

BRIDGESTONE MOTORCYCLE MANUAL

175 DUAL TWIN

175 HURRICANE SCRAMBLER

MII RS

MII SS

Acknowledgment

We extend our sincere appreciation and thanks to you for selecting our new BRIDGESTONE MOTORCYCLE.

This machine has been designed by our experienced engineers and testers and is of the highest workmanship and finish.

We are confident that your BRIDGESTONE MOTORCYCLE will meet with your expectations and that you may look forward to many pleasant rides and excursions.

As with any mechanical device, proper care and maintenance are absolutely necessary to ensure freedom from trouble.

In this Owner's Manual you will find useful information to help you to get to know your machine and how to take care of it.

Useful pointers on driving are also given.

ROCKFORD MOTORS, INC.
Rockford, Illinois

C O N T E N T S

	PAGE
1. SPECIFICATION	7
2. SEVEN OUTSTANDING FEATURES	12
3. DRIVING TIPS TO LENGTHEN THE ENGINE LIFE	
(1) Break-In	13
(2) After Break-In	14
4. STARTING	15
5. GEAR SHIFTING	
(1) In 4 Speed Rotaty Shift Transmission	17
(2) In 5 Speed Return Shift Transmission	19
6. CRUISING	21
7. OIL INJECTION SYSTEM	22
8. STEERING DAMPER	23
9. DIPPER SWITCH AND HORN BUTTON	23
10. MAIN SWITCH	24

11. MAINTENANCE AND ADJUSTMENT

(1) Daily Checking	25
(2) Adjusting and Checking	
2- 1) Adjusting Chain	26
2- 2) Adjusting Clutch	27
2- 3) Adjusting Front Brake	28
2- 4) Adjusting Rear Brake.....	29
2- 5) Adjusting Contact Breaker Points	30
2- 6) Adjusting Ignition Timing.....	31
2- 7) Carburetors Setting	33
2- 8) Adjusting Stoplight Switch	34
2- 9) Checking Battery	35
2-10) Changing Transmission Oil	36
2-11) Cleaning Air Cleaner	37
2-12) Cleaning Spark Plugs	38
2-13) Decarbonizing Cylinder Heads	39
2-14) Decarbonizing Mufflers and Exhaust Pipes	40
2-15) Removing Front Wheel	41
2-16) Removing Rear Wheel	42

(3) Periodic Checking.....	43
(4) Periodic Greasing and Oiling.....	44
(5) Checking Bolts and Nuts for Tightness.....	45
12. WIRING DIAGRAM	46
13. LOCATING TROUBLES	49
14. TOOL KIT.....	53
15. BRIDGESTONE MOTORCYCLE IDENTIFICATION FORM	54

1. SPECIFICATION

MODEL — 175 Dual Twin 175 Hurricane Scrambler Mach II RS Mach II SS
175 DT 175 HS

* ENGINE

- (1) Type: 2-stroke, Dual Cylinders
- (2) Piston Displacement: 177cc (10.8 cu. inch) 175DT, 175HS
198.6cc (12.12 cu. inch) MII RS, MII SS
- (3) Bore & Stroke: 50 mm x 45 mm (1.97 x 1.77 inch) 175DT, 175HS
53 mm x 45 mm (2.09 x 1.77 inch) MII RS, MII SS
- (4) Compression Ratio: 9.5: 1 — 175DT, 175HS
10.4: 1 — MII RS, MII SS
- (5) Max. Brake Horse Power: 20 HP/8,000 rpm — 175DT, 175HS
22 HP/8,000 rpm — MII RS, 21 HP/8,000 MII SS
- (6) Max. Torque: 1.9 kg-m/7,500 rpm — 175DT, 175HS
2.10 kg-m/7,500 rpm — MII RS
2.05 kg-m/7,500 rpm — MII SS
- (7) Air Intake System: Rotary disc valve
- (8) Starting System: Kick Starter
- (9) Charging System: A. C. Generator
- (10) Ignition System: Battery
- (11) Ignition Timing: (19° +1) degree before T.D.C.
—2
- (12) Spark Plug: NGK B-8H
- (13) Carburetor: AMAL Type, VM 17 SC—175DT, VM 18 SC—175HS, MII RS,
MII SS
- (14) Engine Lubrication: 2 cycle engine motor oil
- (15) Fuel: Regular gasoline
- (16) Transmission Oil: 26 ounces in transmission case.
SAE No. 10W/30 in all seasons or
SAE No. 30 in summer and SAE No. 20 in winter.

*** PERFORMANCE**

- (1) Max. Speed: Over 130 km/h (80 mph) 175DT, MII RS
Over 125 km/h (78 mph) 175HS, MII SS
- (2) Climbing Ability: 1 in 3
- (3) Fuel Consumption: 55 km/l; (129 mpg/25 mph) at 40 km/h
on paved flat test road.
- (4) Min. Turning Radius: 1.95 m (76.8 inch)
- (5) Acceleration
(Standing Start 1/4 mile) Under 18 sec (0-400m) 175DT, 175HS
16.2 sec MII RS
16.5 sec MII SS
- (6) Braking Distance: Less than 6 m at 35 km/h (20 feet, at 22 mph).

*** FRAME & SUSPENSION**

- (1) Frame type: Pipe Frame, Cradle Type.
- (2) Front Suspension: Telescopic Fork with Hydraulic Damper.
- (3) Rear Suspension: Swinging Arm with Hydraulic Damper.

* TRANSMISSION

(1) Clutch

(2) Transmission:

(3) Gear Ratio:

Manual, Multiple discs in oil bath.

Dual Transmission. Selective 4-speed constant mesh-rotary, 5-speed constant mesh-return by shifting "Sportshift" lever.

Primary Helical Gear):	1:	3.41		
Gear Box:	1st	1:	2.61	
	2nd	1:	1.67	
	3rd	1:	1.24	
	4th	1:	1.00	
	5th	1:	0.85	
Secondary (Chain):	1:	2.37	175DT	1: 2.53 175HS
Total Gear Ratio:				
	1st:	1:21.19	175DT	1:22.52 175HS
	2nd:	1:13.50	175DT	1:14.41 175HS
	3rd:	1:10.03	175DT	1:10.70 175HS
	4th:	1: 8.10	175DT	1: 8.63 175HS
	5th:	1: 6.86	175DT	1: 7.33 175HS
Secondary (Chain):	1:	2.25	MII RS	1: 2.37 MII SS
Total Gear Ratio:				
	1st:	1:20.03	MII RS	1:20.09 MII SS
	2nd:	1:12.81	MII RS	1:13.50 MII SS
	3rd:	1: 9.51	MII RS	1:10.02 MII SS
	4th:	1: 7.67	MII RS	1: 8.08 MII SS
	5th:	1: 6.52	MII RS	1: 6.87 MII SS

*** DIMENSIONS AND WEIGHT**

- (1) Overall Length: 1,885 mm (74.2 inch) 175DT, MII RS — 1,960mm (77.2 inch) 175HS, MII SS
- (2) Overall Width: With Standard Handle Bar
750 mm (29.5 inch) (UP=Western type) 175DT, MII RS
810 mm (31.9 inch) 175 HS, MII SS
- (3) Overall Height: 1,020 mm (40.2 inch) 175DT, MII RS — 1,060 mm (41.7 inch) 175HS, MII SS
- (4) Saddle Height: 780 mm (30.7 inch) 175DT, MII RS — 790 mm (31.1 inch) 175HS, MII SS
- (5) Wheelbase: 1,235 mm (48.6 inch)
- (6) Road Clearance: 150 mm (5.9 inch) 175DT, MII RS — 155 mm (6.1 inch) 175HS, MII SS
- (7) Tire Size (Front): 2.50-18—4 ply 175DT, MII RS — 3.00-18—4 ply 175HS, MII SS
(Rear): 2.75-18—4 ply 175DT — 3.00-18 4 ply 175HS, MII SS, MII RS
- (8) Tire Pressure (Front): 1.6 kg/cm² (22.8 lbs/in²)
(Rear): 2.0 kg/cm² (28.4 lbs/in²)
- (9) Caster: 64°
- (10) Trail: 83.5 mm (3.29 inch)
- (11) Banking Angle: 45°
- (12) Net Weight: 123 kg (271 lbs) 175DT, 175HS — 124 kg (273 lbs) MII RS
125 kg (276 lbs) MII SS
- (13) Fuel Tank Capacity: 10l (2.64 US gal.)
Including 1.2 litre (0.317 US gal.) reserve
- (14) Oil Tank Capacity: 1.8l (3.8 pint)

* ELECTRICAL EQUIPMENT

(1) Head Light:	12V-35/25W	175DT, 175HS	12V-35/30W	MII RS, MII SS
(2) Tail Light:	12V-8W	175DT, 175HS	12V-7W	MII RS, MII SS
(3) Stop Light:	12V-25W	175DT, 175HS	12V-23W	MII RS, MII SS
(4) Speedometer Lamp	12V-3W			
(5) Headlight high beam indicator lamp:	12V-2W			
(6) Neutral Indicator Lamp:	12V-2W			
(7) Battery:	12V-6AH			

2. OUTSTANDING FEATURES

- (1) New oil injection system which precludes necessity of pre-mixing gasoline and lubricating oil.
- (2) High speed, smooth and quick acceleration obtained by the revolutionary air intake system (dual rotary disc valves) and dual carburetors. Max. speed "Over 80 mph." Acceleration (standing start—1/4 mile), under 18 sec. (16.2 sec. MII RS).
- (3) Aluminum alloy cylinder.
- (4) 4-speed rotary shift gear convertible to 5-speed gear while running or when stationary with "SPORTSHIFT" LEVER.
- (5) Equipped with new kick system assuring quick and easy starting in any gear shifting position, even in neutral gear.
- (6) Large brake hubs 180 dia. mm (6.2 dia. inch) and completely watertight drums providing safe braking.
- (7) Light and strong cradle type frame.
- (8) Front brake stop-switch providing safe driving (MII RS, MII SS).

3. DRIVING TIPS TO LENGTHEN THE ENGINE LIFE

(1) Break-In

To obtain maximum performance

It is important to follow the break-in procedure closely.

The engine is precision made to very close tolerances. Although you will probably be impatient to try the top speed of your new machine, serious damage will very probably result if this is done before the piston rings have properly worn in the cylinder during the break-in period.

ITEM

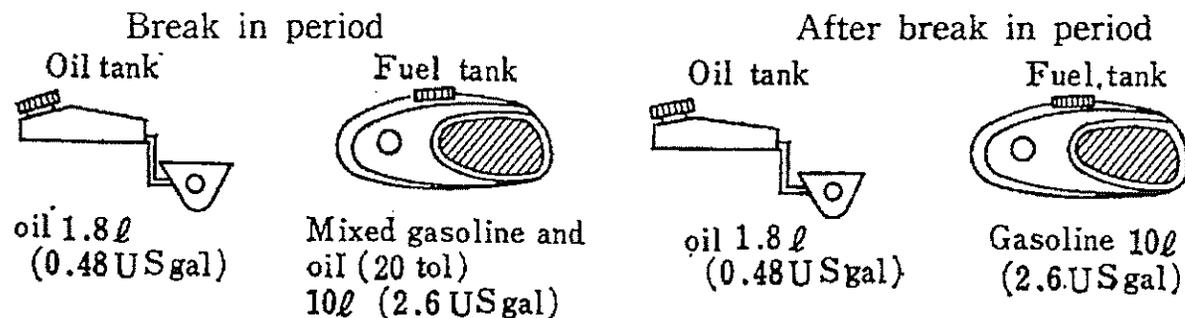
PROCEDURE

Break-in period

Do not run a new engine at full throttle for the first 400 km (250 miles).

Fuel

New oil injection system precludes necessity of pre-mixing gasoline and oil.



Riding

1. Never exceed 55 km/h (35 mph) in 4 th gear, and 65 km/h (40 mph) in 5 th gear.
Do not race engine in first or second gear.
2. Change gears smoothly.

Load Do not allow engine to "strain" or "lug"
Do not open the throttle grip more than three quarters.

Transmission Oil HIGH GRADE Motor oil SAE No. 30 in summer or SAE No. 20 in winter.
If preferred SAE No. 10 w/30 all season oil may be used.
'Fill transmission with 0.8 litre (0.21 US gal)'

(2) After Break-In

The following details must be completed before the machine is ready for every day use.

ITEM	PROCEDURE
Lubrication oil	Check the oil level through peephole in oil tank.
Transmission oil	Fill with fresh high quality motor oil of suitable grade according to season.

NOTE: It is recommended that after 400 km (250 miles), service checkup be made by an authorized service agency.

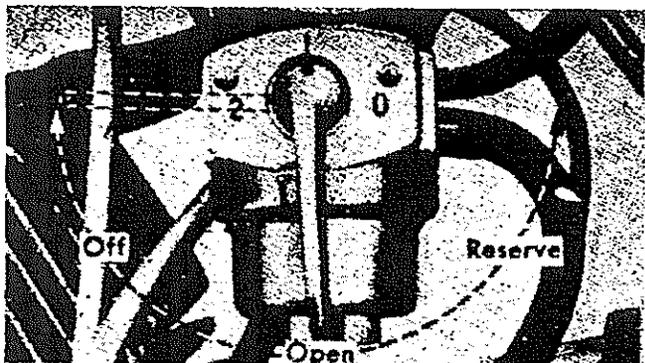


Fig. 1

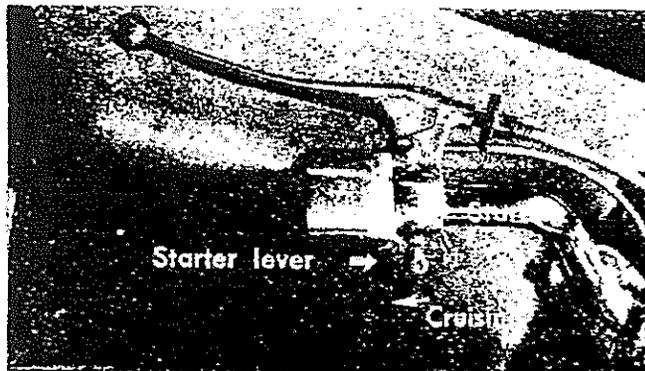


Fig. 2

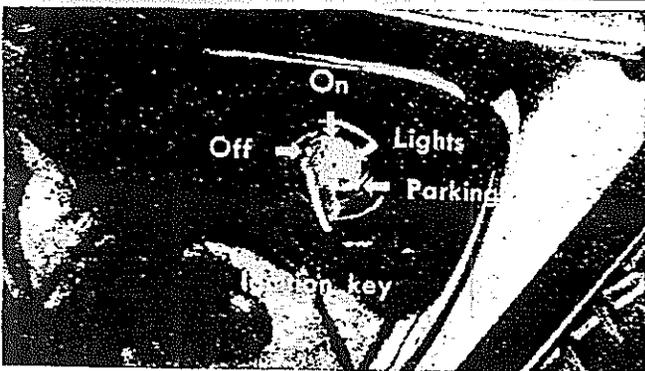


Fig. 3

4. STARTING

* Procedure to be followed before starting

- 1) Turn the fuel cock lever to "open" position "1" as shown in Fig. 1.

NOTE: Position "2" of the cock is for "Reserve" fuel only.

Switch to this position for reserve fuel. The reserve fuel will carry you about 30 km (20 miles). To close the fuel cock, turn the lever to the left.

- (2) Set the starter lever to starting position as shown in Fig. 2.

In summer or when engine is warm, it may not be necessary to use choke.

- (3) Turn ignition key to "ON" position (Fig. 3.)

(a) At night, turn key to "LIGHTS" position after engine has been started.

(b) Parking light switches on in "PARKING" position.

- (4) If green light does not show, the machine is in gear.

-
- (5) Kick the kick pedal.
 - (a) If in neutral gear, kick the starter to the limit.
 - (b) If transmission is in any gear, first grip the clutch lever before kicking.
 - (7) After the engine starts, idle at low speed for 2 minutes.
 - (8) Caution: Do not overlook to return the starter lever to the cruising position after the engine has warmed up.
 - (9) The machine is now ready to be driven.

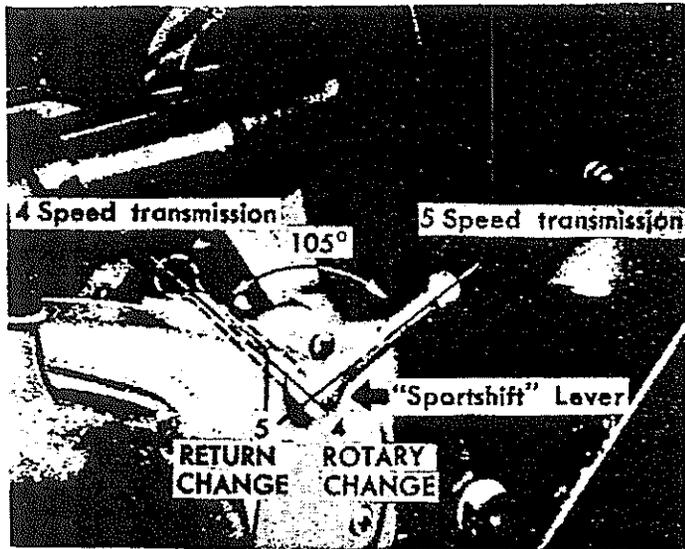


Fig. 4

5. GEAR SHIFTING

This machine is equipped with a selective 4 speed/5 speed Dual Transmission operated with a unique gear shifting system "SPORTSHIFT" lever while running or when stationary as shown in Fig. 4.

This gear shifting system has been designed for use either as a 4 speed rotary transmission or a 5 speed return shift by simply operating the "SPORTSHIFT" lever by hand.

(1) 4 Speed Rotary Shift Transmission

4 Speed Rotary Shift Transmission is recommended for use under the following conditions.

- (A) Running in town or uphill.
- (B) When carrying on extra load, as passenger or goods.

To run on the 4 speed transmission the "SPORTSHIFT" lever should be set in 4 speed as shown in Fig. 5.

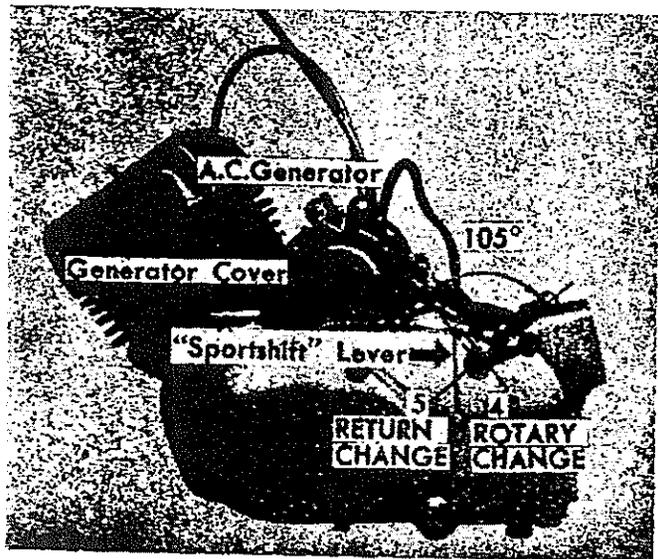


Fig. 5

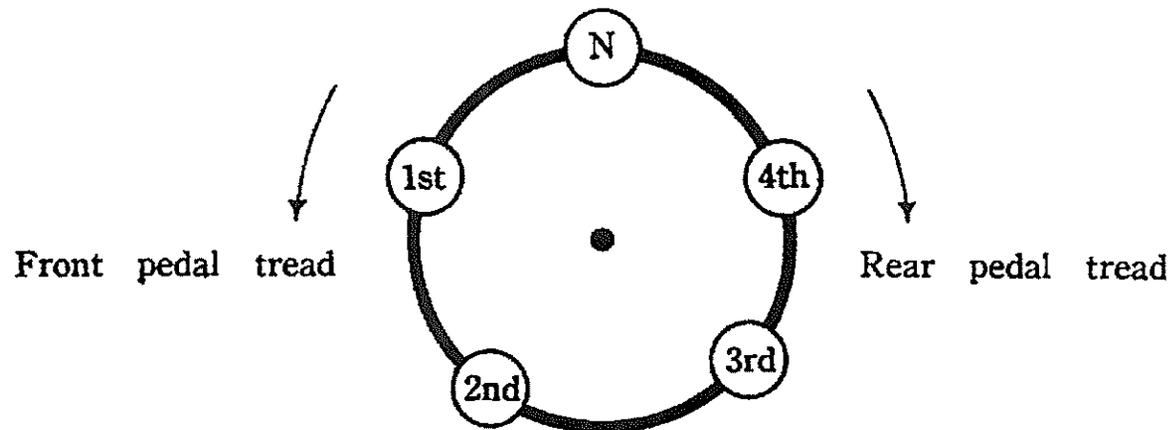
CAUTION:

If the lever is in the 5th gear it can not be shifted, so that the gear must be first shifted to any gear with the gear change pedal and then shift the lever (105° anticlockwise) to 4 speed.

- (a) If the change pedal is stepped on in the forward direction, gears will shift from neutral—1st—2nd—3rd—4th—neutral.
- (b) If stepped on rearward the gear sequence is neutral—4th—3rd—2nd—1st—neutral.

This sequence is used for down shifting. For example going up a steep grade in 4 th, you can shift down to 3rd by stepping backwards on the change pedal.

When shifting, return the throttle grip to completely closed position, grip the clutch lever (cut off), and lightly step on the change pedal.



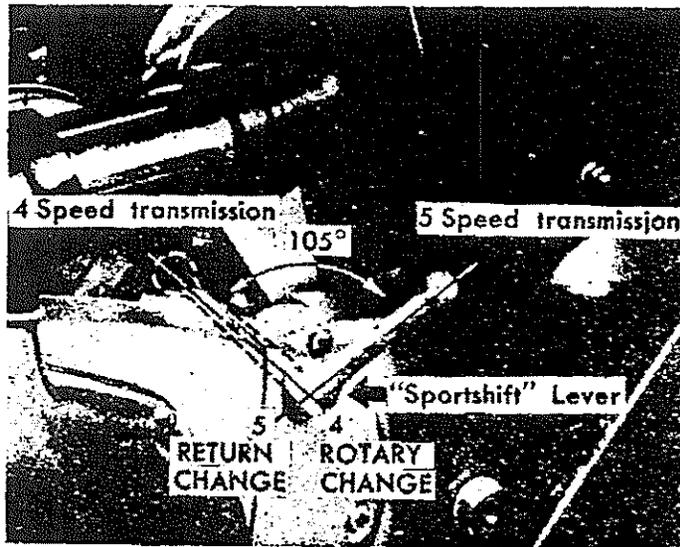


Fig. 6

(2) 5 Speed Return Shift Transmission

a) Running at high speeds on freeways.

When the 5th speed is required for high speeds, turn the Sportshift lever clockwise to 5 speed transmission (Fig. 6) but, as the lever will not shift when it is in neutral of the 4 speed transmission, any one gear must be engaged with the gear change pedal, and then only turn the Sportshift lever 105° clockwise, to the 5 speed transmission.

b) 5 Speed return shift mechanism is as shown in Fig. 7.

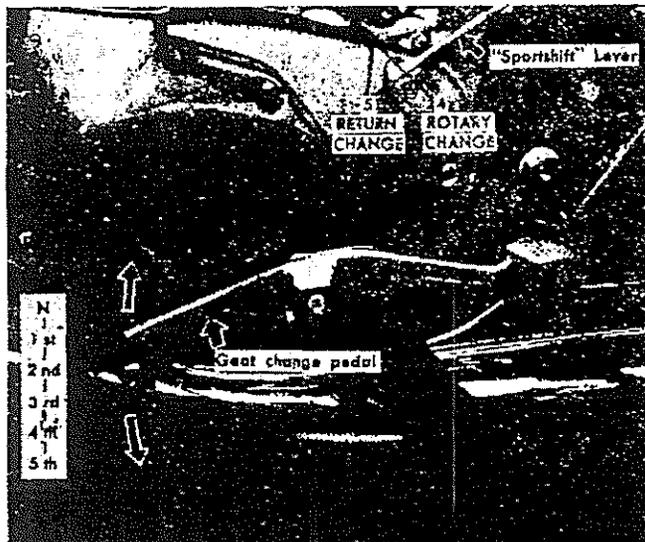
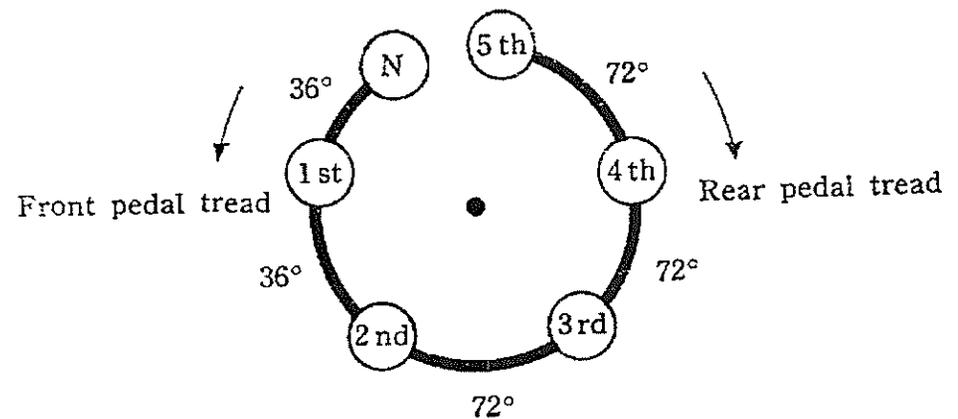
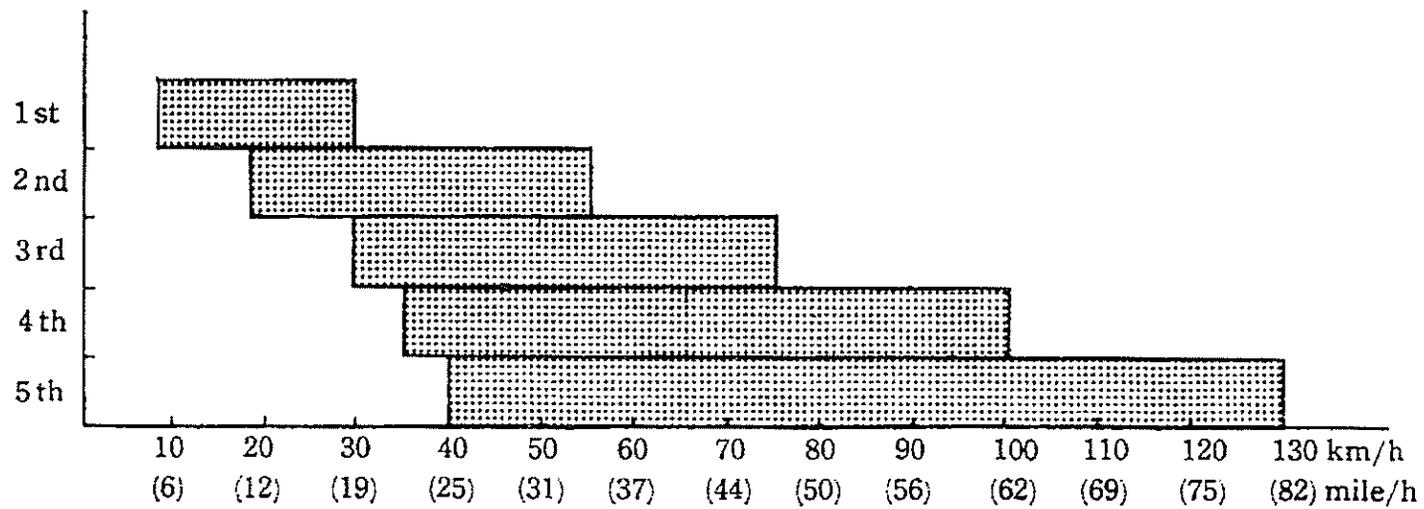


Fig. 7



(3) Gear shifting is to be done within the speed ranges shown in the shaded sections in the illustration.



6. CRUISING

(1) Fuel consumption depends on the speed. Cruising at 25 m.p.h. (40 km/h) in 4th gear is the most economical speed.

(2) **Uphill**

Going uphill, open throttle sufficiently to maintain a speed of not less than 22 m.p.h. (35 km/h) in 4th gear. If speed drops, shift down successively to 3rd and 2nd.

(3) **Downhill**

Going down a long grade, shift into 3rd gear and allow engine drag to assist in controlling speed.

Do not apply brakes for long periods. On very steep grades, use 2nd or 3rd gear. Never completely close throttle going down hill. Keep it open slightly to assure proper engine lubrication.



Fig. 8

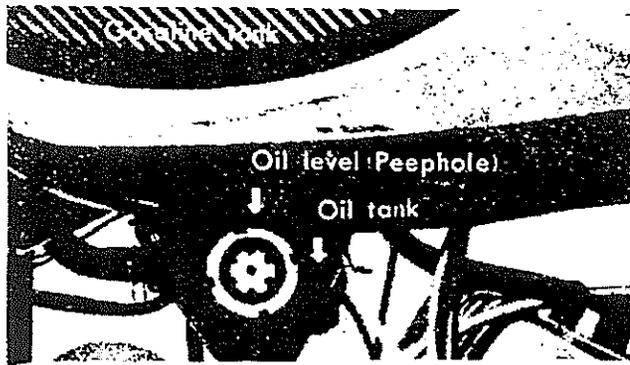


Fig. 9



Fig. 10

7. OIL INJECTION SYSTEM

This machine is equipped with the new oil injector which precludes necessity of pre-mixing gasoline and lubricating oil. Oil injector automatically injects the correct amount of oil between carburetor and intake ports for fuel and air mixture.

Gasoline and oil are filled in separate tanks because no pre-mixture is necessary. (Fig. 8)

It is only necessary to check the oil level through peephole in oil tank which is located under the fuel tank. (Fig. 9)

It is recommended to take the machine to an authorized dealer for adjustments and repairs. (Fig. 10)

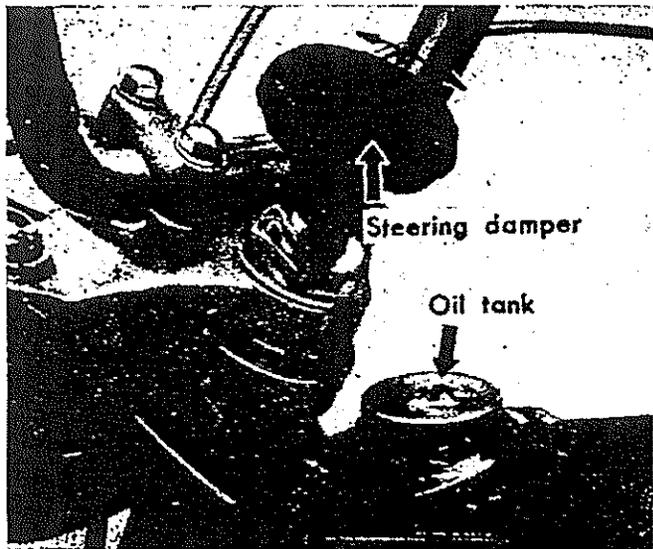


Fig. 11

8. STEERING DAMPER

This machine is equipped with steering damper to obtain stability.

To adjust stability, turn the knob of steering damper as shown in Fig. 11.

Turn clockwise for stiffening steering such as freeway running.

Turn anticlockwise for easing steering.

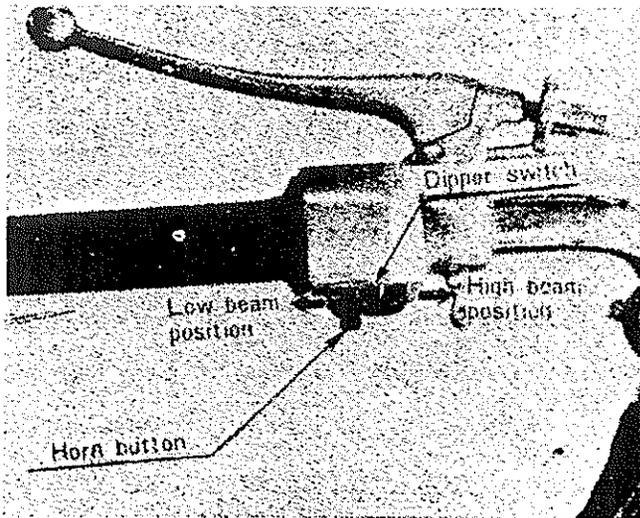


Fig. 12

9. DIPPER SWITCH AND HORN BUTTON

Dipper switch and horn button are found on left handlebar.

Shifting the knob of the dipper switch to the left, the headlight is in low beam position and shifting it to the right, headlight is in high beam position.

Horn push button is located under the dipper switch. (Fig. 12)

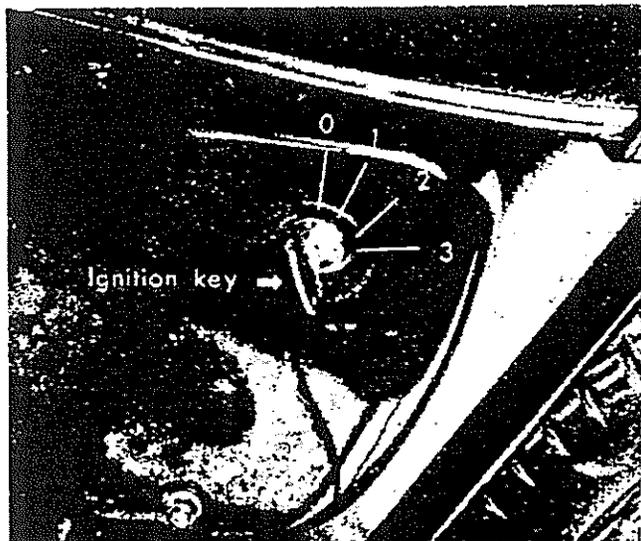


Fig. 13

10. MAIN SWITCH

Ignition switch is combined with the lighting and horn switches and divided into four positions and operated as follows ;

Position of key	Object	Use of key
0	For Parking (Entire electric circuit is opened)	Can be pulled out
1	For Daylight driving (Engine can be started and horn, stop light, neutral lamp are available)	Cannot be pulled out
2	For Night time driving (Head light, tail light, stop light, neutral lamp, high beam lamp, horn are available)	Cannot be pulled out
3	For Parking (Parking light is available)	Can be pulled out

The ignition key is also used for the steering lock.

11. MAINTENANCE AND ADJUSTMENT

(1) Daily Checking

1. Keep your machine clean. Be on the lookout for loose nuts and damaged parts.
2. When washing, avoid getting water into the electrical system.

Daily Check

Tire Air Pressure	Front 1.6 kg/cm ² (22.8 lbs./in ²) Rear 2.0 kg/cm ² (28.4 lbs./in ²)
Front Brake	Proper adjustment
Rear Brake	Proper adjustment
Fuel	Is it sufficient?
Lubricating oil	Is it sufficient?
Horn	Does it work well?
Lights	Proper operation
Transmission Oil	Check level
Battery	Check liquid level
Carburetor	Adjust idling

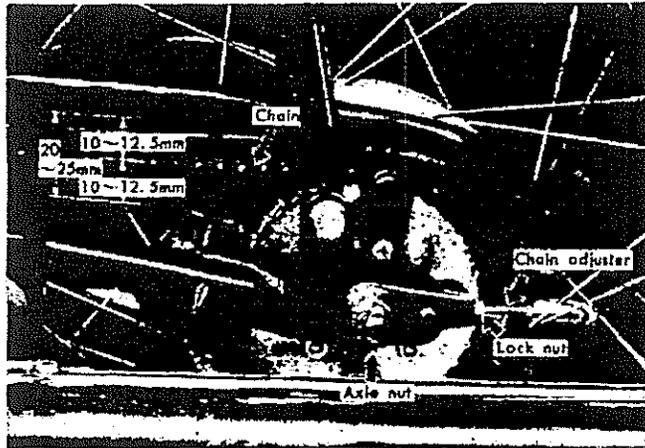


Fig. 14

(2) Adjustment and Checking

2-1) Adjusting Chain

- a) Chain adjustment is correct when chain slack is approximately between 10 mm (3/8") to 15 mm (5/8") up or down by standing up the mainstand. (Fig. 14)
- b) To adjust, loosen rear axle nut and flange collar nut, and then adjust with the chain adjusters on the ends of axle, turning them back or forward an equal amount to keep correct alignment of chain wheels. (Fig. 14)

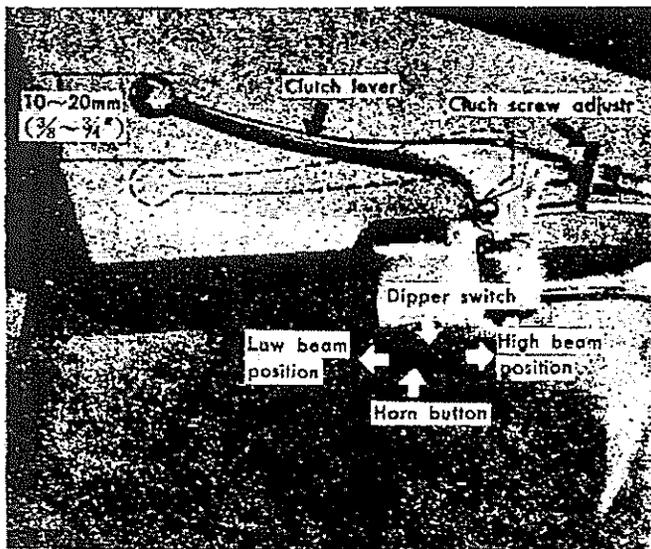


Fig. 15

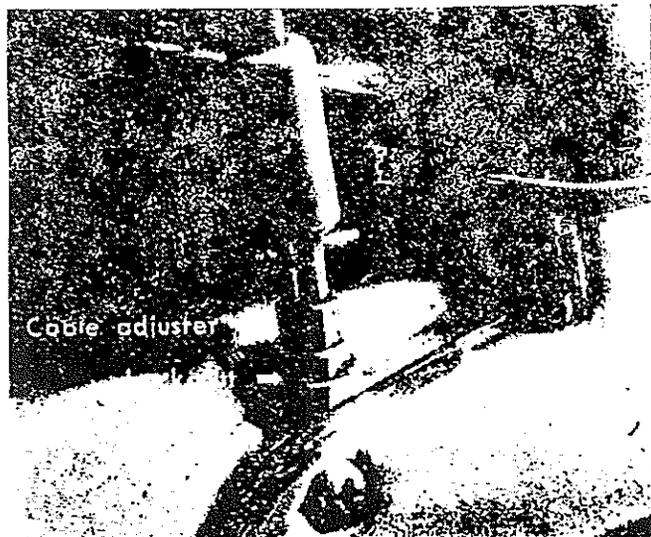


Fig. 16

2-2) Adjusting Clutch

1. When properly adjusted, there will be approximately 10-20 mm (3/8"-3/4") free play in the clutch control before the clutch disengages (Fig. 15).
2. a) The play in the clutch lever may be adjusted while running with the screw adjuster on the lever. (Fig. 15).
- b) Adjustment of the clutch free play is done by turning cable adjuster. Screw in more free play, and out for less. (Fig. 16).

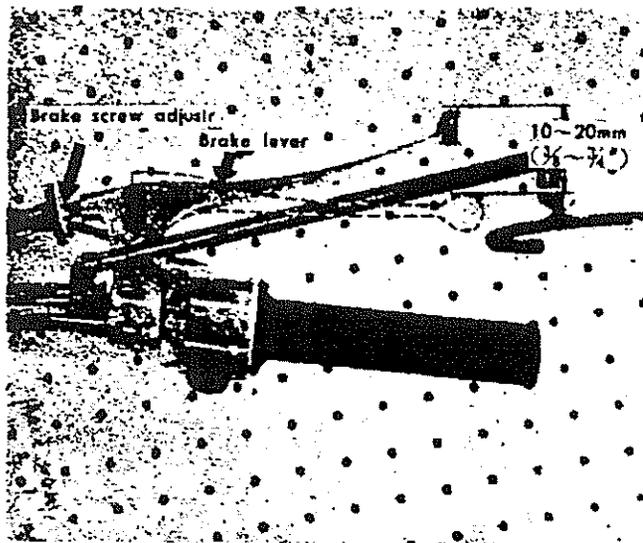


Fig. 17

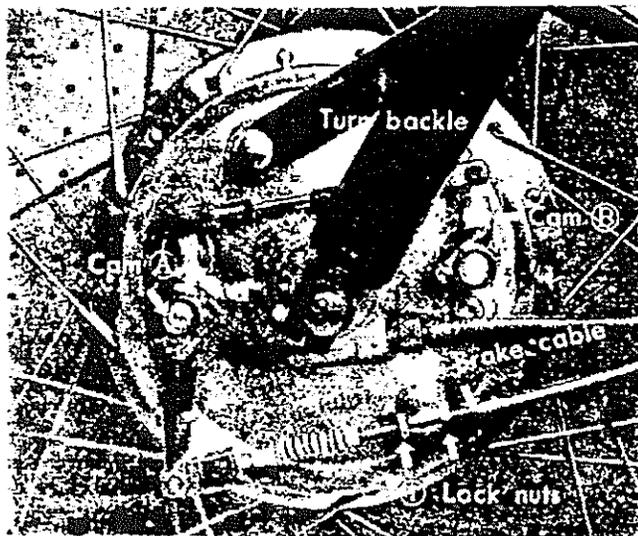


Fig. 18

2-3) Adjusting Front Brake

This machine is equipped with the double cams on the brake drum to assure powerful braking performance.

1. Front brake cable hand lever should be so adjusted to allow a play of 10-20 mm. ($3/8''$ - $3/4''$) before the brake acts. (Fig. 17).
2. a) The play in the brake lever may be adjusted while running with the screw adjuster on the lever, (Fig. 17) or
 - b) With the adjusting lock nuts on front panel (Fig. 19)
 - c) Because of the double cams on the drum, the ① and ② of cam arms must be set parallel with ③ lock nuts and turn-buckle at all times, to prevent uneven brake action. (Fig. 18)

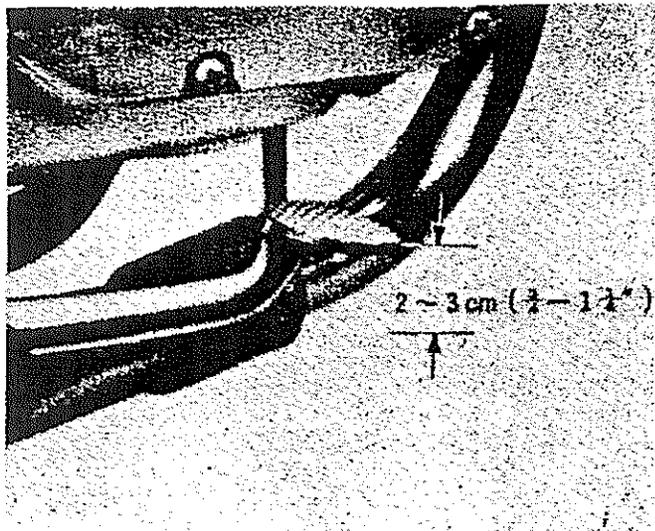


Fig. 19

2-4) Adjusting Rear Brake

- a) Rear brake should be adjusted so that brake pedal can be depressed 20-30 mm (1-1 1/4") before brake acts. (Fig. 19)

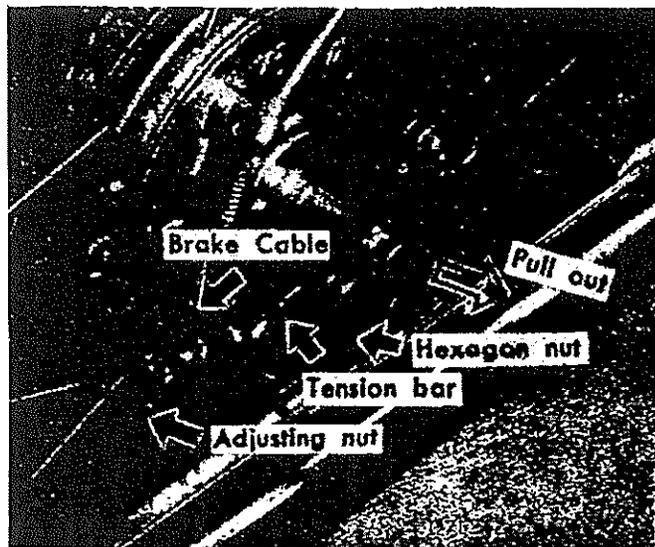


Fig. 20

- b) To adjust, turn brake adjusting nut as required for proper free play. Screw in for less play and out for more.

Spin rear wheel with transmission in neutral to check for brake drag. (Fig. 20)

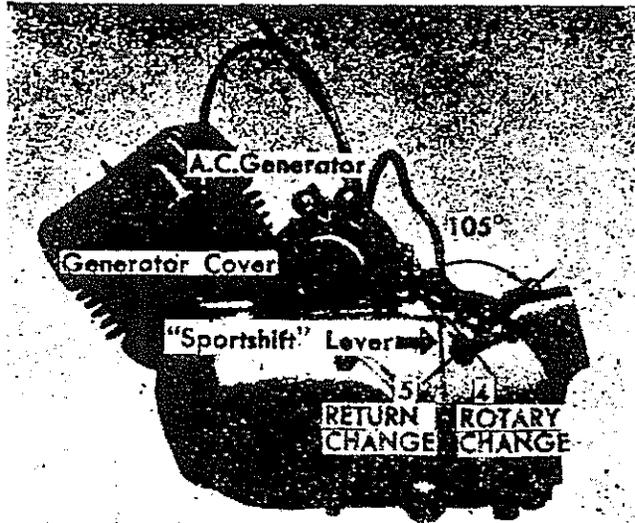


Fig. 21

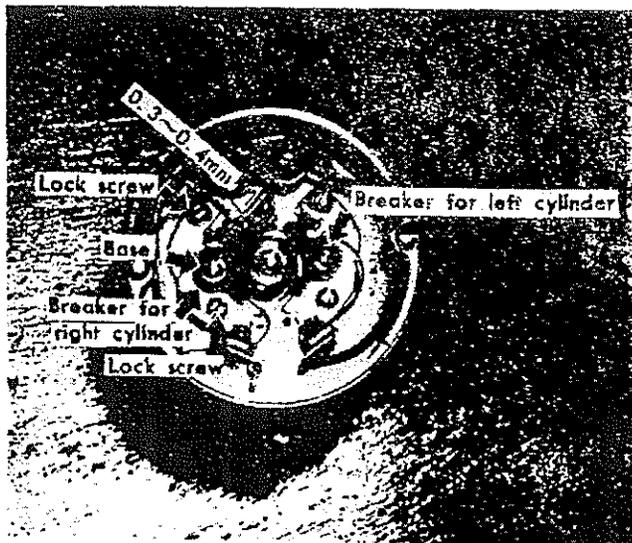


Fig. 22

2-5) Adjusting Contact Breaker Points

* POINTS GAP

- (1) Remove the generator cover, check the point gaps. (Correct point gap is 0.3~0.4 mm (0.012~0.016"). (Fig. 21, 22)
- (2) If the points are incorrectly set, irregular ignition will result.
- (3) It is therefore necessary to inspect the points gap periodically, and keep it adjusted correctly. (Fig. 22)

If too narrow: Poor sparking will result owing to decreased secondary voltage and retarded ignition.

If too wide: Weak sparking will result because of decreased primary current, causing misfiring and resultant starting and other malfunction.

* ADJUSTING THE GAP

Loosen the lock screws and adjust gap to the correct 0.3~0.4 mm (0.012~0.016") with a thickness gauge (standard tool), by sliding the base while rotating the crankshaft slowly.

Then, tighten screws.

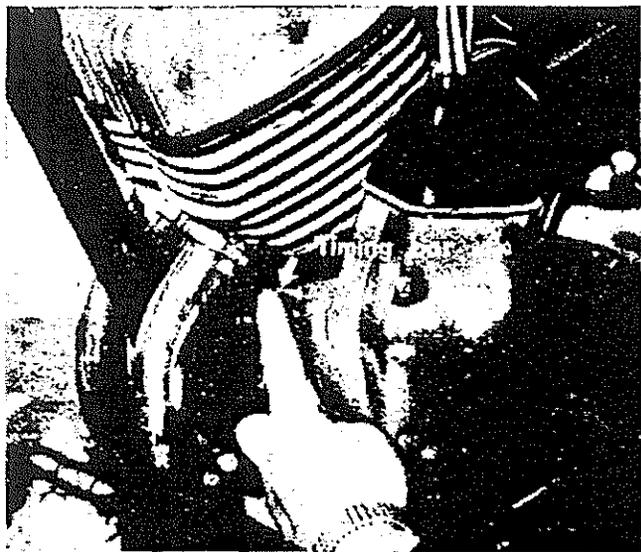


Fig. 23

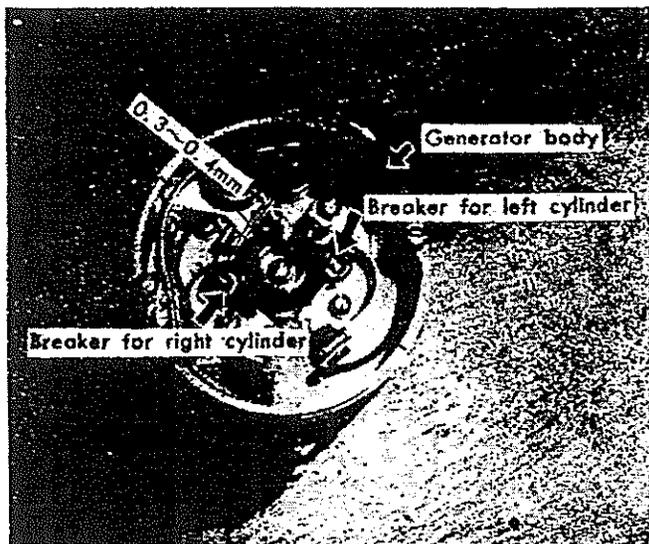


Fig. 24

2-6) Adjusting Ignition Timing

If too advanced: Overheating, loss of power, knocking, backfiring etc.

If too retarded: Overheating, loss of power, and delayed firing.

* CHECKING and ADJUSTING IGNITION TIMING

Set the ignition timing as follows:

RIGHT CYLINDER

- (1) Remove spark plug of right cylinder.
- (2) Rotate rear wheel with gear in mesh (any gear) and stop the piston at top dead center.
- (3) Push the **timing button**—rotate rearwheel clockwise until the button snaps into the hole in crankshaft arm after taking off 8×12 hexagonal bolt on the crank case. (Fig. 23)

This is the standard position for ignition timing (19° BTDC) when the contact points on the right cylinder begins to break. (Fig. 24)

LEFT CYLINDER

Rotate the crankshaft 180°, and follow the same procedure as with the Right Cylinder.

The contact points on the left cylinder begin to break in this position.

To adjust ignition timing, rotate the generator body in the same way as above. (Fig. 24)

Clockwise rotation to retard timing.

Anticlockwise, to advance.

It is recommended to take the machine to an authorized dealer for adjusting timing,
as this is a delicate operation.

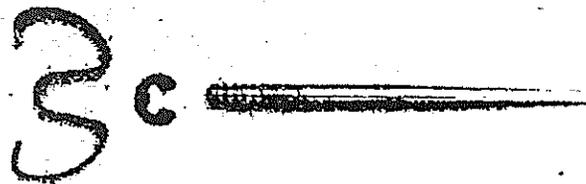


Fig. 25



Fig. 26

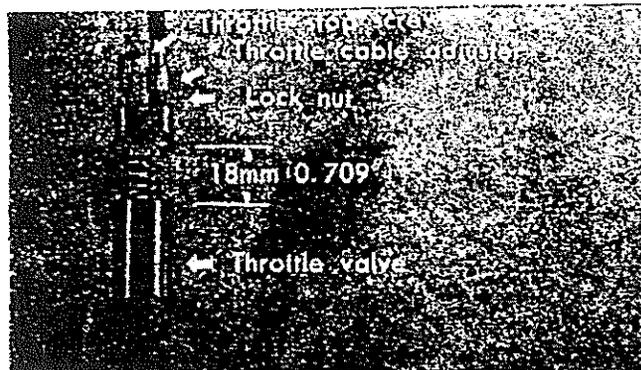


Fig. 27

2-7) Carburetors Setting (Engine idling speed)

The throttle cables, air screws, and throttle stop screws are set according to the following procedure.

In case of dual carburetors, it is most important to allow a little equal play to both cables, and adjust them so that the two throttle valves operate in unison.

1) Set the jet needle in the third groove from the top. (Fig. 25)

2) Setting pilot air screws.

Screw right up the air screw and then screw back one and a half turn. (Fig. 26)

3) Adjusting the throttle stop screws.

Adjust the distance of both left and right carburetor throttle valves to 18 mm (0.709 inch). (Fig. 27)

When throttle stop screw is turned in, engine revolution increases and vice versa.

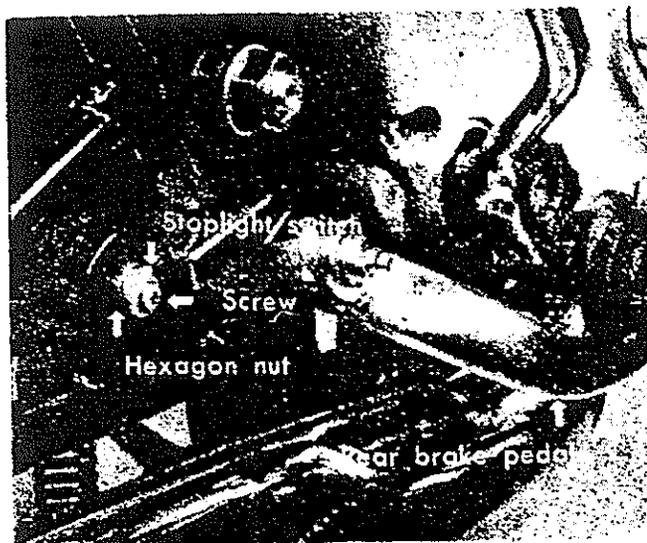


Fig. 28

2-8) Adjusting Stoplight Switch

Stop light bulb is concealed in the tail light lens and the switch is located with brake pedal which works the switch.

- (1) When ignition key is in (1) or (2) position, stoplight can be switched on.
- (2) The lighting timing of stoplight is adjusted as follows. (Fig. 28)

To adjust timing, rotate the stop switch lever:

Clockwise rotation for advancing timing.

Anticlockwise, for retarding.

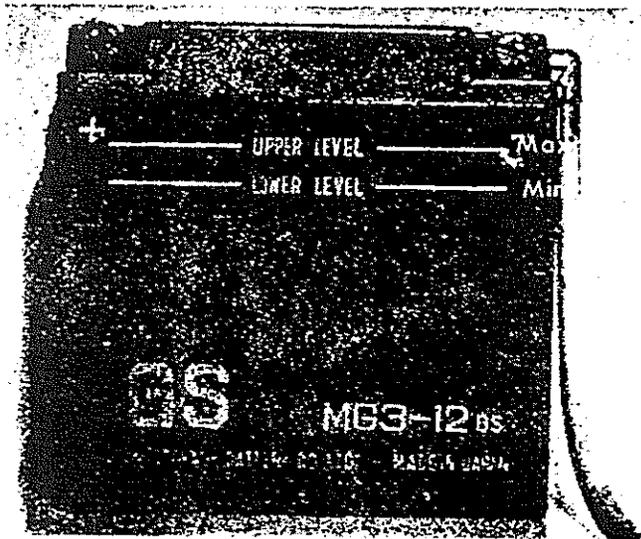


Fig. 29

2-9) Checking Battery

Battery is shipped dry charged.

The dealer from whom the machine is purchased will have filled it with sulfuric acid electrolyte. Do not on any account add acid once battery has been filled.

- a) If machine is used continuously, it should be checked often.
- b) When the electrolyte level falls below the lower line on the battery, add only distilled water to the level of the upper line. (Fig. 29)
Do not add acid!
- c) Keep battery clean.
- d) Be careful not to bend the drain pipe.
- e) Check the liquid level once every month or after every 1000 km (600 miles.)

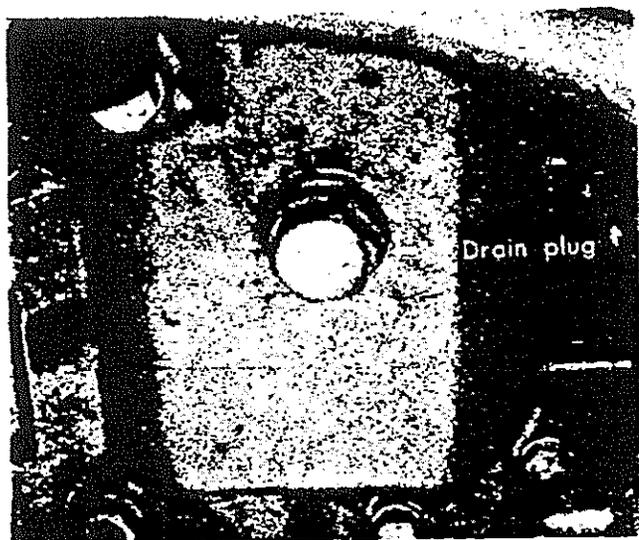


Fig. 30

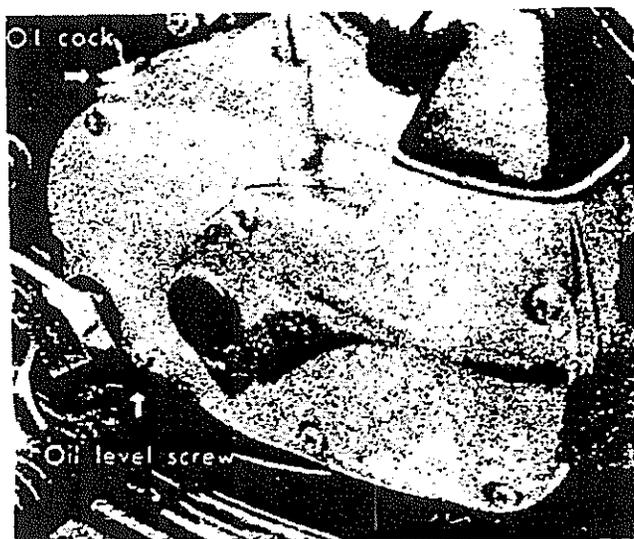


Fig. 31

2-10) Changing Transmission Oil

- a) Drain out dirty oil after running in. (Fig. 30)
- b) When refilling new transmission oil, take off oil cock and fill in 0.7 litre (0.19 US gal.) (Fig. 31)
- c) Check the oil level, only when the oil has settled in the transmission case. Screw out the oil level screw bolt and if it is covered with oil, the case is correctly filled. (Fig. 31)
- d) Check the oil level every 3,000 km (2,000 miles).
- e) Change the oil every 12,000 km (7,500 miles) running.

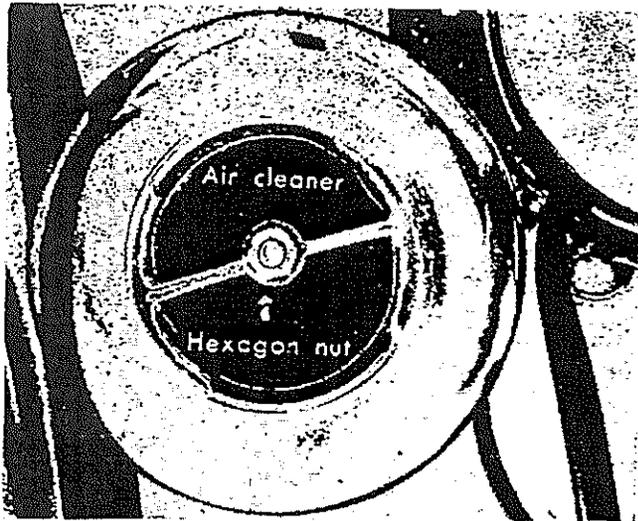


Fig. 32

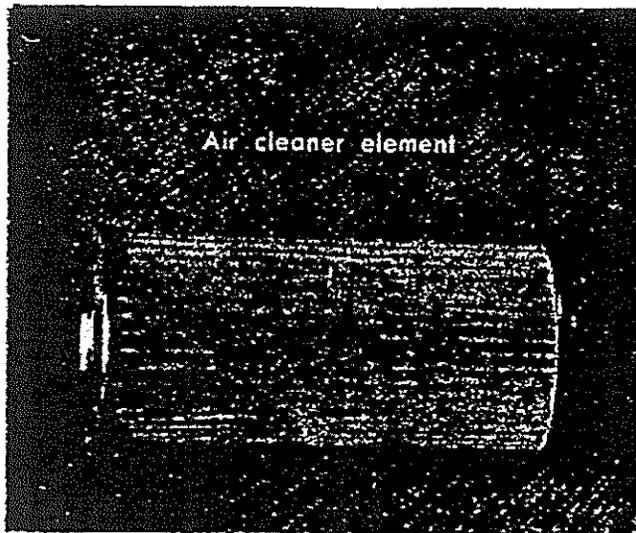


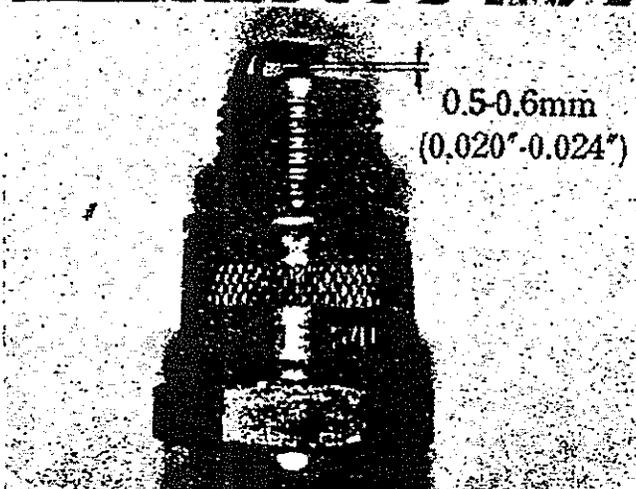
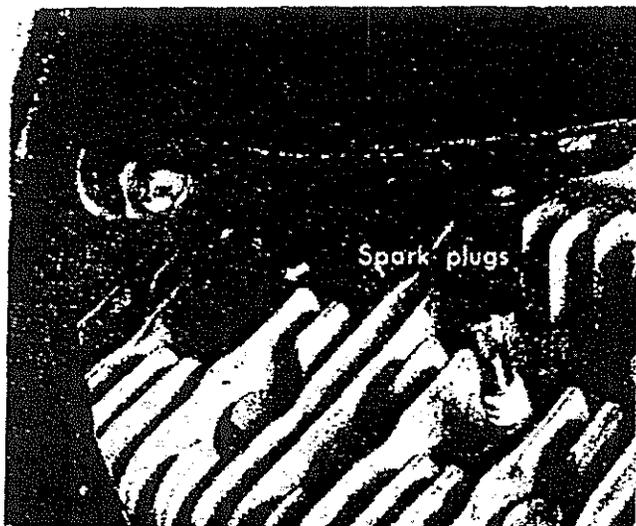
Fig. 33

2-11) Cleaning Air Cleaner

Clean or replace air cleaner element periodically.

A clogged air cleaner will starve engine for air.

- a) Take off air cleaner by removing hexagon nut and clean it every 3,000 km (2000 miles). (Fig. 32)
- b) Tap cleaner lightly and remove accumulated dust or brush clean with soft hair brush. (Fig. 33)
- c) Replace air cleaner when it is torn or damaged.
- d) Never run engine without air cleaner.



Spark plug

Fig. 34

2-12) Cleaning Spark Plugs

a) Clean plug periodically.

This will help provide maximum engine performance. (Fig. 35)

b) Correct gap is 0.5-0.6 mm. (0.020"-0.024")

c) See chart below for plug recommendation.

BRAND	STANDARD	IF PLUG FOULS EASILY (SLOW SPEED)	IF PLUG BURNS EASILY (HIGH SPEED)
NGK	B-8H	B-7H B-7HC	B-8HN B-9H
CHAMPION	(L-58R)	(L-5)	L-56T L-55T
BOSCH	(W310T16)	W225T ₁ W240T ₁	W340T16
LODGE	(R47)	3HN	R49
KLG	(F260)	F100	F280

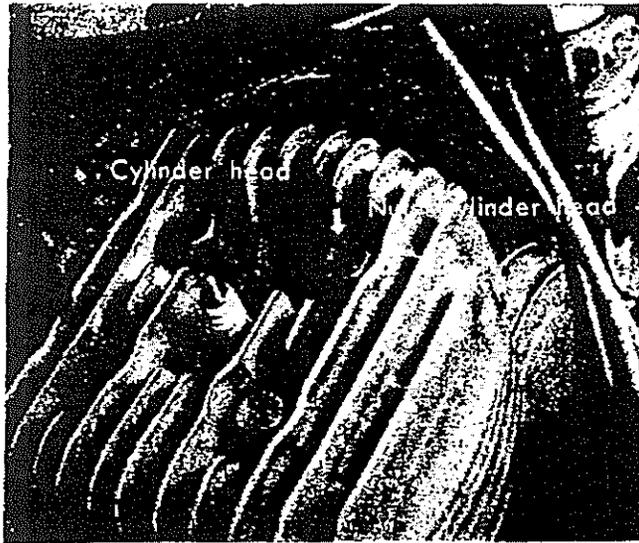


Fig. 35

2-13) Decarbonizing Cylinder Heads

Combustion chamber of head should be cleaned out periodically.

- a) To decarbonize, remove heads by removing cylinder head nuts. (Fig. 35)
- b) Scrape with thickness gauge (standard tool) taking care not to scratch deeply, and remove accumulated carbon.

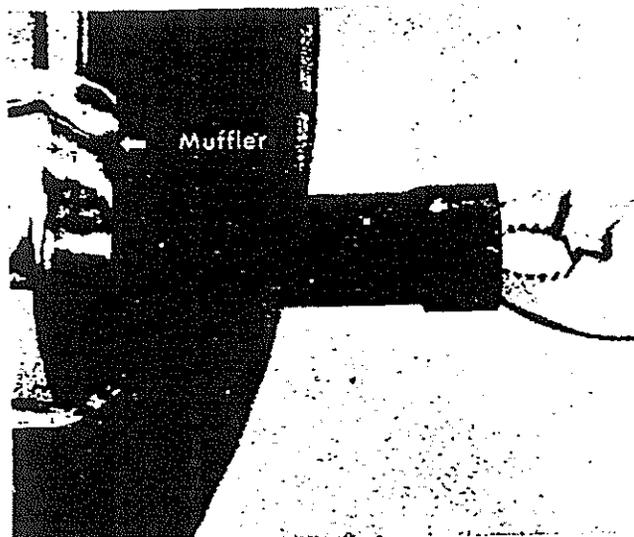


Fig. 36

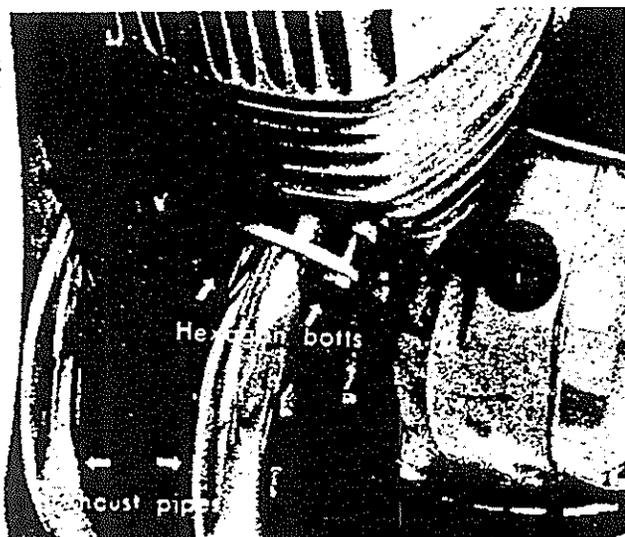


Fig. 37

2-14) Decarbonizing Mufflers and Exhaust Pipes

- a) To decarbonize mufflers, remove lock nut and inner pipes. (Fig. 36)
- b) Tap or rub with brush the inner pipe lightly and remove accumulated carbon.
- c) To decarbonize exhaust pipes, remove hexagon bolts and scrape off the carbon inside. (Fig. 37)

Muffler should be cleaned out periodically.

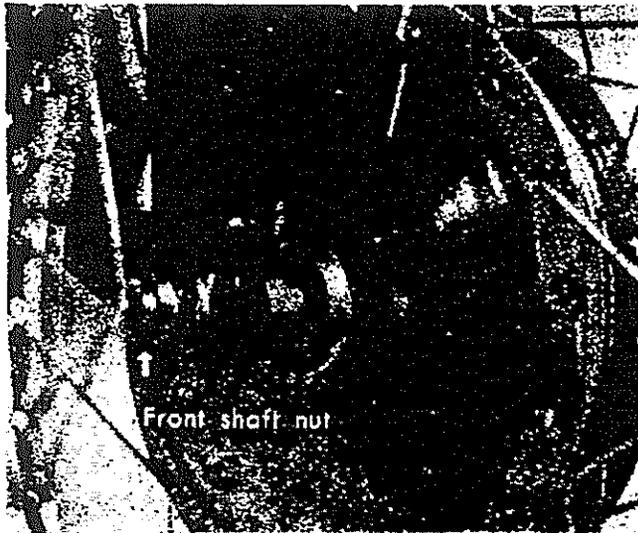


Fig. 38

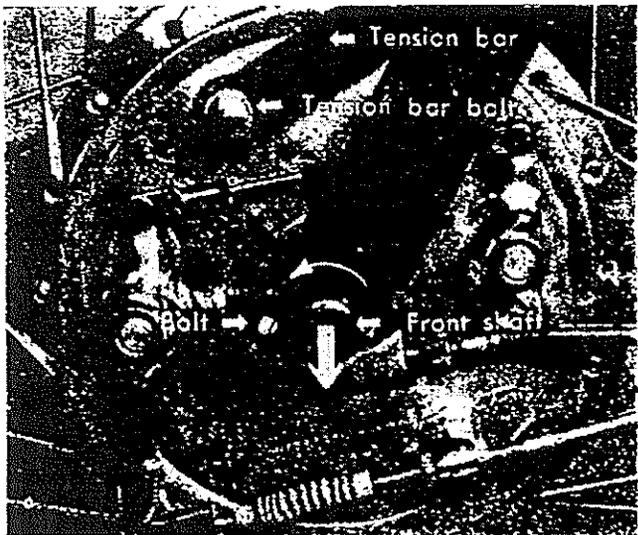


Fig. 39

2-15) Removing Front Wheel

- a) Stand the machine on its main stand, and place some block under the crank case so that front wheel can be lifted off the ground.
- b) Unscrew axle bolt, tension bar bolt and withdraw front shaft by turning it anti-clockwise. (Fig. 38, 39)

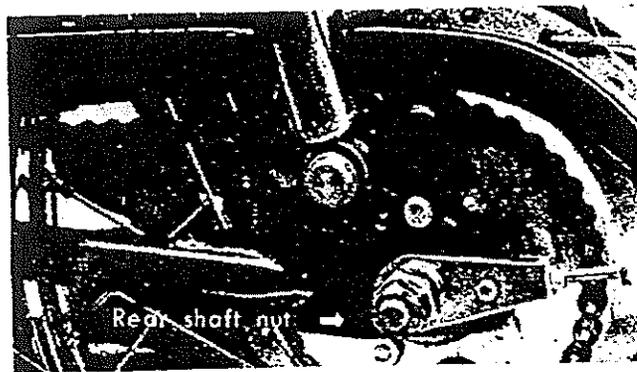


Fig. 40

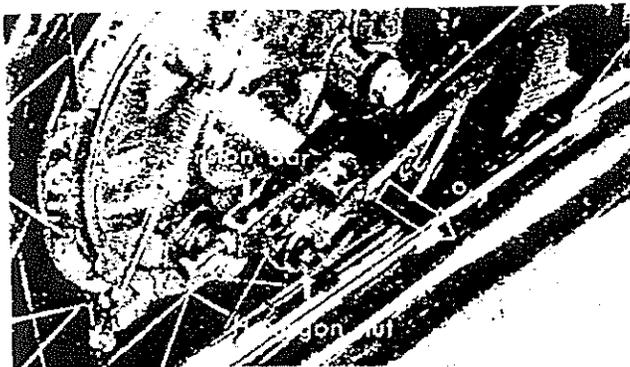


Fig. 41

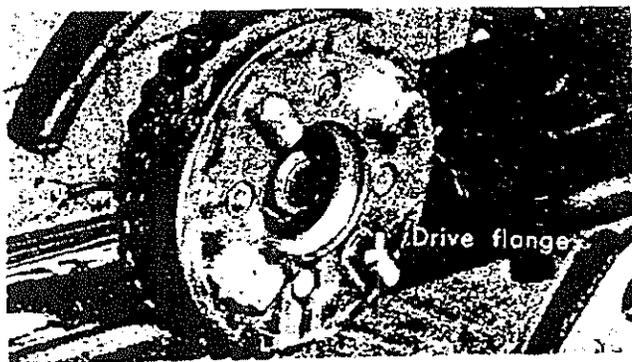


Fig. 42

2-16) Removing Rear Wheel

- a) Set the machine on its main stand.
- b) Remove the 8 mm nut, and take off tension bar from panel arm. (Fig. 40)
- c) Unscrew brake arm adjusting nut, depress brake rod spring and brake lever be removed.
- d) Unscrew the smaller axle nut on left side (The big nut need not be touched.) Withdraw axle shaft and pull the wheel off the rear wheel coupling flange with both hands. (Fig. 41)
- e) When replacing rear wheel, be careful to see that the damper rubber is fitted in the groove in the wheel hub. (Fig. 42)

(3) Periodic Checking

Periodic checking should be carried out as follows:

400 km (250 miles) : 3,000 km (2,000 miles) : 6,000 km (3,500 miles)

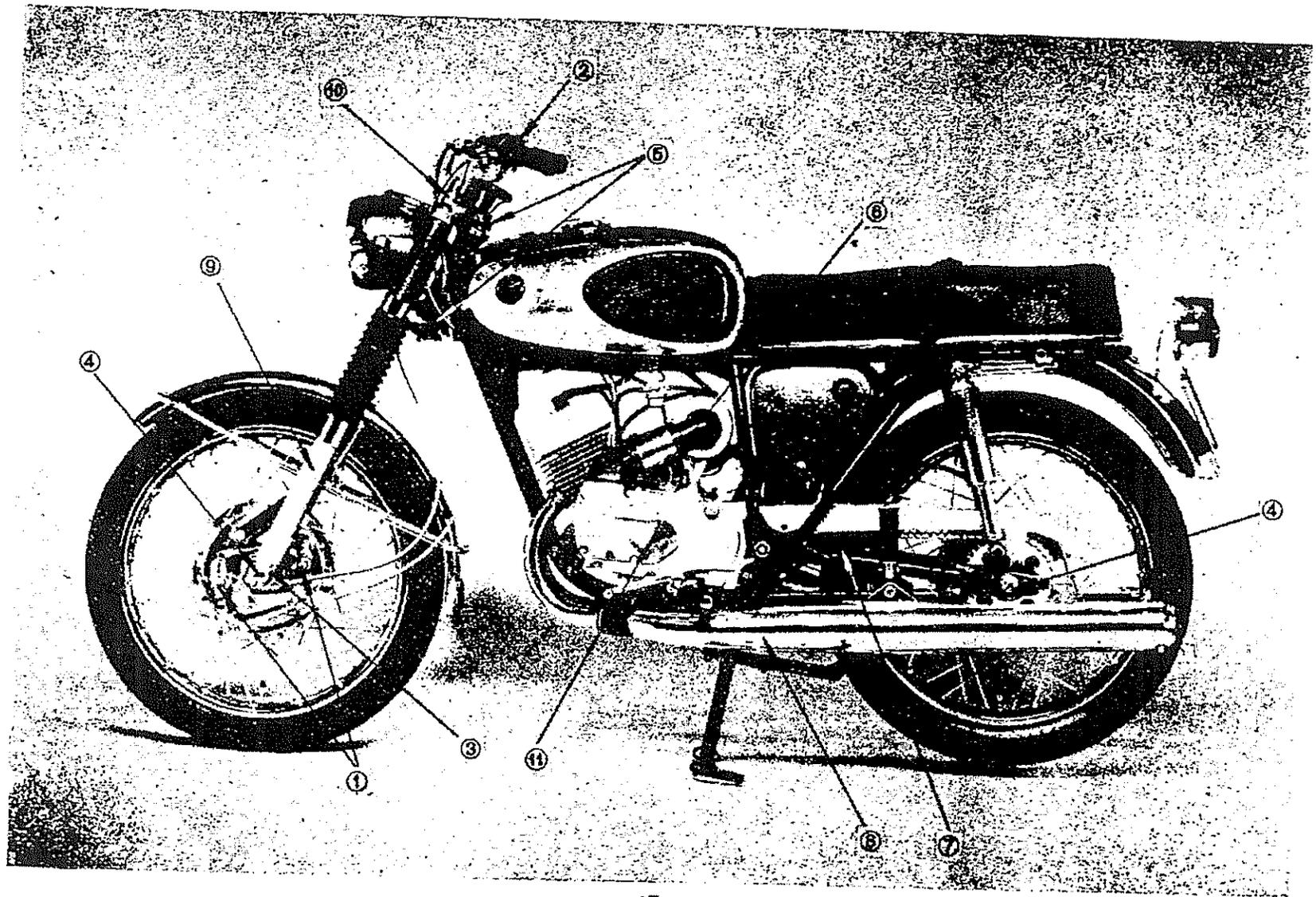
ITEMS	PROCEDURE	AFTER RUNNING-IN (250 miles)	ONCE EVERY 3,000 km (2,000 miles)
Front & Rear Brake Play	Check	×	×
Chain Play	Check	×	×
Muffler & Exhaust Carbon	Clean		○
Clutch Play	Check	×	×
Transmission Oil	Check	×	×
Battery Liquid	Check	×	×
Spark Plug	Clean		×
Contact Points Gap	Check	×	×
Air Cleaner	Clean		○
Cylinder Head Carbon	Clean		×
Bolts and Nuts	Tightness	○	○
Fuel Strainer	Clean		×

Items marked "○" should be checked frequently.

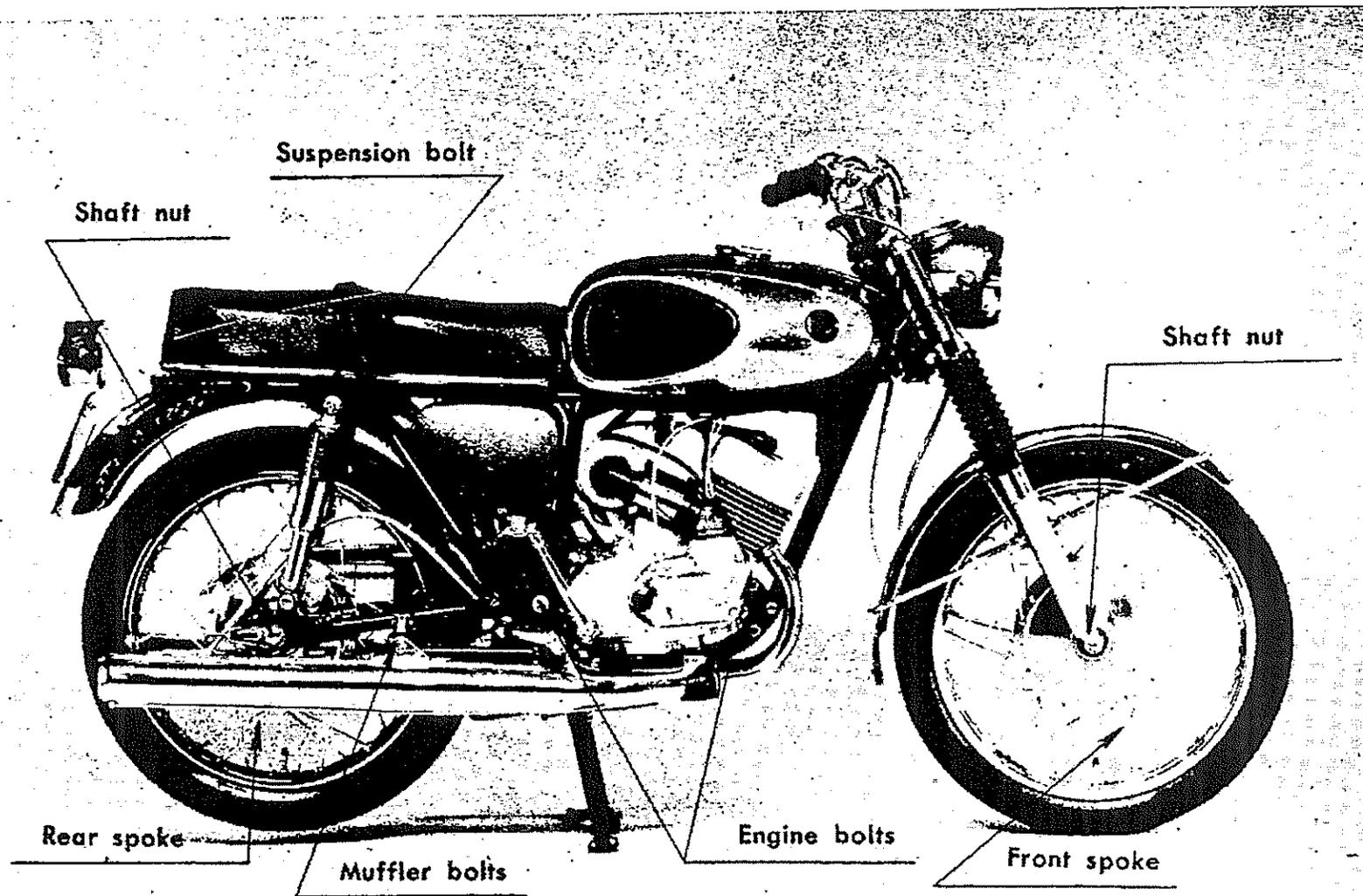
(4) Periodic Greasing and Oiling

Periodic greasing with a grease gun and lubrication.

ITEMS	1ST GREASING	2nd GREASING INTERVAL MILEAGE	PROCEDURE
1. Front, & Rear Brake Cam Shaft	400 km (250 miles)	3,000 km (2,000 miles)	Grease
2. Grips	400 km (250 miles)	3,000 km (2,000 miles)	Grease
3. Speedometer gear box	6,000 km (3,500 miles)	3,000 km (2,000 miles)	Grease
4. Front & Rear Wheel Bearings	NONE	6,000 km (3,500 miles)	Grease
5. Steering Bearings	6,000 km (3,500 miles)	6,000 km (3,500 miles)	Grease
6. Oil Felt (Magneto)	6,000 km (3,500 miles)	6,000 km (3,500 miles)	Grease
7. Chain	400 km (250 miles)	1,000 km (600 miles)	Motor Oil
8. Stand Tube	3,000 km (2,000 miles)	3,000 km (2,000 miles)	Motor Oil
9. Front Fork	12,000 km (7,500 miles)	12,000 km (7,500 miles)	220 cc. of Hydraulic fork oil
10. Cables	1,000 km (600 miles)	3,000 km (2,000 miles)	Grease
11. Transmission oil	400 km (250 miles)	12,000 km (7,500 miles)	



(5) Check Bolts and Nuts for Tightness



13. LOCATING TROUBLES

Engine will not start

- 1) Spark plug fouled or in poor condition.
- 2) Contact breaker points fouled or out of adjustment.
- 3) Ignition timing wrong.
- 4) Dirty contact point.
- 5) Damaged or short circuited wiring.
- 6) Improperly adjusted carburetor. Take motorcycle to authorized dealer and adjust jet needle and the air adjusting screw.
- 7) Insufficient compression-Tighten the cylinder head bolts, crank case joining bolts.—Replace gaskets and piston rings if necessary.
- 8) Fuel pipe clogged.
- 9) Defective main switch.
- 10) Fouled condenser.
- 11) Fouled ignition coil.

Engine hard to start

- 1) Spark plug fouled or in poor condition.
- 2) Improperly adjusted contact point gap.
- 3) Damaged high tension wire.
- 4) Dirty contact breaker points.
- 5) Fouled condenser.
- 6) Discharged battery.
- 7) Fouled ignition coil.
- 8) Worn out piston rings.
- 9) Damaged gaskets.
- 10) Insufficient tightening of spark plug.
- 11) Insufficient tightening of cylinder head bolts.
- 12) Carburetor clogged.

If engine loses power

A. Engine misfires

- 1) Improperly adjusted carburetor.
- 2) Dirty spark plug.
- 3) Dirty contact breaker points.
- 4) Carbon on piston head and cylinder head.
- 5) Improperly adjusted spark plug gap.
- 6) Ignition timing off.
- 7) Contact breaker does not operate smoothly.

B. Engine overheats

- 1) Ignition timing wrong.
- 2) Carbon on piston head and cylinder head.
- 3) Improperly adjusted spark plug gap.

Engine does not run smoothly or misses

A. Engine does not run smoothly or low rpm.

- 1) Ignition timing too advanced.
- 2) Dirty contact points.
- 3) Fouled spark plug.
- 4) Improperly adjusted spark plug gap.
- 5) Clogged fuel line.
- 6) Improperly adjusted point gap.
- 7) Contact breaker does not operate smoothly.

B. Engine does not run smoothly at high rpm.

- 1) Fuel tank air vent hole plugged.
- 2) Vapor lock in fuel line.
- 3) Dirty spark plug.
- 4) Improperly adjusted spark plug gap.
- 5) Ignition timing too retarded.
- 6) Defective carburetor.

D. Engine stops abruptly

- 1) Loosely fitting spark plug.
- 2) Spark plug points bridged.
- 3) Fuel Tank empty.
- 4) Fuel tank air vent plugged.

E. Transmission shifts hard

- 1) Clutch dragging.
- 2) Damaged gear shift system.
- 3) Defective gear shift spring.
- 4) Defective gear shift drum stopper.
- 5) Worn gear claw.
- 6) Worn gear shift drum stopper spring.

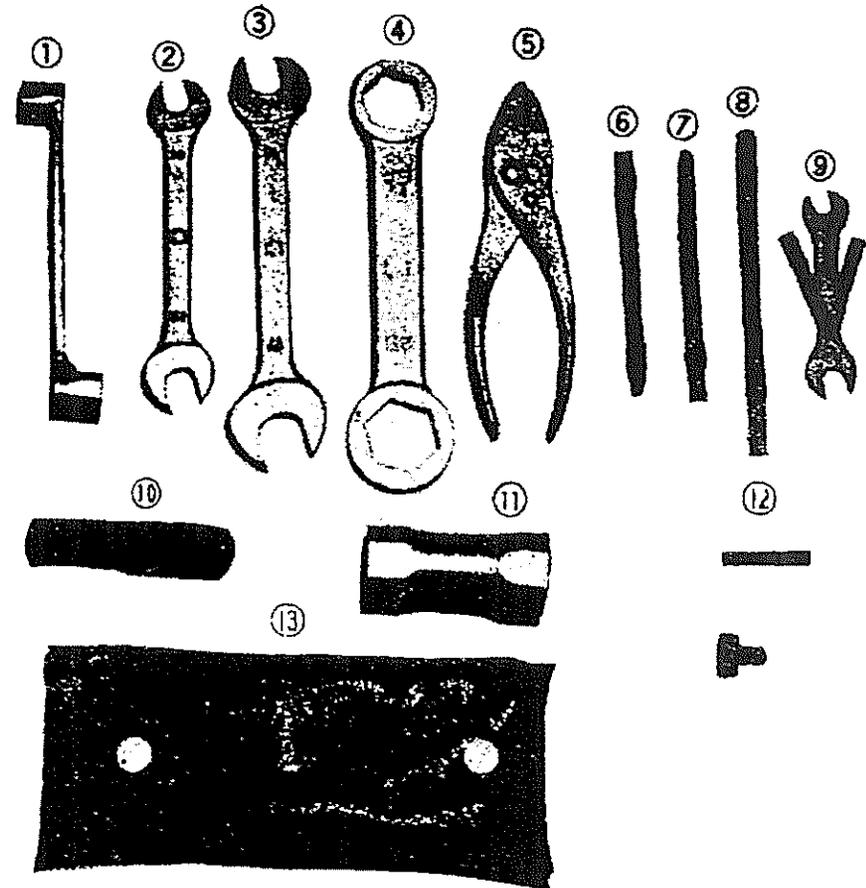
E. Brakes slip.

- 1) Improperly adjusted brakes.
- 2) Worn brake lining.
- 3) Insufficient play in brake pedal.
- 4) Dirty grease.

14. TOOL KIT

Tool kit provided in the tool box located under the right side of side cover.

- 1) 10×12 mm Box wrench, for removing lock nut of clutch adjusting screw.
- 2) 10×12 mm Spanner
- 3) 14×17 mm Spanner
- 4) Axle wrench
- 5) Pliers
- 6) Screw driver ⊖
- 7) Screw driver No. 1 ⊕
- 8) Screw driver No. 2 ⊕
- 9) Spanner combined with thickness gauges
- 10) Grip
- 11) 21×23 mm Box wrench for removing spark plugs
- 12) Ignition timing bar and timing bolt.
- 13) Tool Bag



15. BRIDGESTONE MOTORCYCLE IDENTIFICATION FORM

Fill out and keep for identification purpose.

Owner's Name : _____

Address : _____

Model : _____

License No. : _____

Serial No. : _____

(The Serial Number Plate is attached under the right side cover.)

Insurance Policy No. : _____

Date of Purchase : _____

Name of Dealer : _____

Address of Dealer : _____ Phone : _____