



Whenever you see the symbols shown below, heed their instructions! Always follow safe operating and maintenance practices.

AWARNING

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

CAUTION

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

NOTE

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

IMPORTANT

Off-road motorcycle riding is a wonderful sport, and we hope you will enjoy it to the fullest.

However, if improperly conducted, the 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 BIKE LEGALLY, SHOW CONCERN FOR THE ENVIRONMENT, AND RESPECT THE RIGHTS OF OTHER PEOPLE.

AWARNING

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

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 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 carburetor.

2. Exhaust Emission Control System

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

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.

You should keep a maintenance record for your motorcycle. To assist you in keeping this record, we have provided space on pages 76 through 80 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 EMISSION CONTROL SYSTEM PROHIBITED

California state 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 motorcycle for the purposes of emission control prior to its sale or delivery to the ultimate purchaser or while it is in use, or (2) the use of the motorcycle 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:

- Carburetor and internal parts
- 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 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 level.

Foreword

We wish to thank you for choosing this fine Kawasaki Motorcycle. It is the end product of Kawasaki's advanced engineering, exhaustive testing, and continuous striving for superior reliability, safety, 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 safety.

Due to improvements in design and performance during production, in some cases there may be minor discrepancies between the actual vehicle and the illustrations and text in this manual.

Specifications	6
General Information	8
Location of Parts	8
Fuel	
Fuel Tap	12
Meter Unit	
Engine Stop Button	
Light Switch	
Starting the Engine	
Shifting Gears	
Stopping the Motorcycle	
Stopping the Engine	
Break-In	
Daily Pre-ride Inspection	
After-Race Check Points	
Maintenance and Adjustment	
Periodic Maintenance Chart	
Engine Oil	
Cooling System	
Spark Plug	
Valve Clearance	
Air Cleaner	
Throttle Cable	
Carburetor	
Clutch	with the same of t
Spark Arrester	
Drive Chain	
Handlebar	
Brakes	
Steering	

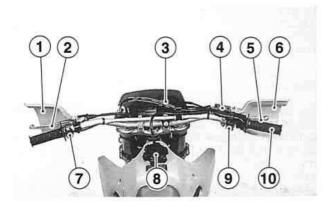
Front Fork	49
Rear Suspension (Uni-Trak)	56
Wheels	
Headlight	61
Bolt and Nut Tightening	62
Torque Table	64
Cleaning	66
Lubrication	67
Troubleshooting	70
Storage	
Wiring Diagram	75
Maintenance Record	76

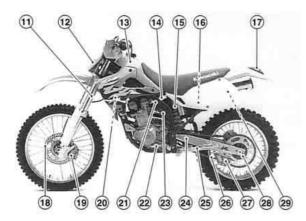
Dimensions			
Overall length			2,115 mm (83.27 in)
Overall width			910 mm (35.83 in)
Overall height			1,220mm (48.03 in)
Wheelbase			1,435 mm (56.50 in)
Road clearanc	e		320 mm (12.60 in)
Dry weight			105 kg (231 lb)
Fuel tank capa	city		9.8 L (2.59 US gal)
Engine	E.A.		
Type			4-stroke, single cylinder, DOHC, liquid-cooled
Bore and strok	e		78.0 x 61.2 mm (3.07 x 2.41 in)
Displacement			292 mL (17.82 cu in)
Compression r	atio		11.0 : 1
Port timing:	Intake	Open	22° BTDC
The section of the se	100 100 100 100 100 100 100 100 100 100	Close	62° ABDC
	Exhaust	Open	61° BBDC
	And the Associated	Close	19° ATDC
Carburetor		34.44.4	KEIHIN CVK34
Lubrication sys	stem		Forced lubrication (wet sump)
Engine oil			SE, SF or SG class SAE10W40, 10W50, 20W40, or 20W50
Engine oil capa	acity		1.5 L (1.6 US gt)
Coolant capac	ity		1.6 L (1.7 US qt)
Starting system			Primary kick
Ignition system			CDI system
Ignition timing			10° BTDC @1,700 r/min (rpm) ~ 40° BTDC @3,000 r/min (rpm)
Spark plug	EP .		NGK CR8E or ND U24ESR-N
Transmission			NGK CHOE OF IND OZ4ESH-IN
Transmission t	vne		6-speed, constant mesh, return shift
Clutch Type	, pc		Wet, multi disc
Driving system	8		Chain drive
Diving system	1.0		Origin unive

Gear ratio:	1st 2nd 3rd 4th 5th 6th	3.000 (30/10) 2.000 (30/15) 1.500 (27/18) 1.250 (25/20) 1.050 (21/20) 0.904 (19/21)
Primary reduction ratio Final reduction ratio		2.863 (63/22) 3.571 (50/14)
Overall drive ratio		9.253 (Top gear)
Type		Tubular, semi-double cradle
Steering angle		45° to either side
Castor		26.5°
Trail		107 mm (4.21 in)
Tire size:	Front Rear	80/100-21 51M, DUNLOP K490J 100/100-18 59M, DUNLOP K695
Suspension:	Front Rear	Telescopic fork (Upside-down) Swingarm (Uni-trak)
Front Suspension stroke		285 mm (11.22 in)
Rear Wheel travel		280 mm (11.02 in.)
Front fork oil (each)		KAYABA 01 or SAE5W, 537 - 543 mL (18.16 - 18.36 US oz)
Front fork oil level (compressed, spring removed)		68 mm (2.68 in)
Brakes		
Type:	Front and Rear	Disc brake
Effective disc diameter:	Front Rear	220 mm (8.66 in) 202 mm (7.95 in)
Electrical Equipment		SELECTRAL CONTRACTOR TO MAINTAIN
Headlight Taillight		12 V 30 W (quartz-halogen) 2 V 10 W

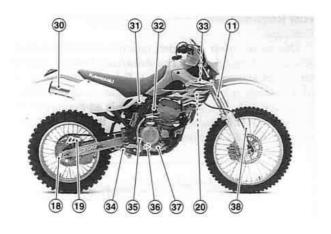
Specifications subject to change without notice, and may not apply to every country.

Location of Parts





- 1. Clutch Lever Guard
- 2. Clutch Lever
- 3. Meter Unit
- 4. Front Brake Reservoir
- 5. Front Brake Lever
- 6. Brake Lever Guard
- 7. Engine Stop Button
- 8. Fuel Tank Cap
- 9. Light Switch
- 10. Throttle Grip
- 11. Front Fork
- 12. Headlight
- 13. Fuel Tank
- 14. Fuel Tap
- 15. Rear Shock Absorber
- 16. Air Cleaner
- 17. Taillight
- 18. Brake Disc
- 19. Brake Caliper
- 20. Radiator
- 21. Choke Knob
- 22. Shift Pedal
- 23. Idle Adjusting Screw
- 24. Swingarm
- 25. Side Stand
- 26. Drive Chain
- 27. Drive Chain Guide
- 28. Chain Adjuster
- 29. Coolant Reserve Tank

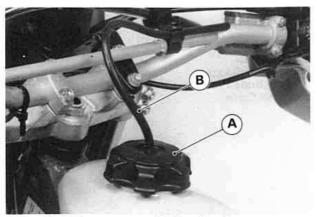


- 30. Spark Arrester 31. Rear Brake Reservoir
- 32. Carburetor
- 33. Radiator Cap 34. Uni-trak Tie Rod and Rocker Arm
- 35. Kick Pedal
- 36. Oil Level Gauge 37. Rear Brake Pedal
- 38. Meter Cable

Fuel

The Kawasaki KLX has a 4-stroke engine that requires a gasoline.

The capacity of the fuel tank is 9.8 L (2.59 US gal). To open the fuel tank cap, pull out the breather hose from the clamp on the handlebar, and turn the tank cap counterclockwise.



A. Fuel Tank Cap

B. Breather Hose

AWARNING

Gasoline is extremely flammable and can be explosive under certain conditions. 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.

Fuel Requirements:

Fuel Type

Use clean, fresh unleaded gasoline with a minimum Antiknock Index of 87. The Antiknock Index is 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 M	ethod	Minimum Rating
Antiknock Index	(RON + MON)	87
Research Octane	Number (RON)	91

CAUTION

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 nonrecommended 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.

CAUTION

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.

CAUTION

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.

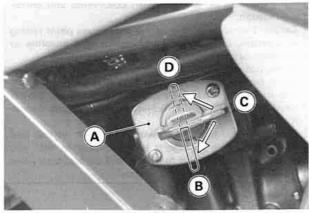
Certain ingredients of gasoline may cause paint fading or damage. Be extra careful not to spill gasoline or gasoline oxygenate blends during refueling.

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 oxydation 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 tank and carburetors. See the Storage section in this manual.

Fuel Tap

The fuel tap has three positions: OFF, ON, and RES (reserve). If the fuel runs out with the tap in the ON position, the last 1.5 L (0.4 US gal) of fuel can be used by turning the tap to RES.



A. Fuel Tap B. ON position

C. OFF position D. RES position

NOTE

- Since riding distance is limited when on RES, refuel at the earliest opportunity.
- Make certain that the fuel tap is turned to ON (Not RES), after filling up the fuel tank.

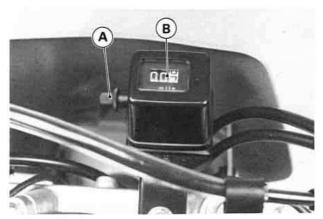
AWARNING

Practice operating the fuel tap with the motorcycle stopped. To prevent an accident you should be able to operate the fuel tap while riding without taking your eyes off the road.

Be careful not to touch the hot engine while operating the fuel tap.

Meter Unit

In the meter face is the trip meter. The trip meter shows the distance traveled since it was last reset to zero. The trip meter can be reset to zero by pulling out the reset knob and turn it to either side.

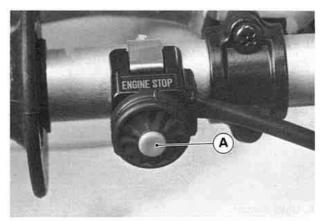


A. Reset Knob

B. Trip Meter

Engine Stop Button

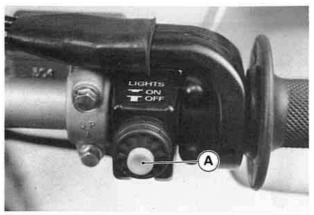
The engine stop button is located on the left side of the handlebar. For ordinary engine stoppage and, if some emergency requires stopping the engine, press the button until the engine stops.



A. Engine Stop Button

Light Switch

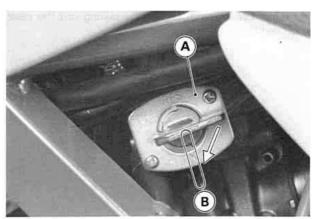
The light switch is located on the right side of the handlebar. The switch positions are identified on the switch housing.



A. Light Switch

Starting the Engine

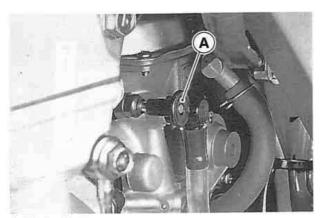
Turn the fuel tap to the ON position.



A. Fuel Tap

B. ON position

• If the engine is cold, pull out the choke knob.

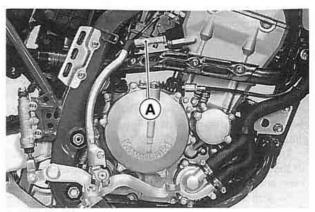


A. Choke Knob

- Make certain the transmission is in neutral.
- Push the kick pedal down slowly, until you feel a slight resistance.
- Continue pushing down until you feel a second slight resistance.
- Now push the kick pedal about 60° further, and then let it return to the top.
- With the throttle completely closed, push the kick pedal down all the way in one fast push.

NOTE

 Do not just stab at the kick pedal or stop part way down.



A. Kick Pedal

- If the engine does not start immediately, repeat the procedure.
- Even after the engine starts, keep the choke knob pulled out. When the engine is thoroughly warmed up, push in the choke knob.

NOTE

- When the engine is already warm or on hot day, open the throttle part way instead of using the choke knob.
- Olf the engine is flooded, kick with the throttle fully open until the engine starts.
- Olf the clutch lever is pulled, the motorcycle can be started while in any gear.

Shifting Gears

The transmission is a 6-speed, return shift type with neutral halfway between 1st and 2nd gears. A "return shift" means that to go back to first gear from a higher gear, you must shift back through the gears one by one. The same is true when upshifting: each gear must be engaged before the next higher gear may be selected.

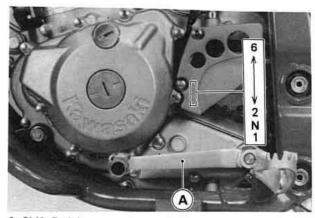
To engage first gear from neutral, pull in the clutch lever and push down on the shift pedal, gently release the clutch lever, then release the shift pedal.

To shift to the next higher gear; pull in the clutch lever, lift the shift pedal with your toe, gently release the clutch lever, and then release the shift pedal.

To shift to the next lower gear; disengage the clutch, push the shift pedal down as far as it will go, engage the clutch gently, and then release the shift pedal.

CAUTION

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



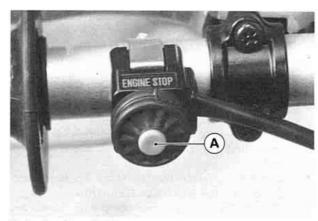
A. Shift Pedal

Stopping the Motorcycle

For maximum deceleration, close the throttle and apply both front and rear brakes. Disengage the clutch as the motorcycle comes to a stop. Independent use of the front or rear brake may be advantageous under certain conditions. Downshift progressively as speed is reduced to ensure good engine response when you want to accelerate.

Stopping the Engine

- Shift the transmission into neutral.
- After racing the engine slightly, close the throttle completely and push the engine stop button.



A. Engine Stop Button

Turn the fuel tap to the OFF position.

Break-In

To obtain the proper operating clearance in the engine and transmission that are necessary for smooth engine performance and reliability, a brief break-in procedure must be carried out. For the first hour or 20 km (12 mi) of operation, run the engine at low and moderate r/min (rpm).

Break-in according to the following steps.

- Start the engine and let it run at idle until the engine is thoroughly warmed up.
- Stop and let the engine cool completely.
- Start the engine and ride for 10 minutes at moderate speed – NEVER HARD ACCELERATION.
- Stop and let the engine cool completely. Be sure to check and adjust chain slack and spoke tightness and make a general inspection.
- Start the engine and ride for 20 minutes at moderate speed – NEVER HARD ACCELERATION.
- Stop and let the engine cool completely. Check and adjust as step 4.
- Start the engine and ride for 30 minutes at moderate speed – NEVER HARD ACCELERATION.
- Stop and let the engine cool completely. Check and adjust as in Step 4.
- After the break-in procedure has been properly carried out, the motorcycle is ready for regular operation. However, since recklessly high r/min (rpm) will lead to engine trouble, take care to use the necessary skill and technique in operating the motorcycle.

Daily Pre-ride Inspection

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

If any irregularities are found during these checks, refer to the appropriate owner's manual section and take the action required to return the motorcycle to a safe operating condition.

AWARNING

Failure to perform these checks every day before you ride may result in serious damage or severe accident.

Engine	
Engine oil	Engine oil level correct.
Coolant	No coolant leakage, coolant level between level lines (when engine is cold).
Radiator cap	Properly installed.
Spark plug	Tighten to correct torque.
Clutch	Clutch functioning properly.
Carburetor	Adjusted properly.
Air cleaner	Clean, properly installed.
Muffler	Muffler not damaged.
Engine sprocket	Not worn or damaged.

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rrame	
Tires	Check overall condition; wear, cuts and other damage. Check pressure.
Spokes	Check for any loose spokes.
Drive chain	Check overall condition and chain slack, oil as necessary.
Brakes; front and rear	Function properly, brake lever and pedal have correct play. No brake fluid leakage.
Throttle	Functions properly, returns smoothly.
Steering	Action is smooth but not loose from lock to lock. No binding of control cables.
Front fork	Functions properly, no oil leakage.
Rear shock absorber	Function properly, no oil leakage.
Fuel tank	Mounted securely, no fuel leakage.
Rear sprocket	Not worn or damaged.
Electrical equipment	Functions properly.
Engine stop button	Functions properly.
Nuts, bolts, fasteners	Tighten any loose bolts and nuts.

After-Race Check Points

After racing, first clean the motorcycle (Pg. 66), then inspect the entire motorcycle with special attention to the air cleaner, carburetor, brakes, etc.

Carry out general lubrication (Pg. 67) and make adjustments as necessary.

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.

Periodic Maintenance Chart

	FREQUENCY		Traveled Distance km (mi)				
	OPERATION	100 (60)	(300)	1000 (600)	1500 (900)	(1200)	Page
	Clutch-adjust			•		•	37
	Clutch and friction plates-check †			•		•	-
	Throttle cable-adjust		•	•		•	32
	Spark plug-clean, gap †	•	•	•		•	28
	Air cleaner element-clean	Every 300 km (200 mi) or every race					29
	Air cleaner element-replace	Damaged					29
	Carburetor-inspect/adjust		•		•		34
	Engine oil-change						23
1	Oil filter-replace	0		•		•	23
	Valve clearance-check †					•	28
	Engine sprocket-check †			•		•	44
	Coolant-change	2 years					
	Radiator hoses, connections-check †			•		•	25
	Spark arrester-cleaning	Every 4 000 km (2 500 mi)				36	
	Brake adjustment-check †	•	•		•	•	44
	Brake pad wear-check †			•			47
	Brake fluid level-check †					•	45

1	FREQUENCY	Traveled Distance km (mi)					See
	OPERATION	100 (60)	(388)	1000 (600)	1500 (900)	(1288)	Page
7	* Brake fluid-change			Every 2 years			-
ſ	* Master cylinder cup and dust seal-replace			Every 2 years			-
ſ	* Caliper piston seal and dust seal-replace	Every 2 years				-	
Ī	* Brake and fuel hose-replace	Every 4 years					
Ī	Spoke tightness and rim runout-check †	•			•	•	58, 59
Ī	Drive chain-adjust	Every 300 km (200 mi)					
[Drive chain-lubricate	Before and after each day of operation					42,69
ſ	Drive chain wear-check †	•	•	•	•	•	40
, [Chain guide and slipper-check †	Damaged				41	
	Front fork-inspect/clean	•	•		•	•	49
	* Front fork oil-change	Every year					:=:
	Nuts, bolts, fasteners-check †	•				•	62
	* Fuel system-clean	•		•	•		188
1	Steering play-check †	•		•	•		47
Ī	* Steering stem bearing-grease					•	15
Ī	Rear sprocket-check †				•		42
Ī	General lubrication-perform			9	•	•	67
I	* Wheel bearing-check †					•	
Ī	* Swingarm and Uni-Trak linkage pivots-grease		•	•	•	•	7=
Ī	* Swingarm and Uni-Trak linkage pivots-check †		•	•	•		-
T	* Rear shock oil-replace	Every year				22	

Replace, add, adjust or torque if necessary.
 Should be serviced by referring to the Service Manual or an authorized Kawasaki dealer.

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

AWARNING

Motorcycle operation with insufficient, deteriorated, or contaminated engine oil will cause accelerated wear and may result in engine or transmission seizure, accident, and injury

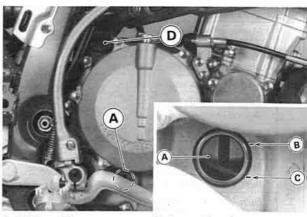
Oil Level

- Situate the motorcycle so that it is perpendicular to the ground.
- 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.

CAUTION

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 gauge in the lower right side of the engine. The oil level should come up between the upper and lower level.



A. Oil Level Gauge B. Upper Level

C. Lower Level D. Oil Filler Cap

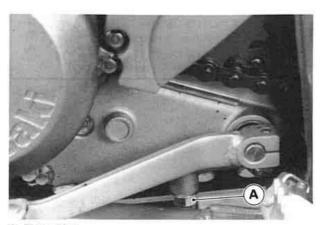
- ★If the oil level is too high, remove the excess oil, using a syringe or some other suitable device.
- ★If the oil level is too low, add the correct amount of oil through the oil filler opening. Use the same type and brand of oil that is already in the engine.

Oil and/or Oil Filter Change

- Warm up the engine thoroughly so that the oil will pick up any sediment and drain easily.
- Set the motorcycle up on its side stand.
- Stop the engine, and place an oil pan beneath the engine.
- Remove the engine drain plug and position the vehicle so that it is perpendicular to the ground to allow all the oil to drain out.

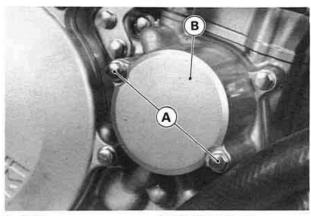
AWARNING

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



A. Drain Plug

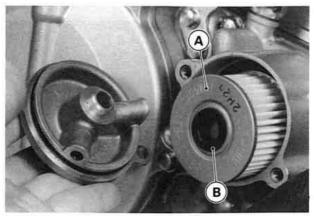
If the oil filter is to be changed, remove the oil filter cover bolts and take off the cover with O-ring.



A. Bolts

B. Oil Filter Cover

Replace the element with a new one.



A. Element

B. Grommet

- Apply a little engine oil to the grommet, and install the oil filter cover and tighten its bolts.
- After the oil has completely drained out, install the engine drain plug with its gasket. Proper torque for it is shown in the table.

NOTE

O Replace the damaged gasket with a new one.

- Fill the engine up to the upper level with a good quality motor oil specified in the table.
- Check the oil level.

Tightening Torque (Drain Plug)

Engine: 15 N-m (1.5 kg-m, 11 ft-lb)

Engine Oil

Grade: SE, SF or SG class

Viscosity: SAE 10W40, 10W50, 20W40, or 20W50

Capacity: 1.3 L (1.4 US qt)

[when filter is not removed]

1.4 L (1.5 US qt) [when filter is removed]

1.5 L (1.6 US qt)

[when engine is completely dry]

Cooling System

Radiator Hoses

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

Radiator

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

CAUTION

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

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 and replenish coolant if the level is low. Change the coolant in accordance with the Periodic Maintenance Chart.

NOTE

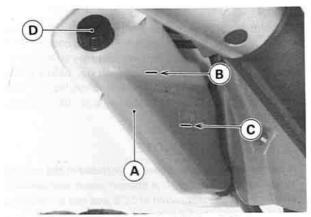
OA permanent type of antifreeze is installed in the cooling system when shipped. It is colored green and contains ethylene glycol. It is mixed at 50% and has the freezing point of − 35°C (−31°F).

Coolant Level Inspection

 Check the coolant level through the coolant level gauge on the reserve tank located inside the left side cover.
 The coolant level should be between the FULL and LOW level lines.

NOTE

 Check the level when the engine is cold (room or ambient temperature).



A. Reserve Tank
B. FULL Level Line

C. LOW Level Line D. Tank Cap

- If the amount of coolant is insufficient, unscrew the cap from the reserve tank and add coolant through the filler opening to the FULL level line.
- Install the cap.

Coolant

Water and coolant mixture ratio:

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

Recommended coolant:

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

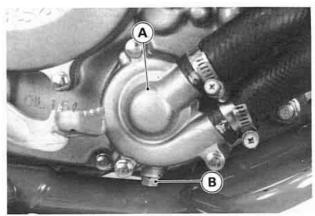
Total amount:

1.6 L (1.7 US qt)

Coolant Change

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

- Wait the engine to cool completely.
- Situate the motorcycle so that it is perpendicular to the ground.
- Remove the radiator cap.
- Place a container under the coolant drain plug, and drain the coolant from the radiator and engine by removing the drain plug at the water pump cover. Immediately wash out any coolant that spills on the frame, engine, or wheel.

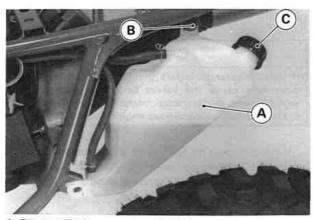


A. Water Pump Cover

B. Drain Plug

- Remove the left side cover.
- Remove the reserve tank mounting bolt and take out the reserve tank from the frame.

Unscrew the cap and pour the coolant into a container.



A. Reserve Tank B. Mounting Bolt

C. Cap

AWARNING

Coolant on tires will make them slippery and can cause an accident and injury.

- Install the reserve tank on the frame.
- Visually inspect the old coolant. If whitish cotton-like wafts are observed, aluminum parts in the cooling system are corroded. If the coolant is brown, iron or steel parts are rusting. In either case, flush the cooling system.

- Check the cooling system for damage, loose joints, or leaks.
- Install the water pump cover drain plug with the specified torque shown in the table. Always replace the gasket with a new one, if it is damaged.

Drain Plug Tightening Torque

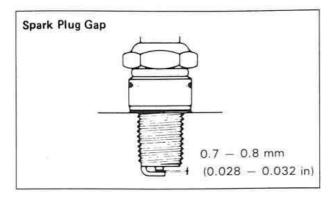
Water Pump Cover

Drain Plug: 8.8 N-m (0.9 kg-m, 78 in-lb)

- Fill the reserve tank up to the FULL level line with coolant, and install the cap.
- Fill the radiator up to the bottom of the radiator filler neck with coolant, and install the radiator cap.
- Check the cooling system for leaks.
- Start the engine, warm up the engine thoroughly, then stop the engine.
- Check the coolant level in the reserve tank after the engine cools down. If the coolant level is low, add coolant up to the FULL level line.
- Install the left side cover.

Spark Plug

The standard spark plug is an NGK CR8E or ND U24ESR-N. It should have a 0.7 - 0.8 mm (0.028 - 0.032 in) gap, and be tightened to 14 N-m (1.4 kg-m, 10 ft-lb) of torque.



The spark plug should be take out periodically to check its gap and ceramic insulator. If the plug is oily or has carbon built up on it, clean it (preferably with a sandblaster) and then clean off any abrasive particles. The plug may also be cleaned using a high flash-point solvent and a wire brush or other suitable tool. Measure the gap with a wire-type thickness gage. Adjust the gap, if incorrect, by bending the outer electrode. If the spark plug electrodes are corroded, worn or damaged, or if insulator is cracked, replace the plug. Use the standard plug.

Valve Clearance

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

CAUTION

If valve clearance is left unadjusted, the 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 done only by your 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.

AWARNING

A clogged air cleaner may allow dirt and dust to enter the carburetor and stick the throttle open. This could cause an accident.

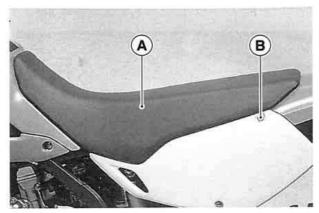
CAUTION

A clogged air cleaner may allow dirt and dust to enter the engine causing excessive wear and possible engine damage.

The air cleaner element must be cleaned in accordance with the Periodic Maintenance Chart.

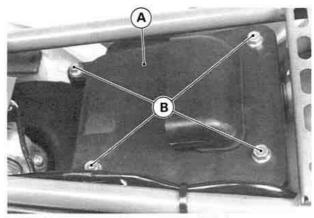
Flement Removal

- Remove the seat.
- Unscrew the air cleaner intake cap bolts and take out the air cleaner intake cap.



A. Seat

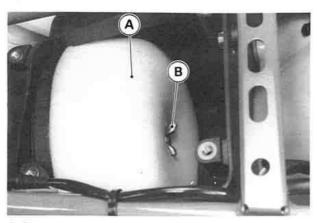
B. Seat Mounting Bolt



A. Air Cleaner Intake Cap

B. Bolts

Remove the wing bolt, and take out the element.



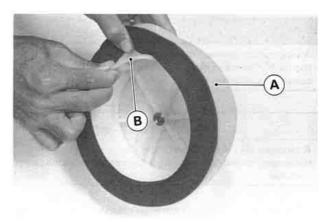
A. Element

B. Wing Bolt

Element Cleaning

- Check inside the inlet track and carburetor for dirt. If dirt is present, clean the intake tract and carburetor thoroughly. You may also need to replace the air cleaner element and seal the air cleaner housing and inlet tract.
- Stuff a clean, lint-free towel into the carburetor so not dirt is allowed to enter the carburetor.

- Wipe out the inside of the air cleaner housing with a clean damp towel.
- Take off the element from the frame.



A. Element

B. Frame

CAUTION

Do not twist or wring the element, as it can easily be torn or otherwise damaged.

• Clean the element in a bath of a high flash-point solvent using a soft bristle brush. Squeeze it dry in a clean towel. Do not wring the element or blow it dry; the element can be damaged.





AWARNING

Clean the element in a well-ventilated area, and take care that there are no sparks or flame anywhere near the working area; this includes any appliance with a pilot light. Do not use gasoline or a low flash-point solvent to clean the element. A fire or explosion could result.

Inspect the element for damage such as tears, hardening, or shrinkage. If damaged, replace it or it will allow dirt into the carburetor.

AWARNING

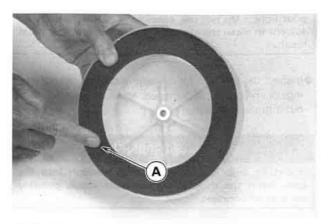
If dirt or dust is allowed to pass through into the carburetor, the throttle may become stuck, possibly causing an accident.

CAUTION

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

- After cleaning, saturate the element with a high-quality foam-air-filter oil, squeeze out the excess oil, then wrap it in a clean rag and squeeze it as dry as possible. Be careful not to tear the element.
- Apply grease to all connections and screw hole in the air cleaner housing and intake tract.
- Remove the towel from the carburetor.

• Install the element on the frame, coat the lip of the element with a thick layer of all purpose grease to assure a complete seal against the element base. Also, coat the base where the lip of the element fits.



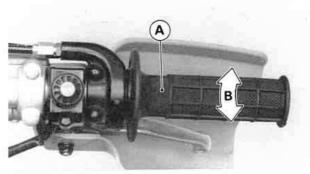
A. Grease

- Install the element in the machine, and make sure the sealing surface of the element is seated properly.
- Install the air cleaner intake cap and seat.

Throttle Cable

Inspect the throttle grip for smooth operation in all steering positions. In accordance with the Periodic Maintenance Chart check and adjust the throttle cable.

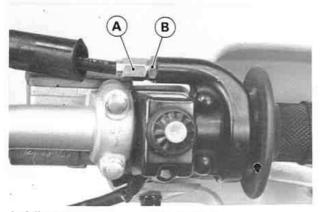
Check that the throttle grip has 2 - 3 mm (0.08 - 0.12 in) of play and turns smoothly.



A. Throttle Grip

B. 2 - 3 mm (0.08 - 0.12 in)

★If the play is incorrect, loosen the locknut on the upper end of the throttle cable, and turn the adjuster to obtain the correct amount of play. Tighten the locknut.

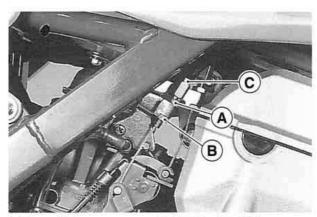


A. Adjuster

B. Locknut

- ★If the free play cannot be set by adjusting the upper cable adjuster, use the nuts on the accelerator cable at the carburetor.
- Loosen the locknut at the throttle grip and turn in the adjuster fully. Tighten the locknut.

 Loosen the upper nut and turn out the lower nut on the accelerator cable, then turn in the upper nut until the correct amount of free play is obtained. After adjustment, tighten the lower nut.



A. Upper Nut B. Lower Nut

C. Accelerator Cable

 If there is excess play, use the adjuster at the throttle grip.

AWARNING

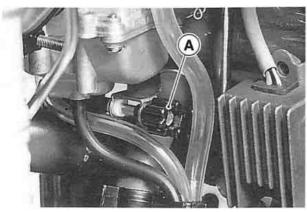
Operation with an improperly adjusted, incorrectly routed, or damaged cable could result in an unsafe riding condition.

Carburetor

Idling Adjustment

Idling adjustment is carried out using the idle adjusting screw.

 After thoroughly warming up the engine, turn the idle adjusting screw to obtain the desired idle speed. If no idle is preferred, turn out the screw until the engine stops.



A. Idle Adjusting Screw

- Open and close the throttle a few times to make sure the idle speed does not change. Readjust if necessary.
- With the engine idling, turn the handlebar to each side. If handlebar movement changes the idle speed, the throttle cable may be improperly adjusted or incorrectly routed, or it may be damaged. Be sure to correct any of these conditions before riding.

AWARNING

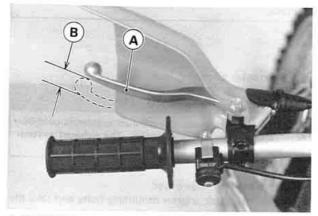
Operation with a damaged cable could result in an unsafe riding condition.

Clutch

Proper clutch lever play is 10-20 mm (0.4-0.8 in). The play increases with cable stretch and friction plate wear, necessitating adjustment.

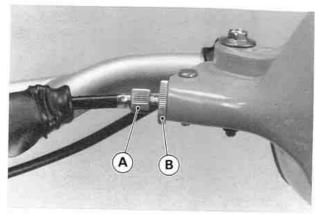
When there is too much lever play, first try adjusting the cable at the clutch lever.

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



A. Clutch Lever

B. 10 - 20 mm (0.4 - 0.8 in)



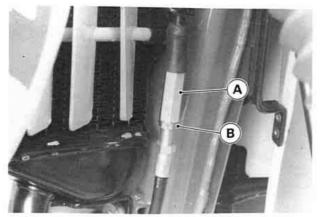
A. Adjuster

B. Knurled Locknut

Slide back the clutch lever dust cover.

If the adjuster at the clutch lever has reached it limit, adjust the cable with the adjusting nut at the middle of the clutch cable.

- Loosen the knurled locknut at the clutch lever.
- Turn the adjuster in all the way, then tighten the knurled locknut.
- ◆Loosen the locknut at the middle of the cable, and turn the adjusting nut so that clutch lever has 10 - 20 mm (0.4 - 0.8 in) of play.



A. Adjusting Nut

B. Locknut

- Tighten the locknut.
- Slide the dust cover back into place.
- After the adjustment is made, start the engine and check that the clutch does no slip and that is releases properly.

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.

CAUTION

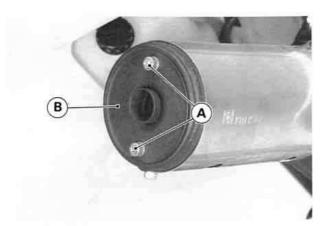
The spark arrester must be installed correctly and functioning properly to provide adequate fire protection.

Spark Arrester Cleaning

AWARNING

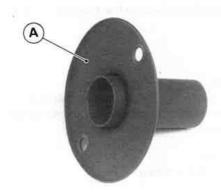
To avoid burns, be sure the exhaust system is cold before cleaning the spark arrester. The exhaust system becomes very hot soon after the engine is started.

- Remove the right side cover.
- Remove the spark arrester mounting bolts and take the spark arrester off from the muffler rear end.



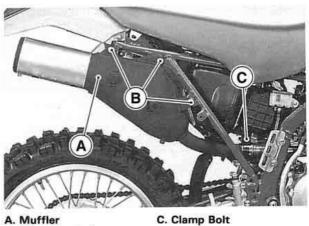
A. Mounting Bolts

B. Spark Arrester



A. Spark Arrester

- Loosen the exhaust pipe clamp bolt.
- Remove the muffler mounting bolts and pull the muffler off toward the rear.



- A. Muffler
- **B. Mounting Bolts**
- With a wire brush, remove the carbon off the inside of the spark arrester and muffler.
- Install the muffler and tighten the mounting bolts and clamp bolt securely.
- Install the spark arrester into the rear end of the muffler.
- Install the right side cover.

Drive Chain

The drive chain must be checked, adjusted, and lubricated 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.

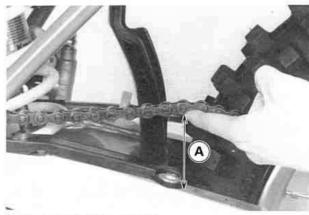
AWARNING

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.

Slack Inspection

With the motorcycle on the side stand, push up the drive chain in the middle of the upper run to measure the chain play. The space between the chain and the swingarm at the rear of the chain slipper should be 55 – 70 mm (2.2 – 2.8 in). Rotate the rear wheel to find the place where the chain is tightest (because it wears unevenly). Adjust the drive chain if it has too much or too little slack.

In addition to checking the slack, rotate the rear wheel to inspect the drive chain and sprockets for damaged rollers, loose pin and links, unevenly or excessively worn teeth, and damaged teeth.



A. 55 - 70 mm (2.2 - 2.8 in)

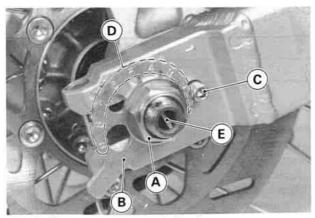
If there is any irregularity, replace the drive chain and/or sprockets.

Slack Adjustment

- Remove the cotter pin, and loosen the rear axle nut.
- Rotate the chain adjuster at each end of the swingarm to obtain the specified chain slack.

Standard Chain Slack

55 ~ 65 mm (2.2 ~ 2.6 in)



- A. Axle Nut
- B. Chain Adjuster
- C. Projection

- D. Numbers
- E. Cotter Pin

NOTE

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

AWARNING

Misalignment of the wheel will result in abnormal wear and may result in an unsafe riding condition.

- Tighten the axle nut to 98 N-m (10 kg-m, 72 ft-lb) of torque.
- Rotate the wheel, measure the chain slack again at the tightest position, and readjust if necessary.

 Insert a new cotter pin through the axle, and spread its ends.

AWARNING

If the axle nut is not securely tightened, or the cotter pin is not installed, an unsafe riding condition may result.

NOTE

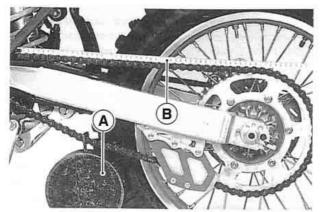
OIn wet and muddy conditions, mud sticks to the chain and sprockets resulting in an overly tight chain, and the chain may break. To prevent this, adjust the chain to 60 - 70 mm (2.4 - 2.8 in) of space between the chain and swingarm whenever necessary.

Drive Chain, Chain Guide, Chain Slipper and Sprocket Wear Inspection

When the chain has worn so much that it is more than 2% longer than when new, it is no longer safe for use and should be replaced. Whenever the chain is replaced, inspect both the engine and rear sprockets, and replace them if necessary. Overworn sprockets will cause a new chain to wear quickly.

Drive Chain Wear

Since it is impractical to measure the entire length of the chain, determine the degree of wear by measuring a 20-link length of the chain. Stretch the chain taut either by using the chain adjuster, or by hanging a 10 kg (20 lb) weight on the chain. Measure the length of 20 links on a straight part of the chain from the center of the 1st pin to the center of the 21st pin. If the length is greater than the service limit, the chain should be replaced.



A. Weight

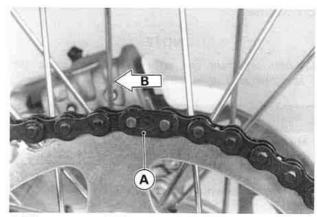
B. Measure

Drive Chain Length

Standard	Service Limit	
317.5 mm (12.5 in)	323 mm (12.7 in)	

NOTE

- The drive system was designed for use with a DAIDO D.I.D 520DS6 110 link chain. For maximum stretch resistance and safety, a genuine part must be used for replacement.
- To minimize any chance of the master link coming apart, the master link clip must be installed with the closed end of the "U" pointed in the direction of chain rotation.

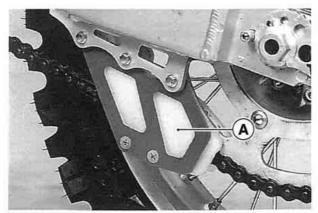


A. Clip

B. Direction of Chain Rotation

Chain Guide Wear

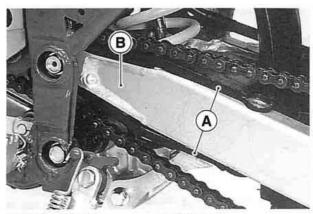
Visually inspect the drive chain guide. If the guide is worn excessively or damaged, replace it.



A. Chain Guide

Chain Slipper Wear

Visually inspect the upper and lower chain slippers on the swingarm. If the chain slipper is worn or damaged, replace it.



A. Chain Slippers

B. Swingarm

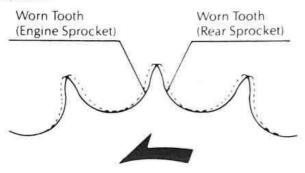
Sprocket Wear

Visually inspect the sprocket teeth. If they are worn or damaged, replace the sprocket.

NOTE

O Sprocket wear is exaggerated for illustration.

Sprocket

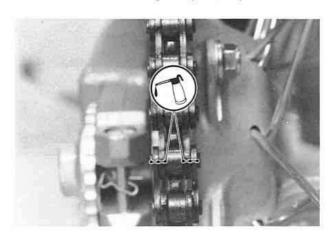


Direction of rotation

Lubrication

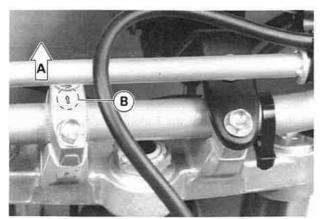
Lubrication is necessary after riding through rain or in the mud, or any time that the chain appears dry. A heavy oil such as SAE90 is preferred to a lighter oil because it will stay on the chain longer and provide better lubrication.

 Apply oil to the side of the rollers so that it will penetrate to the rollers and bushings. Wipe off any excess oil.



Handlebar

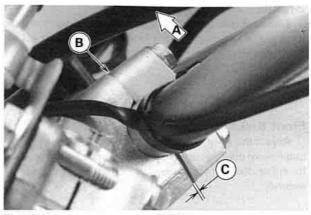
To keep the handlebar properly secured in place, it is necessary to correctly install the handlebar clamps.



A. Front

B. Arrow

•Tighten the clamp bolts, front first and then rear, to 25 N-m (2.5 kg-m, 18 ft-lb) of torque. If the handlebar clamp is correctly installed, there will be no gap at the front and an even gap at the rear after tightening.



A. Front B. No Gap

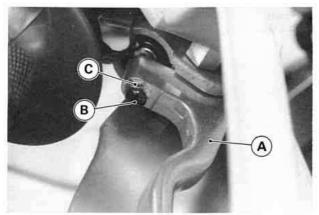
C. Gap

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 brakes except brake lever play.

Front Brake Lever Play:

Adjust the front brake lever to suit you. To adjust the brake lever play, loosen the locknut and turn the adjuster to either side. After adjustment, tighten the locknut securely.



A. Brake Lever B. Adjuster

C. Locknut

AWARNING

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. Since it is dangerous to operate the motorcycle under such conditions, have the brake checked immediately.

Disc Brake Fluid:

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

Fluid Requirement

Recommended fluid are given in the table. If none of the recommended brake fluids are available, use extra heavy-duty brake fluid only from a container marked D.O.T.3 or D.O.T.4.

Recommended Disc Brake Fluid (D.O.T.3)

Atlas Extra Heavy Duty
Shell Super Heavy Duty
Texaco Super heavy Duty
Wagner Lockheed Heavy Duty
Castrol Girling-Universal
Castrol GT (LMA)
Castrol Disc Brake Fluid

(D.O.T.4)

Castrol Girling-Universal Castrol GT (LMA) Castrol Disc Brake Fluid Check Shock Premium Heavy Duty

NOTE

OBrake fluid of D.O.T.4 is installed in the brake system when shipped.

CAUTION

Do not spill brake fluid onto any painted surface.

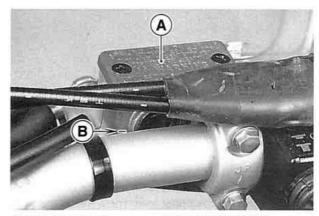
Do not use fluid from a container that has been left open or that has been unsealed for a long time.

Check for fluid leakage around the fittings.

Check for brake hose damage.

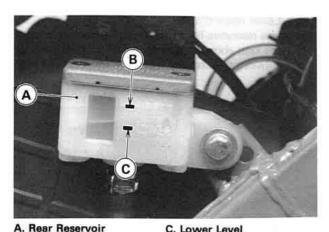
Fluid Level Inspection

 With the reservoirs held horizontal, the brake fluid level must be kept above the lower level line (front reservoir) and between the upper and lower level lines (rear reservoir).



A. Front Reservoir

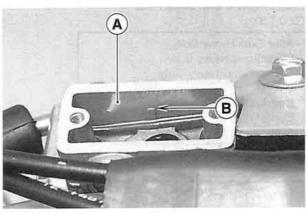
B. Lower Level Line



B. Upper Level

C. Lower Level

If the fluid level in each 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. Inside the front reservoir is a stepped line showing the upper level line.



A. Front Reservoir

B. Upper Level Line

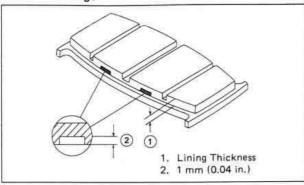
AWARNING

Do not mix two brands of 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 already in the reservoirs are unidentified.

Brake Wear Inspection:

In accordance with the Periodic Maintenance Chart, inspect the brakes for wear. For each front and rear disc brake caliper, if the thickness of either pad 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.

Pad Usable Range



Steering

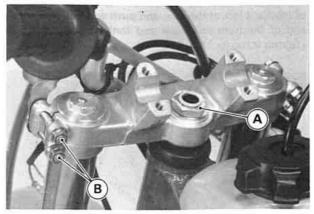
The steering should always be kept adjusted so that the handlebar will turn freely but not have excessive play.

To check the steering adjustment, using the jack (special tool), raise the front wheel off the ground. Push the handlebar lightly to either side; if it continues moving under its own momentum, the steering is not too tight. Squatting in front of the motorcycle, grasp the lower ends of the front fork at the axle, and push and pull the bottom end of the front fork back and forth; it play is felt, the steering is too loose.



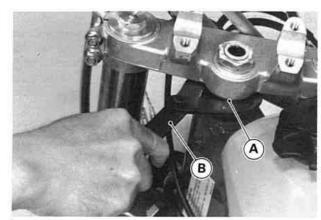
If the steering needs adjusting:

- Remove the headlight unit and meter unit.
- Using the jack (special tool), raise the front wheel off the ground.
- Remove the handlebar.
- Loosen the steering stem head nut and front fork upper clamp bolts.



A. Stem Head Nut B. Front Fork Upper Clamp Bolts

•Turn the steering stem locknut with the stem nut wrench (special tool) to obtain the proper adjustment.



A. Stem Locknut

B. Stem Nut Wrench: 57001-1100

- Tighten the steering stem head nut to 44 N-m (4.5 kg-m, 33 ft-lb) of torque and front fork upper clamp bolts to 20 N-m (2.0 kg-m, 14.5 ft-lb) of torque.
- Check the steering again, and readjust it if necessary.
- Install the handlebar.
- Install the headlight unit and meter unit.

Front Fork

The front fork should always be adjusted for the rider's weight and track conditions by using one or more of the following methods.

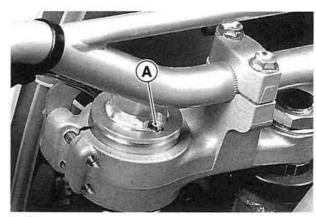
Basically, there are three adjustments you can make to the front fork.

- ★Air pressure Air pressure acts as a progressive spring and affects the entire range of fork travel. The air pressure in the fork increases as the fork heats up, so the fork action on your KLX will get stiffer as the race progresses. Because of this, we don't recommend using air pressure for additional springing. Your KLX forks are designed to work without adding any air.
- ★ Compression damping adjustment This adjustment affects how quickly the compresses. The fork compression damping adjuster has 16 clicks. The seated position (full clockwise until the adjuster stops) is full hard. From the point, 12 clicks counterclockwise is the standard setting, and 16 clicks (full counterclockwise until the adjuster stops) is full soft.
- ★Oil level adjustment The effects of higher or lower fork oil level are only felt during the final 100 mm (4 in) of fork travel. A higher oil level (more oil) will make the fork rebound more quickly. A lower oil level (less oil) will make the fork rebound more slowly.
- ★Fork spring Optional springs are available that are softer and stiffer than standard.

Air Pressure:

The standard air pressure in the front fork legs is atmospheric pressure. The air pressure in the fork legs increases as the fork heats up, so the fork action will get stiffer as the vehicle operation progresses.

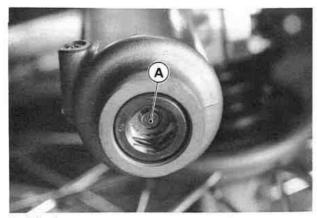
- Using the jack (special tool), raise the front wheel off the ground.
- Remove the screws at the top of the front fork top bolts to let the air pressure equalize. Then reinstall them.



A. Screw

Compression Damping Adjustment:

- Clean the bottom of the fork tubes.
- Remove the caps on the bottom of the fork tubes.
- •To adjust compression damping, turn the adjuster on the front fork cylinder valve with the blade of a screwdriver until you feel a click. Adjust the compression damping to suit your preference under special condition.

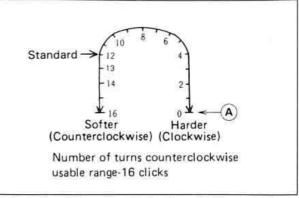


A. Adjuster

CAUTION

The left and right fork legs must have the same shock damping.

Compression Damping Adjustment



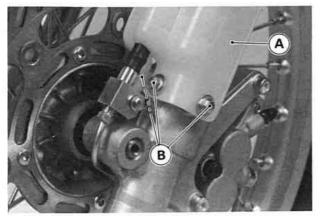
- A. Seated position with adjuster turned fully clockwise.
- Put the caps into the bottom of the fork tubes.

Oil Level Adjustment

- Using the jack (special tool), raise the front wheel off the ground.
- Remove the following parts.

Front Fender
Meter Cable Lower End
Headlight Unit
Meter Unit (with Meter Cable)
Handlebar

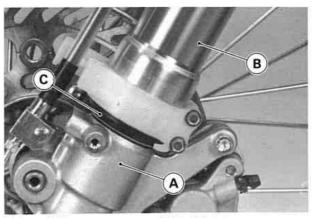
Remove the front fork protectors.



A. Front Fork Protector

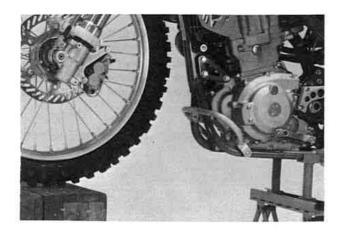
B. Mounting Bolts

- Loosen the fork upper clamp bolts.
- Remove the top bolts from the top of the fork tubes.
- Slowly compress front fork fully while pushing up the inner tube lower end (touch a stepped portion of the inner tube to the outer tube dust cover lower end), and place a stand or other suitable support under the front wheel.

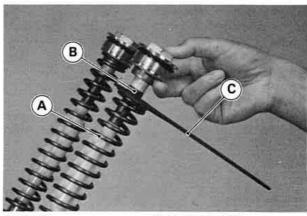


A. Inner Tube B. Outer Tube

C. Dust Cover



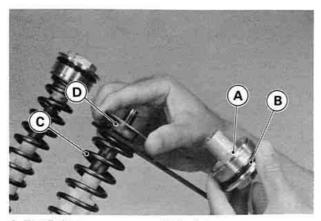
 Pull down the fork spring and insert the spring holder (special tool) under the push rod nut.



A. Spring B. Push Rod Nut

C. Spring Holder: 57001-1286

- Remove the top bolt from the top of the push rod.
- Remove the spring guide.
- Take the spring holder (special tool) off and pull out the fork spring.



A. Top Bolt B. O-Ring

C. Spring D. Spring Guide

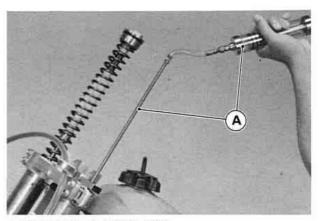
- Remove the other fork spring.
- Put the oil level gauge (special tool) on the top of the fork tube, and measure the distance from the top of the fork tube to the oil level.

Standard Oil Level:

68 mm (2.68 in)

Adjustable Range:

60 - 90 mm (2.36 - 3.54 in)

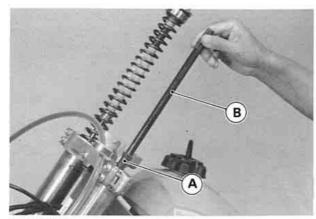


A. Oil Level Gauge: 57001-1290

 Adjust the oil level as required within the adjustable range using the following oil.

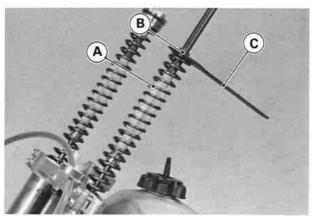
Recommended Oil: KAYABA 01 or SAE 5W

Screw in the push rod puller (special tool) onto the push rod.



A. Push Rod B. Push Rod Puller: 57001-1298

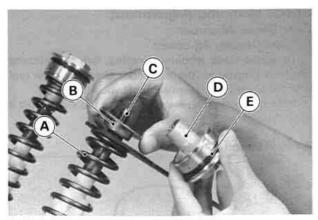
- Put the fork spring into the fork tube.
- Pull up the push rod slowly.
- Pull down the fork spring and insert the spring holder (special tool) under the push rod nut.



A. Spring B. Push Rod Nut

C. Spring Holder 57001-1286

- Remove the push rod puller.
- Put the spring guide on the fork spring.



- A. Fork Spring B. Spring Guide
- C. Push Rod

- D. Top Bolt E. O-Ring
- Check the O-ring of the top bolt for damage. If necessary, replace it with a new one.
- Install the top bolt onto the push rod.

- Holding the top bolt with a wrench, tighten the push rod nut against the top bolt. Tighten the push rod nut to 15 N-m (1.5 kg-m, 11 ft-lb) of torque.
- Remove the spring holder.
- Install the top bolt on the top of the fork tube and tighten it to 29 N-m (3.0 kg-m, 22 ft-lb) of torque.
- Assemble the other fork tube.
- ●Tighten the fork upper clamp bolts to 20 N-m (2.0 kg-m, 14.5 ft-lb) of torque.
- Install the parts removed.

Fork Spring:

Different fork springs are available to achieve suitable front fork action in accordance with rider's weight and track condition.

- ★ Harder springs make the fork stiffer, and rebound action quicker.
- ★Softer spring make the fork softer, and rebound action slower.

Rear Suspension (Uni-Trak)

The rear suspension system of this motorcycle is Uni-trak. It consists of a rear shock absorber, swingarm, tie rod and rocker arm.

In general the operating characteristics of the Uni-trak are similar to the front fork. But, in achieving progressive spring characteristics a linkage system is used.

To suit to various riding conditions, the spring preload of the shock absorber can be adjusted or the spring can be replaced with an optional one. Also the damping force can be adjusted easily so changing oil viscosity is unnecessary.

Shock Damping Adjustment:

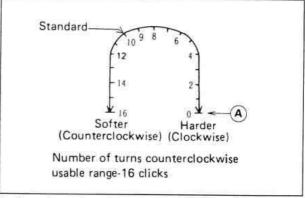
Rear Shock Absorber

Rebound Damping Adjustment

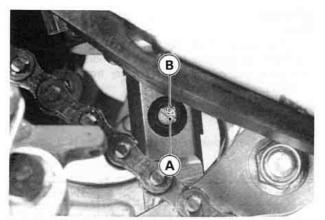
To adjust shock rebound damping, turn the rebound damping adjuster on the rear shock absorber lower end with the blade of a screwdriver until you feel a click.

If the damper setting feels too soft or too stiff, adjust it in accordance with the following table:

Rebound Damping Adjustment



A. Seated position with adjuster turned fully clockwise.



A. Rebound Damping Adjuster

B. Mark

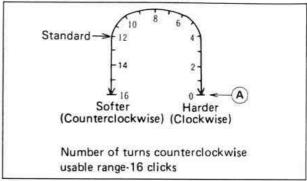
Gas Reservoir

Compression Damping Adjustment

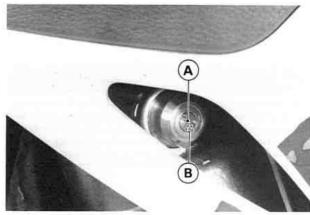
To adjust compression damping, turn the compression damping adjuster on the gas reservoir with the blade of a screwdriver until you feel a click.

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

Compression Damping Adjustment



A. Seated position with adjuster turned fully clockwise.



A. Compression Damping Adjuster

B. Mark

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.

Rear Shock Absorber Spring Replacement:

In addition to the standard spring, hard and soft springs are available. If the standard spring is improper for your purpose, select a proper one according to the rider's weight or course conditions.

- ★Using the harder spring: The spring rate is higher; the spring is stiffer and rebounds move quickly.
- ★Using the softer spring: The spring rate is lower; the spring is softer and rebounds more slowly.

AWARNING

Improper removal by spring from rear shock absorber body may cause the spring and/or associated parts to be ejected at high velocity. Always wear eye and face protection. Removal and installation of spring should be performed by an authorized Kawasaki dealer.

Wheels

Tires:

Tire pressure affects traction, handling, and tire life. Adjust the tire pressure to suit track conditions and rider preference, but do not stray too far from the recommended pressure.

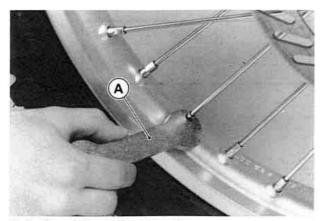
NOTE

 Tire pressure should be checked when the tires are cold before your ride.

Track Condition	Tire Pressure
 When the track is wet, muddy, sandy or slippery, reduce the tire pressure to increase the tire tread surface on the ground. When the track is pebbly or hard, in- 	80 kPa (0.8 kg/cm², 11 psi)
crease the tire pressure to prevent damage or punctures, though the tires will skid more easily.	100 kPa (1.0 kg/cm², 14 psi)

Spokes and Rim:

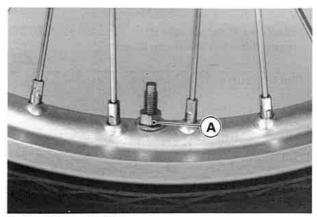
The spokes on both wheels must all be tightened securely and evenly and not be allowed to loosen. Unevenly tightened or loose spokes will cause the rim to warp, hasten nipple and overall spoke fatigue, and may result in spoke breakage.



A. Spoke and Spark Plug Wrench



There is a bead protector on the front and rear wheels. The bead protector 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 that the tire and tube remain fixed in position on the rim, inspect the bead protector before riding and tighten it if necessary. Tighten the valve stem nut finger tight only.



A. Bead Protector Nut

Rim Runout:

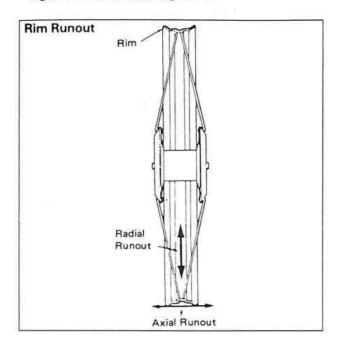
Set a dial gauge to the side of the rim, and rotate the wheel to measure axial runout. The difference between the highest and lowest dial readings is the amount of runout.

Set the dial gauge to the inner circumference of the rim and rotate the wheel to measure radial runout. The difference between the highest and lowest dial readings is the amount of runout.

A certain amount of rim warp (runout) can be corrected by recentering the rim, that is, loosening some spokes and tightening others to change the position of different parts of the rim. If the rim is badly bent, however, it should be replaced.

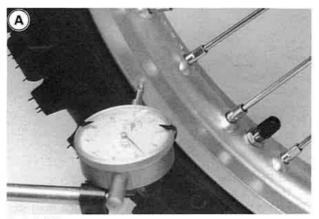
NOTE

 Weld area of the rim may show excessive runout. Disregard this when measuring runout.

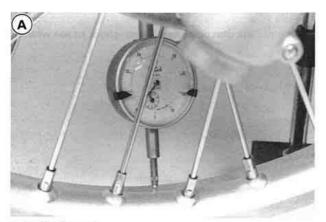


Rim Runout

	Service Limit		
Axial	2.0 mm (0.08 in)		
Radial	2.0 11111 (0.00 111)		



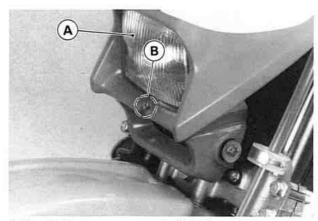
A. Axial Runout



A. Radial Runout

Headlight

Adjust the headlight so that it points slightly below horizontal. Turning the adjusting screw clockwise makes the headlight beam point upward.



A. Headlight

B. Adjusting Screw

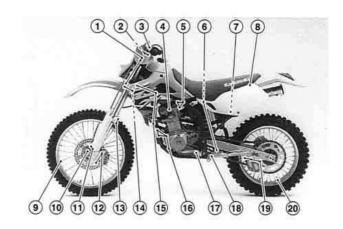
CAUTION

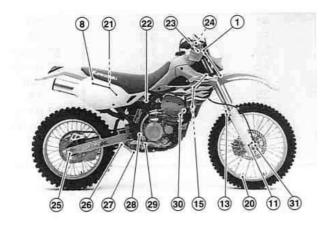
When handling the quartz-halogen bulbs, never touch the glass portion with bare hands. Always use a clean cloth. Oil contamination from hands or dirty rags can reduce bulb life or cause the bulb to explode.

Bolt and Nut Tightening

Every day before riding, check without fail the tightness of the bolts and nuts described here. Also, check to see whether or not each cotter pin is in place and in good condition.

- 1. Front Fork Clamp Bolts
- 2. Handlebar Clamp Bolts
- 3. Clutch Lever Mounting Bolt
- 4. Spark Plug
- 5. Engine Bracket Bolts
- 6. Rear Shock Absorber Bolts
- 7. Air Cleaner Case Bolts
- 8. Seat Mounting Bolts
- 9. Spokes
- Brake Hose Holder Mounting Bolt
- 11. Front Fork Protector Mounting Bolts
- 12. Caliper Mounting Bolts
- Front Fork Protector Guide Mounting Bolts
- 14. Front Fender Mounting Bolts
- 15. Radiator Mounting Bolts
- 16. Engine Mounting Bolts and Nuts
- 17. Shift Pedal Bolt
- 18. Side Stand Mounting Bolt
- 19. Chain Guide Bolts
- 20. Bead Protector Nut





- 21. Muffler Mounting Bolts
- 22. Rear Brake Reservoir Mounting Bolt
- 23. Steering Stem Head Nut
- 24. Brake Lever Mounting Bolt
- 25. Rear Axle Nut
- 26. Tie Rod Mounting Bolt
- 27. Rocker Arm Mounting Bolt
- 28. Pivot Shaft Nut
- 29. Kick Pedal Bolt
- 30. Exhaust Pipe Mounting Nuts
- 31. Front Axle Clamp Nuts

Torque Table

Tighten all bolts and nuts to the proper torque using an accurate torque wrench. A bolt or nut if insufficiently tightened may become damaged or fall out, possibly resulting in damage to the motorcycle and injury to the rider. A bolt or nut which is over-tightened may become damaged or break and then fall out.

	Part Name	N-m	kg-m	ft-lb
2550	Engine Drain Plug	15	1.5	11
岁	Kick Pedal Bolt	17	1.7	12
ENGINE	Shift Pedal Bolt	9.8	1.0	87 (in-lb)
Z	Spark Plug	14	1.4	10
	Water Pump Cover Drain Plug	8.8	0.9	78 (in-lb)
	Caliper Mounting Bolts	25	2.5	18
	Disc Plate Mounting Bolts: Front	9.8	1.0	87 (in-lb)
	Rear	23	2.3	17
	Engine Bracket Bolt: (M8)	29	3.0	22
S	(M10)	44	4.5	33
	Engine Mounting Bolts	44	4.5	33
S	Front Axle	88	9.0	65
AS	Front Axle Clamp Nut	9.8	1.0	87 (in-lb)
CHASSIS	Front Brake Hose Holder Mounting Bolts	9.8	1.0	87 (in-lb)
	Front Fork Clamp Bolt: Upper	20	2.0	14.5
	Lower	25	2.5	18
	Front Fork Protector Guide Mounting Bolts	9.8	1.0	87 (in-lb)
	Front Fork protector Mounting Bolts	9.8	1.0	87 (in-lb)
	Front Fork Top Bolts	29	3.0	22
	Handlebar Clamp Bolts	25	2.5	18

	Part Name	N-m	kg-m	ft-lb
	Pivot Shaft Nut	88	9.0	65
- 1	Rear Axle Nut	98	10.0	72
	Rear Shock Absorber Bolts	39	4.0	29
S	Rear Sprocket Nuts	29	3.0	22
CHASSIS	Side Stand Mounting Bolt	25	2.5	18
₹	Spokes	1.5	0.15	13 (in-lb)
ᇙ	Steering Stem Head Nut	44	4.5	33
	Steering Stem Locknut	4	0.4	35 (in-lb)
	Uni-trak Rocker Arm Bolt	88	9.0	65
	Uni-trak Tie Rod Bolts	81	8.3	60

Cleaning

1) Preparation for washing

Before washing, precautions must be taken to keep water off the following places:

Rear opening of

the muffler...... Cover with a plastic bag secured with rubber bands.

Clutch and brake levers. hand grips, light switch,

engine stop button...... Cover with plastic bags.

Air cleaner intake...... Close up the opening with

tape, or stuff in rags.

2) Where to be careful

Avoid spraying water with any great force near the following places:

Disc brake master cylinders and calipers

Under the fuel tank If water gets into the ig-

nition coil or into the spark plug cap, the spark will jump through the water and be grounded out. When this happens, the motorcycle will not start and the affected parts must be wiped dry.

Front and rear wheel hubs Steering pivots (Steering stem head pipe) Uni-trak system pivots Swingarm pivot

3) After washing

- Remove the plastic bags, and clean the air cleaner intake.
- Lubricate the points listed in the Lubrication Section.
- Start the engine and run it for 5 minutes.
- Test the brakes before riding the motorcycle.

AWARNING

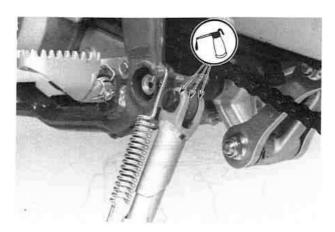
Never wax or lubricate the brake disc. Loss of braking and an accident could result. Clean the disc with an oil-less solvent such as trichloroethylene or acetone. Observe the solvent manufacturer's warning.

Lubrication

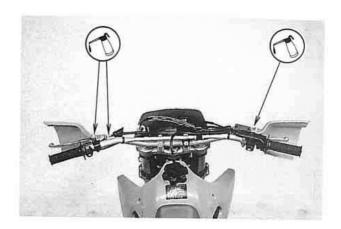
Lubricate the points shown here, with either motor oil or regular grease, in accordance with the Periodic Maintenance Chart or whenever the vehicle has been operated under wet or rainy conditions, and especially after using a high pressure spray washer. Before lubricating each part, clean off any rusty spots with rust remover and wipe off any grease, oil, dirt, or grime.

General Lubrication
Apply motor oil to the following pivots:

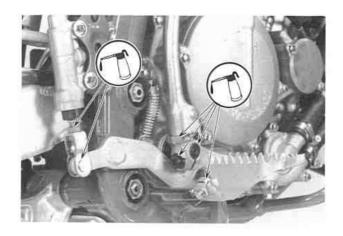
OSide Stand



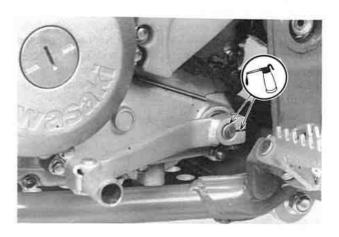
O Clutch Lever
O Front Brake Lever



ORear Brake Pedal ORear Brake Rod Joints OKick Pedal



OShift Pedal

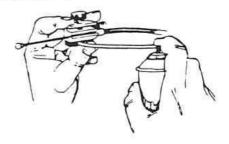


Use an aerosol cable lubricant with a pressure luber on all cables:

OClutch Inner Cable

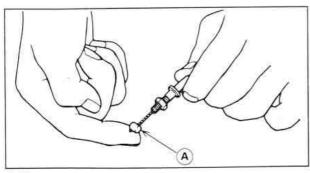
OThrottle Inner Cable

Cable Lubrication



Apply grease to the following points:

- OClutch Inner Cable Upper End
- OThrottle Inner Cable Upper End
- OMeter Cable Lower End

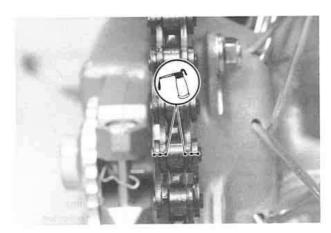


A. Grease.

Drive Chain Lubrication

Lubrication is also necessary after riding through rain or on wet tracks, 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 side of the rollers so that it will penetrate to the rollers and bushings. Wipe off any excess oil.



NOTE

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

Engine Doesn't Start or Starting Difficulty: Engine worn't turn over

Valve seizure

Cylinder, piston seizure

Connecting rod small end seizure

Connecting rod big end seizure

Camshaft seizure

Transmission gear or bearing seizure

Kick return spring broken

Kick gear not engaging

Compression low

Spark plug loose

Cylinder, piston worn

Piston ring worn, weak, broken, or sticking

Piston ring groove and ring clearance excessive

Cylinder head not sufficiently tightened down

No valve clearance

Cylinder warped

Cylinder head gasket damaged

Crankshaft oil seal leak

Valve spring broken or weak

Valve not seating properly (valve bent, worn, or carbon accumulation on the seating surface)

No spark or weak spark

Spark plug faulty

Spark plug cap poorly connected or shorted

Ignition coil faulty

Wiring open or shorted

Magneto faulty (layer short)

No fuel flow

No fuel in fuel tank

Fuel hose clogged

Fuel tap clogged

Float valve clogged

Pilot jet clogged

Flooded

Fuel level too high

Float valve worn or stuck open

Starting technique faulty

Poor Running at Low Speed:

Spark weak

Spark plug faulty

Ignition coil faulty

Spark plug cap, high tension lead short

Spark plug gap excessive

Mixture too rich or too lean

Pilot jet or air passage clogged

Idle adjusting screw maladjusted

Starter plunger stuck open

Fuel level too high or too low

Air cleaner element clogged

Intake manifold loose

Tank cap air vent obstructed

Compression low

Spark plug loose

Cylinder, piston worn

Piston ring worn, weak, broken, or sticking

Piston ring groove and ring clearance excessive

Cylinder head not sufficiently tightened down

No valve clearance

Cylinder head warped

Cylinder head gasket damaged

Valve spring broken or weak

Valve not seating properly (valve bent, worn, or carbon accumulation on the seating surface)

Other

Ignition timing incorrect

Engine oil viscosity too high

Poor Running or No Power at High Speed:

Mixture too rich or too lean

Air cleaner element clogged

Air cleaner duct loose

Pilot screw maladjusted

Pilot jet, or air passage clogged

Starter plunger stuck open

Tank cap air vent obstructed

Fuel level too high or too low

Compression low

Spark plug loose

Cylinder, piston worn

Piston ring worn, weak, broken, or sticking

Piston ring groove and ring clearance excessive

Cylinder head not sufficiently tightened down

Cylinder head warped

Cylinder head gasket damaged

No valve clearance

Valve spring broken or weak

Valve not seating properly (valve bent, worn, or carbon accumulation on seating surface)

Misfiring

Spark plug worn

Spark plug cap poorly connected or shorted

Ignition coil faulty

High tension lead damage

Knocking

Ignition timing advanced

Fuel poor quality

Carbon built up in combustion chamber

Other

Ignition timing incorrect

Brakes dragging

Overheating

Clutch slipping

Throttle valve does not fully open

Engine oil quantity excessive

Engine oil viscosity too high

Overheating:

Ignition timing retarded

Carbon built up in combustion chamber

Brakes dragging

Clutch slipping

Intake manifold loose or damaged

Main jet clogged

Fuel level too low

Coolant level too low

Coolant deteriorated

Radiator cap faulty

Clutch Not Operating Smoothly:

Clutch slipping

No clutch lever play

Friction plates worn

Clutch springs weak

Clutch release mechanism trouble

Clutch inner cable not sliding smoothly

Clutch doesn't disengage properly

Clutch lever play excessive

Clutch plates warped or damaged

Clutch springs not evenly tightened

Engine oil deteriorated or of too high a

viscosity

Clutch release mechanism trouble

Clutch inner cable not sliding smoothly

Shift Operation Not Smooth:

Doesn't go into gear or shift pedal doesn't

return

Clutch not disengaging

Shift return spring weak or broken

Shift lever spring broken

Shift lever broken

Shift fork bent or seized

Shift drum damaged

Jumps out of gear

Shift fork worn

Drive shaft, output shaft, or gear splines worn

Gear groove worn

Shift drum groove worn

Shift fork guide pin worn

Poor Handling or Stability:

Handlebar hard to turn

Steering stem nut too tight

Tire pressure too low

Steering stem lubrication insufficient

Handlebar vibrates or shakes

Swingarm bent

Front fork bent

Frame bent

Wheel alignment incorrect

Pivot shaft warped

Right/left front fork oil level uneven

Shock absorption too stiff

Front fork oil quantity excessive Front fork oil viscosity too high

Front fork air pressure too high

Tire air pressure too high

Shock absorption too soft

Oil quantity insufficient

Oil viscosity too low

Fork spring wear

Suspension oil leak

Brakes Don't Hold:

Air in the brake line

Pad or disc worn

Brake fluid leak

Disc warped

Contaminated pads

Brake fluid deteriorated

Primary cup faulty

Master cylinder scratched inside

Brake maladjustment (lever play excessive)

Brakes overheated

Water in brakes

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, shut it off and drain the engine oil.

AWARNING

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

- Install the drain plug and put in fresh engine oil.
- Empty the fuel from the fuel tank, and empty the carburetor float bowl. (If left in for a long time, the fuel will deteriorate.)

AWARNING

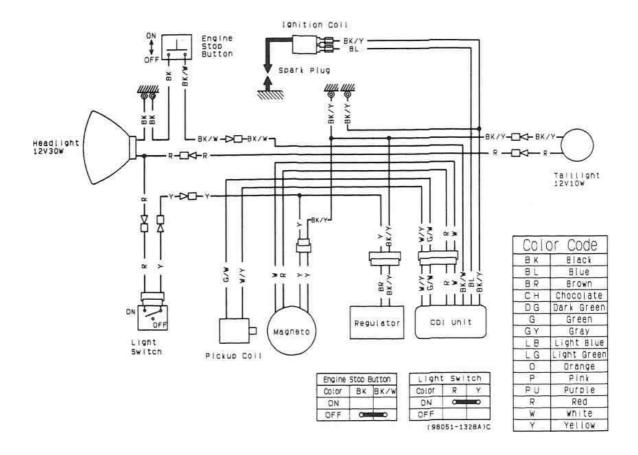
Gasoline is extremely flammable and can be explosive under certain conditions. Always stop the engine and do not smoke. Make sure the area is well ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light.

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. Kick the engine over slowly a few times to coat the cylinder wall. Install the 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 or in the brakes.
- Set 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 exhaust pipe to prevent moisture from entering.
- Put a cover over the motorcycle to keep dust and dirt from collecting on it.

To put the motorcycle back into use after storage.

- Remove the plastic bag from the exhaust pipe.
- Make sure the spark plug is tight.
- Fill the fuel tank with fuel.
- Check all the points listed in the Daily Pre-ride Inspection Section.
- Perform the General Lubrication Procedure.



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Vehicle Identification No	
Owner Name	
Warranty Start Date	
Engine Displacement	Œ.

Note: Keep this information in a secure location.

Date	Traveled Distance	Maintenance Performed	Dealer Name	Dealer Address

Date	Traveled Distance	Maintenance Performed	Dealer Name	Dealer Address

Date	Traveled Distance	Maintenance Performed	Dealer Name	Dealer Address
	1.2			

Date	Traveled Distance	Maintenance Performed	Dealer Name	Dealer Address

Date	Traveled Distance	Maintenance Performed	Dealer Name	Dealer Address



KLX300-A3



Part No. 99920-1840-02