

KAWASAKI

500

MACH III

RIDER'S HANDBOOK

Contents

1. Specifications	2
2. Stopping Distance and Passtime(Consumer Information)	4
3. Breaking in Procedure	7
4. Controls Layout & Operation	9
5. Starting The Engine	11
6. Parking	12
7. Maintenance and Adjustements.....	13
8. Periodical Inspection Chart.....	25
9. Wiring Diagram	26

Foreword

We wish to thank you for your choosing this fine Kawasaki Motorcycle. With the proper care and maintenance you will find your "dynamic partner" will go any time and anywhere. Please read this handbook carefully to obtain instructions for proper use of your "dynamic partner", so that you can always enjoy its best performance.

KAWASAKI HEAVY INDUSTRIES, LTD.

Motorcycle Division

1. Specifications

Engine

Type	2 stroke, three Cyl, air cooled
Displacement	30.4 cu in (498 cc)
Bore x Stroke	2.36 x 2.31 in, (60 x 58.8 mm)
Compression Ratio	6.8 : 1
Fuel	Regular Gasoline
Ignition	Capacitor discharge ignition
Ignition timing	25° Before TDC
Starting	Kick
Lubrication	Injectolube (Oil injection)
Engine Oil	2 stroke engine oil as recommended
Carburetors	Triple Mikuni VM28SC.
Spark Plugs	Champion Surface Plug L-19V

Performance

Max. Horsepower	60 HP/7500 rpm
Max. Torque	42.3ft-lb (5.85 kg-m)/7000 rpm
Max. Speed	118 mph (190 kph).....15/45 124 mph (200 kph).....16/45 * Optional parts
S.S. ¼ mile	12.4 sec
Climbing Ability	40°
Minimum Turning Radius	90.5 in (2.3 m)
Fuel Consumption	55 miles/gal @ 50 mph (33 km/l @ 50 kph)

Transmission

Type	5 speed, constant mesh, return change
Clutch	Multiple Disks, Wet Plates
Primary Reduction Ratio	2.41
Gear Ratios.	
1st	2.20
2nd	1.40
3rd	1.09
4th	0.92
5th	0.81

Final Reduction Ratio	3.00 (15/45)
	2.81 (16/45)
Overall Drive Ratio	5.84 w/15 teeth E/sprocket
	5.46 w/16 teeth E/sprocket
Transmission Oil	SAE #10W/30
Frame	
Type.....	Tubular, double cradle
Suspension, Front	Telescopic fork
Rear	Swing arm
Tire Size, Front	3.25-19 4PR
Rear	4.00-18 4PR
Castor	61°
Trail	4.3 in (110 mm)
Brakes	
Front, Diameter x Width	7.9 x 1.4 in (200 mm x 35 mm)
Rear, Diameter x Width	7.1 x 1.4 in (180 mm x 35 mm)
Braking Distance	34.5ft @ 31 mph (10.5 m @ 50 kph)
Electrical Equipment	
Battery	12V 9AH
Head Lamp	12V, 35/25W, Semi-sealed beam, fully approved
Tail/Brake Lamp	12V, 4/32CP (8/25 W), fully approved
Dimensions	
Overall Length	82.5 in (2,095 mm)
Overall Width	33.0 in (840 mm)
Overall Height	42.5 in (1,080 mm)
Wheelbase	55.0 in (1,400 mm)
Ground Clearance	5.3 in (135 mm)
Dry Weight	382 lb (174 kg)
Fuel Tank Capacity	4.0 gal (15 liters)
Oil Tank Capacity	2.5 US qt (2.3 liters)

* Specifications subject to change without notice.

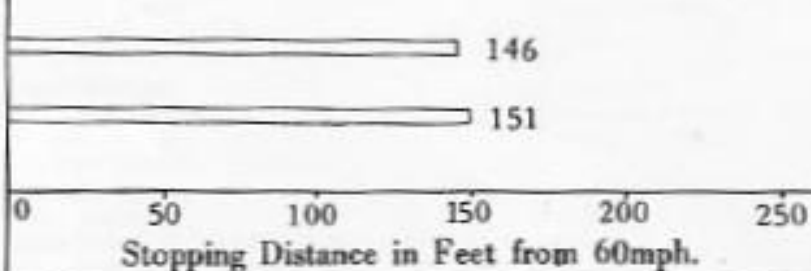
2. Stopping Distance and Passtime (Consumer Information)

VEHICLE MINIMUM STOPPING DISTANCE ON DRY PAVEMENT

This figure indicates braking performance that can be met or exceeded by the vehicles to which it applies, without locking the wheels, under different conditions of loading. The information presented represents results obtainable by skilled drivers under controlled road and vehicle conditions, and the information may not be correct under other conditions.

I Description of vehicles to which this table applies: 500 Model- III

A. Fully Operational Service Brake
Load
Light
Maximum



ACCELERATION AND PASSING ABILITY

THIS FIGURE INDICATES PASSING TIMES AND DISTANCES THAT CAN BE MET OR EXCEEDED BY THE VEHICLES TO WHICH IT APPLIES, IN THE SITUATIONS DIAGRAMMED BELOW.

THE LOW-SPEED PASS ASSUMES AN INITIAL SPEED OF 20 MPH AND A LIMITING SPEED OF 35 MPH.
THE HIGH-SPEED PASS ASSUMES AN INITIAL SPEED OF 50 MPH AND A LIMITING SPEED OF 80 MPH.

NOTICE: THE INFORMATION PRESENTED REPRESENTS RESULTS OBTAINABLE BY SKILLED DRIVERS UNDER CONTROLLED ROAD AND VEHICLE CONDITIONS, AND THE INFORMATION MAY NOT BE CORRECT UNDER OTHER CONDITIONS.

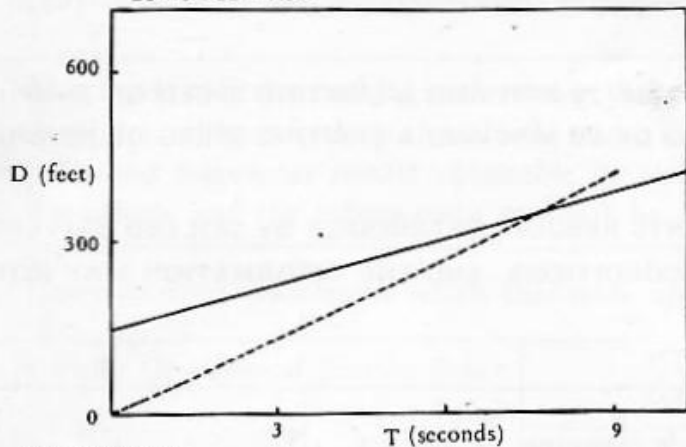
DESCRIPTION OF VEHICLES TO WHICH THIS TABLE APPLIES: Model H1

SUMMARY TABLE:

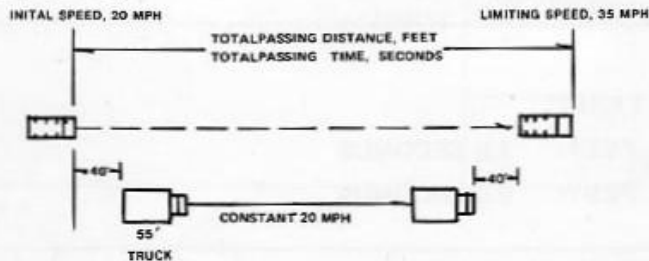
LOW-SPEED PASS . . 365	FEET:	7.5 SECONDS
HIGH-SPEED PASS . . 920	FEET:	9.0 SECONDS

GRAPHIC DETERMINATION OF PASSING TIME AND DISTANCE

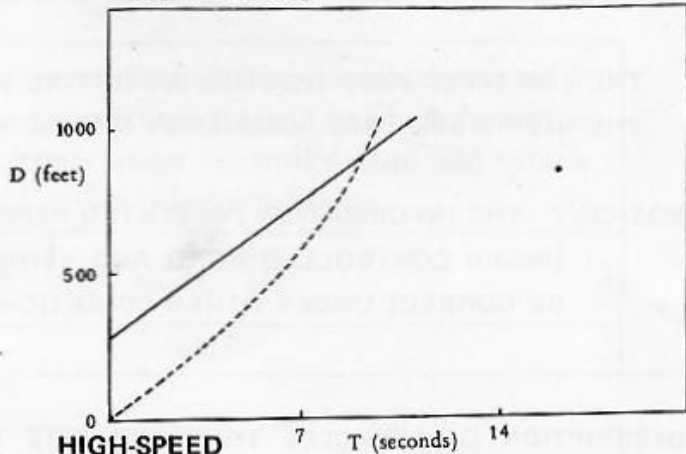
LOW-SPEED PASS:



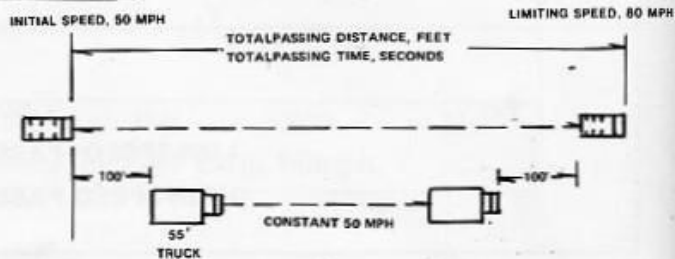
LOW-SPEED



HIGH-SPEED PASS:



HIGH-SPEED



3. Breaking In



This Kawasaki motorcycle is precision manufactured, but it must be broken in properly for the first 600 miles (1,000 kilometers) to ensure long and troublefree service life.

Injectolube Oil Injection System

Your Kawasaki is equipped with Injectolube oil injection which eliminates the need to mix oil with the gas. Check the level in the oil tank regularly. Add two (2) quarts oil when the level falls to the line on the tank gauge. Never let the tank run dry. Do not disconnect oil pipe to engine as this may cause an air lock which may lead to engine damage.

Use any good quality two (2) cycle oil designated for use in motorcycles or air cooled engines. Racing type oils are not required for normal riding conditions and will be an unnecessary expense. Your dealer can recommend oils most suitable and available in your area.

Avoid use of oils which do not flow readily in low temperatures as these will not flow to the oil pump in proper quantities in cold weather.

Do not attempt to adjust the oil pump yourself. When adjustment is required, consult your Kawasaki dealer.

Adding and Changing Oil in Transmission

Check the oil level daily and never let oil level drop below mark on oil level gauge. (Dip Stick).

At 500 miles drain oil and refill with fresh oil.

Repeat at 2,000 miles and change at intervals of 2,000 miles thereafter.

Drain oil when engine is warm.

Refill with good quality SAE10W30 motor oil.

To fill transmission, remove oil filler cap and fill until oil level is between the two lines marked on the level gauge, when the gauge is screwed in. Replace filler cap.

Do Not "Race" Engine

Do not race engine or run at high revs immediately after starting. Over revving the engine in neutral can cause severe damage.

Do Not Over-Rev Engine

Do not run the engine exceeding 6,000 r.p.m. in any gear for the first 300 mi (500 km). Even after that, do not strain the engine by over-revving. In particular, be careful not to run the engine at high speeds with the gears in neutral, as this overloads turning parts and can cause defective engine operation. Do not brake the motorcycle suddenly. Do not strain the engine and do not slip the clutch excessively.



4. Controls

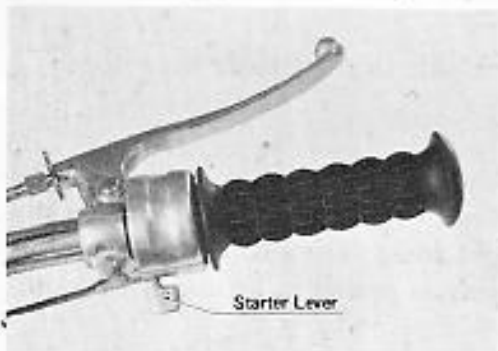


Gasoline Shut-Off Valve:

The valve of the H1 is of automatic fuel cock which are controlled by the negative pressure in the carburetor. Place the lever at the position "ON" where the cock opens or shut off the fuel line automatically whenever engine is started or stopped.

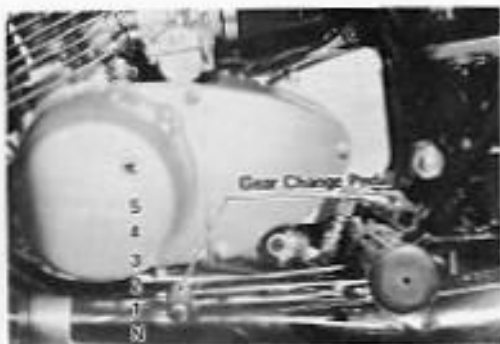
Position "RES" opens about a 3 quart reserve supply which is also controlled automatically.

Position "PRI" opens fuel cock manually by-passing the automatic control part.



Carburetor Starter Lever:

The starter lever is located on the right handlebar and provides a rich mixture for starting, similar in result to a choke. Use when starting cold engine. Push lever to full forward position, keep throttle closed, and kick starter pedal through quickly. After engine warms up, return lever to normal (back) position. When starting warm engine, do not use carburetor starter lever, and give throttle approximately 1/8 turn.



Clutch Lever

The clutch lever operates the clutch. When the lever is pulled in, engine power is not transmitted to the rear wheel. When the lever is released, power is supplied to the rear wheel and the motorcycle moves. Pull in the lever quickly and release it slowly.

Gear Shifting

Transmission gears are changed by pulling up the gear change pedal. The 5-speed transmission is a stopper type return change.

The neutral is located at lowest position, so gears can be shifted up into a higher gear by pulling up the pedal with tow and shifted down into a lower gear by pressing on the pedal. When the gears are in neutral, engine power cannot be transmitted to the rear wheel and green lamp in the speedometer turns on.

Gear sequence is as follows.

Neutral (green lamp on), low, second, third, fourth then top.



Brakes

The motorcycle will stop smoothly and safely when both front and rear brakes are applied at the same time. The rear brake operates when the brake pedal is pushed by the right foot. The front brake operates when the brake lever on the handlebar is pulled in by the right hand.

5. Starting the Engine

Starting Cold Engine

This Kawasaki motorcycle has a special carburetor incorporating a system for easy starting when cold.

1. Push carburetor starter lever all the way forward.
2. Close throttle completely. If the throttle is open even a little, the carburetor starter system will not work effectively and make the engine hard to start.
3. Insert key in ignition switch and turn it on.
4. Check to be sure green neutral indicator lamp in the speedometer turns on. If the gears are not in neutral, the motorcycle will jump when the starter pedal is kicked and could cause an accident.
5. Kick the starter pedal down smartly.
6. After the engine starts, twist the throttle grip open slightly. When engine speed increases, indicating the engine has warmed up, return the starter lever to its normal (back) position. If the starter lever is not returned to its normal position, too rich a mixture is supplied to the engine, causing fouled spark plugs and defective engine operation.



Starting Warm Engine

Do not use the starter lever when the engine is warm, or the engine may be flooded or spark plugs fouled.

1. Insert key in ignition switch and turn it on.
2. Check to be sure green neutral indicator lamp in the speedometer turns on.
3. Crack the throttle open a little, about 1/8-1/4 turn.
4. Kick the starter pedal down smartly, and the engine will start.

Note: At night, start engine before turning on lights.

6. Parking



Shift the gears into neutral and stop the engine. Place the motorcycle on either the side stand or the main stand on a firm surface. Remove the key from the ignition switch. Lock the steering head lock. When parking the motorcycle at night, turn the ignition switch to position 3 to leave tail lamp turned on.

Key can be removed in this position.

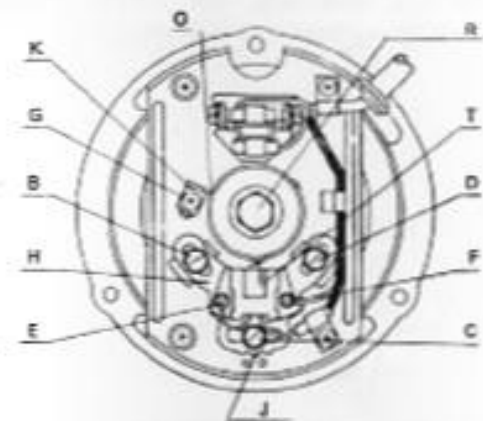
7. Maintenance and Adjustments



AC Generator

The H1 are equipped with AC generator which consists of generating part, rectifying part and signal generator.

The signal generator induces pulsing current at the specified timing which actuate the C-D (capacitor discharge) ignition system.

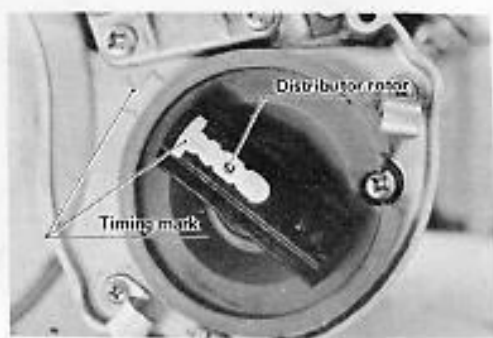


Adjusting ignition timing.

Turn the signal generator rotor R until ignition timing pointer K aligns to the mark O. Loosen the fitting screws B, C and D.

Then adjust the mark T on the signal generator pick-up so as to align to the mark O by moving the base plate H to the left or right.

Note: The base plate B can be easily moved by prying the notch J with a screw driver. Be sure to tighten the fitting screws B, C and D securely after adjusting the pick-up.



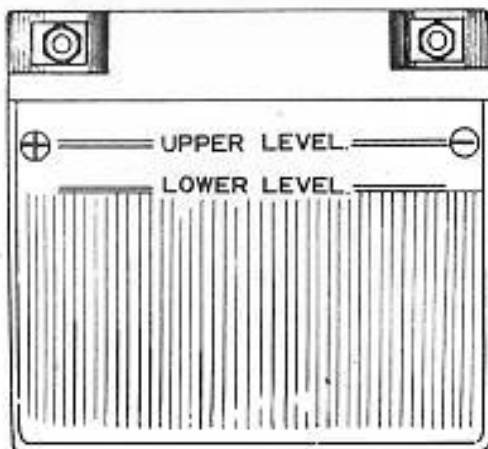
Adjusting distributor timing.

After adjusting the ignition timing, check to be sure that the distributor is installed in correct ignition timing. Place the piston in the right cylinder at the Top Dead Center. Then check the distributor position. If it points between two arrow marks on the right cover, it is correct.

Spark Plugs

Standard spark plugs for the H1 are Champion L-19V which is generally called surface gap plug and specially used for the C-D ignition system. If Champion L-19V is not available, use NGK-B9HC.

Note: In case of using NGK-B9HC, adjust the spark plug gap to 0.04 in.



Battery

Battery should be completely charged, using a low charging rate before installing. (Follow instructions supplied with battery.)

Keep solution above lower line printed on battery. Add distilled water to bring level to the line. Do not overfill.

Make sure air vent is open. Do not spill acid.

Inspect battery frequently and keep it clean. If the motorcycle is not ridden for more than one month, charge the battery once a month. Improper battery service will result in the need for early battery replacement, an unnecessary expense to the owner.

Be sure battery is installed correctly with positive and negative terminals connected securely to correct wires. Tighten all connecting nuts and bolts firmly.



Head Lamp

The 12V, 35/25W head lamp is turned on when the ignition switch key is turned to position (2) for night riding.

The head lamp is dimmed by moving the knob of the dimmer switch mounted on the left handlebar (high beam indicator lamp turns off).

Head lamp focus can be adjusted loosening two head lamp fitting bolts and moving the head lamp up and down. To adjust focus right or left, screw the focus adjusting screw in or out.



Carburetors

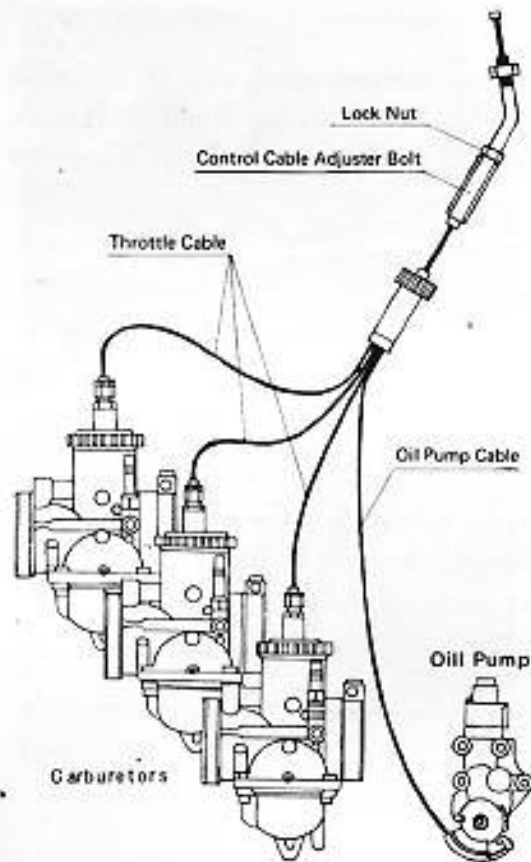
The carburetor atomizes the gasoline, mixes it with the proper amount of air and supplies the proper amount of mixture to the engine. To adjust engine idling speed, turn the throttle stop screws in or out. Turning in screws decreases idling speed and turning out screws increases idling speed. Check exhaust pressures of all cylinders after idling speed is adjusted.

Note: Differences between exhaust pressures of each cylinder can be easily found by holding hands near end of exhausts.



Although it may seem easy, carburetor adjusting is difficult to do properly and incorrect adjustment can cause serious problems. Always take your motorcycle to your Kawasaki dealer for carburetor adjustments.

The pilot air screw standard setting is backed out by $1\frac{1}{4}$ turns from the bottom. Standard needle clip position is in the 3rd groove from the top of the jet needle.



Throttle Control Cable

This control cable consists of the oil pump cable and throttle cables which are connected with a junction device.

Adjust control cable play with control cable adjuster bolt, and lock it with lock nut.

Do not touch throttle cable adjusters on carburetor mixing chamber tops because throttle cables are synchronized exactly with oil pump cable. If the throttle cables only are adjusted without adjusting oil pump cable, oil injection quantity may be incorrect.

If throttle cable adjusting is needed, take your motorcycle to your Kawasaki dealer for adjusting and synchronization.



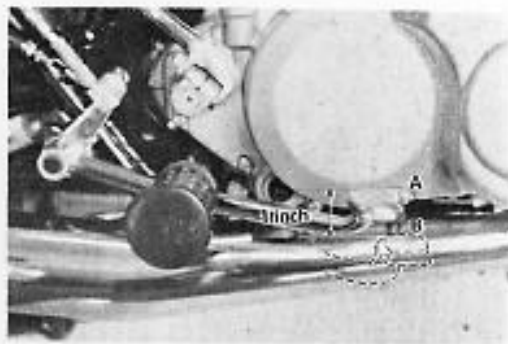
Steering Damper

The Steering damper fitted on the steering stem can be adjusted according to road and loading conditions. Turning steering damper knob to the right stiffens steering and turning it to the left loosens steering.



Shock Absorber Spring

The shock absorber spring can be adjusted according to the road conditions and the loading conditions. Be sure both shock absorbers are adjusted in the same position.



Brakes

Good brakes are highly important for safe riding. Always be sure to check brakes before riding. Play in brakes increases gradually with wear, so adjust them regularly.

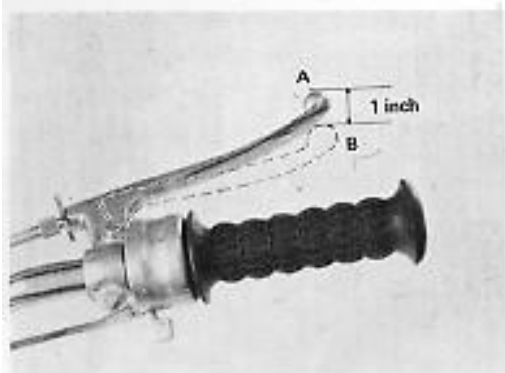


1. Rear Brake

Brake pedal position A is the normal position and position B is the point where the brake begins to be applied. Adjust brake pedal play to 1 inch or slightly more (25-35 mm). Adjust with brake wire adjusting nut.

2. Front Brake

Brake lever position A is the normal position and position B is the point where the brake begins to be applied. Adjust brake lever play to about 1 inch (20-30 mm).



Tires

Check tires frequently, at least once a week, and before any lengthy ride. Correct pressure means easy ride, good handling and long service life of tires.

Too low a pressure wears sidewalls rapidly, builds up heat and may lead to tire failure.

Too high a pressure gives a hard ride, increases vibration, wears tread rapidly, and tends to skid more easily.

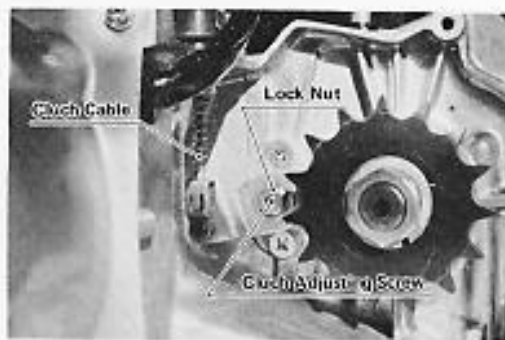
Correct pressures are:

26 Pounds (Front)

32 Pounds (Rear)

When replacing a tube, check wheel for balance.

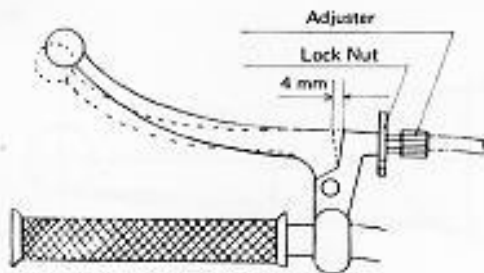


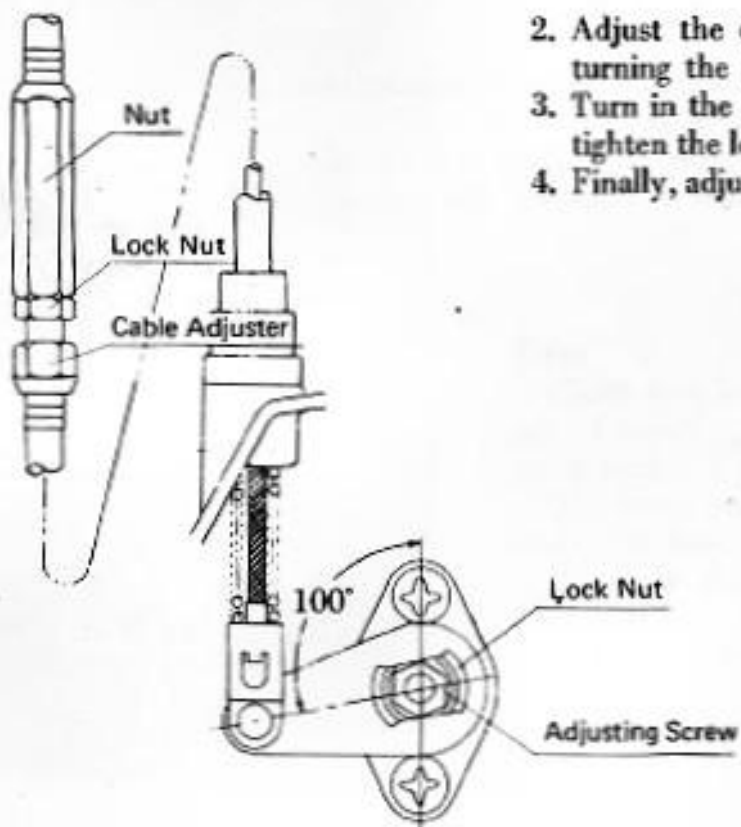


Clutch

1. To begin with clutch adjusting, remove chain cover and back off the clutch adjusting screws enough.

Note: Check to be sure that the clutch lever has proper play before beginning the adjustment as illustrated here.





2. Adjust the clutch release lever position to about 100° (degree) by turning the clutch cable adjuster as shown here.
3. Turn in the clutch adjusting screw until it begins to turn hard, then tighten the lock nut securely.
4. Finally, adjust the clutch lever play to about 4 mm at the joint of it.



Drive Chain

If drive chain is not properly lubricated, the links become stiff resulting in rapid wear of sprockets and chain. Power is lost by dry or badly worn chain.

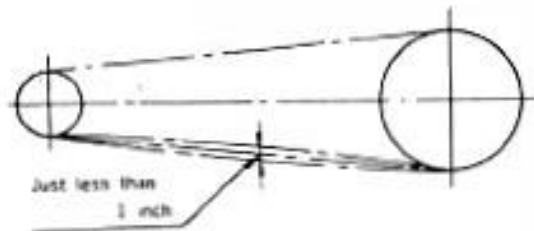
Inspect and lubricate the chain periodically.

There should be a play of just less than 1 inch (about 20 mm) midway between the sprockets.

To adjust chain tension, first loosen nuts, and then turn chain adjusting bolts.

Check chain for tight spots by revolving rear wheel. Adjust for tightest spot.

Be sure chain adjusters on each side are moved the exact same amount. Readjust the rear brake after adjusting the chain.





Muffler

Loosen screws (A) and pull out the baffle tubes.

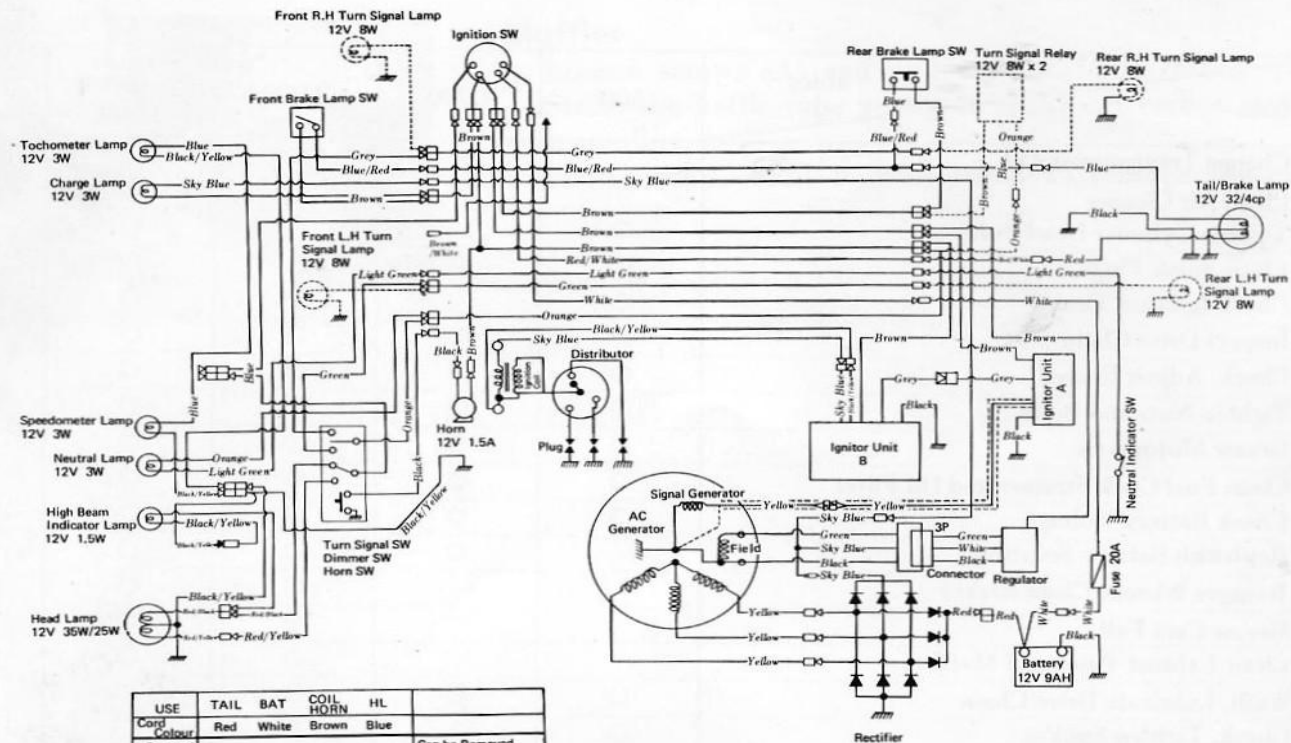
Strike the baffle tube gently to shake off carbon deposits and wash with gasoline.

If necessary, burn it with torch to remove the carbon deposit.

8. Periodical Inspection Chart

Item \ Miles	500	1,000	2,000	EACH SUBSEQUENT 2,000
Change Transmission Oil	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Clean Air Cleaner			<input type="checkbox"/>	<input type="checkbox"/>
Tighten Cylinder Head Bolts	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Clean Spark Plugs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check Ignition Timing	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Inspect Drive Chain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check, Adjust Brakes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tighten Nuts and Bolts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grease Motoreycle		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clean Fuel Cock Strainer and Oil Filter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check Battery Voltage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Replenish Battery Solution		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remove Wheels, Clean Brakes			<input type="checkbox"/>	<input type="checkbox"/>
Grease Cam Felt			<input type="checkbox"/>	<input type="checkbox"/>
Clean Exhaust Pipes and Mufflers			<input type="checkbox"/>	<input type="checkbox"/>
Wash, Lubricate Drive Chain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check, Tighten Spokes	<input type="checkbox"/>		<input type="checkbox"/>	
Check, Adjust Carburetors and Oil Pump			<input type="checkbox"/>	<input type="checkbox"/>

9. Wiring Diagram



NOTE: Turn Signal Lamps and Turn Signal Lamp Relay are Optional Parts which are shown with dotted lines