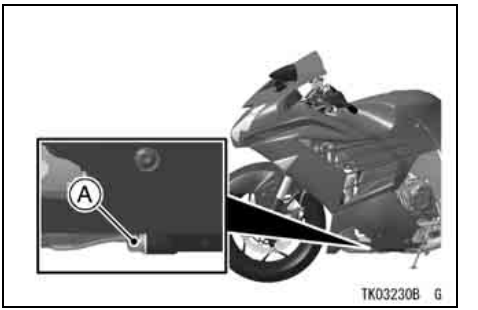
If the engine oil gets extremely low or if the oil pump does not function properly or oil passages are clogged, the oil pressure warning indicator light will go on. If it stays on when the engine speed is above idle, stop the engine immediately and have it serviced. Failure to do so could cause serious engine damage.



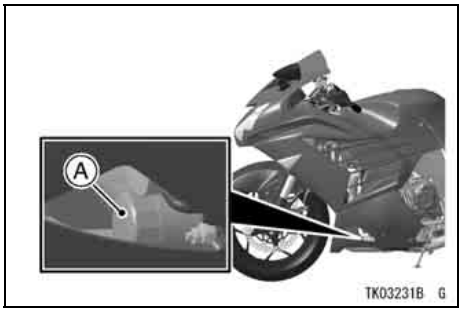
A. Red Oil Pressure Warning Indicator Light

Oil and/or Oil Filter Change

- To change the engine oil and replace oil filter, the engine oil drain bolt and oil filter must be removed. The oil change and oil filter replacement should be done by an authorized Kawasaki dealer.



A. Engine Oil Drain Bolt



A. Oil Filter

⚠ WARNING

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

Tightening Torque

Engine Oil Drain Bolt:
30 N·m (3.1 kgf·m, 22 ft·lb)
Oil FIlter:
17 N·m (1.7 kgf·m, 13 ft·lb)

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:
SAE10W-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.

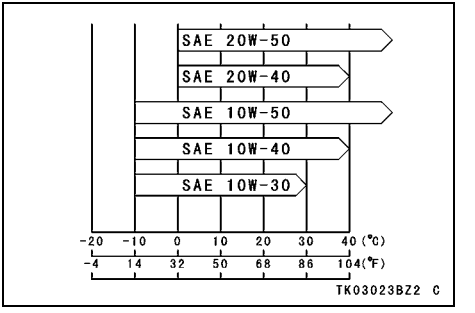
NOTE

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

Engine Oil Capacity

Capacity:	3.8 L (4.0 US qt)
	[when filter is not removed]
	4.2 L (4.4 US qt)
	[when filter is removed]
	4.6 L (4.9 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.



Cooling System

Radiator and Cooling Fan -

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

⚠ WARNING

The cooling fan spins at high speed and can cause serious injuries. Keep your hands and clothing away from the cooling fan blades at all times.

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 through the radiator by installing unauthorized accessories in front of the radiator or behind the cooling fan. Interference with the radiator airflow can lead to overheating and consequent engine damage.

Radiator Hoses -

Check the radiator hoses for leakage, cracks or deterioration, and connections for leakage, or looseness each day before riding the motorcycle, and in accordance with the Periodic Maintenance Chart.

Coolant -

Coolant absorbs excessive heat from the engine and transfers it to the air at 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, also in accordance with the Periodic Maintenance Chart and replenish coolant if the level is low. Change the coolant in accordance with the Periodic Maintenance Chart.

Information for Coolant

To protect the cooling system (consisting of the aluminum engine and radiator) from rust and corrosion, the use of corrosion and rust inhibitor chemicals in the coolant is essential. If coolant containing corrosion and rust inhibitor chemicals are not used, over a period of time, the cooling system accumulates rust and scale in the water jacket and radiator. This will clog up the coolant passages, and considerably reduce the efficiency of the cooling system.

⚠ WARNING

Coolant containing corrosion inhibitors for aluminum engines and radiators include harmful chemicals for human body. Drinking coolant can result in serious injury or death. Use coolant in accordance with the instructions of the manufacturer.

Soft or distilled water must be used with the antifreeze (see below for antifreeze) in the cooling system.

NOTICE

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.

If the lowest ambient temperature encountered falls below the freezing point of water, use permanent antifreeze in the coolant to protect the cooling system against engine and radiator freeze -up, as well as from rust and corrosion.

Use a permanent type of antifreeze (soft water and ethylene glycol plus corrosion and rust inhibitor chemicals for aluminum engines and radiators) in the cooling system. On the mixture ratio of coolant, choose the suitable one referring to the relation between freezing point and strength directed on the container.

NOTICE

Permanent types of antifreeze on the market have anti-corrosion and anti-rust properties. When it is diluted excessively, it loses its anti-corrosion property. Dilute a permanent type of antifreeze in accordance with the instructions of the manufacturer.

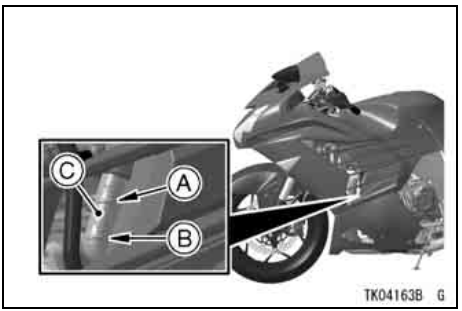
NOTE

○ *A permanent type of antifreeze is installed in the cooling system when shipped. It is colored green and contains ethylene glycol. It is mixed at 50% and has the freezing point of –35°C (–31°F).*

Coolant Level Inspection

● Position the motorcycle so that it is perpendicular to the ground.

- Check the coolant level through the coolant level gauge on the reserve tank located to the left of the engine. The coolant level should be between the F (Full) and L (Low) level lines.



A. F (Full) Level Line
B. L (Low) Level Line
C. Reserve Tank

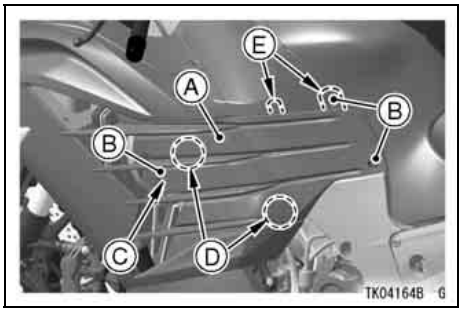
NOTE

○ *Check the level when the engine is cold (room or atmospheric temperature).*

- If the amount of coolant is insufficient, add coolant into the reserve tank.

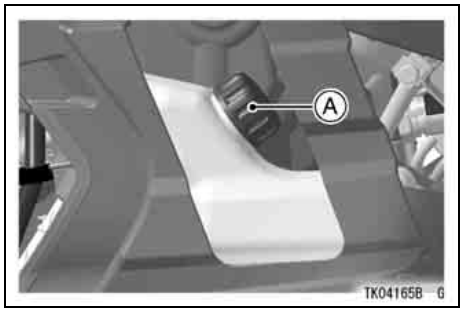
Coolant Filling

- Remove the bolts and washers on the left fairing cover.
- Pulling out the left fairing cover out slowly to clear the projections.
- Clear the left inner rubber cover from the left fairing cover, and remove the left fairing cover backward.



A. Left Fairing Cover
B. Bolts and Washers
C. Left Inner Rubber Cover
D. Projections
E. Tabs

- Remove the cap from the reserve tank and add coolant through the filler opening to the F (Full) level line.



A. Reserve Tank Cap

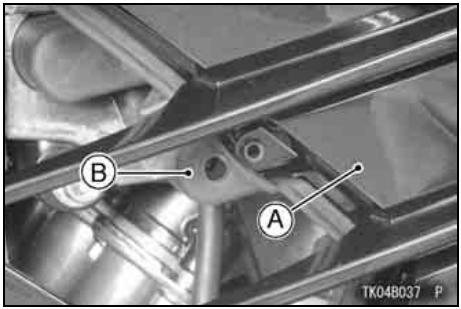
NOTE

○ *In an emergency you can add water alone to the coolant reserve tank, however it must be returned to the correct mixture ratio by the addition of antifreeze concentrate as soon as possible.*

NOTICE

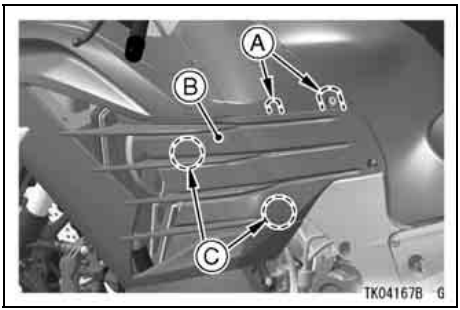
If coolant must be added often, or the reserve tank completely runs dry, there is probably leakage in the system. Have the cooling system inspected by your authorized Kawasaki dealer.

- Install the reserve tank cap.
- Insert the left fairing cover halfway, and fit the left inner rubber cover to the left fairing cover.



A. Left Fairing Cover
B. Left Inner Rubber Cover

- Insert the front part of the left fairing cover securely.
- Insert the tabs on the left fairing cover under the fuel tank cover first, and then fit the projections to the holes.
- Tighten the bolts.



A. Tabs
B. Left Fairing Cover
C. Projections

Coolant Change

Have the coolant changed by an authorized Kawasaki dealer.

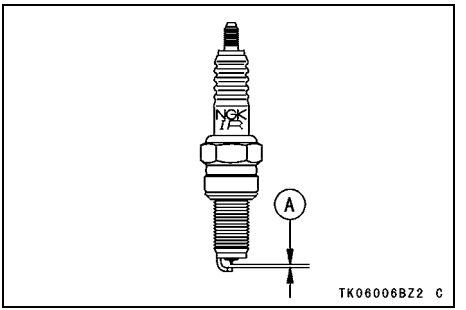
Spark Plugs

The standard spark plug is shown in the table. The spark plugs should be replaced in accordance with the Periodic Maintenance Chart.

Spark plug removal should be done by an authorized Kawasaki dealer.

Spark Plug

Standard Plug:	NGK CR9EIA-9
Plug Gap:	0.8 ~ 0.9 mm (0.031 ~ 0.035 in.)
Tightening Torque:	13 N·m (1.3 kgf·m, 115 in·lb)



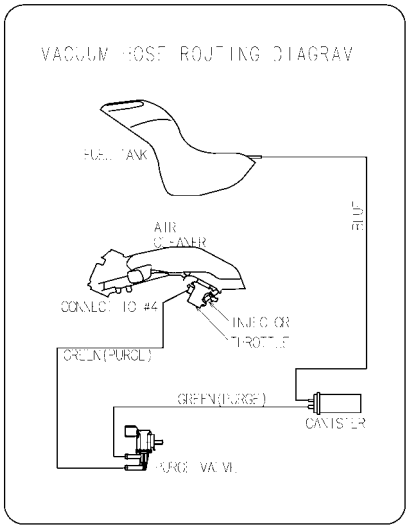
A. 0.8 ~ 0.9 mm (0.031 ~ 0.035 in.)

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.



59465-0855
TE03203D S

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 performance, 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 carried out by an authorized Kawasaki dealer.

Kawasaki Clean Air System

The Kawasaki Clean Air System (KCA) is a secondary air suction system that helps the exhaust gases to burn more completely. When the spent fuel charge is released into the exhaust system, it is still hot enough to burn. The KCA System allows extra air into the exhaust system so that the spent fuel charge can continue to burn. This continued burning action tends to burn up a great deal of the normally unburned gases, as well as changing a significant portion of the carbon monoxide into carbon dioxide.

Air Suction Valves -

The air suction valve is essentially a check valve which allows fresh air to flow only from the air cleaner into the exhaust port. Any air that has passed the air suction valve is prevented from returning. Inspect the air suction valves in accordance with the Periodic Maintenance Chart. Also, inspect the air suction valves whenever stable idling cannot be obtained, engine power is greatly reduced, or there are abnormal engine noises.

Air suction valve removal and inspection should be carried out by an authorized Kawasaki dealer.

Air Cleaner

A clogged air cleaner restricts the engine's air intake, increasing fuel consumption, reducing engine power, and causing spark plug fouling.

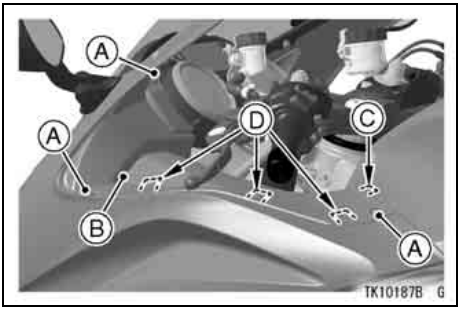
This motorcycle's air cleaner element consists of a wet paper filter, which cannot be cleaned.

The air cleaner element must be replaced in accordance with the Periodic Maintenance Chart. In dusty, rainy, or muddy conditions, the air cleaner element should be serviced more frequently than the recommended interval.

NOTICE

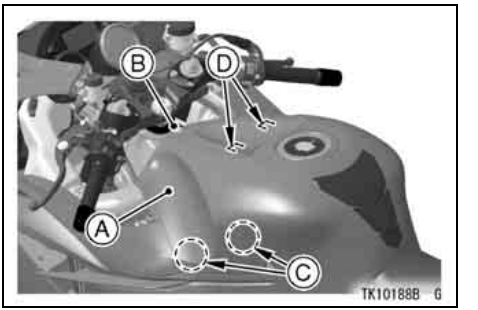
Use only the recommended air cleaner element (Kawasaki part number 11013-0718). Using the any other air cleaner element will wear the engine prematurely or lower the engine performance.

- Remove the left and right fairing covers. (Refer to "Cooling System" section and "Battery" section in this chapter.)
- Remove the left and right inner covers by removing the bolts and washers on both sides.



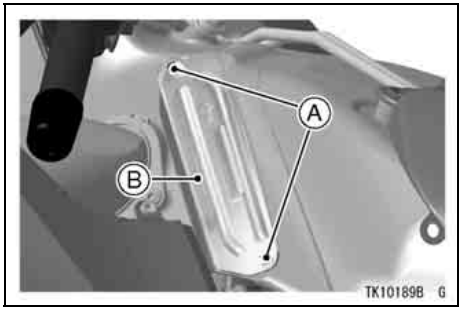
A. Bolts and Washers
B. Inner Cover (Left Side)
C. Tab
D. Hooks

- Remove the bolt.
- Spread the fuel tank cover evenly outward to clear the projections on both sides.
- Remove the fuel tank cover forward.



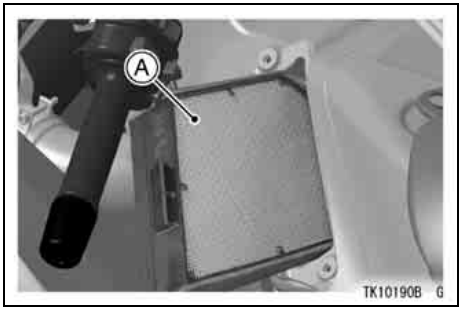
A. Fuel Tank Cover
B. Bolt
C. Projections
D. Tabs

- Remove the air cleaner element cover by removing the bolts.



A. Bolts
B. Air Cleaner Element Cover

- Pull out the air cleaner element.



A. Air Cleaner Element

- Put a clean, lint-free towel over the air cleaner element slot to keep dirt or other foreign material from entering.

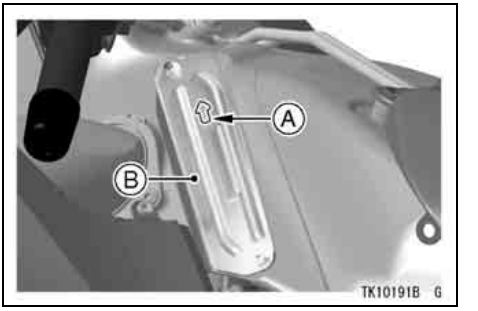
⚠ WARNING

If dirt or dust is allowed to pass through into the fuel injection system, the throttle may stick or become inoperable resulting in a hazardous operating condition.

NOTICE

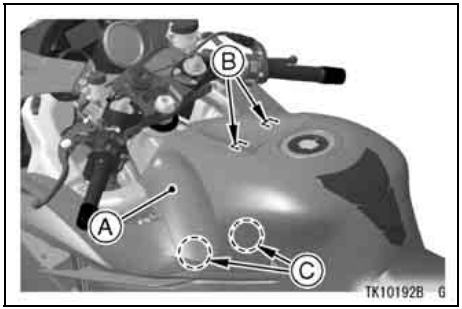
If dirt gets through into the engine, excessive engine wear and possibly engine damage will occur.

- Element and the removed parts installation is performed in the reverse order of removal.
- Install the air cleaner element cover so that arrow mark faces up ward.
- Install the bolts.



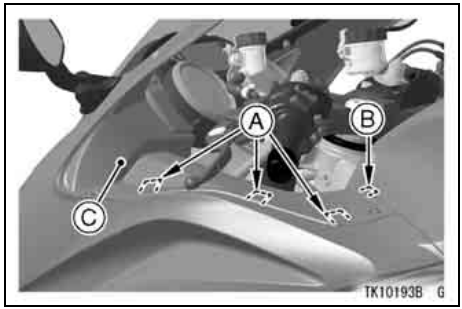
A. Arrow Mark
B. Air Cleaner Element Cover

- Fit the tabs of the fuel tank into the slots of the fuel tank cover.
- Fit the projections to the holes on both sides.
- Install the bolt.



A. Fuel Tank Cover
B. Tabs
C. Projections

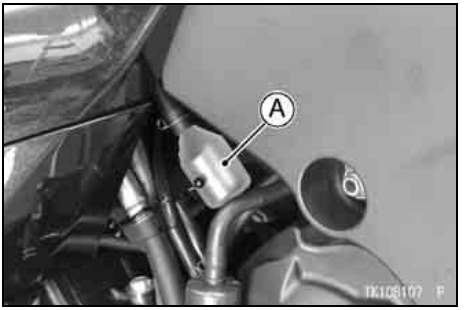
- Insert the hook on the front part of the inner cover to the slot of the bracket.
- Insert the tab into the slot of the fuel tank cover first, and then insert the hook on the rear part of the inner cover under the middle fairing.
- Install the bolts and washers.



A. Hooks
B. Tab
C. Inner Cover

Oil Draining

- Inspect the transparent reservoir located under the left side of the engine to see if any oil has run down.



A. Reservoir

- If there is any oil in the reservoir, remove the reservoir from the lower end of the drain hose and drain the oil.

⚠ WARNING

Oil on tires will make them slippery and can cause an accident and injury. Be sure to install the reservoir in the drain hose after draining.

Throttle Control System

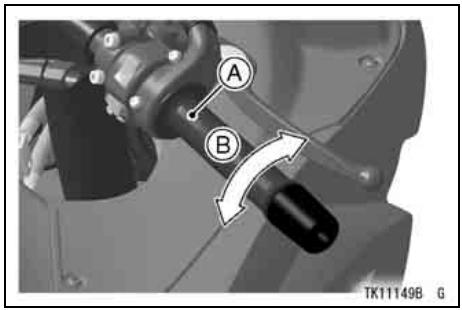
Check the throttle grip play each day before riding the motorcycle, and carry out maintenance and adjustment in accordance with the Periodic Maintenance Chart. Adjust it if necessary.

Throttle Grip -

The throttle grip controls the butterfly valves in the throttle body. If the throttle grip has excessive play due to either cable stretch or maladjustment, it will cause a delay in throttle response, especially at low engine speed. Also, the throttle valve may not open fully at full throttle. On the other hand, if the throttle grip has no play, the throttle will be hard to control, and the idle speed will be erratic.

Inspection

- Check that the throttle grip play is correct by lightly turning the throttle grip back and forth.



A. Throttle Grip
B. Throttle Grip Play

Throttle Grip Play

2 ~ 3 mm (0.08 ~ 0.12 in.)

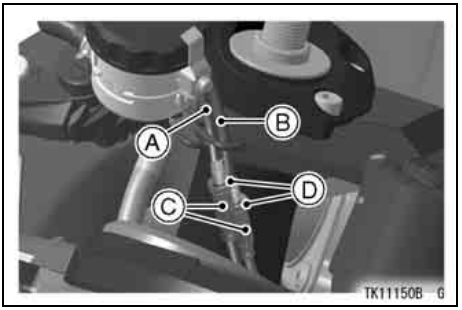
- If there is improper play, adjust it.

Adjustment

- Loosen the locknuts at the lower ends of the throttle cables, and screw

both throttle cable adjusters in completely so as to give the throttle grip plenty of play.

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

⚠ WARNING

Operation with 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.

Engine Vacuum Synchronization

Engine vacuum synchronization must be checked and adjusted periodically in accordance with the Periodic Maintenance Chart by an authorized Kawasaki dealer.

NOTE

○ *Poor engine vacuum synchronization will cause unstable idling, sluggish throttle response, and reduce engine power and performance.*

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 valve. So adjustment of the idle speed is not necessary on this motorcycle. If the idle speed is disturbed, inspection of the idle speed control should be done by an authorized Kawasaki dealer.

Idle Speed

1 050 ~ 1 150 r/min (rpm)

Clutch

The motorcycle is equipped with a hydraulically operated clutch that requires no adjustment except fluid level and clutch operation inspection each day before riding the motorcycle in accordance with the Periodic Maintenance Chart.

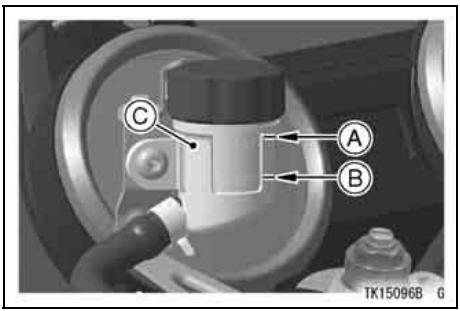
Clutch Operation Inspect

- If the clutch lever play becomes excessive and the motorcycle creeps or stalls when shifted into gear, there is probably air in the clutch system and it must be bled out by an authorized Kawasaki dealer.

Fluid Level Inspection

- With the clutch fluid reservoir held horizontal, the clutch fluid level must be kept between the upper and lower level lines.

- If the fluid level is lower than the lower level line, check for fluid leaks in the clutch line, and fill the clutch fluid reservoir to the upper level line.



A. Upper Level Line
B. Lower Level Line
C. Clutch Fluid Reservoir

NOTE

○ *Use the same fluid as is used in the brakes and keep the same requirements mentioned in the "Brakes" section.*

Drive Chain

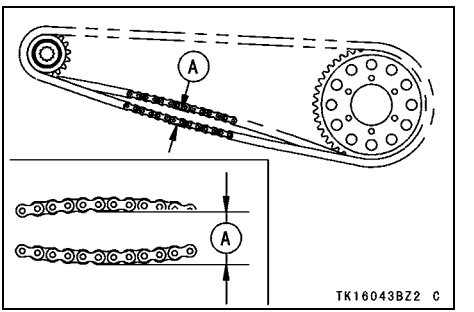
The drive chain slack and lubrication must be checked each day before riding the motorcycle, and in accordance with the Periodic Maintenance Chart for safety and to prevent excessive wear. If the chain becomes badly worn or maladjusted - either too loose or too tight - the chain could jump off the sprockets 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

- Set the motorcycle up on its side 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.



A. Chain Slack

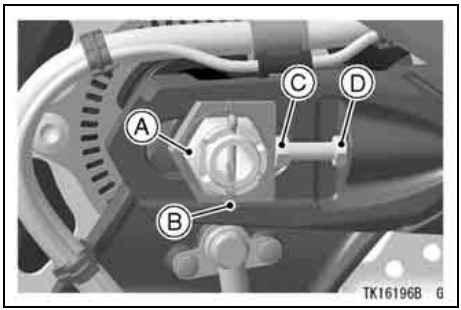
- If the drive chain is too tight or too loose, adjust it so that the chain slack is within the standard value.

Drive Chain Slack

Standard: 25 ~ 30 mm (1.0 ~ 1.2 in.)

Chain Slack Adjustment

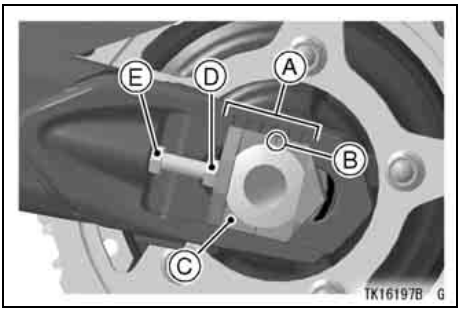
- Loosen the left and right chain adjuster locknuts.
- Remove the cotter pin, and loosen the axle nut.



A. Axle Nut
B. Cotter Pin
C. Adjuster
D. Locknut

- If the chain is too loose, turn out the left and right chain adjusters evenly.
- If the chain is too tight, turn in the left and right chain adjusters evenly.
- Turn out both chain adjusters evenly until the drive chain has the correct amount of slack. To keep the chain and wheel properly aligned, the notch on the left wheel alignment

indicator should align with the same swingarm mark that the right indicator notch aligns with.



A. Marks
B. Notch
C. Indicator
D. Adjuster
E. Locknut

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.

- Tighten both chain adjuster locknuts.
- Tighten the axle nut to the specified torque.

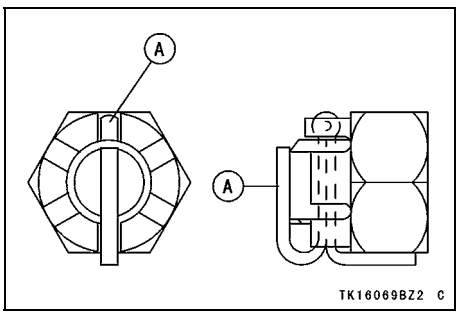
Tightening Torque

Axle Nut: 127 N·m (13.0 kgf·m, 94 ft·lb)

NOTE

○ *If a torque wrench is not available, this item should be serviced by a Kawasaki dealer.*

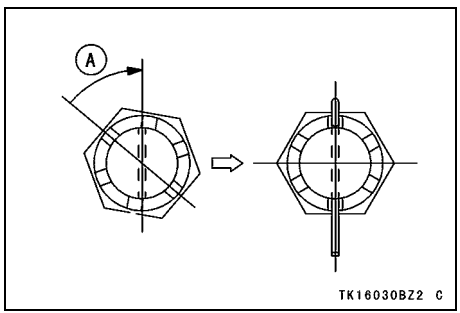
- Rotate the wheel, measure the chain slack again at the tightest position, and readjust if necessary.
- Install a new cotter pin through the axle nut and axle, and spread its ends.



A. Cotter Pin

NOTE

○ *When inserting the cotter pin, if the slots in the nut do not align with the cotter pin hole in the axle shaft, tighten the nut clockwise up to the next alignment.*
○ *It should be within 30 degrees.*
○ *Loosen once and tighten again when the slot goes past the nearest hole.*



A. Turn Clockwise

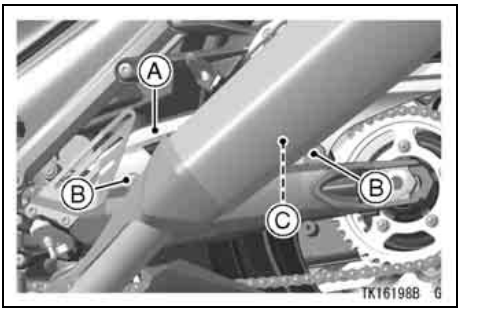
⚠ WARNING

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 (see the Brakes section).

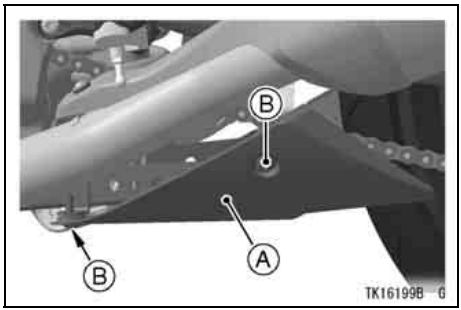
Wear Inspection

- Remove the screws.
- Clear the projection from the swingarm, and remove the chain cover.



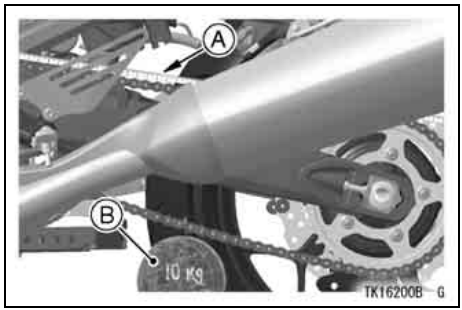
A. Chain Cover
B. Screws
C. Projection

- Remove the bolts and under cover.



A. Under Cover
B. Bolts

- Stretch the chain taut either by using the chain adjusters, or by hanging a 10 kg (22 lb) weight on the chain.
- Measure the length of 20 links on the straight part of the chain from pin center of the 1st pin to pin center of the 21st pin. Since the chain may wear unevenly, take measurements at several places.
- If the length exceeds the service limit, the chain should be replaced.



A. Measure
B. Weight

Drive Chain 20-Link Length

Service Limit: 319 mm (12.56 in.)

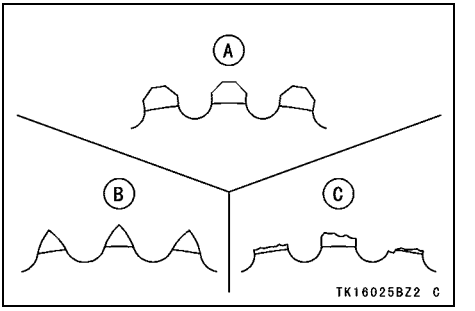
⚠ WARNING

For safety, use only the standard chain. It is an endless type and should not be cut for installation; have it installed by an authorized Kawasaki dealer.

- Rotate the rear wheel to inspect the drive chain for damaged rollers, and loose pins and links.
- Also inspect the sprockets for unevenly or excessively worn teeth, and damaged teeth.

NOTE

○ *Sprocket wear is exaggerated for illustration. See Service Manual for wear limits.*



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

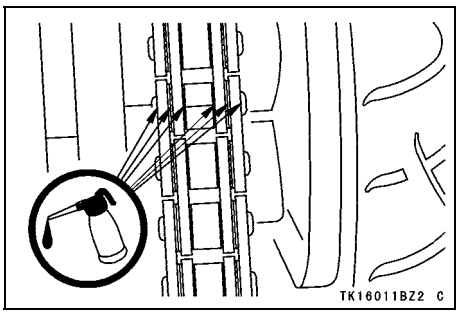
- If there is any irregularity, have the drive chain and/or the sprockets replaced by an authorized Kawasaki dealer.

Lubrication

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

heavy oil such as SAE 90 is preferred to a lighter oil because it will stay on the chain longer and provide better lubrication.

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

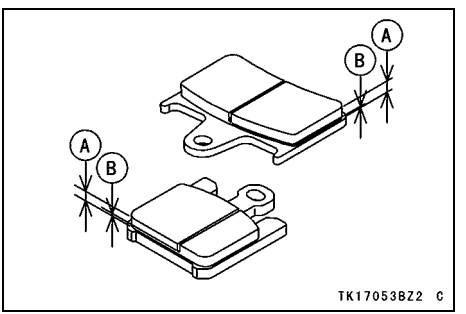


- If the chain is especially dirty, clean it using diesel oil or kerosine and then apply oil as described above.

Brakes

Brake Wear Inspection

Inspect the brakes for wear. For each front and rear disc brake caliper, if the thickness of either pad linning is less than 1 mm (0.04 in.), replace both pads in the caliper as a set. Pad replacement should be done by an authorized Kawasaki dealer.



A. Lining Thickness
B. 1 mm (0.04 in.)

Brake Fluid -

In accordance with the Periodic Maintenance Chart, inspect the brake fluid level in both the front and rear brake fluid reservoirs and change the brake fluid. The brake fluid should also be changed if it becomes contaminated with dirt or water.

Fluid Requirement

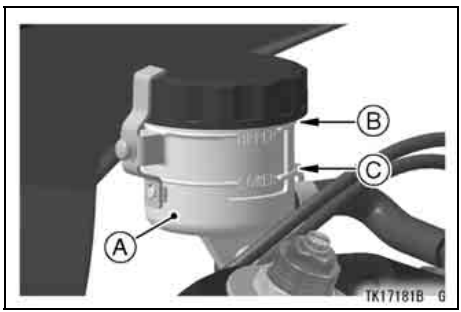
Use DOT4 rated heavy-duty brake fluid only.

NOTICE

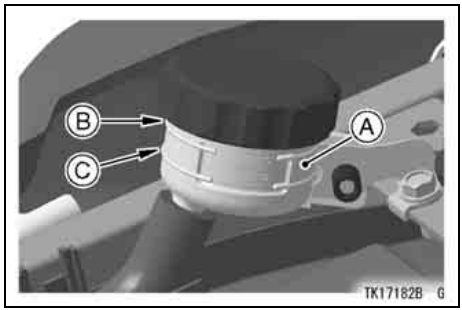
Do not spill brake fluid onto any painted surface.
Do not use fluid from a container that has been left open or that has been unsealed for a long time.
Check for fluid leakage around the fittings.
Check brake hose for damage.

Fluid Level Inspection

- With the brake fluid reservoirs held horizontal, the brake fluid level must be kept between the upper and lower level lines.



A. Front Brake Fluid Reservoir
B. Upper Level Line
C. Lower Level Line



A. Rear Brake Fluid Reservoir
B. Upper Level Line
C. Lower Level Line

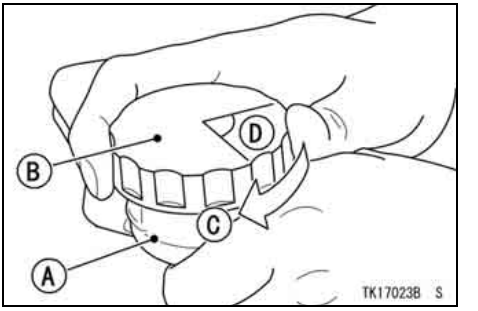
- If the fluid level in either reservoir is lower than the lower level line, check for fluid leaks in the brake lines, and fill the reservoir to the upper level line.

⚠ 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.

NOTE

○ *First, tighten until slight resistance is felt indicating that the cap is seated on the reservoir body; tighten the cap an additional 1/6 turn while holding the brake fluid reservoir body.*



A. Reservoir
B. Cap
C. Clockwise
D. 1/6 turn

Fluid Change

Have the brake fluid changed by an authorized Kawasaki dealer.

Front and Rear Brakes -

Disc and disc pad wear is automatically compensated for and has no effect on the brake lever or pedal action.

So there are no parts that require adjustment on the front or rear brakes.

⚠ WARNING

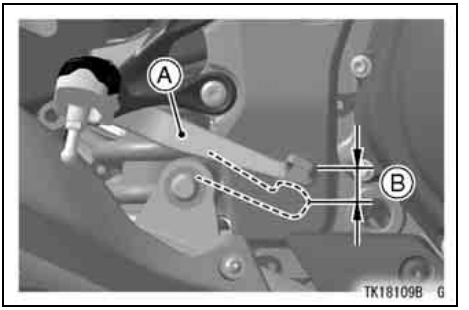
Air in the brake lines diminish braking performance and can cause an accident resulting in injury or death. If the brake lever or pedal feels mushy when it is applied, there might be air in the brake lines or the brake may be defective. Have the brake checked immediately by an authorized Kawasaki dealer.

Brake Light Switches

When either the front or rear brake is applied, the brake light goes on. The front brake light switch requires no adjustment, but the rear brake light switch should be adjusted in accordance with the Periodic Maintenance Chart.

Inspection

- Turn the ignition key to ON.
- The brake light should go on when the front brake is applied.
- If it does not, ask your authorized Kawasaki dealer to inspect the front brake light switch.
- Check the operation of the rear brake light switch by depressing the brake pedal. The brake light should go on after the proper pedal travel.



A. Brake Pedal
B. 10 mm (0.4 in.)

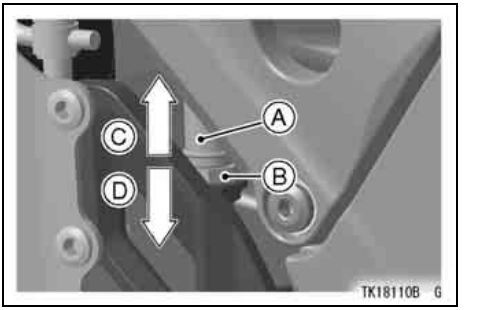
- If the light does not come on, adjust the rear brake light switch.

Brake Pedal Travel

10 mm (0.4 in.)

Adjustment

- To adjust the rear brake light switch, move the switch up or down by turning the adjusting nut.



A. Rear Brake Light Switch
B. Adjusting Nut
C. Lights sooner
D. Lights later

NOTICE

To avoid damaging the electrical connections inside the switch, be sure that the switch body does not turn during adjustment.

Front Fork

The front fork operation and oil leakage should be checked in accordance with the Periodic Maintenance Chart.

For various riding or load conditions the front fork can be adjusted for:

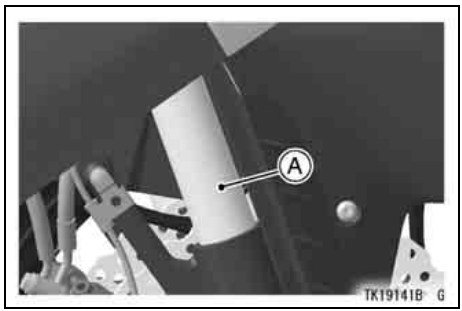
– Spring preload
– Rebound damping force
– Compression damping force

⚠ WARNING

Improper fork leg adjustment can cause poor handling and loss of stability, which could lead to an accident. Always adjust the fork legs on the left and right side to the same setting.

Front Fork Inspection

- Holding the brake lever, pump the front fork up and down several times to inspect smooth stroke.
- Visually inspect the front fork for oil leakage, scoring or scratches on the outer surface of the inner tube.
- If any doubt about the front fork, it should be checked by an authorized Kawasaki dealer.

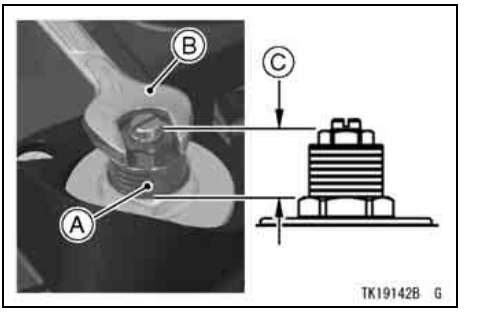


A. Inner Tube

Spring Preload Adjustment

The spring preload adjuster is located at the top end of each front fork leg and can be adjusted.

- To increase spring preload and stiffen the suspension, turn the preload adjuster clockwise with the wrench.
- To decrease preload and soften the suspension, turn the preload adjuster counterclockwise.



A. Spring Preload Adjuster
B. Wrench
C. Adjuster Position

Spring Preload Setting

Adjuster Position	19 mm (0.75 in.)	←	**14 mm (0.55 in.)***	→	4 mm (0.16 in.)*
Spring Action	Weak	←	**Standard**	→	Strong
Setting	Soft	←	**Standard**	→	Hard
Load	Light	←	**Standard**	→	Heavy
Road	Good	←	**Standard**	→	Bad
Speed	Low	←	**Standard**	→	High

*: From the top of the adjuster. This adjustment range may not exactly match the number shown in the table due to small tolerance of production.

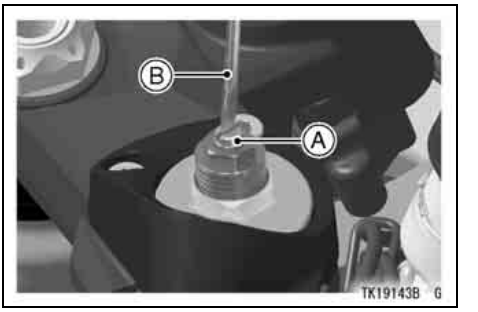
Rebound Damping Force Adjuster Adjustment

The rebound damping force adjuster are located on top of each front fork leg.

- Turn the adjuster clockwise with a screwdriver to increase damping force.
- Turn the adjuster counterclockwise to decrease damping force.

NOTICE

Do not force to turn the rebound and compression damping force adjuster from the fully seated position, or the adjusting mechanism may be damaged.



A. Rebound Damping Force Adjuster
B. Screwdriver

Rebound Damping Force Setting

Adjuster Position	Rebound Damping	0*	←	**8 clicks****	→	15 clicks**
Damping Force		Strong	←	**Standard**	→	Weak
Setting		Hard	←	**Standard**	→	Soft
Load		Heavy	←	**Standard**	→	Light
Road		Bad	←	**Standard**	→	Good
Speed		High	←	**Standard**	→	Low

*: This position is the fully seated position (turned fully clockwise).
**: Out from the fully seated position (turned fully clockwise). This adjustment range may not exactly match the number shown in the table due to small tolerance of production.

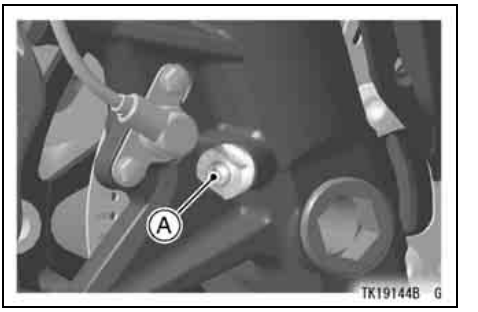
Compression Damping Force Adjuster

The compression damping force adjuster are located at the lower end of each front fork leg.

- Turn the adjuster clockwise with a screwdriver to increase damping force.
- Turn the adjuster counterclockwise to decrease damping force.

NOTICE

Do not force to turn the rebound and compression damping force adjuster from the fully seated position, or the adjusting mechanism may be damaged.



A. Compression Damping Force Adjuster

Compression Damping Force Setting

Adjuster Position	Compression Damping	0*	←	**10 clicks****	→	18 clicks**
Damping Force		Strong	←	**Standard**	→	Weak
Setting		Hard	←	**Standard**	→	Soft
Load		Heavy	←	**Standard**	→	Light
Road		Bad	←	**Standard**	→	Good
Speed		High	←	**Standard**	→	Low

*: This position is the fully seated position (turned fully clockwise).
**: Out from the fully seated position (turned fully clockwise). This adjustment range may not exactly match the number shown in the tabel due to small tolerance of production.

The standard front fork setting positions are as follows:

Standard Setting Position (Front Fork)

Spring Preload Adjuster	**14 mm (0.55 in.)***
Rebound Damping Adjuster	**8 clicks****
Compression Damping Adjuster	**10 clicks****

*: From the top of the adjuster
**: Out from the fully seated position (turned fully clockwise)

Rear Shock Absorber

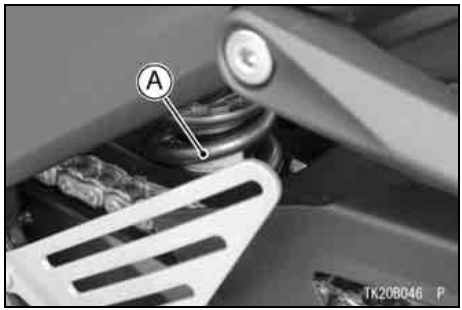
The rear shock absorber should be checked for operation and oil leakage in accordance with the Periodic Maintenance Chart.

For various riding or load conditions the rear shock absorber can be adjusted for:

– Spring preload
– Rebound damping force
– Compression damping force

Rear Shock Absorber Inspection

- Press down on the seat several times to inspect the stroke.
- Visually inspect the rear shock absorber for oil leaks.
- If there is any doubt about the rear shock absorber, it should be inspected by an authorized Kawasaki dealer.



A. Rear Shock Absorber

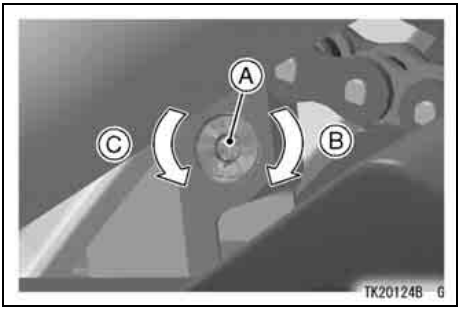
Spring Preload Adjustment

The spring adjusting nut on the rear shock absorber can be adjusted.

If the spring action feels too soft or too stiff, have it adjusted by an authorized Kawasaki dealer.

Rebound Damping Force Adjustment

The rebound damping force adjuster is located at the lower end of the rear shock absorber.



A. Rebound Damping Force Adjuster
B. To increase damping force
C. To decrease damping force

- Using a screwdriver turn the rebound damping force adjuster clockwise to increase rebound damping or counterclockwise to decrease it.

NOTICE

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

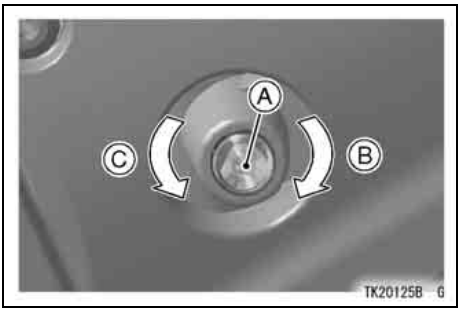
Rebound Damping Force Setting

Adjuster Position	Rebound Damping	0*	←	**2 turns out****	→	2 3/4 turns out**
Damping Force		Strong	←	**Standard**	→	Weak
Setting		Hard	←	**Standard**	→	Soft
Load		Heavy	←	**Standard**	→	Light
Road		Bad	←	**Standard**	→	Good
Speed		High	←	**Standard**	→	Low

*: This position is the fully seated position (turned fully clockwise).
**: Out from the fully seated position (turned fully clockwise). This adjustment range may not exactly match the number shown in the tabel due to small tolerance of production.

Compression Damping Force Adjustment

The compression damping force adjuster is located at the upper end of the rear shock absorber.



A. Compression Damping Force Adjuster
B. To increase damping force
C. To decrease damping force

- Using a screwdriver turn the compression damping force adjuster clockwise to increase rebound damping or counterclockwise to decrease it.

NOTICE

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

Compression Damping Force Setting

Adjuster Position	0*	←	**2 3/4 turns out****	→	6 turns out**
Damping Force	Strong	←	**Standard**	→	Weak
Setting	Hard	←	**Standard**	→	Soft
Load	Heavy	←	**Standard**	→	Light
Road	Bad	←	**Standard**	→	Good
Speed	High	←	**Standard**	→	Low

*: This position is the fully seated position (turned fully clockwise).
**: Out from the fully seated position (turned fully clockwise). This adjustment range may not exactly match the number shown in the tabel due to small tolerance of production.

The standard suspension setting positions are as follows:

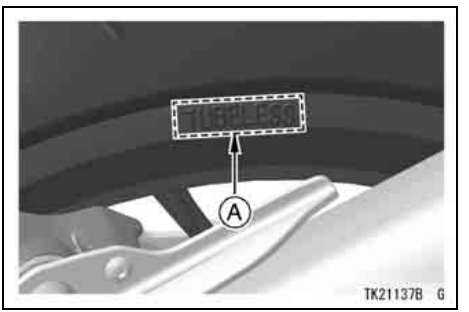
Standard Setting Position (Rear Shock Absorber)

Rebound Damping Adjuster	**2 turns out***
Compression Damping Adjuster	**2 3/4 turns out***

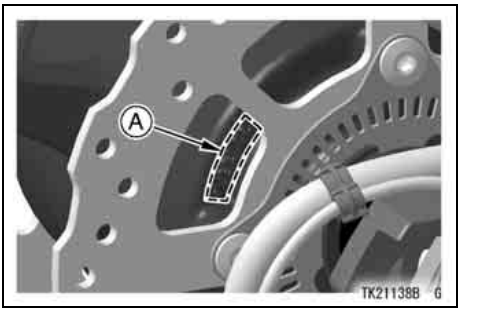
*: Out from the fully seated position (turned fully clockwise)

Wheels

Tubeless tires are installed on the wheels of this motorcycle. The indications of TUBELESS on the tire side wall and the rim show that the tire and rim are specially designed for tubeless use.



A. TUBELESS Mark



A. TUBELESS Mark

The tire and rim form a leakproof unit by making airtight contacts at the tire chamfers and the rim flanges instead of using an inner tube.

⚠ WARNING

Installing a tube inside a tubeless-type tire can create excessive heat build up that can damage the tube and cause rapid deflation. The tires, rims, and air valves on this motorcycle are designed only for tubeless type wheels. The recommended standard tires, rims, and air valves must be used for replacement. Do not install tube-type tires on tubeless rims. The beads may not seat properly on the rim causing tire deflation. Do not install a tube inside a tubeless tire. Excessive heat build-up may damage the tube causing tire deflation.

Tires -

Payload and Tire Pressure

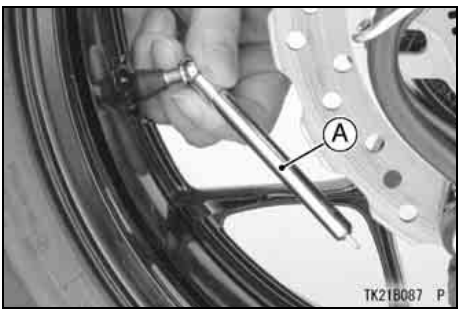
Failure to maintain proper inflation pressures or observe payload limits for your tires may adversely affect handling and performance of your motorcycle and can result in loss of control. The maximum recommended load in addition to vehicle weight is 175 kg (385 lb), including rider, passenger, baggage, and accessories.

- Remove the air valve cap.
- Check the tire pressure often, using an accurate gauge.
- Make sure to install the air valve cap securely.

NOTE

○ *Measure the tire pressure when the tires are cold (that is, when the motorcycle has not been ridden more than a mile during the past 3 hours).*

○ *Tire pressure is affected by changes in ambient temperature and altitude, and so the tire pressure should be checked and adjusted when your riding involves wide variations in temperature or altitude.*



A. Tire Pressure Gauge

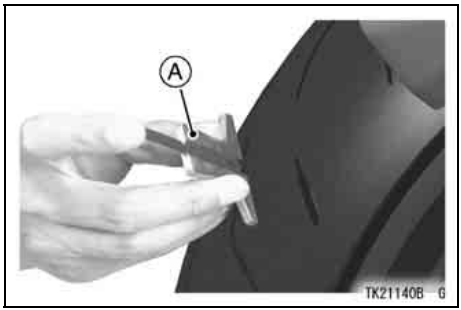
Tire Air Pressure (when cold)

Front	290 kPa (2.90 kgf/cm², 42 psi)
Rear	290 kPa (2.90 kgf/cm², 42 psi)

Tire Wear, Damage

As the tire tread wears down, the tire becomes more susceptible to puncture and failure. An accepted estimate is that 90% of all tire failures occur during the last 10% of tread life (90% worn). So it is false economy and unsafe to use the tires until they are bald.

- In accordance with the Periodic Maintenance Chart, measure the depth of the tread with a depth gauge, and replace any tire that has worn down to the minimum allowable tread depth.



A. Tire Depth Gauge

Minimum Tread Depth

Front	—	1 mm (0.04 in.)
Rear	Under 130 km/h (80 mph)	2 mm (0.08 in.)
	Over 130 km/h (80 mph)	3 mm (0.12 in.)

- Visually inspect the tire for cracks and cuts, replacing the tire in case of bad damage. Swelling or high spots indicate internal damage, requiring tire replacement.
- Remove any imbedded stones or other foreign particles from the tread.

NOTE

○ *Have the wheel balance inspected whenever a new tire is installed.*

⚠ WARNING

Tires that have been punctured and repaired do not have the same capabilities as undamaged tires and can suddenly fail, causing an accident resulting in serious injury or death. Replace damaged tires as soon as possible. To ensure safe handling and stability, use only the recommended standard tires for replacement, inflated to the standard pressure. If it is necessary to ride on a repaired tire, do not exceed 100 km/h (60 mph) until the tire is replaced.

NOTE

○ *Most countries may have their own regulations requiring a minimum tire tread depth; be sure to follow them.*

○ *When operating on public roadways, keep maximum speed under traffic law limits.*

Standard Tire (Tubeless)

Front	Make, Type: METZELER TL SPORTEC M5 INTERACT E Size: 120/70ZR17 M/C (58W)
Rear	Make, Type: METZELER TL SPORTEC M5 INTERACT E Size: 190/50ZR17 M/C (73W)

⚠ WARNING

Mixing tire brands and types can adversely affect handling and cause an accident resulting in injury or death. Always use the same manufacturer's tires on both front and rear wheels.

⚠ WARNING

New tires are slippery and may cause loss of control and injury. A break-in period of 160 km (100 miles) is necessary to establish normal tire traction. During break-in, avoid sudden and maximum braking and acceleration, and hard cornering.

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.

The sealing strip should not be pulled off once the specified electrolyte has been installed in the battery for initial service.

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. Every 15°C (27°F) doubles the rate.

Electrical accessories, such as digital clocks and computer memory, also draw current from the battery even when the key is switched off. Due to a combination of such “key-off” draws and hot temperature, 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	Lead -Calcium
	Battery	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 12.8 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.

Kawasaki-recommended chargers are:
Battery Mate 150-9
OptiMate 4
Yuasa MB-2040/2060
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 Battery Removal).
- 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 Battery Installation).

NOTICE

Never remove the sealing strip, or the battery can be damaged. Do not install a conventional battery in this motorcycle, or the electrical system cannot work properly.

NOTE

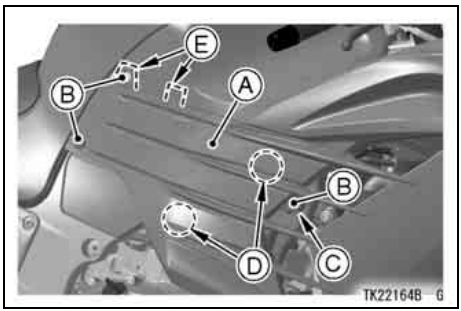
○ *If you charge the sealed battery, never fail to observe the instructions shown in the label on the battery.*

⚠ 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.

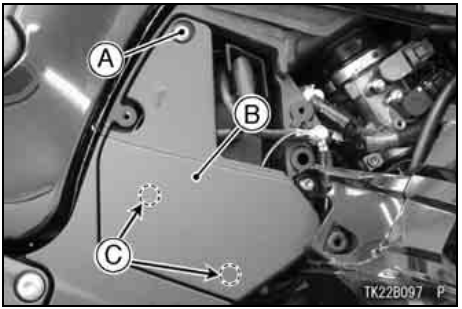
Battery Removal

- Remove the bolts.
- Pulling out the right fairing cover out slowly to clear the projections.
- Clear the right inner rubber cover from the right fairing cover, and remove the right fairing cover backward.



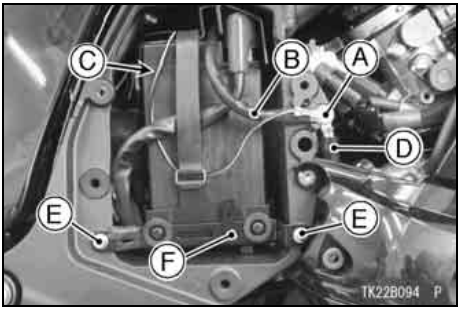
A. Right Fairing Cover
B. Bolts
C. Right Inner Rubber Cover
D. Projections
E. Tabs

- Remove the battery compartment cover by removing the bolt.



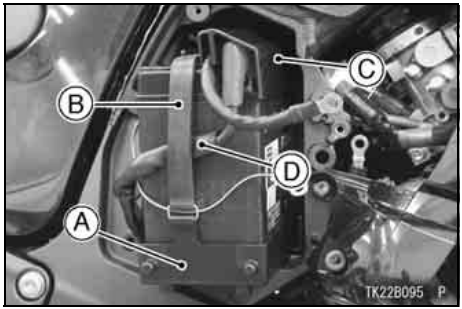
A. Bolt
B. Battery Compartment Cover
C. Projections

- Removet he battery (–) cable, (–) terminal lead and frame ground cable by removing the bolt.
- Remove the battery holder bracket by removing the bolts.



A. Bolt
B. Battery (–) Cable
C. (–) Terminal Lead
D. Frame Ground Cable
E. Bolts
F. Battery Holder Bracket

- Slightly pull out the battery tray.
- Unhook the band first, and then remove the battery cover.
- Disconnect the battery (+) cable.
- Remove the battery tray with battery.

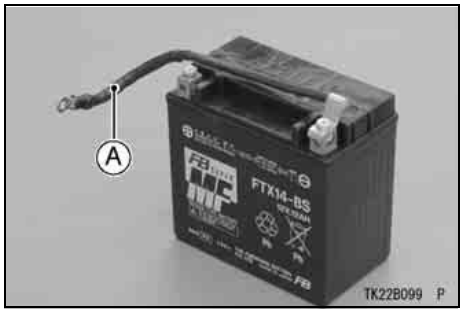


A. Battery Tray
B. Band
C. Battery Cover
D. Battery (+) Cable

NOTICE

Be careful not to drop the battery from the motorcycle when pulling out it.
Do not give the battery tray a strong pull, or the cables may be damaged.

- Disconnect the battery (–) cable.



A. Battery (–) Cable

- Clean the battery using a solution of baking soda and water. Be sure that the cable connections ate clean.

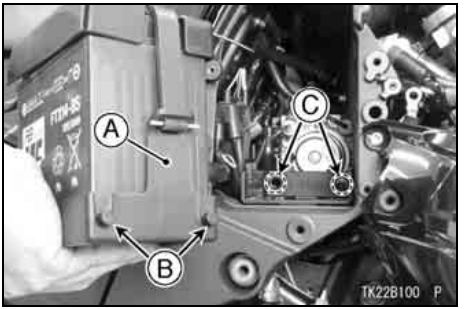
Battery Installation

Battery and the removed parts installation is performed in the reverse order of removal, and make sure that the lead or cable does not pinch with any parts.

NOTICE

Installing the (–) cable to the (+) terminal of the battery or the (+) cable to the (–) terminal of the battery can seriously damage the electrical system.

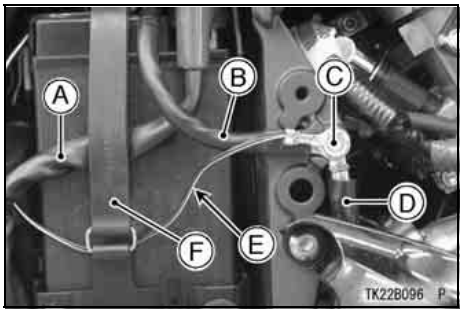
- Install the battery (–) cable to the battery.
- Install the battery (+) cable to the battery, and then install the battery cover on the battery, and hook the band.
- Insert the projections on the battery tray into the holes of the battery compartment.



A. Battery Tray
B. Projections
C. Holes

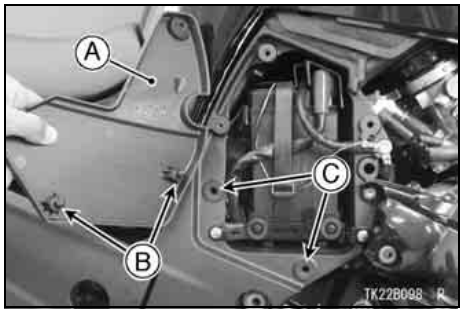
- Install the battery holder bracket.
- Install the bolts.
- Install the cables and lead so that they are positioned over the frame, in order of the frame ground cable, battery (–) cable and (–) terminal lead from the bottom.
- Install the bolt.

- Run the battery (+) cable and (–) terminal lead under the band.



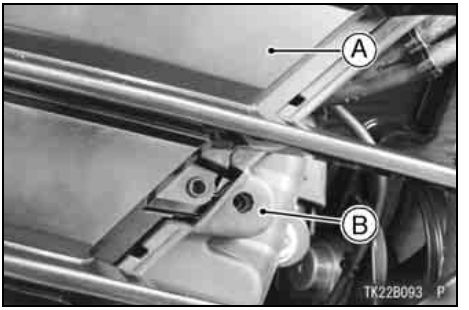
A. Battery (+) Cable
B. Battery (–) Cable
C. Bolt
D. Frame Ground Cable
E. (–) Terminal Lead
F. Band

- Insert the projections on the battery compartment cover into the holes of the frame.
- Install the bolt.



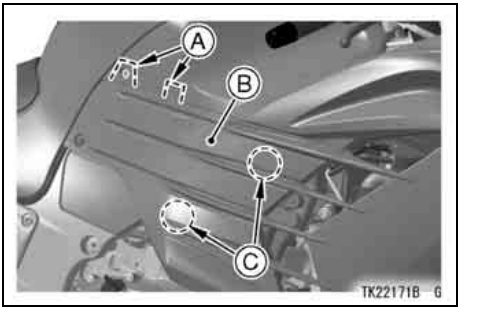
A. Battery Compartment Cover
B. Projections
C. Holes

- Insert the right fairing cover halfway, and fit the right inner rubber cover to the right fairing cover.



A. Right Fairing Cover
B. Right Inner Rubber Cover

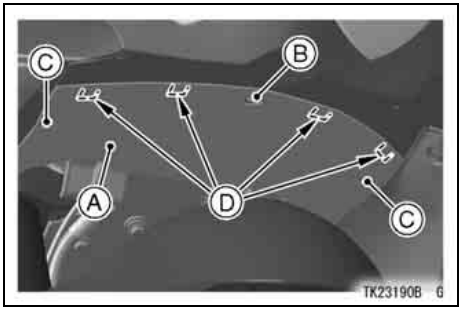
- Insert the front part of the right fairing cover securely.
- Insert the tabs on the right fairing cover under the fuel tank cover first, and then fit the projections to the holes.
- Install the bolts and washers.



A. Tabs
B. Right Fairing Cover
C. Projections

Headlight Beam

- When adjusting headlight beam horizontally or vertically, remove the front right and left inner covers (refer to the Air Cleaner section in this chapter).
- Remove the bolt, washer and quick rivets.
- Remove the upper inner fairing backward.

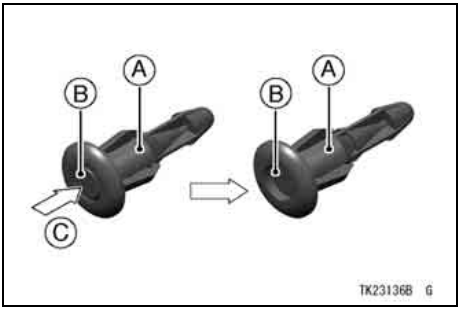


A. Upper Inner Fairing
B. Bolt and Washer
C. Quick Rivets
D. Tabs

NOTE

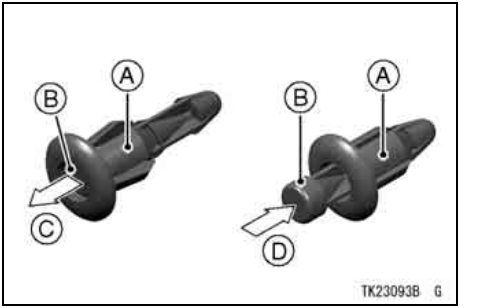
○ *The upper inner fairing uses the quick rivets. The quick rivets can be removed by pushing the central pin into the quick rivets, and when installing them, pull the central pin fully up first, and then push into the central pin after inserting them.*

Quick Rivet Removal



A. Quick Rivet
B. Central Pin
C. Push in.

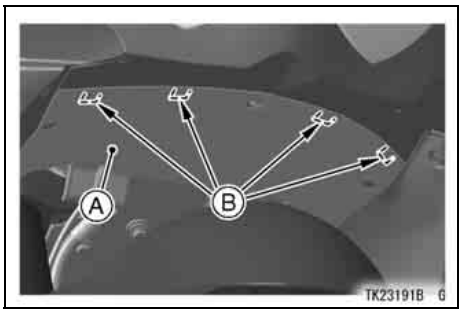
Quick Rivet Installation



A. Quick Rivet
B. Central Pin
C. Pull up fully.
D. Push in.

- After adjusting the headlight beam, install the upper inner fairing.
- Upper inner fairing and the removed parts installation is performed in the reverse order of removal.
- Insert the slots of the upper inner fairing into the tabs of the upper fairing.

- Install the bolt, washer and quick rivet.

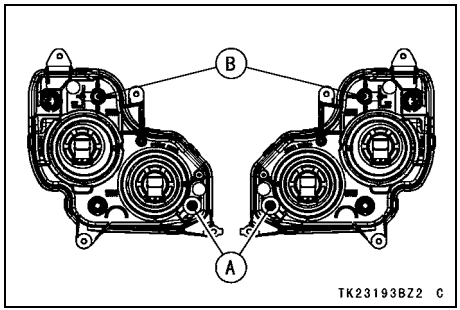


A. Upper Inner Fairing
B. Tabs

Horizontal Adjustment

The headlight beam is adjustable horizontally. If not properly adjusted horizontally, the beam will point to one side rather than straight ahead.

- Turn the horizontal adjuster in or out until the beam points straight ahead.



A. Horizontal Adjuster
B. Vertical Adjuster

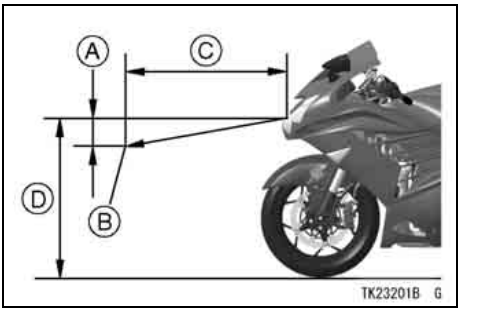
Vertical Adjustment

The headlight beam is adjustable vertically. If adjusted too low, neither low nor high beam will illuminate the road far enough ahead. If adjusted too high, the high beam will fail to illuminate the road close ahead, and the low beam will blind oncoming drivers.

- Turn the vertical adjuster in or out to adjust the headlight vertically.

NOTE

○ *On high beam, the brightest points should be slightly below horizontal. The proper angle is 0.4 degrees below horizontal. This is a 50 mm (2.0 in.) drop at 7.6 m (25 ft) measured from the center of the headlight, with the motorcycle on its wheels and the rider seated.*

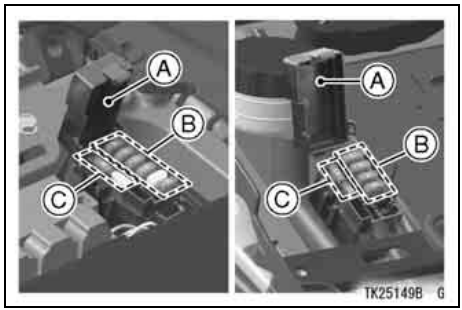


A. 50 mm (2.0 in.)
B. Center of Brightest Spot
C. 7.6 m (25 ft)
D. Height of Headlight Center

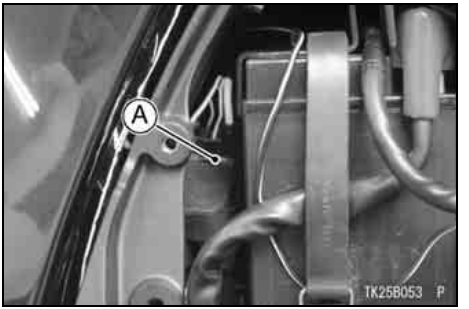
Fuses

Fuses are arranged in the fuse boxes located under the seat. The main fuse is located at the battery compartment. If a fuse fails during operation, inspect the electrical system to determine the cause, and then replace it with a new fuse of proper amperage.

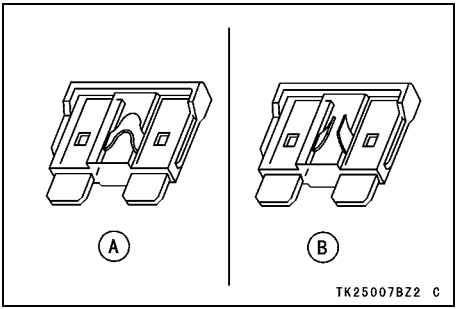
The main fuse removal should be done by an authorized Kawasaki dealer.



A. Fuse Box
B. Fuses
C. Spare Fuses



A. Main Fuse



A. Normal
B. Failed

⚠ WARNING

Substituting fuses can cause wiring to overheat, 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 boxes and main fuse.

General Lubrication

Lubricate the points shown below, with either motor oil or regular grease, in accordance with the Periodic Maintenance Chart or whenever the vehicle has been operated under wet or rainy conditions.

Before lubricating each part, clean off any rusty spots with rust remover and wipe off any grease, oil, dirt, or grime.

NOTE

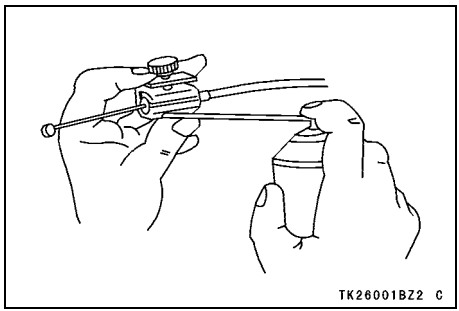
○ *A few drops of oil are effective to keep bolts and nuts from rusting and sticking. This makes removal easier. Badly rusted nuts, bolts, etc., should be replaced with new ones.*

Apply motor oil to the following pivots -

○ Side Stand
○ Clutch Lever
○ Front Brake Lever
○ Rear Brake Pedal

Lubricate the following cables with a pressure cable lubber -

○ **(K)** Throttle Inner Cables



Apply grease to the following points -

○ **(K)** Throttle Inner Cable Upper Ends

(K): Should be serviced by an authorized Kawasaki dealer.

NOTE

○ *After connecting the cables, adjust them.*

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 windshield, headlight cover, and other 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, fuel system, brake components, electrical components, muffler outlets, and fuel tank openings.

Washing Your Motorcycle

- 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 a 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.

○ *Condensation may form on the inside of the headlight lens after riding in the rain, washing the motorcycle or humid weather. To remove the moisture, start the engine and turn on the headlight. Gradually the condensation on the inside of the lens will clear off.*

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.

Windshield and Other Plastic Parts

After washing use a soft cloth to gently dry plastic parts. When dry, treat the windshield, headlight lens, and other nonpainted plastic parts with an approved plastic cleaner/polisher product.

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.

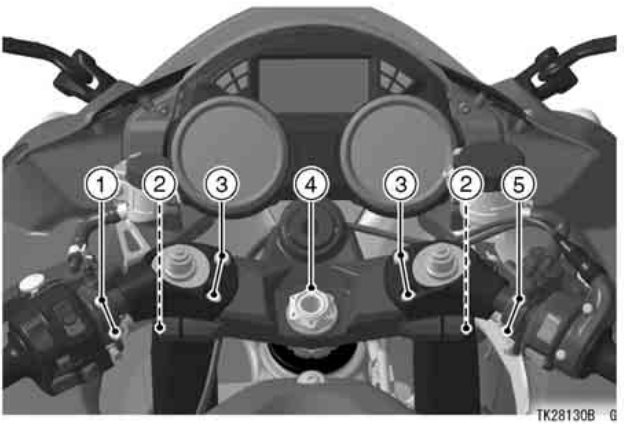
⚠ WARNING

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.

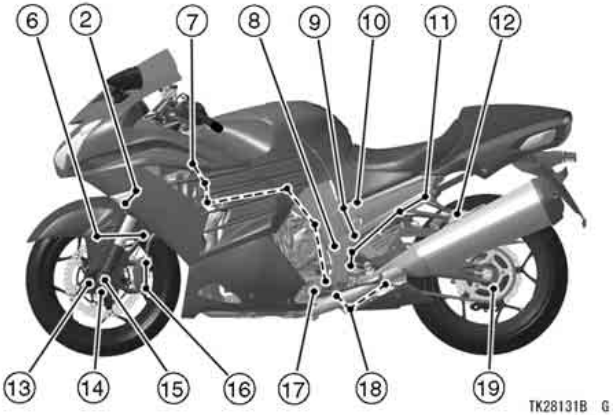
Bolt and Nut Tightening

In accordance with the Periodic Maintenance Chart, it is very important to check the tightness of the bolts and nuts listed here. Also, check to see that each cotter pin is in place and in good condition. Please ask your authorized Kawasaki dealer for torque values.

1. Clutch Lever Holder Bolts
2. Front Fork Clamp Bolts
3. Handlebar Mounting Bolts
4. Steering Stem Head Nut
5. Brake Lever Holder Clamp Bolts



6. Front Fender Mounting Bolts
7. Engine Mounting Bolts and Nuts
8. Swingarm Pivot Shaft Nut
9. Rear Frame Mounting Bolts
10. Rear Shock Absorber Mounting Bolt
11. Footpeg Mounting Bolts
12. Muffler Mounting Bolts
13. Brake Disc Mounting Bolts
14. Front Axle Clamp Bolt
15. Front Axle Nut
16. Caliper Mounting Bolts
17. Side Stand Bolt
18. Suspension Linkage Tie-Rod Nuts
19. Rear Sprocket Nuts



20. Rear Axle Nut
21. Brake Pedal Bolt