

# YAMAHA TRAILMASTER 80

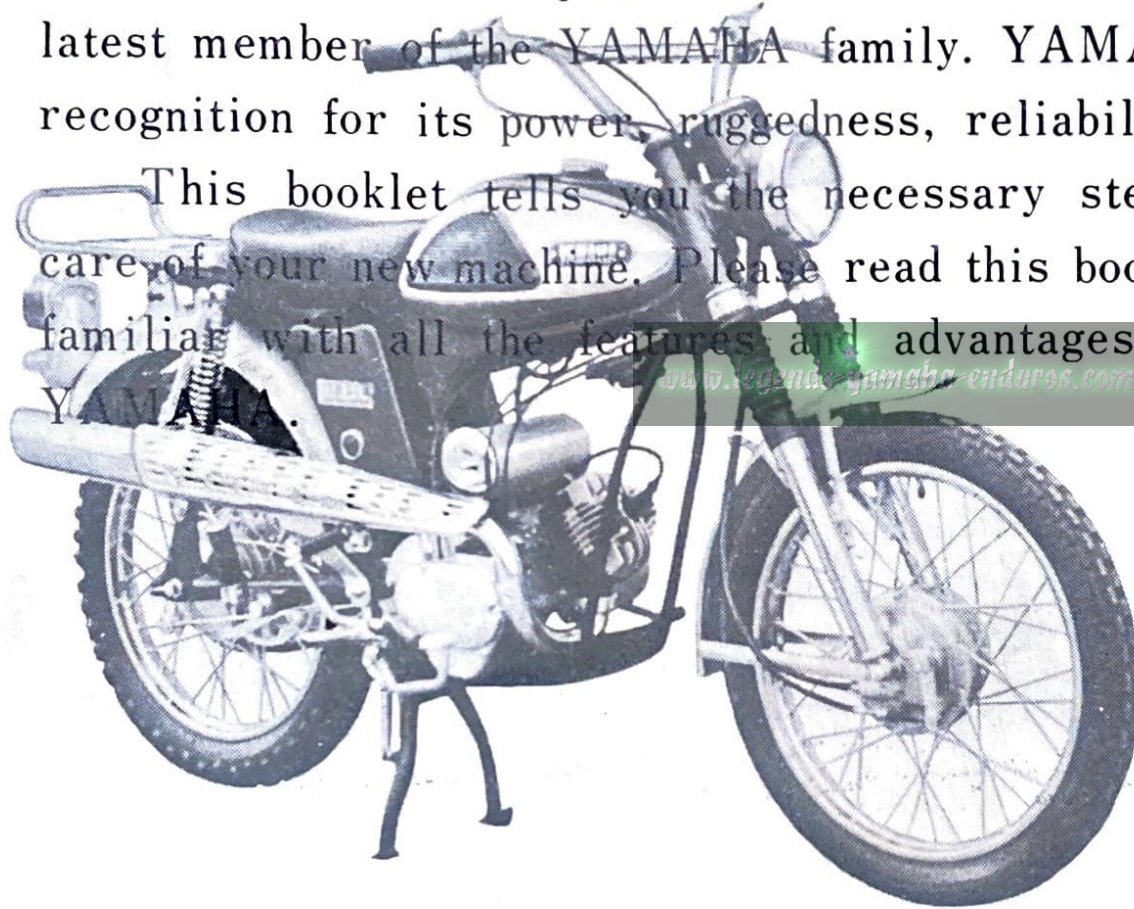
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Rider's Manual



Congratulations! You are now the owner of a YAMAHA TRAIL MASTER 80 manufactured by YAMAHA, the leading manufacturer of motorcycles in Japan. The YAMAHA TRAILMASTER 80 is the latest member of the YAMAHA family. YAMAHA has won world wide recognition for its power, ruggedness, reliability, handling and economy.

This booklet tells you the necessary steps for the operation and care of your new machine. Please read this booklet carefully and become familiar with all the features and advantages that are built into your YAMAHA.



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# **SPECIAL FEATURES**

## **\*YAMAHA Autolube**

The new YAMAHA TRAILMASTER 80 has an exclusive lubricating device that automatically delivers the proper amount of oil to the engine. Oil is injected into the engine according to both engine rpm and throttle opening. This device solves the old problems of mixing the gas and oil.

## **\*HIGH PERFORMANCE ENGINE (ROTARY VALVE)**

The world famous YAMAHA rotary valve engine assures improved performance and acceleration at both high and low speed riding. It is an engineering masterpiece in the field of two-stroke engine design.

## **\*CARBURETOR WITH BUILT-IN STARTER JET**

This new type of carburetor, proven in all YAMAHA motorcycles, makes it easy to start and warm up your engine, even in cold weather.

## **\*DEPENDABLE BRAKES**

The powerful dust and waterproof brakes assure you of having the best possible

braking efficiency under any conditions.

## **\* PRIMARY KICK SYSTEM & ELECTRIC STARTER**

A primary-coupled kick-starter crank lets you start the engine with the gear-change pedal in any position, eliminating the need to shift to neutral before starting in an emergency: squeeze the clutch lever and kick the starter, or simply push the electric starter button.

## **\* EASY RIDE AND EXCELLENT HANDLING**

The shape of the handlebars, width of the gas tank, position of the foot pegs and knee pads, etc. are all part of a new design based on the rider's natural body position. This riding position, combined with the stable yet maneuverable chassis of the YAMAHA 80, allows balanced control on any terrain.



# SPECIFICATIONS

## Dimensions

Overall length	70.9 in.	1,800 mm
Overall width	31.7 in.	805 mm
Overall height	40.0 in.	1,015 mm
Wheelbase	46.3 in.	1,175 mm
Road Clearance	6.3 in.	160 mm
Weight Gross	92 kg(203 lbs.)	
Net	84 kg(185 lbs.)	

## Performance

Speed range Small sprocket	50~55 mph (80~88 km/h)
Large sprocket	40~45 mph (64~72 km/h)
Fuel consumption on level road	60 km/ℓ (at 40 km/h) 140 mpg (at 25 mph)
Climbing ability	30°
Minimum turning radius	70.9 in. 1,800 mm

## Engine:

Model	Yamaha YG-5
Lubrication system	Autolube (oil injection system)
Number & arrangement of cylinders	One, forward inclined
Bore & stroke	47×42 73 cc
Compression ratio	6.8 : 1
Maximum power	6.6 hp/7,000 rpm
Maximum torque	0.72 kg-m/6,000 rpm(5.2 ft-lbs/6,000 rpm)
Ignition system	Battery Ignition, or Flywheel magneto Ignition
Starting system	Electric and kick starter, or Kick starter

**Transmission:**

Primary reduction & ratio .....	Gears 3.894 (74/19)
Secondary reduction method & ratio .....	Chain 2,740 (41/15) or 3.667 (55/15)
Clutch .....	Wet, multiple disc
Gearbox .....	Constant mesh 4 speed
Ratios .....	Gear box, Total ratio
Low .....	3.077      (32.924) (43.933)
Second .....	1.889      (20.212) (26.971)
Third .....	1.304      (13.953) (18.619)
Fourth .....	0.963      (10.304) (13.750)

**Suspension:**

Front ..... Telescopic fork oil dampened

Rear ..... [www.legende-yamaha-enduro.com](http://www.legende-yamaha-enduro.com) Swinging arm, shock absorber unit

**WHEELS:**

Caster .....	63° 30'
Trail .....	78 mm (3.1 in.)
Front tire .....	2.50-17-4 P.R.
Rear tire .....	3.00-17-4 P.R.

**Brakes:**

Front .....	Hand operated, internal expanding
Rear .....	Foot operated, internal expanding

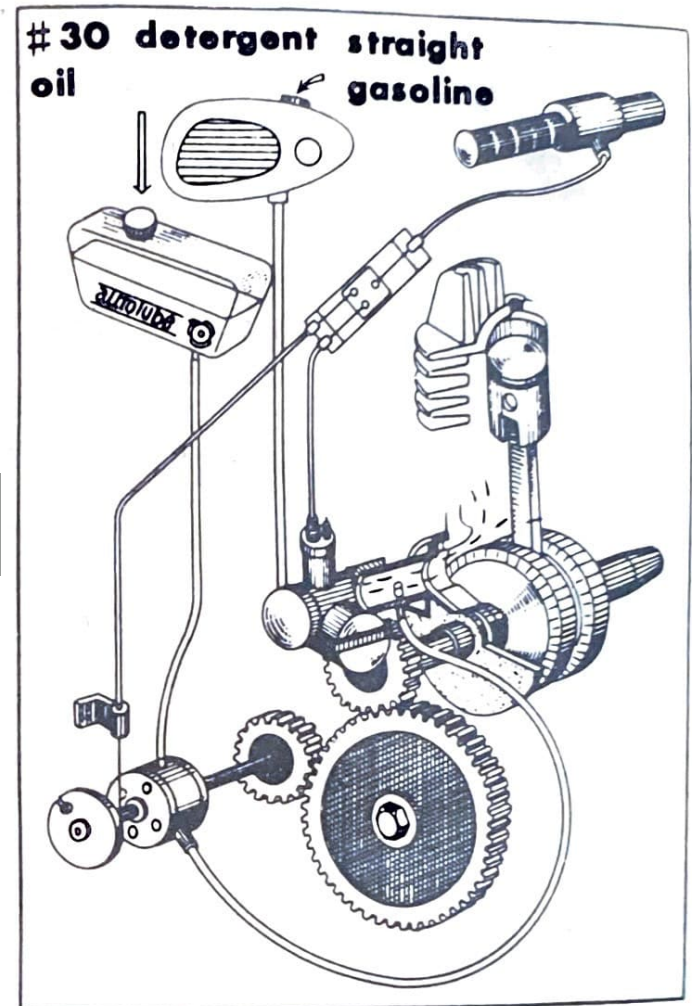
**FUEL TANK:**

Gasoline tank capacity .....	6.0ℓ (1.6 gallon)
Oil tank capacity .....	1.4ℓ (1.5 qts.)



# WHAT IS YAMAHA'S AUTOLUBE

Yamaha's Autolube is an automatic lubricating device for 2-stroke engines. Developed by the Yamaha Technical Institute, it meters oil to the engine with respect to the engine's speed and throttle opening by means of a precision pump. As a result, the Yamaha engine does not require pre-mixed gas and oil like other 2-stroke engines. Controlled lubrication is automatically applied to the working parts of the engine. This makes the Yamaha Autolube the best lubricating system ever devised for production 2-stroke engines. The oil pump is driven by the engine, through a reduction gear system and also connected to the throttle.

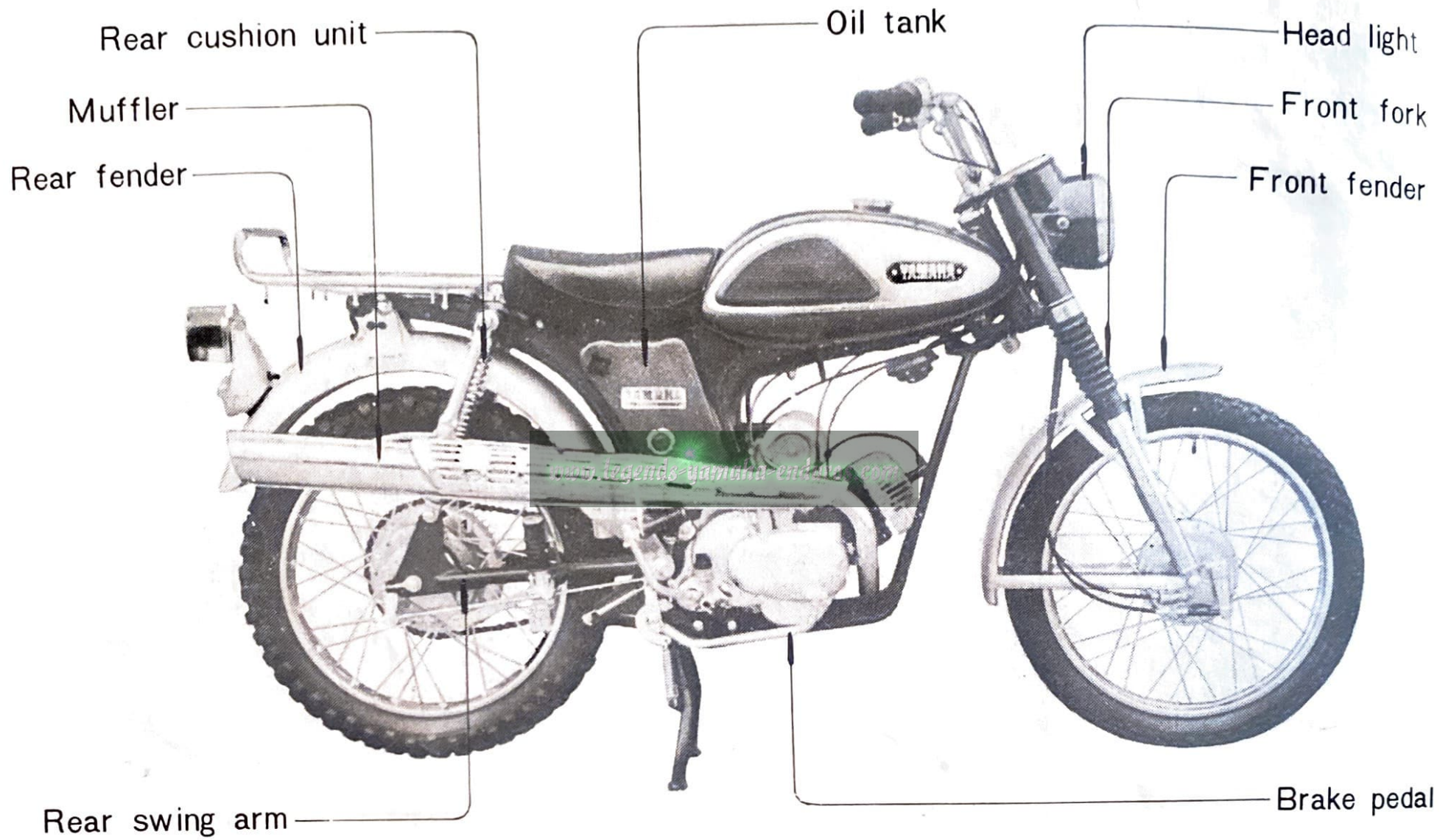


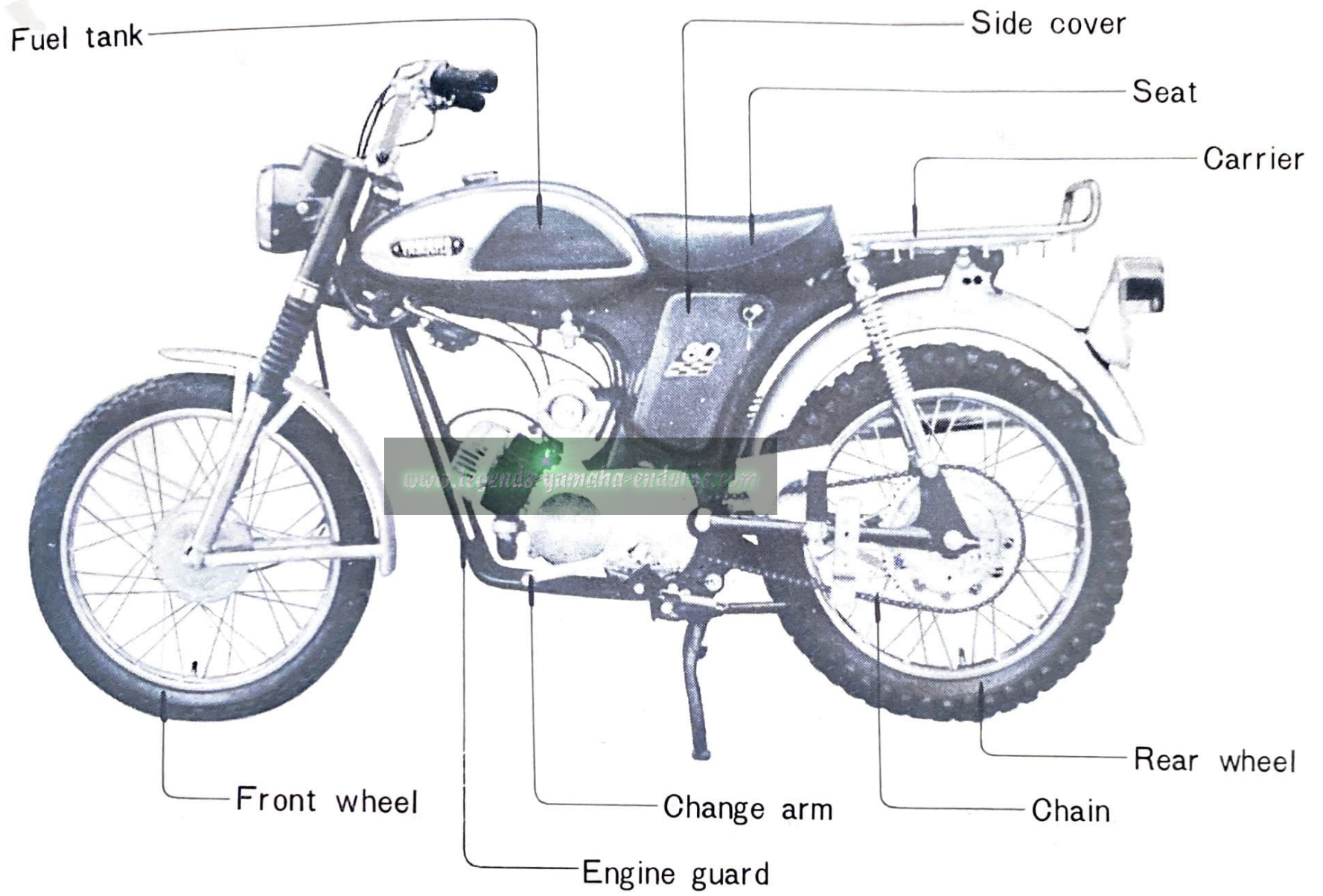
**Diagram of Autolube operation**

# AUTOLUBE MERITS

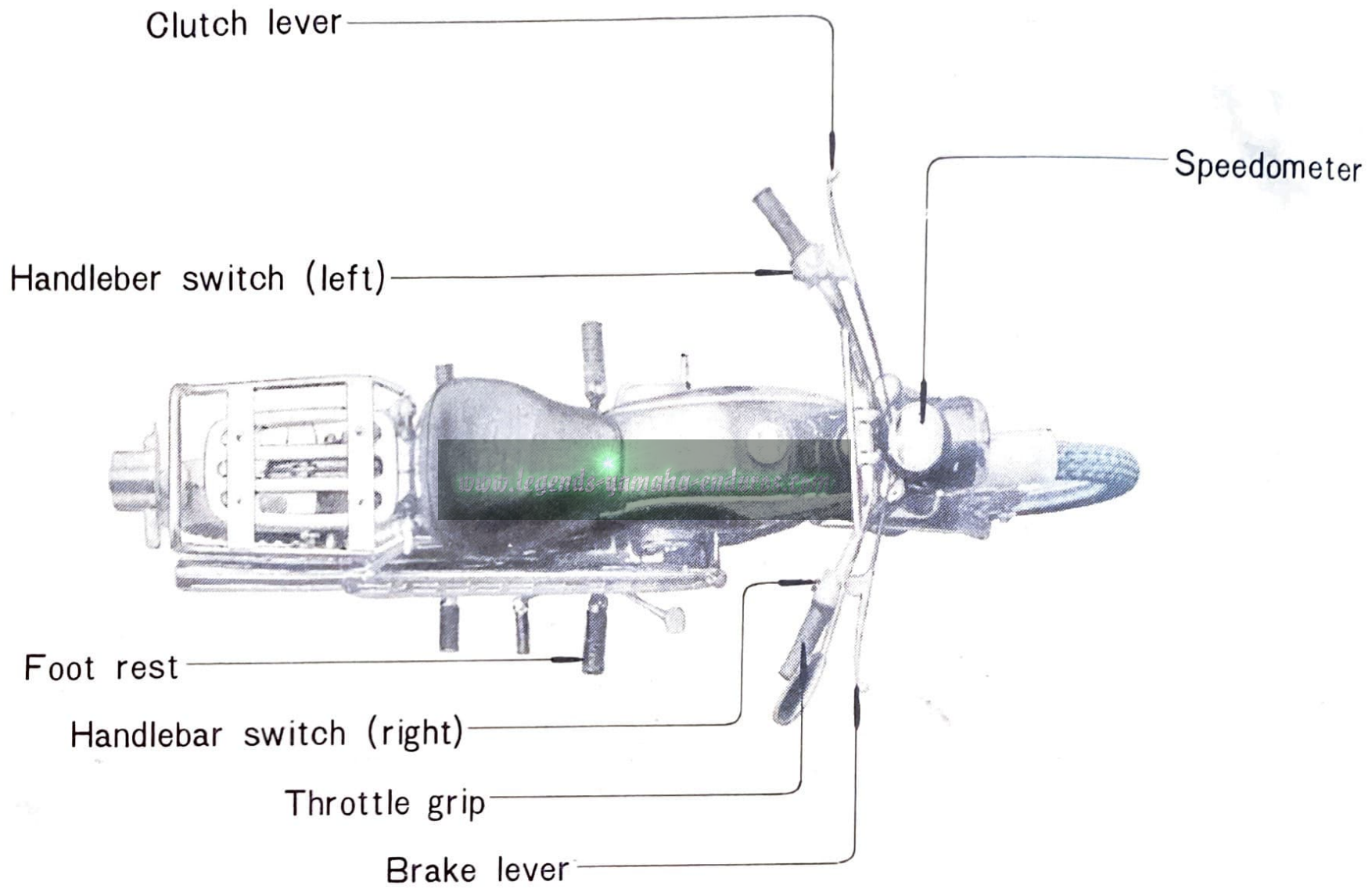
1. Eliminates the bother of pre-mixing gas and oil.
2. Maintains optimum lubrication according to both engine rpm and throttle opening.
3. Reduces sparkplug fouling by injecting just enough oil for proper lubrication.
4. Can cut oil consumption to 1/3 that of conventional 2-strokes.
5. Reduces exhaust smoke.
6. Lets you use the engine compression as a brake; the oil injection continues according to the engine rpm, even though the throttle may be closed.
7. Improves performance; no excess oil to interfere with complete combustion of the gas-air mixture.
8. Prolongs engine life; each injection is clean undissolved #30 wt. detergent oil with high film strength, qualities often lacking in 2-stroke oils.









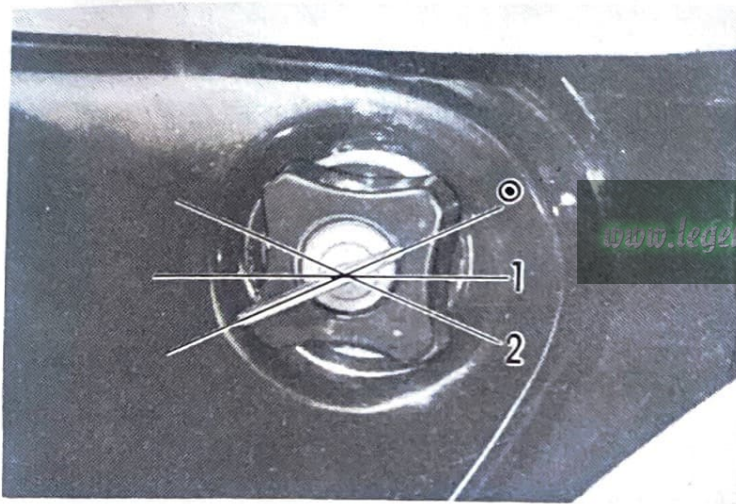


# OPERATING INSTRUCTIONS

## What you should know

### a) Main switch (Fig 1)

The following chart shows the key position at which the lights and horn are switched on.



(Fig. 1)

Part Name	Key Position		
	0	I	II
Headlight			○
Taillight			○
Stop light		○	○
Neutral light		○	○
Instrument Light			○
Horn		○	○
Ignition system		○	○

Note:

0: When stopped

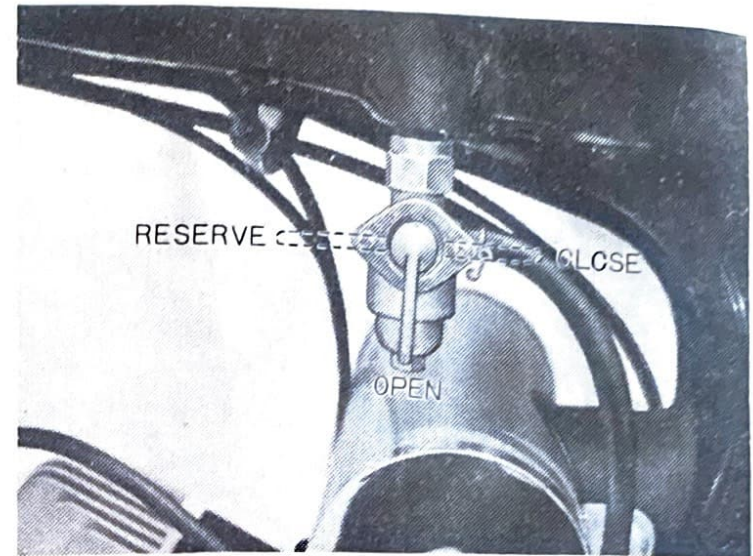
I: Day riding

II: Night riding



**b) Fuel cock (Fig.2)**

Turn the fuel cock lever to OPEN position and let fuel flow into the carburetor. If you run out of gas while riding, turn the lever to the RESERVE position a quarter gallon of reserve fuel will let you ride nearly 25 miles (40 km) to find a gas station.



**(Fig. 2)**

**c) Left handlebar switch (Fig.3)**

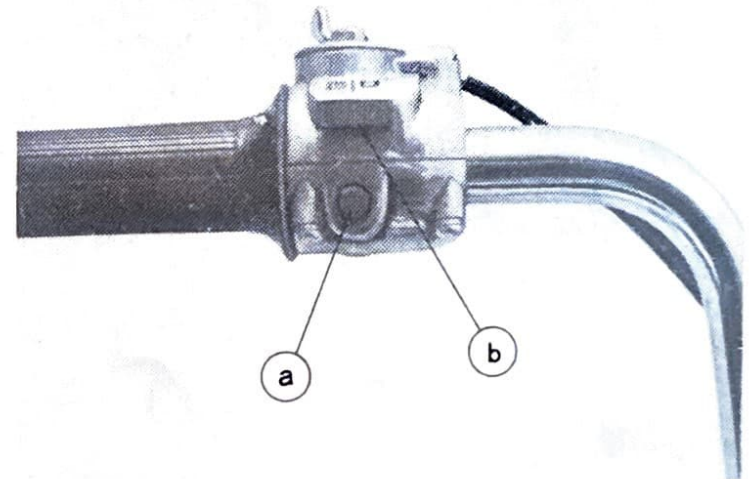
Horn button

Press the button (a) to sound the horn

Headlight switch

To lower the headlight beam, push the switch (b) to the left.

To raise the headlight beam, push the switch to the right.



**(Fig. 3)**

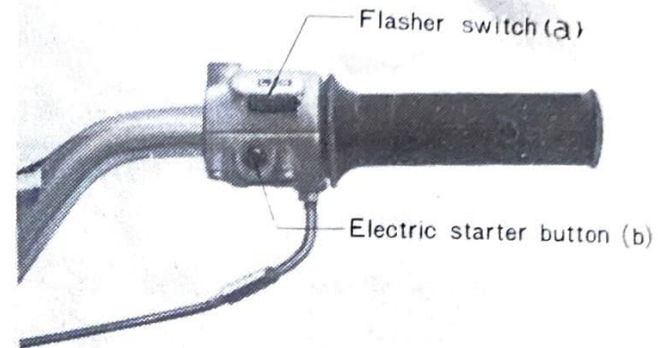
**d) Right handlebar switch (Fig.4)**

Electric starter button

Press the electric starter button (b) and the engine will start.

Flasher switch

To light the left flasher lamp, push switch(a) to the left, and to light the right flasher lamp, push the switch to the right.



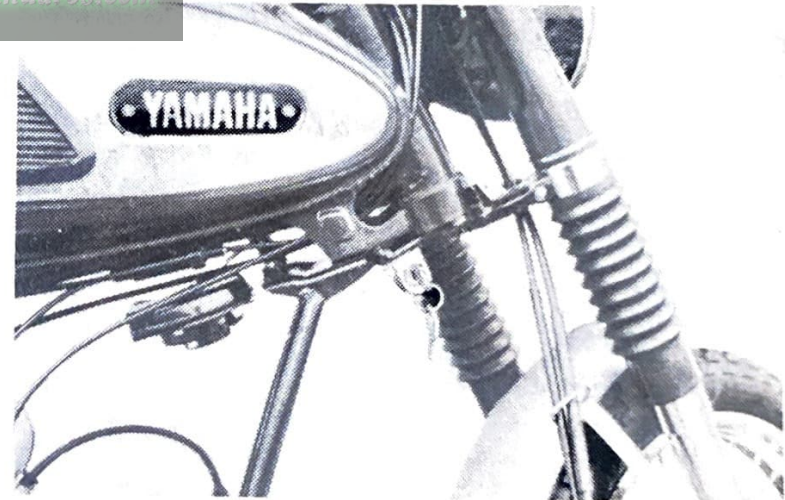
**(Fig. 4)**

**e) Steering lock**

Turn the handlebars all the way left or right, then insert the key in the lock just below the front fork pivot and turn it to lock the steering.

Make sure the handlebar will not turn and then remove the key.

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**(Fig. 5)**



## DAILY INSPECTION

For safety's sake, be sure to check the following before every ride.

### a) Fuel

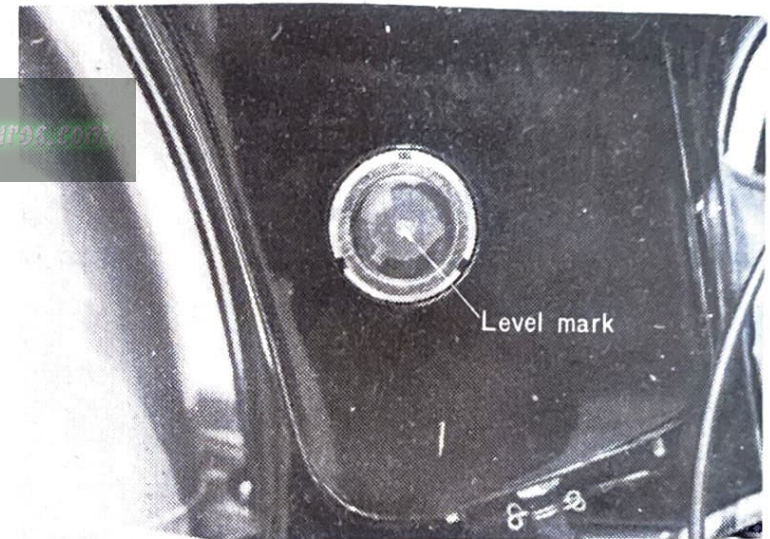
Do you have enough gas for your ride? If not, fill the gas tank with "straight" gasoline; The Autolube eliminates pre-mixing with oil.

### b) Autolube oil

To avoid running out of oil or adding fractions of quarts:

- 1) Check the oil level whenever you stop for gas and
- 2) when it reaches the middle of the viewport in the Autolube tank you can a full quart of oil.

Add #30 detergent oil, in temperatures down +20 F. Use SAE 10W-30W oil, from +20 F to -15 F  
Use SAE 5W-20W oil, from -15 F to -30F



(Fig. 6)

### c) Tire pressures

Low tire pressure will not only impair riding comfort, but will also reduce the stability and decrease tire life.

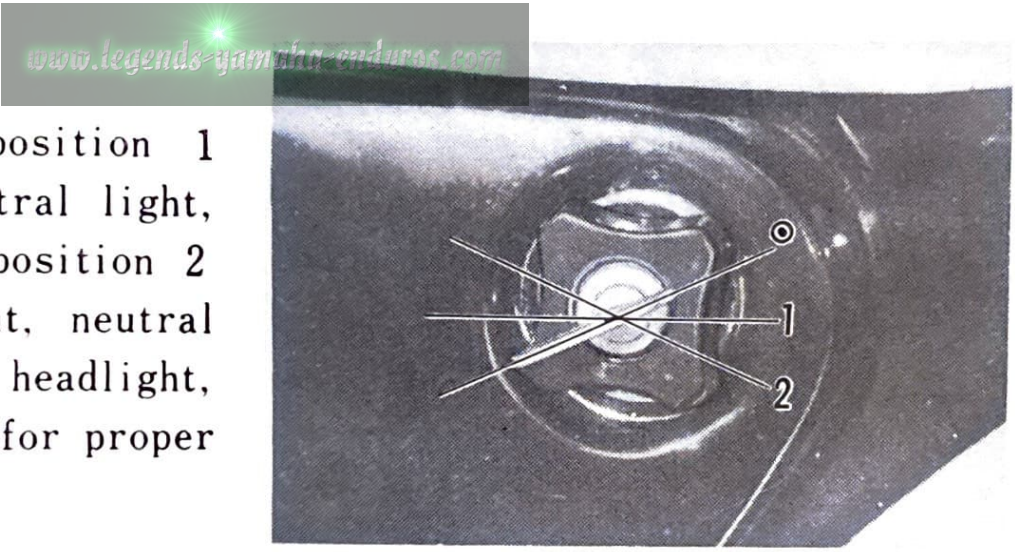
Front tire	20 lbs.
Rear tire	28 lbs.

### d) Brakes

Ride a few yards and apply the front and rear brakes simultaneously. Do they feel properly adjusted?

### e) Lights and Horn

Turn the main switch to position 1 and check the brake light, neutral light, and horn. Turn the switch to position 2 and again check the brake light, neutral light and horn; then check the headlight, taillight and speedometer light for proper operation.



(Fig. 7)



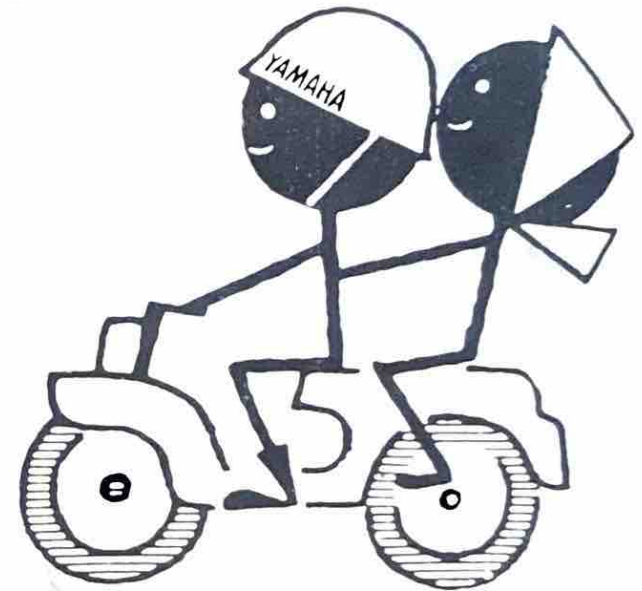
## RIDING ESSENTIALS

If fuel, tire pressure and brakes are O.K., you are ready to ride.

### a) **Starting the engine** (see Fig.2 page 14)

- 1) Turn the gasoline fuel cock to OPEN position
- 2) Turn on the main switch.

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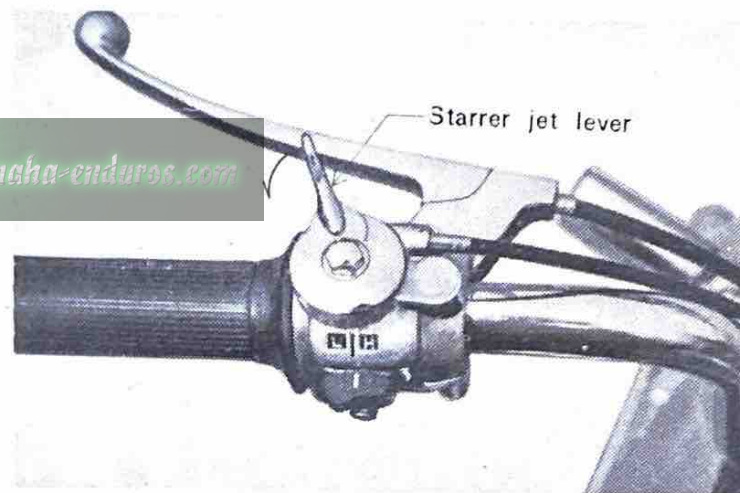


3) Leave the accelerator grip closed, straddle the machine, and push the electric starter button once or twice until your engine starts.

4) Starting in cold weather

All engines are hard to start in cold weather, but your Yamaha has a new type carburetor with built-in starter jet to enrich the fuel mixture for easy starting, even in cold weather.

Pull the starter jet lever on the left handlebar (Fig.8)



**(Fig. 8)**



5) Warming up

When the engine starts, open the throttle slightly to keep it running, but don't close the starter jet lever. The engine warm up is complete when you can close the starter lever and rev up the engine quickly with a twist of the throttle.

6) Starting when the engine is warm.

a) Leave the starter jet lever closed

b) Hold the throttle open  $\frac{1}{4}$  to  $\frac{1}{2}$  turn (Fig9) and press the electric starter button (or push down on the kick starter crank with your foot.)



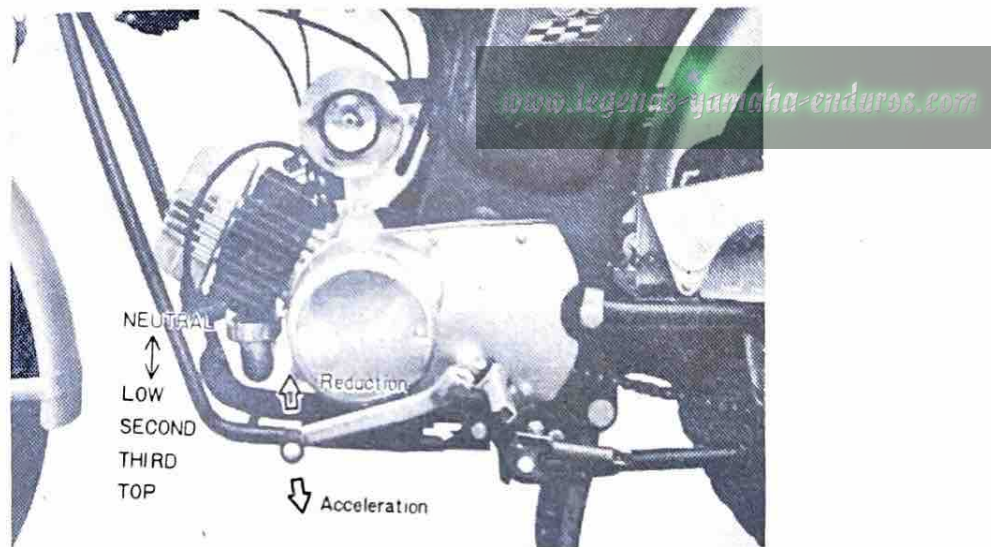
**(Fig. 9)**

## RIDING

### 1) Shifting gears

Your Yamaha TRAILMASTER 80 has a 4-speed transmission to provide a correct balance between speed and power under varying riding conditions. To shift into neutral, raise the highest position. When the gear box is in neutral, the green lamp in the speedometer will light up.

The use of the gear lever is illustrated below.



(Fig. 10)



- 2) After you start the engine
  - a) Squeeze the clutch lever to disengage the transmission from the engine.
  - b) Press the shift lever down into LOW.
  - c) Gradually open the throttle and slowly release the clutch lever to get your machine moving.
- 3) Shifting Gears
  - a) At 10 to 15 MPH, close the throttle and, at the same time, squeeze the clutch lever;
  - b) then shift to second (press the toe section down again) and
  - c) again open the throttle as you release the clutch lever.

You can use the engine's compression to decelerate:

Close the throttle as you squeeze the clutch lever, and downshift to THIRD, SECOND or FIRST. Keep the throttle closed and slowly release the clutch lever.

To avoid abusing the engine, shift gears according to your riding conditions as follows:

Gear	Power	Speed	Use	Optimum Sp.
Low	High	Slow	Starting; on steep grades	Up to 6 mph
2nd	Medium	Medium	Uphill; slow riding	6 mph 12
3rd	Medium	Medium	Gentle slopes, gravel roads	12 mph 22
Top	Low	Fast	Level riding, cruising	22 mph

NOTE: THESE SPEEDS ARE RECOMMENDED FOR AFTER THE BREAK-IN PERIOD. FOR BREAK-IN RECOMMENDATIONS SEE PAGE 25.

## RIDING ON HILLS

### 1) Uphill

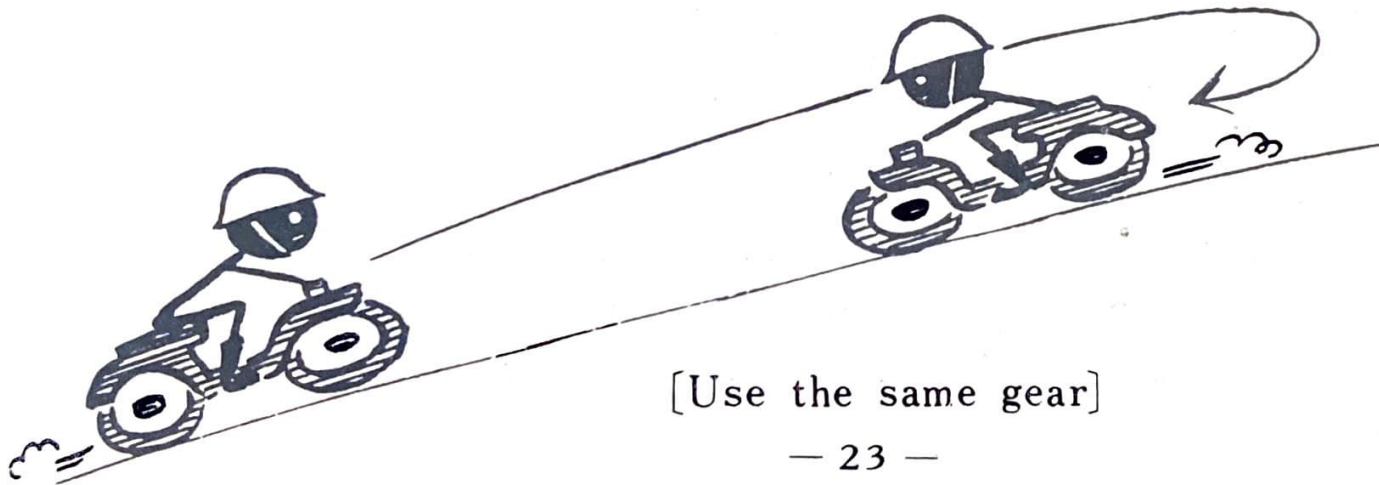
When climbing a slight grade, gradually open the throttle to avoid losing speed. When you are climbing a steep hill, downshift promptly from TOP to THIRD or from THIRD to SECOND, to maintain engine RPM and power.

### 2) Downhill

When riding down a long steep hill, use the engine compression as well as the brakes to hold you back: keep the throttle closed and downshift to THIRD or SECOND, depending on the grade. Use the same gear for riding down a hill as you would use for climbing the same hill.

### CAUTION:

Never turn off the main switch when riding down a long hill; it will foul the sparkplug and impair the engine's performance.



# STOPPING AND PARKING

## 1) Stopping

- a) Be sure to apply the front and rear brakes at the same time. Applying only one (front or rear) brake may cause skidding or loss of control.
- b) Apply the brakes gently, not sharply.
- c) Don't overheat your brakes: apply them at repeated intervals rather than continuously when you're riding down a long hill.

## 2) Parking

- a) Lock the handlebars and remove the key (see P 15)
- b) Remove the main switch key.
- c) Turn the fuel cock to STOP position

NOTE: Be sure to observe parking regulations

Park your machine where it will be protected.



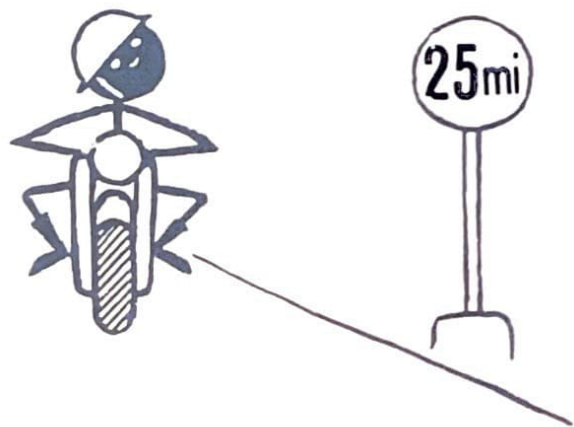
## BREAKING-IN YOUR NEW MOTORCYCLE

The YAMAHA TRAILMASTER 80 is a precision-built motorcycle. It has been tested extensively for ruggedness and dependability, but the first 600 miles (1,000km) are still the most important. This break-in period will affect the life of the engine and all other revolving parts; carefully observe the following break-in procedure.

- a) Up to 300 miles (500 km) ride at 35 mph or less.
- b) From 300 to 600 miles (500—1,000 km), ride at 40 mph (65 km/h) or less in top gear.

### BREAK-IN SPEED LIMIT FOR EACH GEAR

Odometer mileage	Top	Third	Second	Low
Up to 300 mi. (500km)	30 mph	20 mph	12 mph	6 mph
300-600 mi. (500-1,000km)	40 mph	25 mph	15 mph	6 mph



Note: The above figures are described under the standard (small) sprocket.

# INSPECTION AND MAINTENANCE

Periodic inspection and maintenance by you and your dealer is the key to keeping your motorcycle in top condition for many years.

## a) Dealer Service

All items in the list on page 27 should be inspected or serviced at maximum intervals of 1,000 miles or 4 months, whichever occurs first. These are preventative maintenance measures that will insure you of proper operation.

When the odometer shows 500 and 1,000 miles, have your Yamaha Dealer inspect and adjust your machine as indicated in the list page

## CHECK POINTS AT YAMAHA DEALER

No.	Check Points	RIDING DISTANCE			
		500 mi.	1000 mi.	2000 mi.	4000 mi.*
1	Adjust Front and Rear brakes	○	○	○	○
2	Change Transmission Oil	○	○	○	○
3	Grease		○	○	○
4	Replenish Battery Fluid	○	○	○	○
5	Clean Sparkplug		○	○	○
6	Adjust Ignition Timing		○	○	○
7	Adjust Carburetor			○	○
8	Adjust Autolube Cable		○	○	○
9	Clean Air Cleaner		○	○	○
10	Clean Cylinder Head & Piston		○	○	○
11	Clean Muffler		○	○	○
12	Tighten Bolts and Nuts	○	○	○	○
13	Adjust Drive Chain	○	○	○	○
14	Adjust minimum stroke of autolube pump.	○	○	○	○

\*Every 2000 miles thereafter



## b. Periodic Inspection

In addition to the check points listed on page 27, the following parts should be cleaned and/or adjusted by the owner every 500 miles, before every long distance trip, for every month. This section covers the maintenance of your machine with service tools.

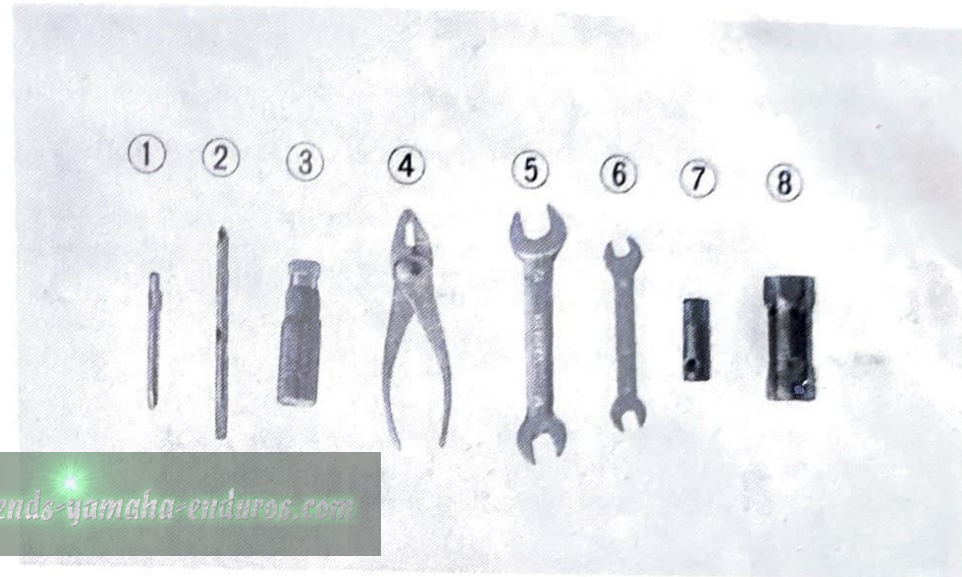
\* Before every long distance trip.

	CHECK POINTS	WHAT YOU SHOULD DO YOURSELF	PAGE
1	Front & rear brakes	Adjust cable & rod play	30. 31
2	Transmission oil	Check amount of oil; replenish, if necessary	33
3	Battery	Check battery fluid; replenish, if necessary	34
4	Sparkplug	Clean	35
5	Air Cleaner	Clean	36
6	Clutch	Adjust cable slack	32
7	Drive Chain	Adjust and apply oil	37
8	Other Parts	Tighten bolts and nuts	39

## PERIODIC INSPECTION USING SERVICE TOOLS

### Identification of metric tools:

- (1) Phillips type screw driver
- (2) Combination slotted & phillips types screw drivers
- (3) Screw driver handle
- (4) Pliers
- (5) 14 mm × 17 mm wrench
- (6) 9 mm × 10 mm wrench
- (7) 10 mm Box wrench
- (8) 21 mm × 23 mm Box wrench



(Fig. 11)

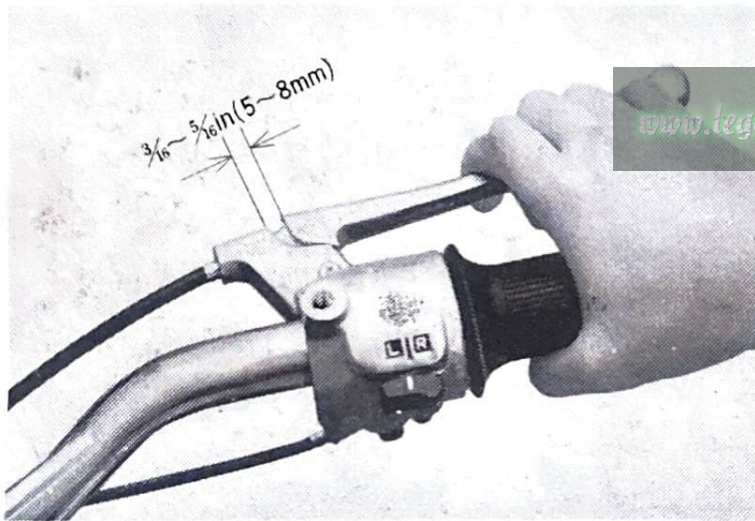
Use these tools for adjustments and repair; Always keep them with the motorcycle.

## Maintenance

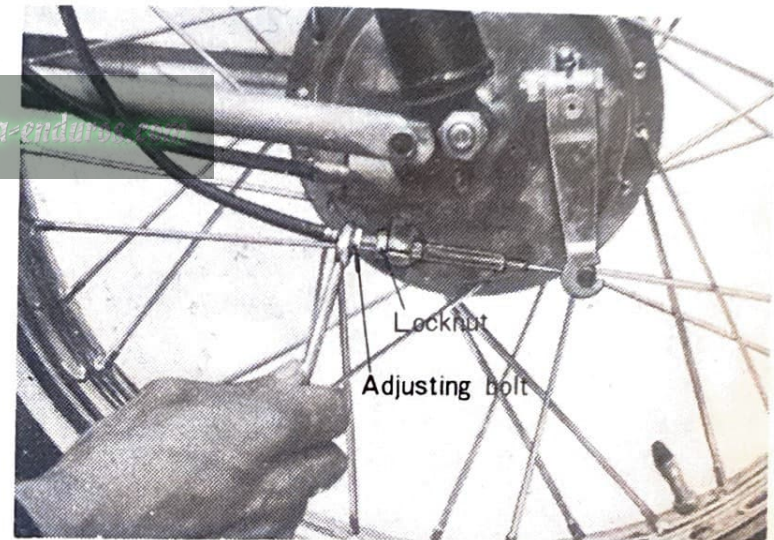
### 1) Adjusting the brakes

#### a. Front brake

- (1) Adjust by turning the adjusting nut at end of the brake cable a half-turn at a time (clockwise to remove slack)
- (2) The proper brake lever play is  $\frac{3}{16}$  to  $\frac{5}{16}$  in. (5~8mm)  
(See Fig.12 & 13)



(Fig. 12)

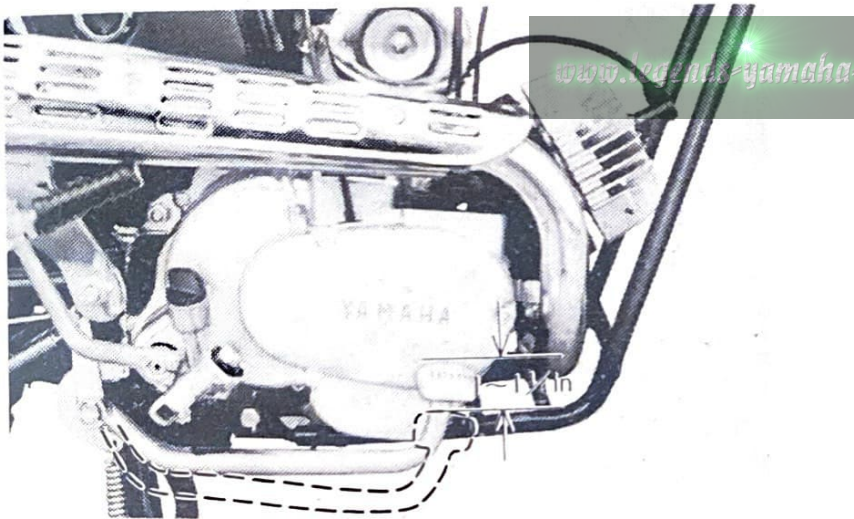


(Fig. 13)

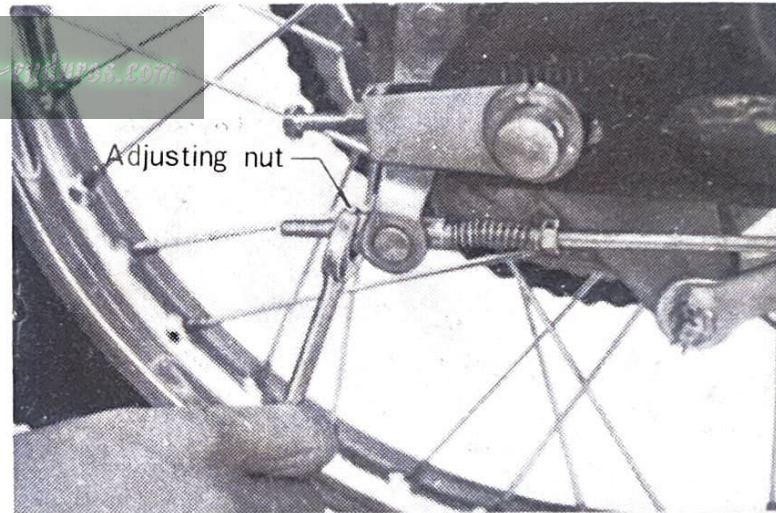


b. Rear brake

- (1) Adjust by turning the adjusting nut at the end of the brake rod a half turn at a time (clockwise to remove slack)
- (2) The proper amount of play for the brake pedal is 1 in. to  $1\frac{1}{4}$  in. ( 25 mm to 30 mm)



**(Fig. 14)**



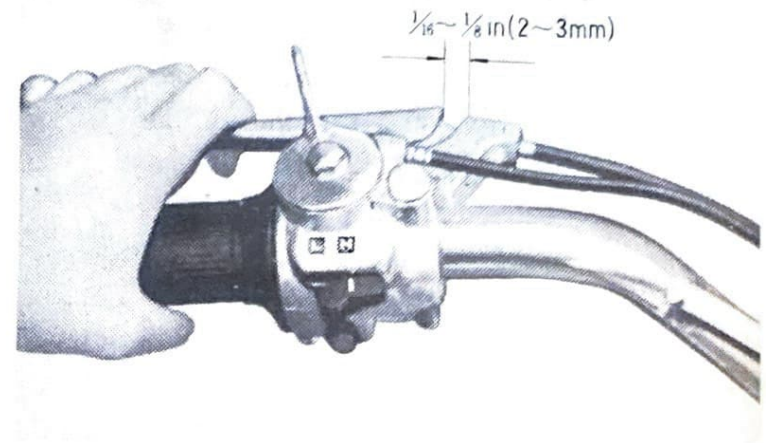
**(Fig. 15)**

## 2) Adjusting the clutch

Clutch lever play must be adjusted to  $\frac{1}{16} \sim \frac{1}{8}$  (2~3mm) to let the clutch springs apply full pressure to the clutch facings. With excessive lever play, the clutch will not completely disengage, but without play it will not completely engage, and slipping will occur.

Tools: 14 mm and 10 mm wrenches

- a. Loosen locknut (a).
- b. To decrease play, loosen adjusting bolt (b) (counterclockwise); to increase play, tighten the nut (clockwise). When your adjustment is correct, tighten locknut (a).



(Fig. 16)



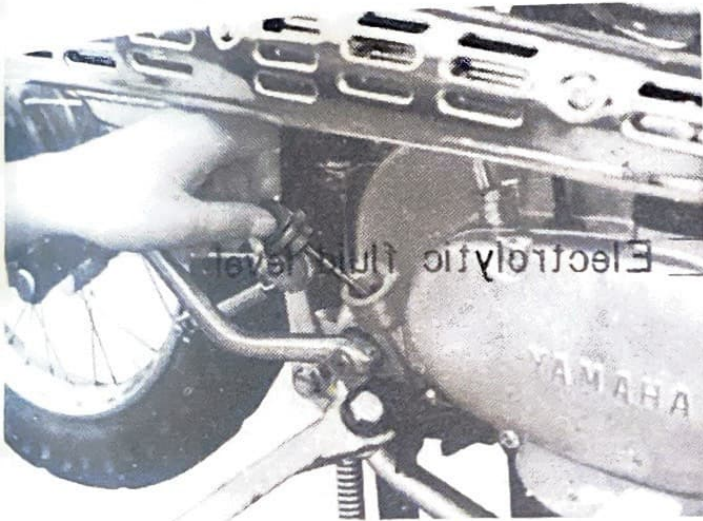
(Fig. 17)



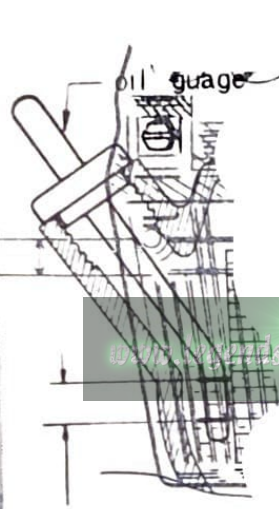
### 3) Checking and changing gearbox oil

#### a. Oil level

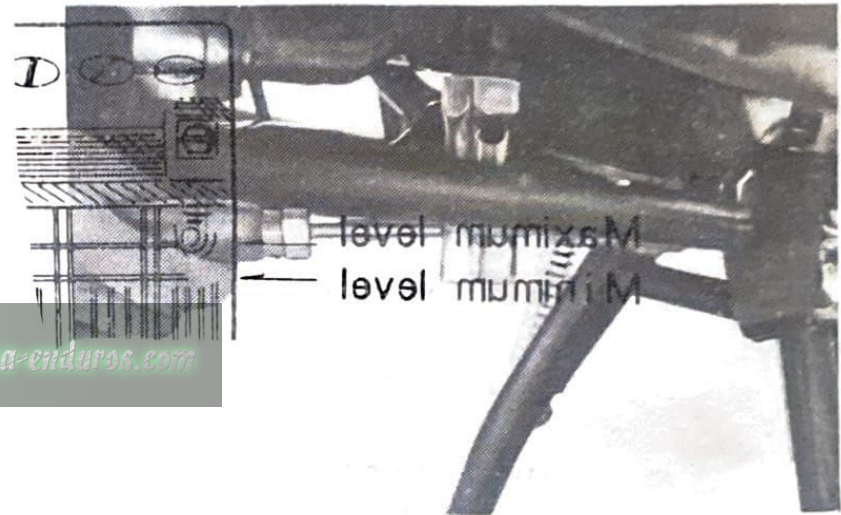
Remove the check plug in the rear edge of the right crankcase and insert the oil gauge as illustrated (Fig. 18). If the flat section of the gauge comes out covered with oil your gearbox oil level is correct. If not add oil as described below (Fig. 19).



(Fig. 18)



Keep the oil level between these levels.



(Fig. 19)

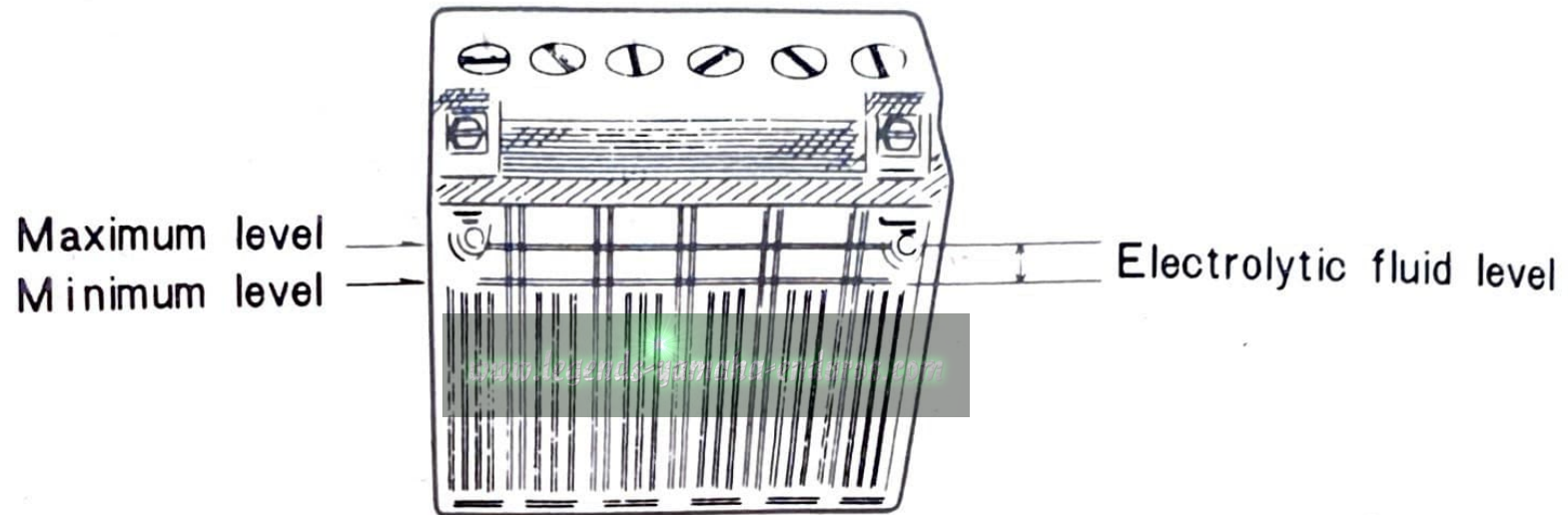
#### b. Changing the oil

Change transmission oil every 2 000 miles (3,000 km). Remove the plug in the bottom of the right crankcase and let the oil drain into a pan. After draining, replace the plug firmly and add the prescribed amount of #30 detergent oil into your machine. Start your machine and let it run a few minutes then check the oil level. Clutch lubrication depends on transmission oil overflow, so a correct gearbox oil level means the clutch also has proper lubrication.



#### 4) Inspecting the battery fluid

Remove the left side cover and check the battery: its fluid levels should be always between the maximum and minimum levels as illustrated. (Fig.20)



(Fig. 20)

If your motorcycle will not be used for more than a month:

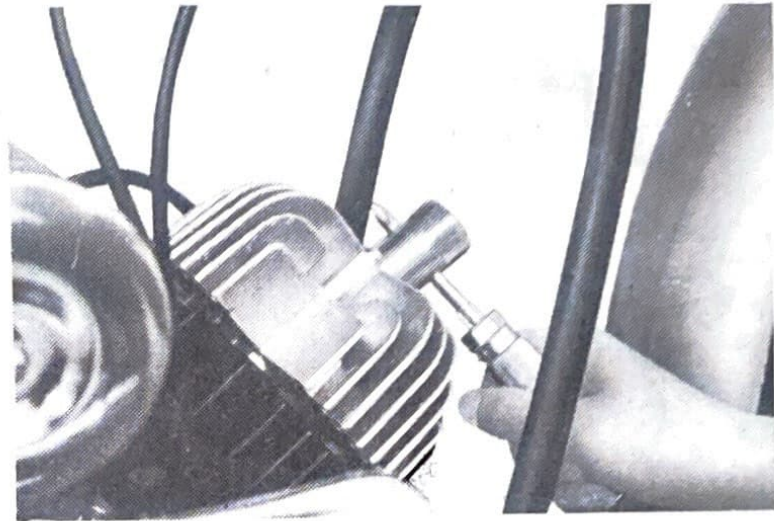
- a) remove the battery from your machine and keep it in a cool, dry place or have your dealer store it for you;
- b) have your dealer recharge it once a month.

NOTE: After long storage, you should completely recharge your battery before reinstallation.

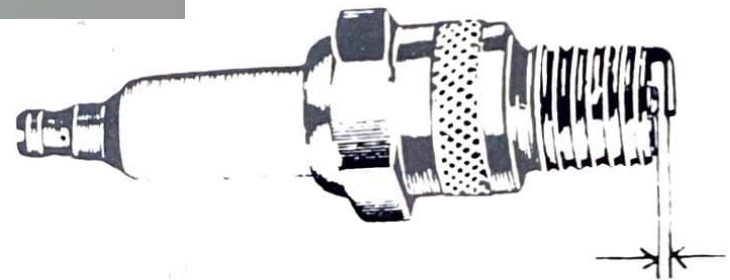
## 5) Cleaning the spark plugs

The spark plugs ignite the carburetor's air-fuel mixture. The defective or fouled plug will cause hard starting, poor acceleration, engine misfiring, etc. Check the plug to keep your engine running smoothly.

- a) Pull off the sparkplug wire and unscrew the plug with the 21mm socket wrench as illustrated. (Fig. 21)
- b) Clean the carbon from plug's electrode with a wire brush or fine sandpaper.
- c) Check the gap between the electrodes 0.025 in. (0.5~0.6mm) (See Fig. 22)
- d) The plug is correct for your engine's present operating conditions if the porcelain around their center electrodes is a light tan color. If the porcelain is covered with carbon, change to hotter operating range plugs. If the porcelain is burned white, install colder range plugs. Spark plug heat range requirements differ with individuals' riding habits, so consult your dealer before you switch plugs. For example: if your standard B-7HZ plug is covered with carbon, as some times during early break-in, your dealer may suggest hotter B-7H plug.



(Fig. 21)



(Fig. 22)

0.025 in  
(0.5~0.6mm)

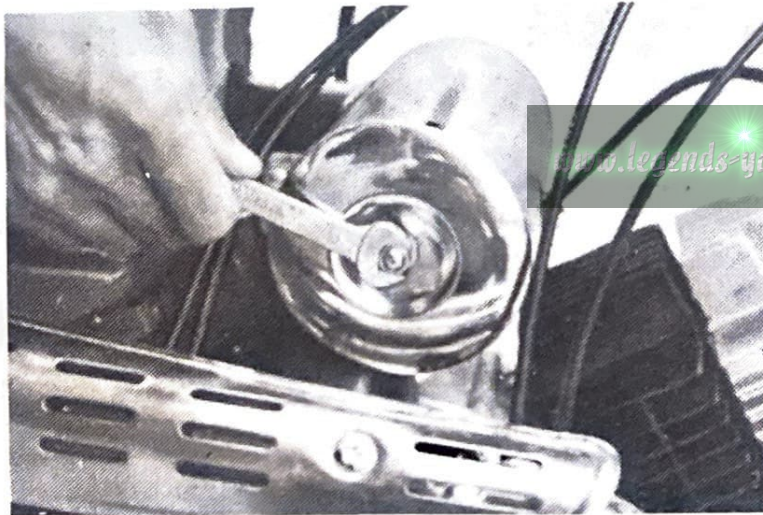


## 6) Cleaning the air filter

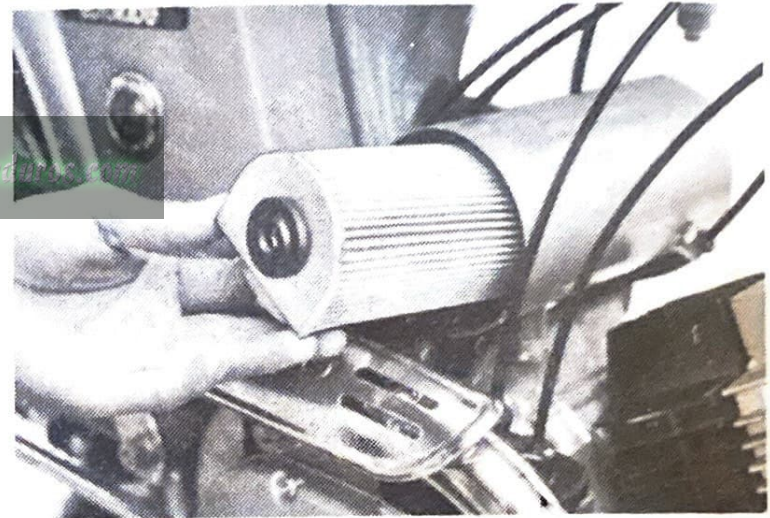
The air filter protects the engine from dust and grit, but it must be kept clean to stay efficient.

Tools: Phillips and slotted screwdrivers.

- a) Remove the bolt and nut holding a cover to the cleaner; then remove the cover.
- b) Remove the joint rubber holding clip, and pull out the aircleaner.



**(Fig. 23)**



**(Fig. 24)**



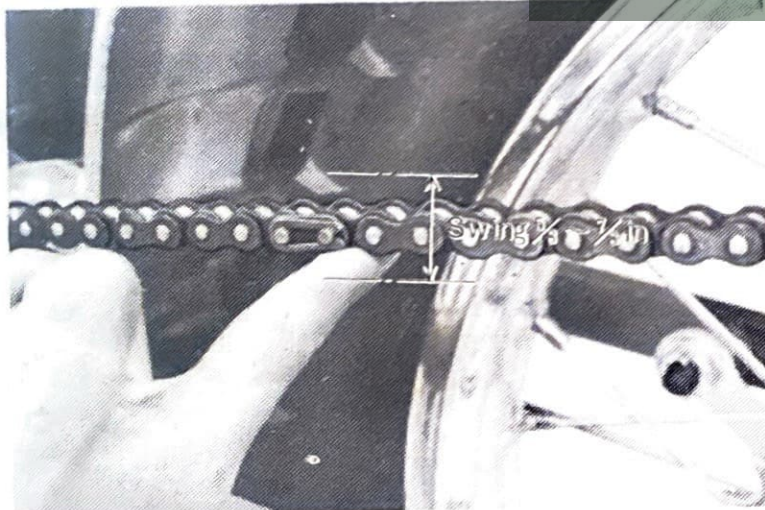
e) Knock off dust and dirt by tapping the element on the floor.

NOTE: The element is a dry paper type so be careful to keep it free of oil and grease that would impair filtration. Very dirty or oil saturated elements must be replaced to regain peak engine performance.

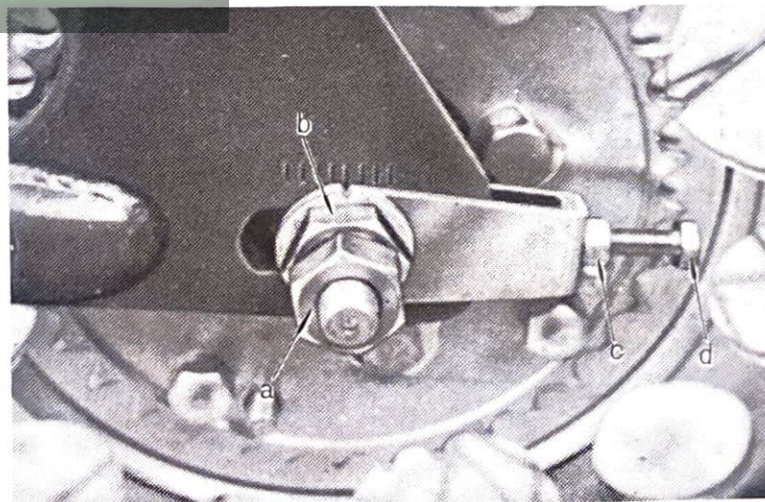
## 7) Adjusting the drive chain

Tools: 23 mm box, 17 mm and 10 mm wrenches and Phillips screwdrivers.

- Pull your machine up on its center stand. Move the chain up and down to check chain play (Fig.26). If total play is more than  $7/8$  inch, adjust it to no less than  $5/8$  inch.(20mm)
- Loosen the rear wheel's outside axle nut(a)with the 17 mm wrench.
- Then loosen the inner axle nut (b) with the 23 mm socket and screwdriver.



(Fig. 25)



(Fig. 26)

- d) Loosen the lock nut (c) with the 10mm wrench.
- e) Tighten the 10mm adjusting bolt (d) to decrease chain play, loosen then knock the wheel forward to increase play. Adjust both adjusting plates to equal marks on the swing arm.
- f) After adjustment, tighten nut (c), then nut (b) and nut (a).
- g) Readjust brake pedal play to  $1-1\frac{1}{4}$  (25~30mm) inches.
- h) Oil the chain every 500 miles (1,000 km) Lack of oil will impair performance and shorten chain life.

### 8) Checking other parts

Check all bolts, nuts, and screws holding the parts listed below and tight them if necessary.

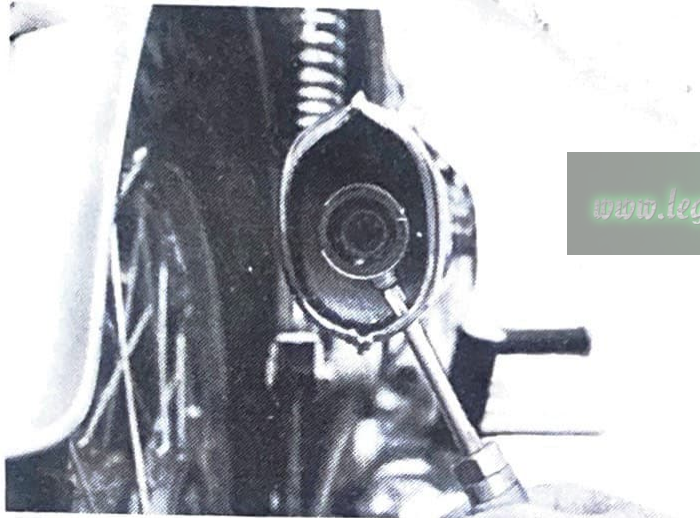
Front and rear axles	Engine case
Steering arm shaft	Chain guard
Shock absorber units	Handle lever holders
Handlebars	Crankcase covers
Footrests	Cylinder heads
Center and side stands	Carburetors
Mufflers	Air cleaner cover
Seat	Others



## OTHER PERIODIC MAINTENANCE

### 1) Cleaning the muffler

Carbon coated exhaust pipe and muffler can cause power loss, poor acceleration, and overheating. Use a 9mm wrench to remove the bolt holding the inner baffle out with pliers. Scrape off carbon with a wire brush. Remove hard-to-reach carbon by tapping the baffle on a hard surface. (See Fig. 27 & 28)



**(Fig. 27)**

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**(Fig. 28)**

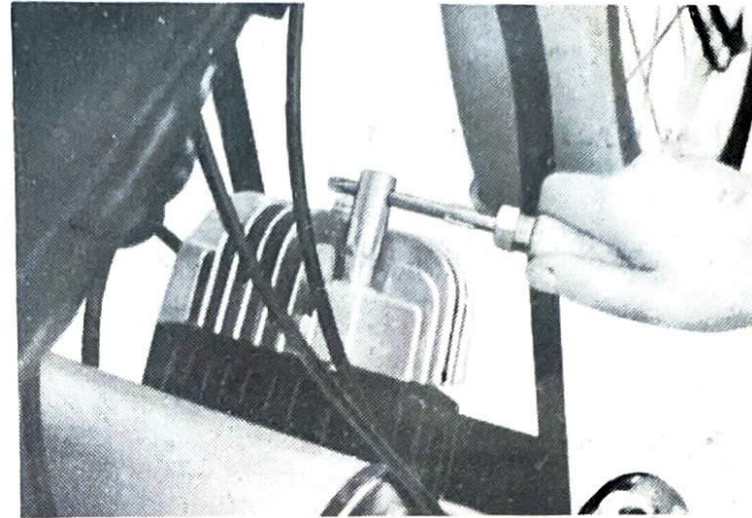
## 2) **Cleaning the cylinder head and piston**

Carbon covered cylinder head and piston may cause overheating, loss of power, engine knock, etc.

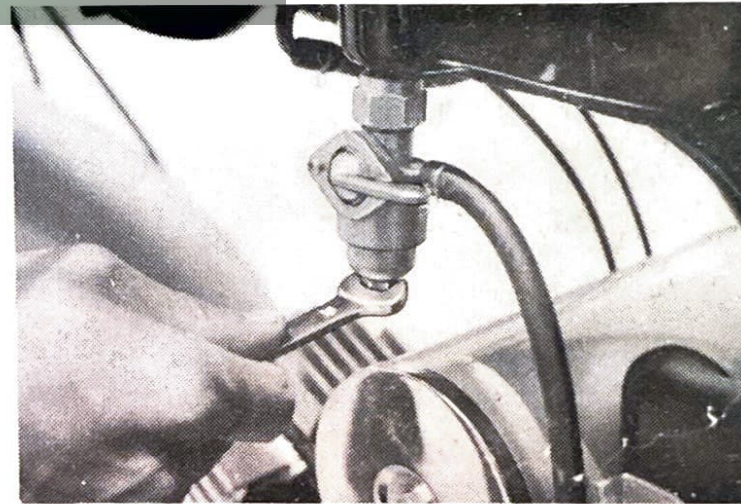
- a) Remove the cylinder head nuts with the 10 mm socket wrench. (Fig. 29) Pull off the heads and scrape the carbon from each combustion chamber.
- b) Move each piston to top dead center and scrape the carbon from its crown with a wire brush or screwdriver, then clean it with a rag moistened in gasoline.

## 3) **Cleaning the fuel cock filter**

The gasoline filter keeps impurities from entering the carburetor. A dirty filter will limit the flow of gasoline and cause other engine troubles. Use 10 mm wrench to unscrew the cap below the fuel cock; remove the filter element, and wash it in gasoline. (Fig. 30)



(Fig. 29)



(Fig. 30)



#### 4) Wheel Removal

Wheel removal is necessary to repair the flat tires.

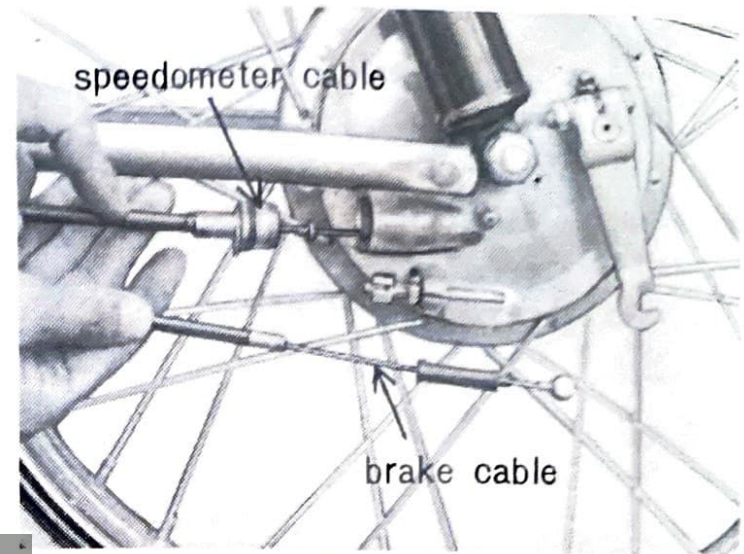
##### a) Front wheel

- (1) Remove the brake cable and speedometer cable from the brake backing plate. (Fig.31)
- (2) Remove the 17mm nut on the right side of the axle.
- (3) Loosen the 14mm clamp bolt on the left side, and use a screwdriver to pull the axle. (Fig.32)

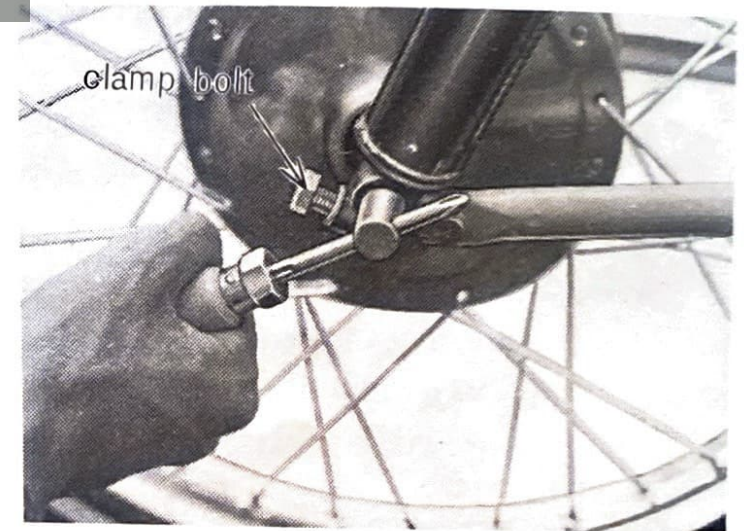
##### b) Rear wheel

Tools: 14 mm box, 21 mm, and 23 mm wrenches.

- (1) Remove the 14 mm adjusting nut at the end of the brake rod.
- (2) Remove the bolt holding the anchor bar to the wheel hub. (Fig.33)
- (3) Unscrew the outer and inner axle



**(Fig. 31)**



**(Fig. 32)**



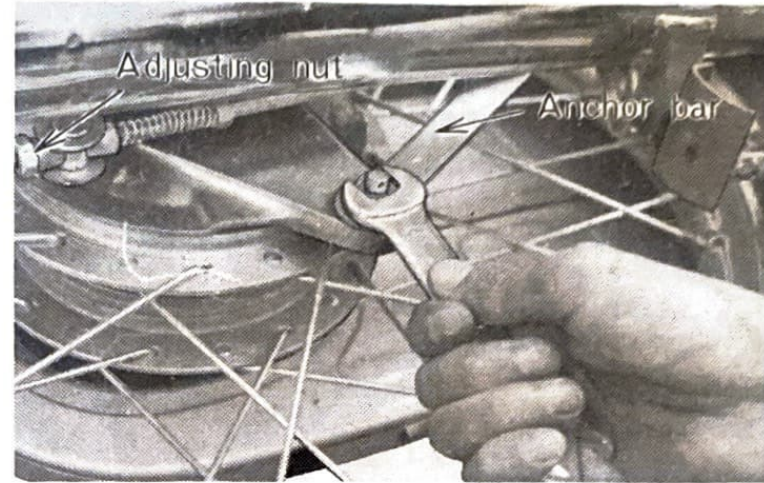
nuts and pull out the axle from the right side.

- (4) Pull the wheel to the left to separate its hub. Leave the sprocket and hub clutch on the swing arm.

### 5) Headlight beam adjustment

If your headlight does not suit you in its present position, simply adjust its position.

- a) Loosen the mounting bolts in the right and left headlight brackets, and pivot the headlight up or down while you are sitting on the motorcycle. (Fig. 34)
- b) Position the headlight where its beam is most effective, then carefully tighten both bolts.



(Fig. 33)



(Fig. 34)

# REPAIR INFORMATION

## 1. Genuine YAMAHA parts

All replacement parts must be of the same high quality as the originals to keep your Yamaha performing like new. The genuine, guaranteed Yamaha parts stocked by your dealer are manufactured and tested to meet the requirements of Yamaha's high standards.

The imitation Yamaha parts on the market today are not recommended for your bike because of their uncertain quality and durability; using them may deversely affect the life and performance of your machine.

## 2. Troubleshooting

All Yamaha motorcycles undergo rigid factory tests to insure their reliability, so if trouble develops consult your dealer immediately. Every dealer's shop is staffed with trained mechanics and provided with a stock of genuine Yamaha parts.

NOTE: Some parts are sealed or cannot be detached or disassembled, so let your dealer repair them. Yamaha can only be responsible for the results of repairs made by its own authorized dealers. Repair and adjustment of the Autolube pump, for instance, should be left to your Yamaha dealer.

Listed in the following pages are possible causes of trouble and their remedies:

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### a. Engine does not start

Cause	Remedy
1) No fuel	Add fuel
2) Fuel cock is closed	Open fuel cock
3) Carburetor flooded	You may have left the fuel cock open. Close starter jet lever.
4) Spark plug dirty	Remove and clean
5) Spark plug burned	Replace with colder plugs
6) Wrong plug gap	Set gap to 0.025 in. (0.5mm)
7) Spark plug damaged	Replace with new plugs
8) Faulty magneto	Have a Yamaha dealer check and repair it.
NOTE: Remove plug from cylinder head and reconnect the high voltage lead. Then ground the plug to the engine and see if it sparks as you crank the kickstarter. No spark means the points, ignition coil, flywheel magneto or battery may be faulty.	

**b. Engine output falls off under load (while climbing a long slope), although nothing is wrong with the piston.**

Cause	Remedy
1) Spark plug temperature is too high (porcelain around center electrode is white).	Replace with colder plugs.
2) Ignition timing is incorrect	Have your dealer check and set it.

**c. Engine overheats**

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Cause	Remedy
1) Autolube oil tank is empty	Add #30 detergent oil
2) Too much gear oil	Drain oil to correct level
3) Gear oil viscosity too high	Use #30 detergent oil.

**d. Engine over-revs in relation to the motorcycle's forward speed. This is because the clutch may be slipping. Ask your dealer to check and, if necessary, adjust it.**

**e. The headlight is dim and the battery is easily discharged.**

Cause	Remedy
1) Low battery fluid level	Add distilled water
2) Battery fluid is wrong specified gravity.	Have your dealer charge the battery. (Specific gravity should be 1.26–1.28)
3) Others	Ask your dealer to check the electrical system.

**f. Other troubles.**

Consult your dealer for brake repair, hard steering, tendency to steer to one side, clutch slippage, hard starting, difficult shifting, or other major troubles.



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