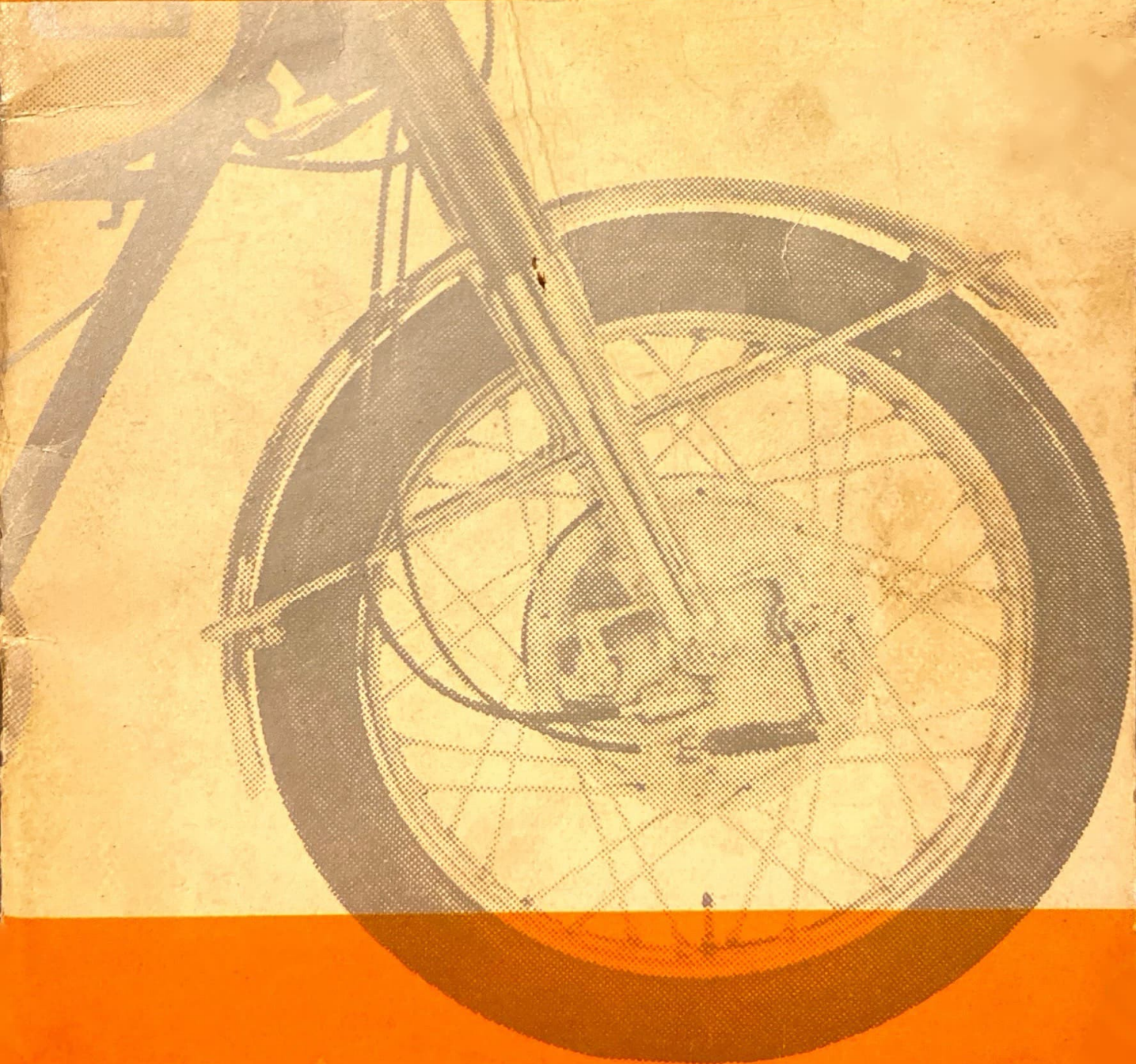


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YAMAHA

SPORT

Rider's Manual for YAMAHA YDS-3



Congratulations you are now the owner of a new YDS3, a supper high-speed motorcycle manufactured by YAMAHA, the leading maunfacturer of motorcycles in Japan.

The Yamaha YDS3, the latest in the Yamaha sports motorcycle line, is designed for competition and sports use. It features the world famous 2-cycle twin engine and Auto Lube, newly developped by Yamaha Technical Research Laboratory.

This booklet explains some steps necessary for operating and caring for your new motorcycle. Please read it carefully to become thoroughly familiar with all features and advantages built into your YDS3.

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1 Special Features and Specifications

1-1 Special Features

1 High-performance engine with auto lube

World-famous Yamaha 2-cycle twin-cylinder engine plus revolutionary lubricating system develops 27 ps at 7,500 r.p.m, 150 km/h(94mph) with fast pick-up. You can enjoy high-speed touring and competition to the fullest.

2 5-speed transmission

5-speed transmission with perfect reduction gear ratio assures of efficiently gear shifting under driving conditions.

3 Easy to start engine

Entirely new carburetor with built-in starter proven in all Yamaha motorcycle lines makes it easier to start the engine in cold, freezing weather.

4 Reliable brakes

Front brake that is more important for high-speed driving is of 2-leading shoe type. In addition, the special water and dust proof drums assure you of having effectively working brakes on rainy or windy days.

5 Adjustable rear cushion

Rear cushion can be adjusted depending on the driving conditions(load, speed and road surface).

6 Fine riding comfort

Newly designed pipe frame and riding position based on years of scientific researches keep balance perfect all the times even on bad roads or sharp curves.

Driving is always smooth and never tiring even on rough roads.

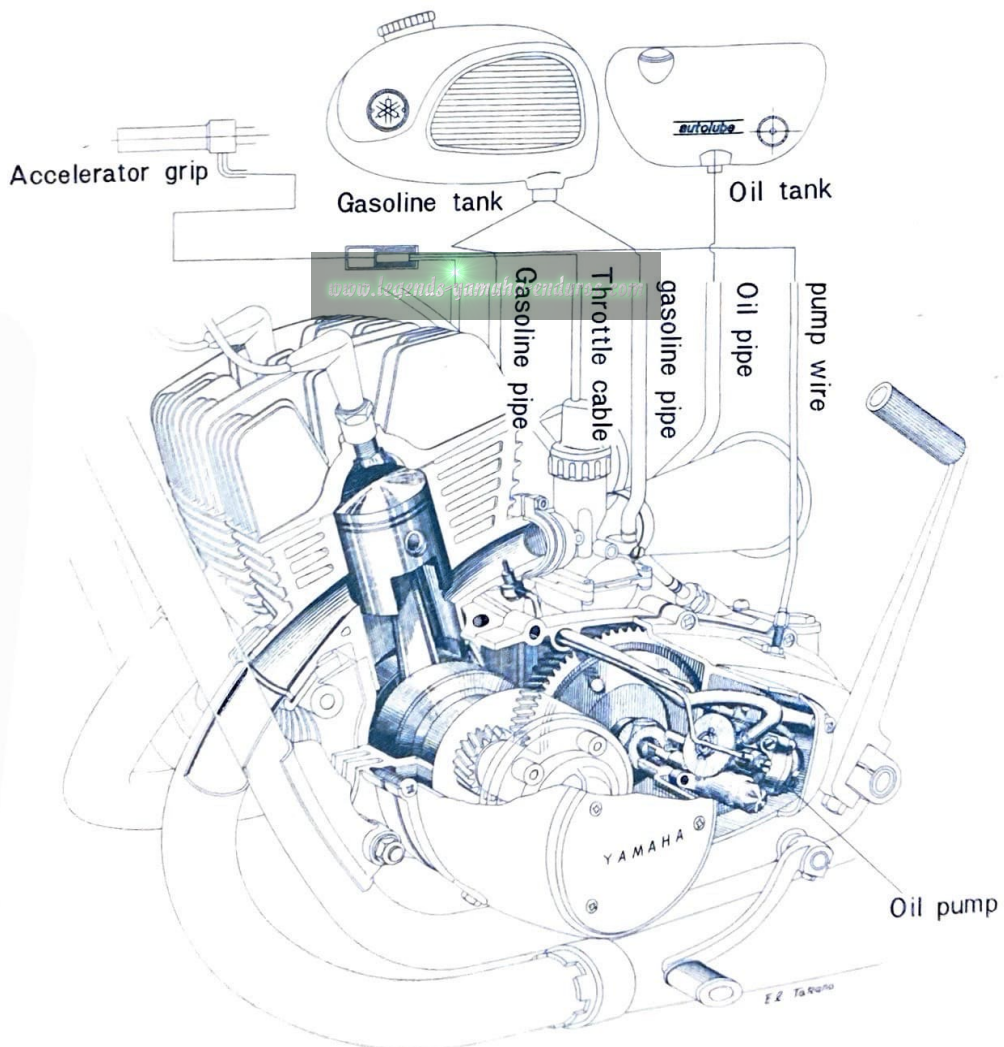
1-2 Specifications YDS3

| Model | YAMAHA YDS 3 | |
|-------------|---------------------------------------|---|
| Dimensions | Overall length | 79.0 in (2,005 mm) |
| | Overall width | 31.2 in (780 mm) |
| | Overall height | 42.0 in (880 mm) |
| | Wheel base | 51.9 in (1,287 mm) |
| | Minimum road clearance | 5.8 in (150 mm) |
| Weight | 350 lbs. (159 kg) | |
| Performance | Maximum speed | 150km/h - 94 mph |
| | Fuel consumption(on paved level road) | 43km/at 40km/h - 102 min/gsl |
| | Climbing capacity | 23° |
| | Braking distance | 12 meters at 50 km/h - 40 ft - 32 mi/h |
| | Minimum turning radius | 2,200 mm - 88in |
| Engine | Model | Yamaha D 9 |
| | Classification | Air-cooled, 2-cycle gasoline |
| | Lubricating system | Yamaha Auto Lube: automatic lubrication |
| | Number of cylinder | 2, parallel |
| | Displacement | 246 cc |
| | Bore Stroke | 56 × 50 × 2 |
| | Compression ratio | 7.5 : 1 |
| | Maximum power | 28 ps/8,000r.p.m. |
| | Maximum torque | 2.3kg-m/6,000r.p.m. |
| | Starting system | Kick starter |
| | Ignition system | Battery ignition |

| Model | YAMAHA YDS 3 | |
|--------------|---------------------------|--------------------------------------|
| Transmission | Primary reduction ratio | 3.25 gear |
| | Secondary reduction ratio | 2.667 chain |
| | Clutch | Wet, multiple-disk |
| | Gear box | Constant mesh, 5-speed |
| | Gear ratio | Low |
| | | Second |
| | | Third |
| | | Fourth |
| | | Top |
| | | 2.545(total reduc. ratio 22.061) |
| | | 1.600(" 13.867) |
| | | 1.222(" 10.593) |
| | | 0.950(" 8.233) |
| | | 0.773(" 6.69) |
| Body | Frame | Cradle-type pipe frame |
| | Front suspension | Telescopic(coil spring damper) |
| | Rear suspension | Swinging arm(coil spring oil damper) |
| Steering | Steering angle | 38° × 2 |
| | Caster | 65° |
| | Trail | 76 mm - 3.0 in |
| Brakes | Type | Internal expanding |
| | Front | Right hand, wire |
| | Rear | Right foot, wire |
| Tires | Front | 3.00-18-4PR |
| | Rear | 3.25-18-4PR |
| Tanks | Gasoline tank capacity | 14ℓ-3.6gal |
| | Oil tank capacity | 1.9ℓ-(1.9qt.) |

2 What is Yamaha Auto Lube ?

The Yamaha Auto Lube is the best lubricating system for 2-cycle engine. Any conventional 2-cycle engine must use gasoline-oil mixture, but the new Yamaha engine need not. The oil is controlled and forced from the oil tank to the engine by the compact precision oil pump that has been newly developed by the Yamaha Technical Research Laboratory.



The oil pump, driven by the engine through the reduction gear, functions according to the carburetor throttle(accelerator grip).

The flow of oil is controlled depending on the engine RPM(speed) and load(opening of throttle), the proper amount of oil being forced to the engine under any driving conditions.

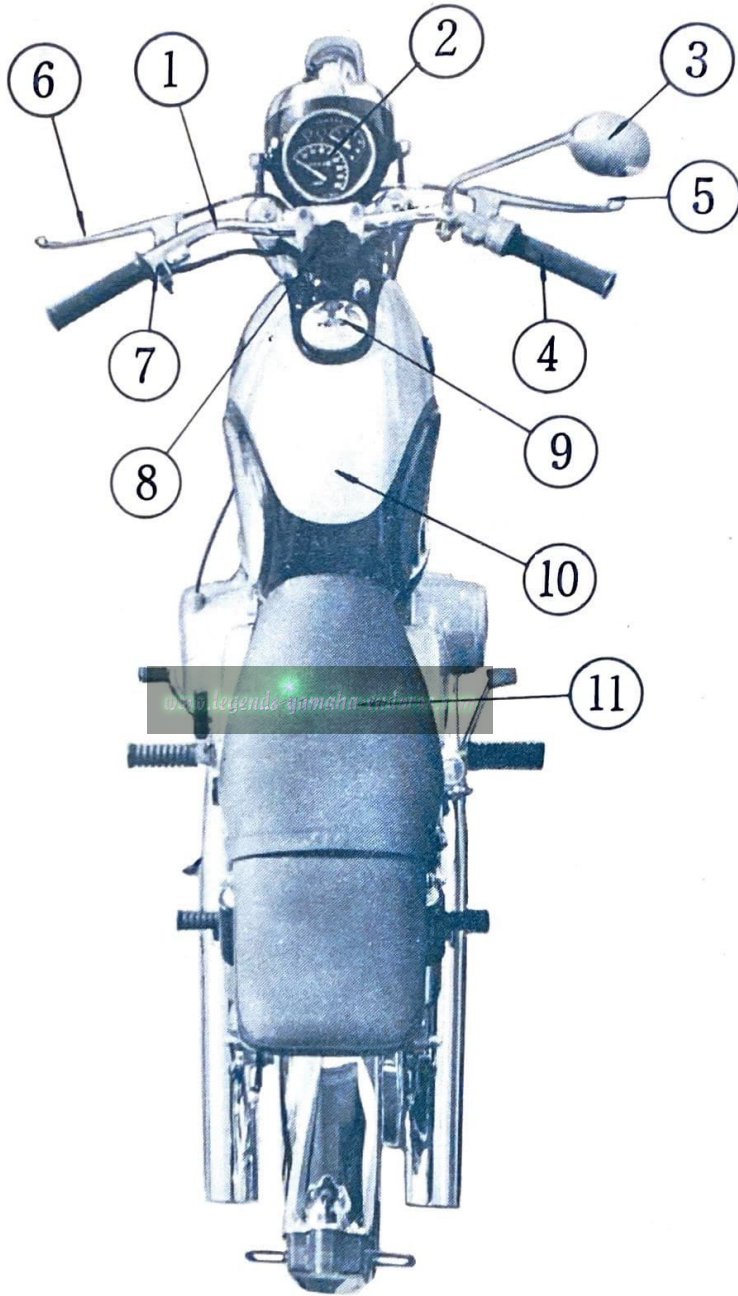
The Yamaha Auto Lube completely solved the major problems of 2-cycle engine presented by the use of gasoline-oil mixture and improved the Yamaha 2cycle rotary valve engine in performance and durability.

Yamaha Auto Lube Features:

1. Oil consumption is largely reduced : about 3,000km(1,800 mi.) per liter Only $\frac{1}{3}$ or less of that of the conventional 2-cycle engine !
2. More efficient and effective lubrication because of larger particle of oil.
3. Less carbon accumulation around the spark plug, muffler, piston and other parts.
4. Less exhaust gas.
5. Simplified fuel supply.
6. More dependable lubrication. Bad quality oil and incorrect fuel ratio in the gasoline-oil mixture were the enemy of 2-cycle engine lubrication.

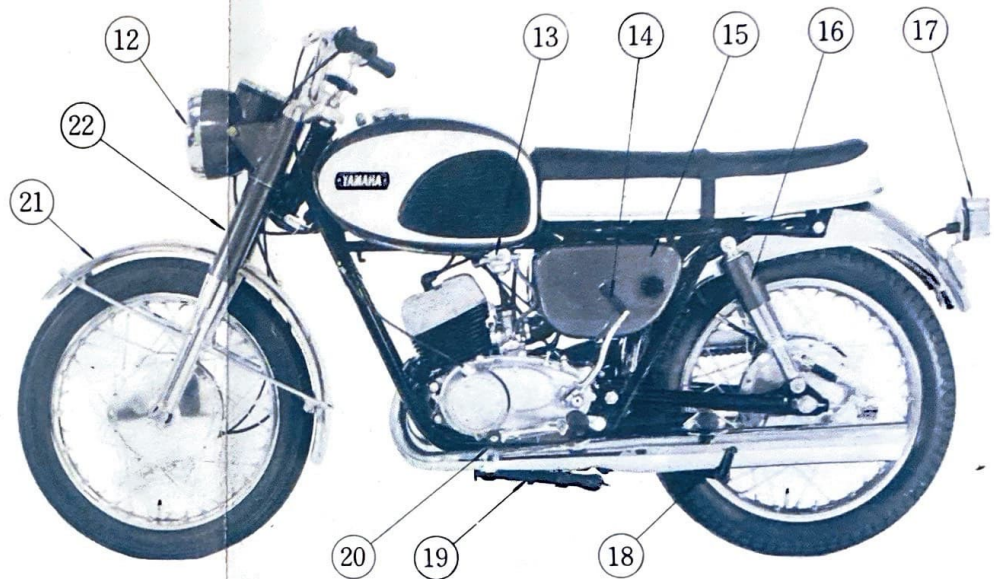
Be sure to use YAMAHA AUTO LUBE OIL or "SHELL2T" to preserve higher performance longer life of your Yamaha engine.

3 Main Parts

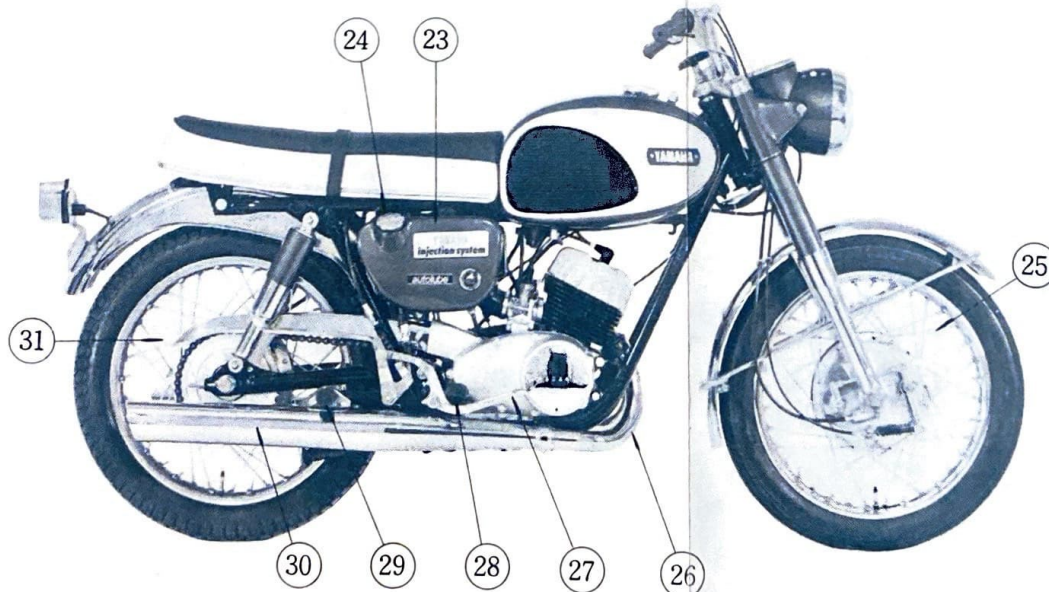


- | | | |
|----------------------|-----------------|----------------|
| ① Handle | ② Speedometer | ③ Backmirror |
| ④ Accelerator grip | ⑤ Brake lever | ⑥ Clutch lever |
| ⑦ Change over switch | ⑧ Handle damper | ⑨ Tank cap |
| ⑩ Gasoline tank | ⑪ Seat | |

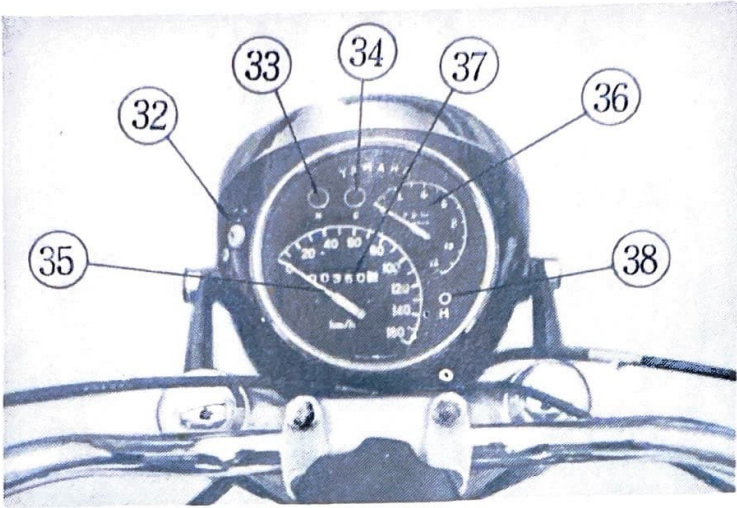
- ⑫ Head light
- ⑬ Fuel cock
- ⑭ Kick pedal
- ⑮ Side cover
- ⑯ Rear cushion
- ⑰ Tail light
- ⑱ Main stand
- ⑲ Side stand
- ⑳ Change pedal
- ㉑ Front fender
- ㉒ Front fork



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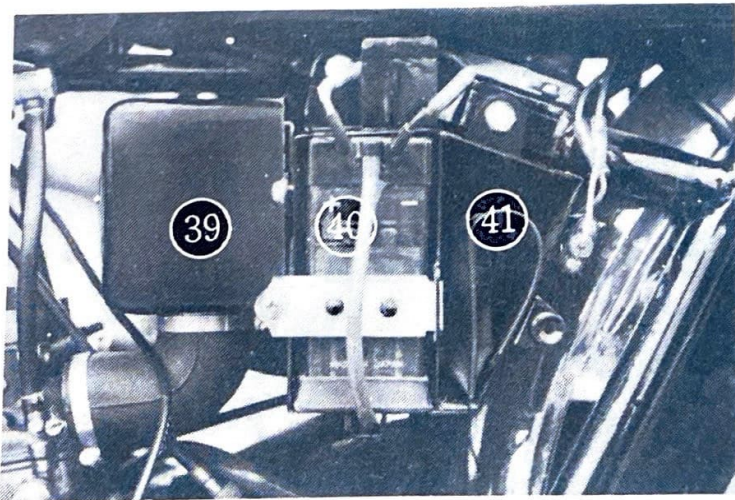


- ⑲ Oil tank
- ⑳ Oil tank cap
- ㉑ Front wheel
- ㉒ Exhaust pipe
- ㉓ Brake pedal
- ㉔ Foot rest
- ㉕ Tandem foot rest
- ㉖ Muffler
- ㉗ Rear wheel

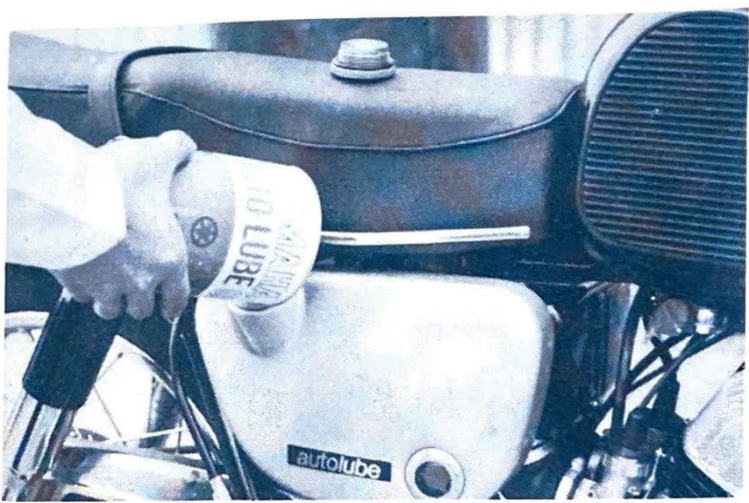


- ③② Main switch
- ③③ Neutral lamp
- ③④ Charge lamp
- ③⑤ Speedometer
- ③⑥ Tachometer
- ③⑦ Trip total-meter
- ③⑧ High-beam indicator lamp
- ③⑨ Air cleaner
- ④⑩ Battery
- ④⑪ Service tool

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4 Operating Instructions

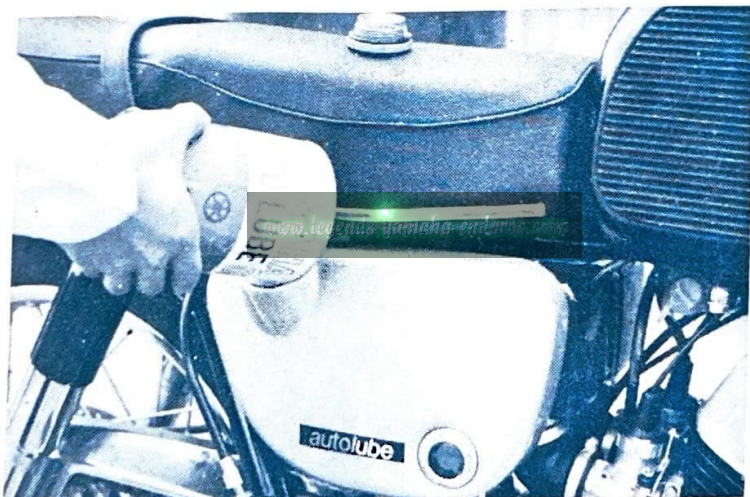
4-1 What you should know before operating

4-1-1 Gasoline and Oil

As described in Section 2, the Auto Lube allows the Yamaha 2-cycle engine not to use gasoline-oil mixture. Fill the fuel tank with gasoline only. Oil should be stored in the separate detached tank positioned in the center of the frame.

Gasoline : Use gasoline of 72 octane rating or over.

Oil : Use the Yamaha Auto Lube Oil.(or "Shell" 2T)



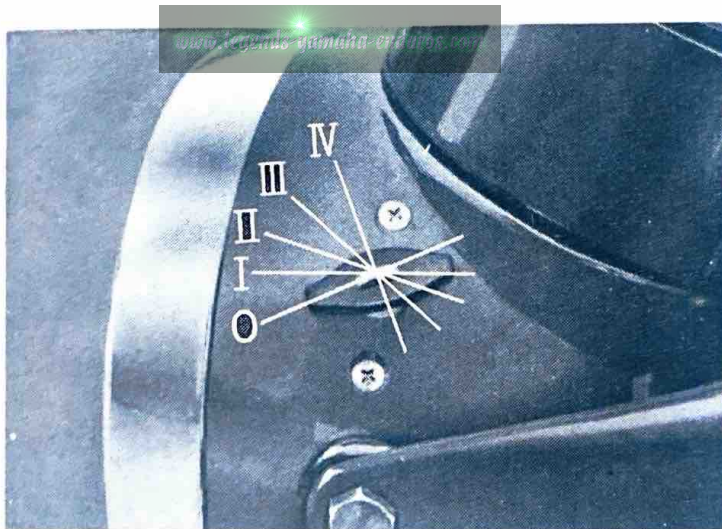
The Yamaha Auto Lube Oil, refined especially for this new lubricating device, excels in oiliness, viscosity, freezing point and remained carbon. It can flow to lubricate even at 20°C.

The performance of the Auto Lube depends on the quality of oil. Be sure to use the Yamaha Auto Lube Oil to always keep the engine in top condition and preserve its longer life.

4-1-2 Main switch

The following chart shows the key position at which the lights, horn and ignition circuit are switched on or off:

| Parts Name | Key Position | | | | | Instructions |
|------------------|--------------|-----|----|-----|-----|---|
| | 0 | I | II | III | IV | |
| Ignition circuit | off | on | on | on | off | I & II Kick starting III Push starting |
| Headlight | off | off | on | off | off | Use IV when parking at night. Goes on when applying brake. Goes on when gear is shifted into neutral. Goes off when engine starts. Press horn button. |
| Taillight | off | off | on | off | on | |
| Stop light | off | on | on | off | off | |
| Neutral lamp | off | on | on | off | off | |
| Charge lamp | off | on | on | off | off | |
| Meter lamp | off | off | on | off | off | |
| Horn | off | on | on | off | off | |

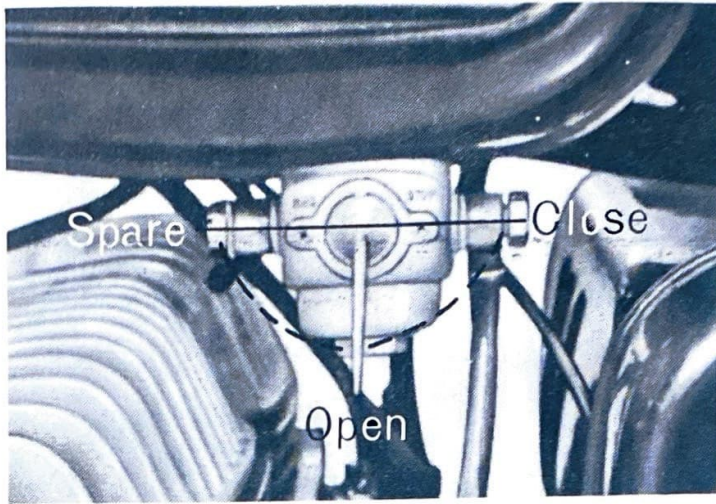


- 0 When stopped
- I Day driving
- II Night driving
- III Emergency starting
- IV Night parking

4-1-3 Fuel cock

To allow the fuel to flow into the carburetor, set the fuel cock lever to "Open" position. If you should find the fuel off while driving, turn it to "Spare" position. With the spare fuel of about 1 liter you can drive nearly 40km(25 miles) enough to get to the nearest service station for replenishing.

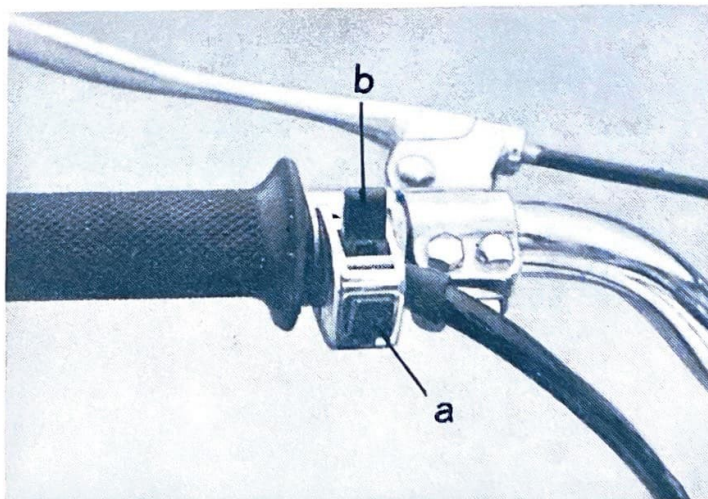
When parking or storing, be sure to turn the lever to "Close" position.



4-1-4 Handlebar switch & Horn button

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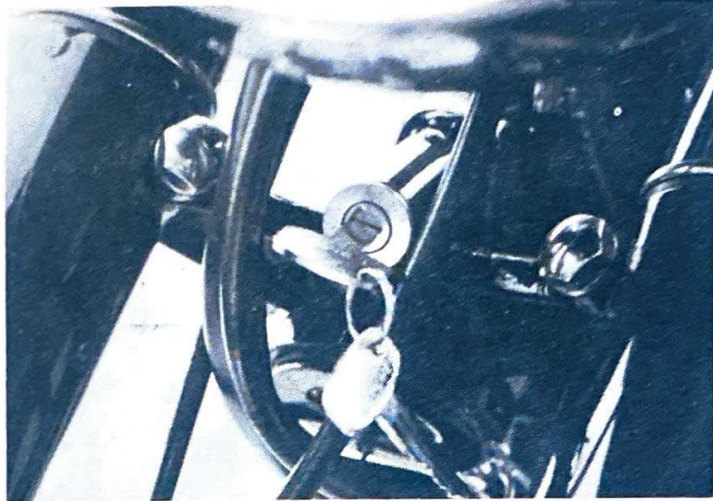
| Name | Instructions | Where located |
|---------------------------|--|---------------------------|
| Horn button (a) | Press. | on left side of handlebar |
| Headlight beam switch (b) | To lower the beam, push toward front; To raise the beam, push toward you. | on left side of handlebar |



4-1-5 Steering lock key

Turn the steering handles left; insert the steering lock key; and turn it 90 counterclockwise. Pull it out after checking whether they have been firmly locked.

Be sure to lock the steering handles even when parking for a short time.



4-1-6 Handle damper

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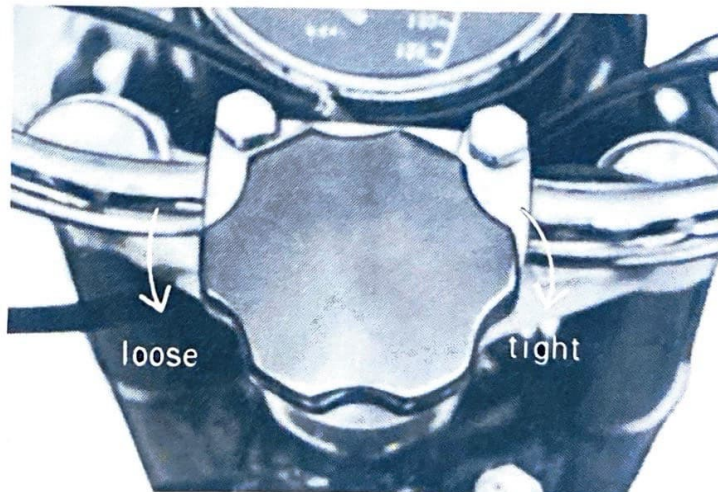
When driving on a gravel or rough road, adjust the handlebars to absorb shock from it.

Turn the handle damper to the right,

To get heavier steering, turn the handle damper to the right.

To get lighter steering, turn the handle damper to the left.

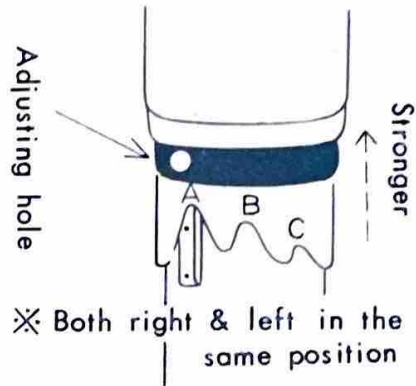
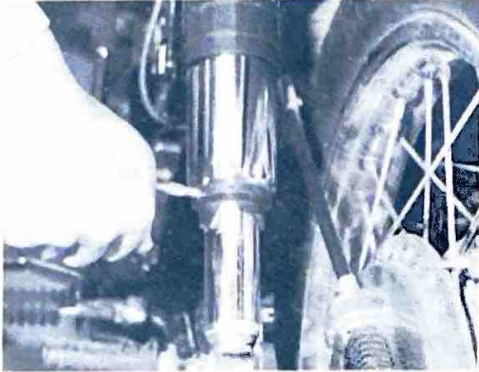
Adjust it properly depending on the road surface.



4-1-7 How to adjust the rear cushion

Insert the screwdriver (service tool) into the adjusting hole and then turn it clockwise to change the position of the toothed notch. Adjust properly depending on your weight, load, speed and road conditions.

- Standard cushion A
- Slightly harder B
- Harder C

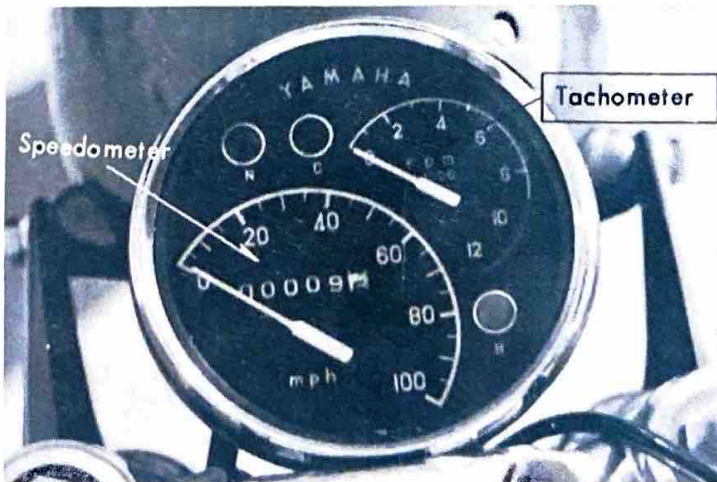


4-1-8 How to read the tachometer

The Yamaha Sports YDS3 has a speedometer with a built-in tachometer that is used to keep the engine RPM constant by indicating the moment to shift gears correctly under any driving conditions (starting, cruising, high-speed driving, hill climbing etc.).

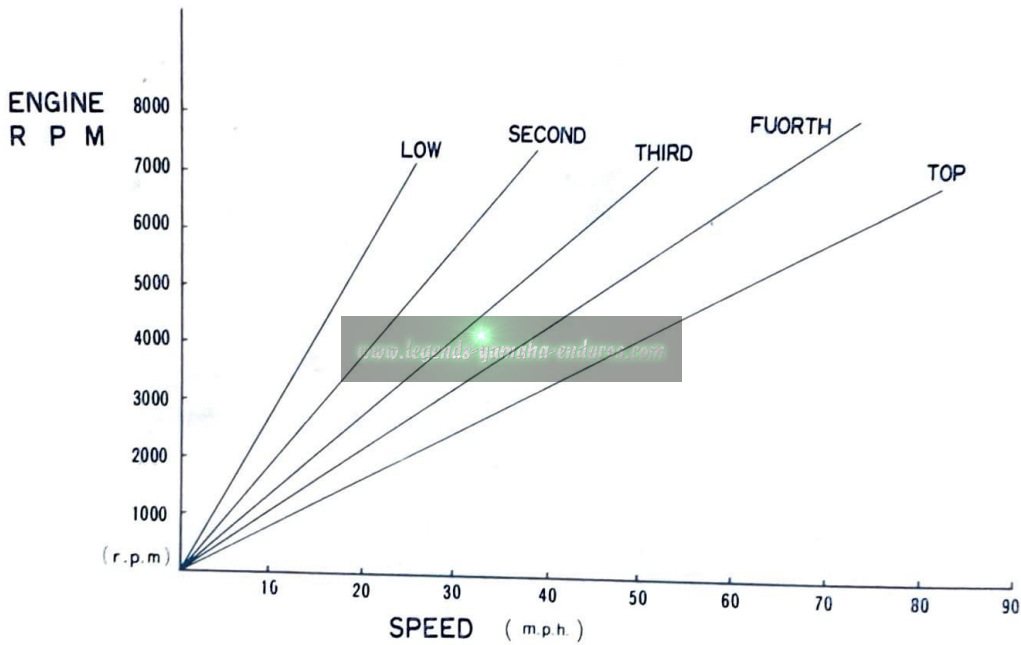
For example, a speed racer is designed to run always at the maximum power and RPM of the engine (for YDS3, 27ps at 7,500 r.p.m.).

Accordingly, the gears must be changed so that the engine RPM is always kept at the given RPM. tachometer indicates the moment to do.



The engine RPM for city driving at which the engine runs more smoothly is 3,000 to 4,000

The relation between the engine RPM, speed and gears is shown in the diagram below:



4-2 What you should check before every driving

For the safety reason you should check the following points before every use :

- a Is the fuel sufficient for your driving plan ?

Fill the fuel tank with gasoline only. The Yamaha Auto Lube allows your engine not to use gasoline-oil mixture.

- b Sufficient oil supply.

Look through the inspection hole of the oil tank to make sure that the tank holds enough oil.

If the oil is below the red level line, refill the tank with 1 liter of Yamaha Auto Lube Oil.



- c Is the tire pressure correct ?

The wrong tire pressure affects the riding comfort, steering, pick-up, speed and life of inner tube.

| Tire | Pressure, 1bs per sq. in. |
|-------|---------------------------|
| Front | 22 |
| Rear | 28 to 30 |

- d Do the front and rear brakes work effectively ? And is the stop light on ?

- e Do the lights and horn function work well ?

Check the horn, stop light, headlight, taillight meter lamp etc.

4-3 Starting, Shifting gears, Stopping and Parking

4-3-1 Starting

a Preparation for starting

1. Turn the fuel cock lever to "OPEN" position.
2. Insert the main switch key and turn it to "DAY DRIVING" position. Make sure the neutral lamp is on.

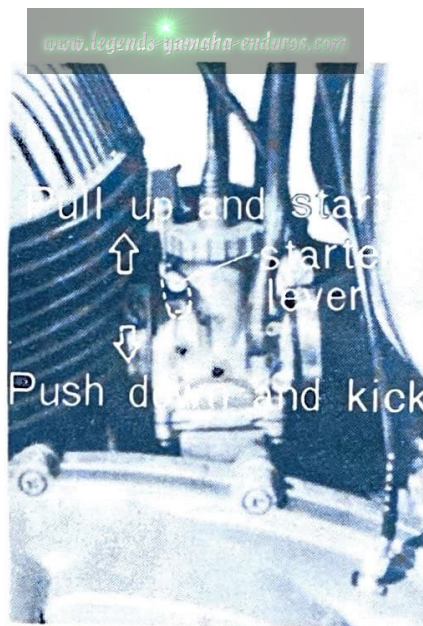
CAUTION: Never attempt to crank the engine unless the gear is in NEUTRAL

b Starting in cold weather

Any engine is difficult to start in cold, freezing weather.

The Yamaha YDS3, however, possesses a new type carburetor with a built-in starter that makes richer mixture gas for easy starting. To obtain the best result, use it effectively.

1. Depress the starter lever.
2. Start the engine by the kick pedal with the accelerator grip closed.



c Starting when your engine is warm.

When your engine is still warm after running or in summer, don't use the starter lever.

Slightly turn the accelerator grip ($\frac{1}{4}$ turns) and kick the crank pedal.

d Warming up.

To preserve a longer life of your engine, it is very important to allow a warm ing-up period of about 2 minutes after starting engine. Leave the gear in NEUTRAL and the engine to run.

After warming up, check whether the engine RPM is normally increased according as the accelerator grip is turned.

CAUTION : Be sure to release the starter lever, if used.

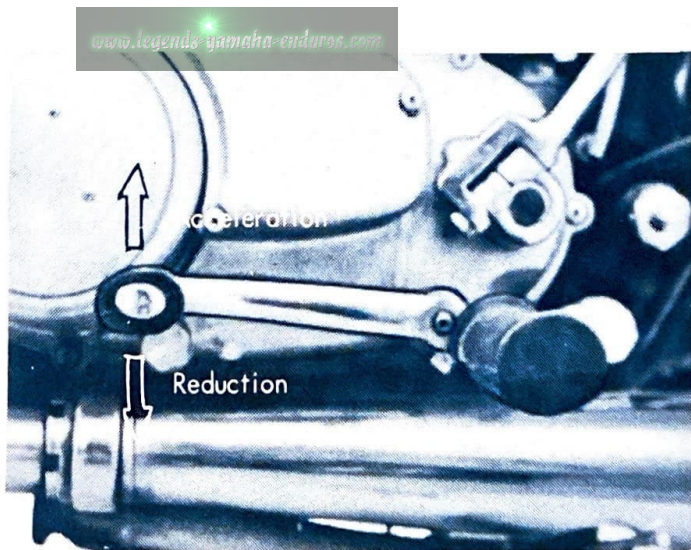
4-3-2 Shifting gears

The Yamaha YDS3 is equipped with a 5-speed transmission. The transmission is for the purpose of increasing engine power through gearing pedal for smooth starting, accelerating, hill climbing etc.

The gear position of the pedal is illustrated below:

TOP FOURTH THIRD SECOND NEUTRAL LOW

TOP
FOURTH
THIRD
SECOND
NEUTRAL
LOW



To shift into NEUTRAL, depress the toe section of the shift pedal to the end, and then raise it slightly. Whether the gear is shifted right into NEUTRAL or not is indicated by the blue lamp in the speedometer.

1. Grip the clutch lever to disengage the engine.
2. Shift into LOW.
3. Turn the accelerator grip little by little and, at the same time, release the clutch lever gradually.
4. At 10 to 15 mph, release the accelerator grip and, at the same time, grip the clutch lever promptly.
5. Shift into SECOND. Be carefull not to shift into NEUTRAL
6. Turn the accelerator grip and release the clutch lever.
7. Accelerate or decelerate in the same procedure as above.
8. Except for competition, the gears should be shifted so that the engine RPM is kept between the range of 3,000 to 4,000 r.p.m.

| Gear | Driving conditions | Optimum speed |
|----------|-------------------------------|---------------|
| Low | Starting or hill climbing | 0 to 10 mph |
| Second | Hill climbing or going slowly | 15 to 20 mph |
| Third | On easy uphill or in streets | 20 to 30 mph |
| Top | On main roads | 30 to 40 mph |
| Over top | High-speed running | 40 or over |

4-3-3 Driving on hills

a Uphill:

When starting to climb an easy uphill, open up the accelerator grip little by little to avoid loss of power.

When climbing a steep uphill, shift gear promptly from TOP to THIRD or from THIRD to SECOND not to decrease the engine revolutions.

b Downhill:

On a long downhill or a sharp descent, don't rely on the brakes alone, but apply the so-called engine brake: shift into THIRD or SECOND depending on its grade and release the accelerator grip.

CAUTION: Never attempt to release the main switch on a long downhill. It will only cause the spark plug to become defective and impair the engine performance.

4-3-4 Stopping and Parking

a Stopping:

1. Be sure to apply the front and rear brakes together. Applying only one may, under certain conditions, cause skidding or overturning.
2. Apply the brakes gently.
3. After stopping, be sure to shift into NEUTRAL
4. Turn the fuel cock lever to "CLOSE"
5. Remove the main switch key.

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b Parking:

1. Close the fuel cock and remove the main switch key.
2. Lock the handlebars by using the steering lock key.
3. When parking at night, turn the main switch to "I" and the taillight functions as a parking light.

CAUTION: If the parking light is used for a long time, the battery will have been discharged. Avoid excessive use of it.

4-3-5 Emergency starting

If the battery should be used up, try push starting as follows:

1. Turn the main switch to “III (EMERGENCY STARTING).”
 2. Step on the crank pedal two or three times to deliver the fuel into the cylinder.
 3. Shift into THIRD: grip the clutch lever: and push your machine.
 4. When your machine picks up some speed, release the clutch lever. And the engine will start.
 5. As soon as the engine starts, grip the clutch lever: stop your machine: shift into NEUTRAL: and turn the main switch to “I.”
- NOTE : It is easier to do so on a downhill or by the help of another person.

4-4 Breaking in period

During your first 600 miles of driving, you can, by observing a few simple precautions, contribute greatly to a longer life for your Yamaha YDS3 and much to its future performance. The following precautions will assure proper “mating” of all moving parts:

1. During first 300 miles, be sure to drive at less than 4,000 r.p.m.
2. During another 300 miles, be sure to drive at less than 5,000 r.p.m.

The relation between speed and gear during the breaking-in period is given below:

| Driving Distance | Engine RPM | Maximum Speed, mph | | | | |
|------------------|------------|--------------------|--------|-------|--------|-----|
| | | Top | Fourth | Third | Second | Low |
| 0 to 300 miles | 4,000 | 50 | 40 | 30 | 20 | 15 |
| 300 to 600 miles | 5,000 | 60 | 50 | 35 | 25 | 20 |

3. Don't accelerate or decelerate suddenly. Use the accelerator grip gently.

CAUTION : The Auto Lube does not function, if the machine is stopped with the clutch lever gripped. Under this conditions, never race at high RPM for a long time.

5 How to keep your Motorcycle in top condition

The regular inspection and maintenance help keep your motorcycle in top condition. They are preventive measures. Don't wait until something goes wrong.

NOTE : It is stipulated in the Highway Transportation Law that the owner shall have the authorized dealer inspect his motorcycle periodically.

5-1 Periodic service at Yamaha dealers'

When the speedometer reads 300, 1,000, 3,000miles, have your Yamaha dealer inspect and service according to the periodical inspection card. This is "physical checkup" for your motorcycle.

Periodic Inspection Guide

| Check Point | Driving Distance | | | |
|---------------------------------|------------------|------------|------------|-----------------------------|
| | 300miles | 1,000miles | 3,000miles | thereafter every 2,000miles |
| Front & rear brakes adjustment | ○ | ○ | ○ | ○ |
| Clutch adjustment | ○ | ○ | ○ | ○ |
| Gear oil change | ○ | ○ | ○ | ○ |
| Greasing | | ○ | ○ | ○ |
| Battery fluid | ○ | ○ | ○ | ○ |
| Spark plug | ○ | ○ | ○ | ○ |
| Ignition timing | | ○ | ○ | ○ |
| Carburetor adjustment | | ○ | ○ | ○ |
| Carburetor cleaning | | | ○ | ○ |
| Air cleaner cleaning | | ○ | ○ | ○ |
| Cylinder head & piston cleaning | | ○ | ○ | ○ |
| Muffler cleaning | | ○ | ○ | ○ |
| Bolts & nuts tightening | | ○ | ○ | ○ |
| Drive chain | | ○ | ○ | ○ |

5-2 Owner's inspection

5-2-1 Daily inspection

As described in Section 4-2, check the following points before daily use:

1. Fuel : Is the fuel sufficient ?
2. Auto Lube Oil : Is the oil sufficient ?
3. Tire Pressure : Is the tire pressure correct ?

The correct tire pressure not only affects riding comfort. It also has an important bearing on effectiveness of the brakes and the life of the tire tubes.

| Tire | Pressure, 1bs per sq. in. | |
|-------|---------------------------|-----------------|
| | 1-person riding | 2-person riding |
| Front | 22 | 22 |
| Rear | 28 | 32 |

4. Brakes : Do the front and rear brakes work effectively ?
5. Lights and Horn : Do they function well ?

5-2-2 Periodic inspection

It is advisable, in addition to the periodical inspection at your Yamaha dealer's, check yourself the parts listed below, every 1,000km or once a month. Do it yourself with service tools.

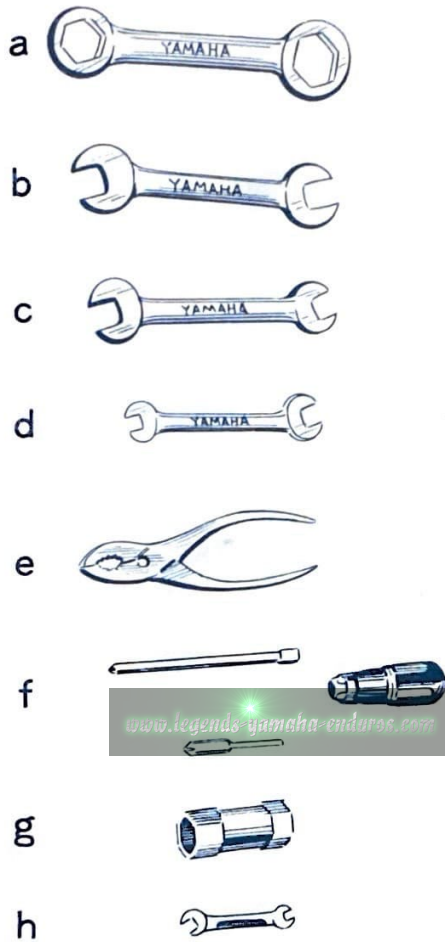
Periodic inspection guide

| Check point | Instructions | P. Ref. |
|---------------------|---|---------|
| Spark plug | Clean. | 33 |
| Air cleaner | Clean. | 34 |
| Battery | Check or, if necessary replenish battery fluid. | 32 |
| Drive chain | Adjust and oil. | 36 |
| Gear oil | Change. | 31 |
| Front & rear brakes | Adjust wires. | 28 · 29 |
| Muffler | Clean. | 37 |
| Bolts & nuts | Tighten. | 38 |

Be sure to check the above points before long-distance touring.

5-3 Service Tools and Their use

5-3-1 Service tools :



a. Ring spanner 23 × 29.

b. Double-ended spanner 19 × 21.

c. Double-ended spanner 14 × 17.

d. Double-ended spanner 10 × 12.

e. Pliers.

f. Screw-driver set (handle, philips, and regulars).

g. Box spanner.

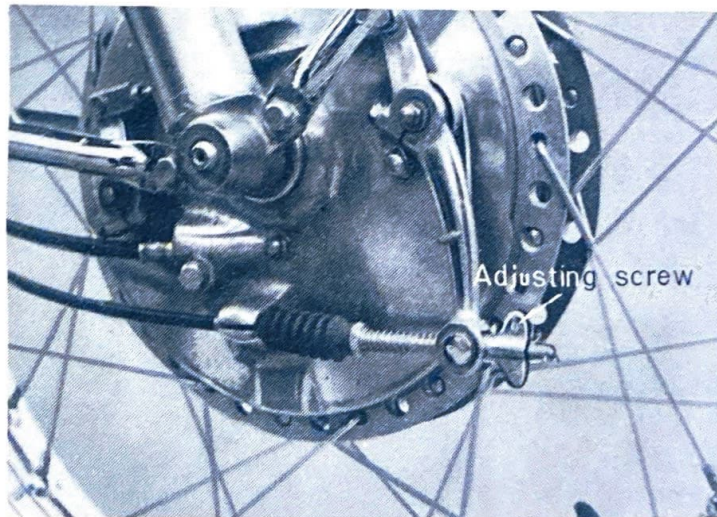
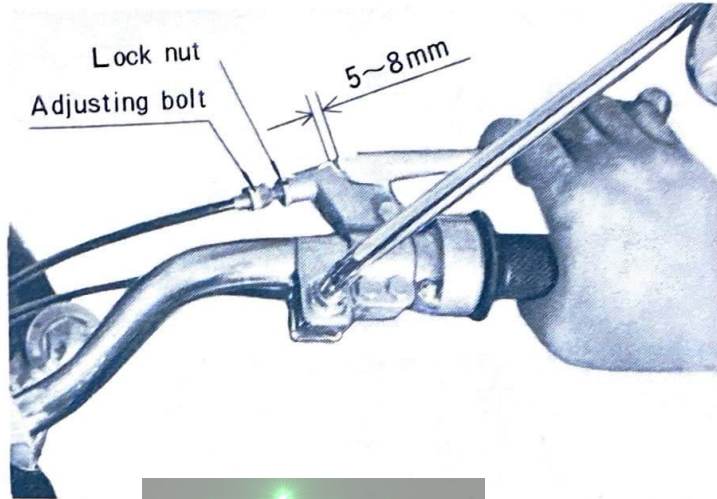
h. Point spanner.

5-3-2 Use of the service tools

1 Adjusting the brakes

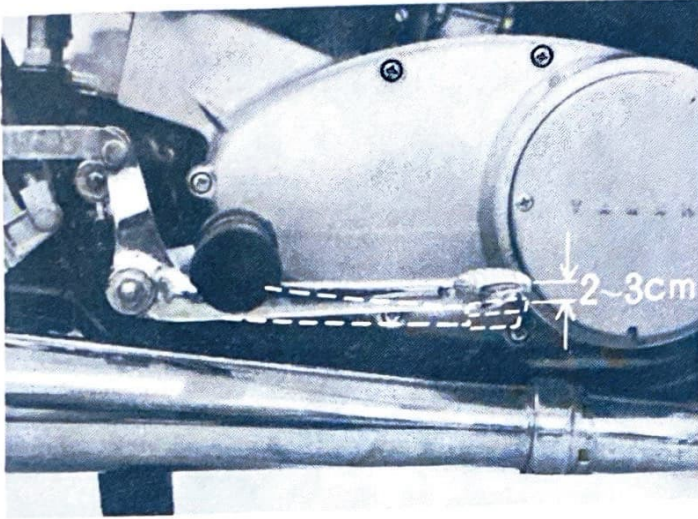
a Front brake

The correct free play of the brake lever is 5 to 8mm. Adjust by turning the adjusting nut at the end of the brake wire.half at a time

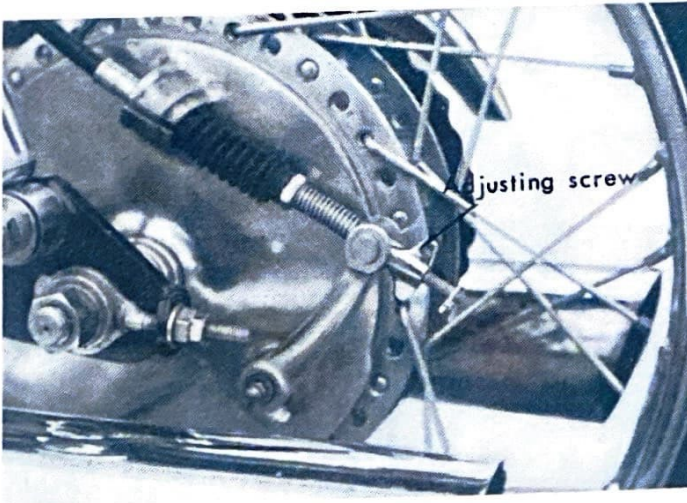


b Rear brake

The correct free play of the brake pedal is 2 to 3mm. Adjust by turning, half at a time, the adjusting nut at the end of the rear brake wire. After adjusting, make sure the stop light functions.



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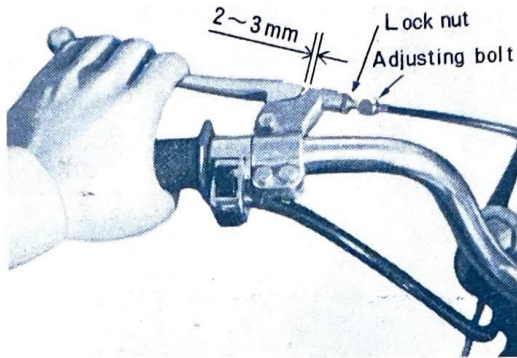


NOTE : Inspect the brake linings for wear and clean the brake shoes and drums every 2,000 miles. Never attempt to apply any oil to their friction surfaces.

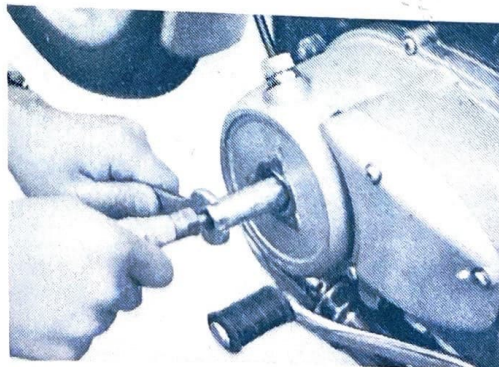
2 Adjusting the clutch

The clutch lever should be adjusted to have 2 or 3 mm play so the clutch spring can apply sufficient pressure to the clutch facing.

If there is too much play, the clutch lever may not function well; if there is no play, it causes slipping.



- a Remove the clutch cover from the left crankcase cover.
- b Loosen the clutch adjusting screw locknut with 14 mm box and 19 × 21 mm spanners.
- c Adjust by turning the clutch adjusting screw with screwdriver.
- d To reduce the play, loosen the adjusting nut; To increase the play, tighten the adjusting nut.
- f After adjusting, tighten the locknut firmly.

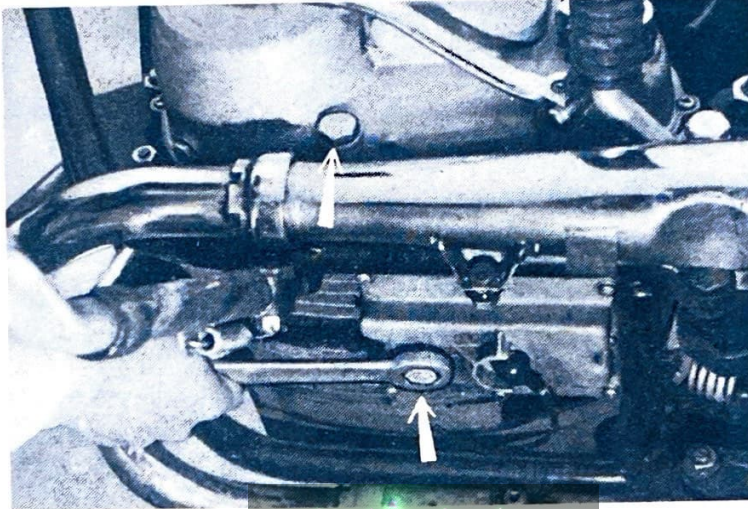


3 Gear oil

Be sure to change the gear oil before it is used up at 300, 1,000 and 3,000 miles during the breaking period and every 2,000 miles thereafter.

a Draining

To drain the oil, remove two oil drain bolts at the bottom of the engine and in the left crankcase cover.

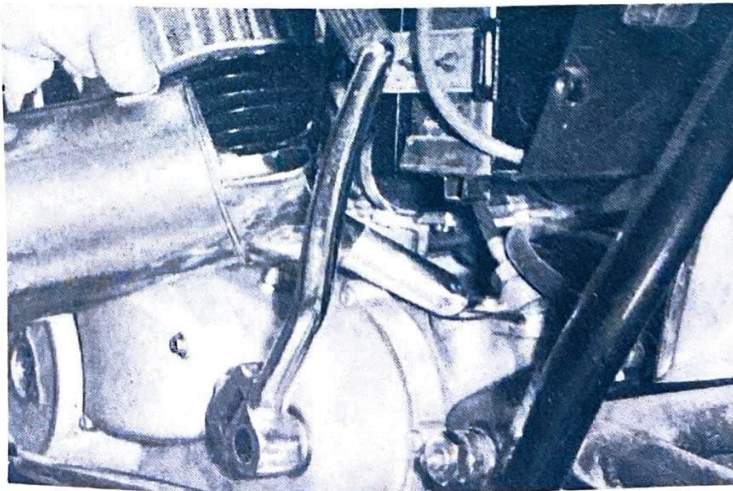


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b Replenishing

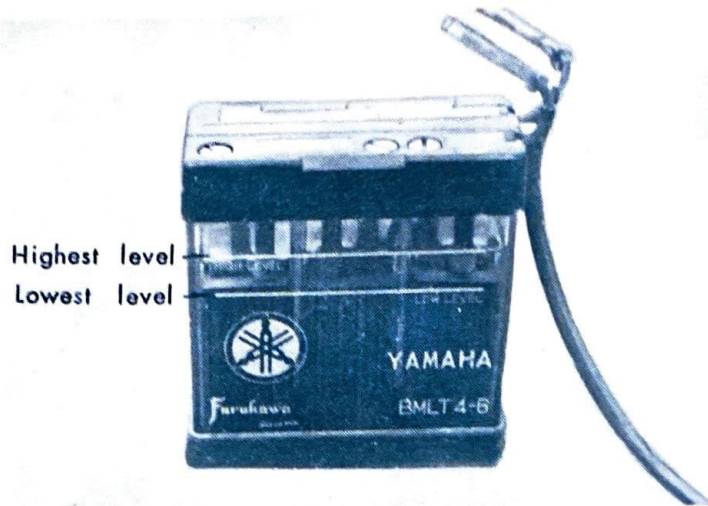
After draining, tighten two bolts firmly. Remove the oil filler cap near the left air cleaner and pour the specified amount of oil.

1½ quart



4 Battery

The battery fluid should be always kept between the upper and lower level lines. If it is below the lower one, fill with distilled water up to the upper one.



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Check whether the exhaust tube is clogged or not.

If your motorcycle will not be used for more than a month, remove the battery and keep it in dry, cool place or give it into your dealer's keeping. Be sure to have your dealer charge it once a month.



5 Spark plug

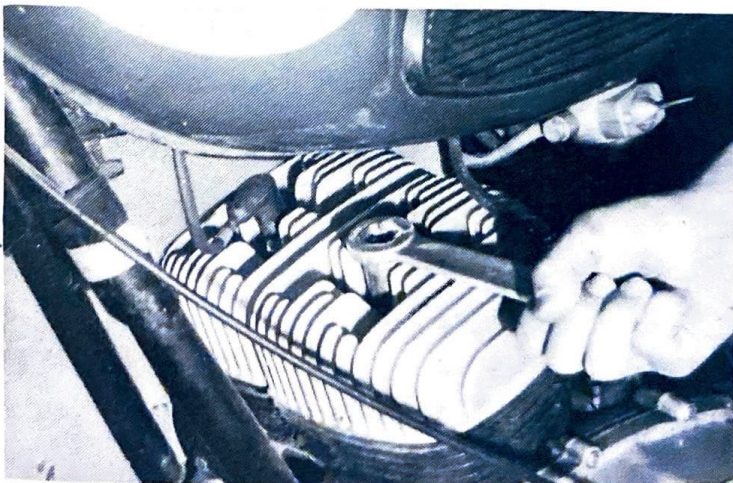
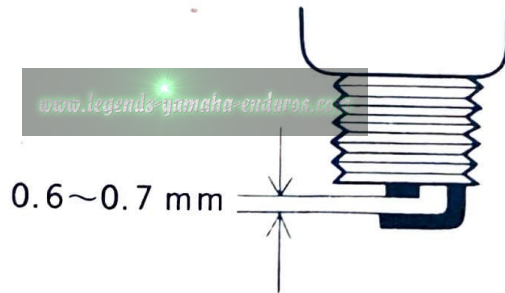
A spark plug is for the purpose of igniting the air-fuel mixture in the cylinders. The dirty plug causes hard starting, engine misfiring and other troubles. Remove carbon from the electrodes with a wire brush or the like from time to time.

a Spark gap : The coreect gap is 0.6 or 0.7mm.

b Heat range : The standard plug B-77HC

The spark plug that is too cool for the operating conditions of the engine will soot up with carbon. If the plug is correct, the insulator will be relatively clean and have a tan color.

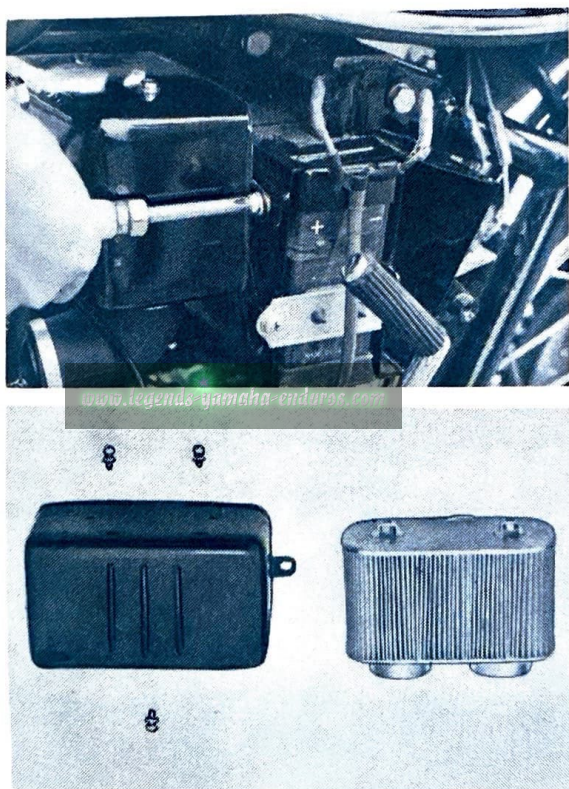
If the plug soots up with carbon, use B-7HZ plug.



6 Air cleaner

An air cleaner is just like a flu mask for the engine. The mask must be clean at all times. If you drive often on dusty roads, be sure to clean it once a month at least.

- a Remove the left side cover and then the air cleaner cover setting screw.
- b Remove the fitting section of the joint rubber between the carburetor and the air cleaner. And the cleaner assembly can be pulled outward.
- c Remove three screws holding the cleaner element and then element.



Cleaning

The air cleaner is of a paper-filter type. Clear dust away with fingers or wash in pure gasoline with a special care. Blow compressed air through it from the inside. Never wash in water or oil. Use pure gasoline.

7 Adjusting the carburetor

If the carburetor setting that was done under the rigid tests is changed on your own authority, it may cause poor performance.

Adjust as follows :

a Idling

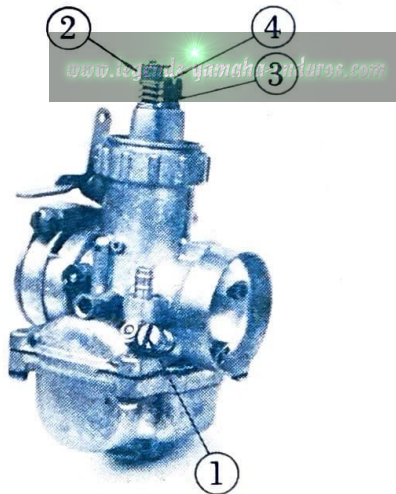
1. Tighten the right and left pilot airscrews ① fully and then loosen them by $1\frac{1}{2}$ turns.
2. With the engine in motion, turn the throttle adjusting screw ②, adjusting it to the position where the engine runs smoothly at low RPM.

NOTE : To decrease the RPM, turn the screw clockwise ;

To increase the RPM, turn the screw counterclockwise.

3. The exhaust gas from the mufflers on the right and left sides should be the same.

NOTE : The proper RPM at idle is 1,200 to 1,500.



b Throttles

The right and left throttle valves should function at the same time when the accelerator grip is turned.

1. Turn the accelerator grip to open the throttle valves fully.
2. Loosen the cable adjuster locknut ③. And then turn the cable adjuster ④ and move the accelerator wire until there is no play.
3. After adjusting, tighten the locknut to secure the adjuster.

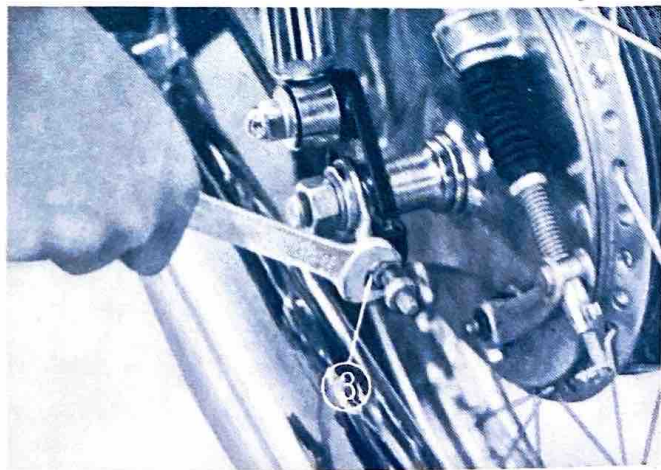
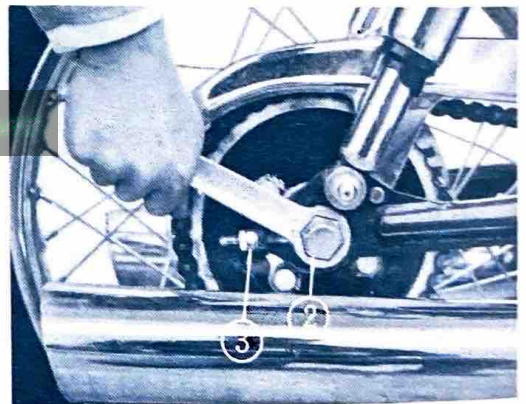
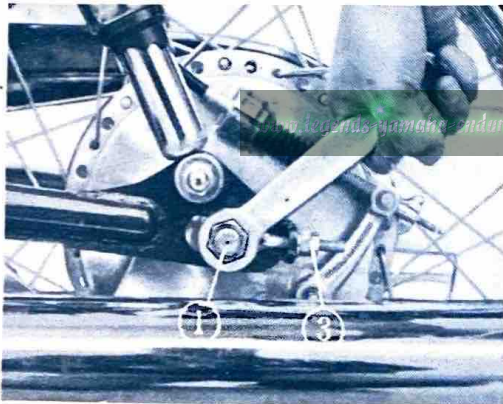
8 Drive chain

The drive chain should have a play of 2 cm up and down at the center of the lower section with the rear wheel on the ground.

Since the dirty chain causes lack of oil and scorching, apply oil at regular intervals. In addition, wash it in gasoline before oiling at every periodical inspections.

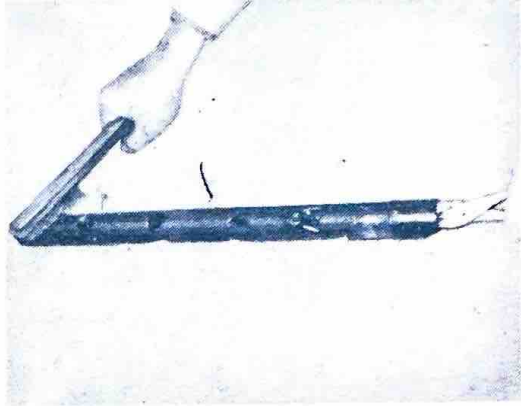
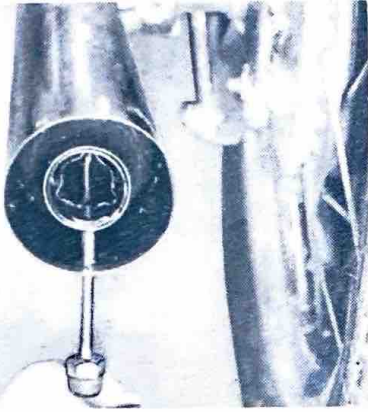
Adjusting

- a Loosen the rear brake adjusting screw.
- b Loosen the rear wheel nuts ① ② on both sides.
- c Adjust by turning the chain adjusting nut ③. The adjusting marks on both sides should be set to the same position.
- d After adjusting, tighten the nuts ② and ①.
- e Be sure to readjust the play of the brake pedal.



9 Cleaning the muffler

To remove the inner cylinder from the muffler, remove the cylinder setting screw and pull outward with pliers. Remove carbon with a wire brush and by tapping.



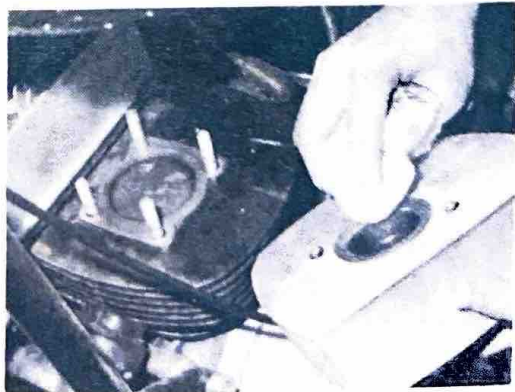
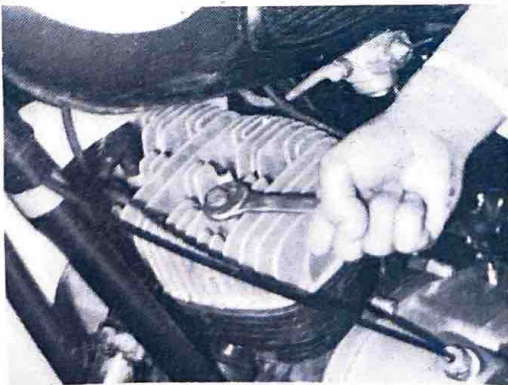
10 Cleaning the cylinder head and piston

Carbon accumulation around the cylinder head and piston causes poor performance, power loss, overheat, engine knock and other troubles.

a Remove the cylinder head and remove carbon from the combustion chamber.

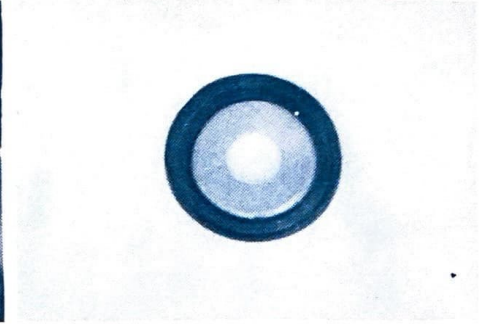
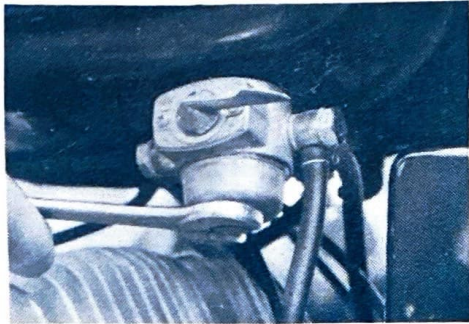
b Remove carbon from the top section of the piston.

NOTE : Use a wire brush or a \ominus screwdriver and some waste with gasoline to clean them.



11 Cleaning the fuel cock filter

The fuel cock filter is used to remove impurities from gasoline that flows into the carburetor. The dirty filter clogs the carburetor and, as a result, the engine does not work well. Clean it from time to time. Remove a cup for the fuel cock and then the filter. Wash it carefully in gasoline.



12 Bolts and nuts

Inspect the bolts, nuts and screws in the parts listed below for loose and tighten them if necessary :

| | |
|--------------------|-------------------|
| Front & rear axles | Engine fittings |
| Foot rests | Carburetor |
| Swinging arm shaft | Air cleaner cover |
| Muffler | Brake linkage |
| Center stand | Exhaust ring nut |
| Side stand | Rear cushion |

13 Greasing and oiling

| | Parts to be lubricated | Distance of driving at 1st lubr., miles | Lubrication interval, miles | Type of Lubricant |
|----|------------------------|---|-----------------------------|-------------------|
| 1 | Front brake cam shaft | 600 | 2,000 | cup grease |
| 2 | Rear brake cam shaft | 600 | 2,000 | " |
| 3 | Front brake wire | 600 | 2,000 | " |
| 4 | Rear brake wire | 600 | 2,000 | " |
| 5 | Accelerator grip | 600 | 2,000 | " |
| 6 | Stand shaft | 600 | 2,000 | " |
| 7 | Brake linkage | 600 | 2,000 | " |
| 8 | Drive chain | 300 | 600 | motor oil |
| 9 | Gear oil | 300 | 600 | |
| 10 | Swinging arm shaft | 600 | 2,000 | cup grease |

6 Repair and troubleshooting charts

6-1 Yamaha service

The correct, scientific inspection and maintenance keep your motorcycle in top condition at all times and increase your motorcycling satisfaction. Your Yamaha dealer is well trained and equipped to meet such demands. We recommend you to have your Yamaha dealer inspect and service at regular intervals according to the periodical inspection card that you received from the Yamaha dealer from whom you purchased the new Yamaha motorcycle.

6-2 Genuine Yamaha parts

Always use the genuine, guaranteed Yamaha parts, manufactured and tested at Yamaha's own plant to meet the exacting requirements of Yamaha's high standard. Your Yamaha dealer is supplied with the genuine Yamaha stocks to be able to efficiently meet your every need. There are many so-called imitation parts on the market. These are almost the same in appearance, but not in performance and durability. These are not recommended.

Lubricating oil is vital to the engine just like blood to your body. To preserve a longer life and higher performance for the Yamaha engine we recommend you to use YAMAHA AUTO LUBE OIL and YAMAHA GEAR OIL.

These oils are available at the Yamaha dealers!

6-3 If a trouble should occur

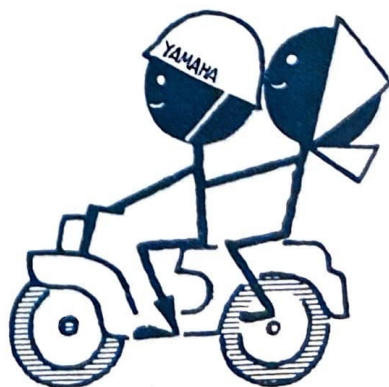
The Yamaha YDS3 undergoes rigid factory tests to assure long and satisfactory performance. However, if a trouble should occur, immediately ask for your Yamaha dealer's advice. He is always glad to answer your questions.

IMPORTANT : Some parts are sealed, or cannot be removed or disassembled.

If repairs are necessary to such components, take to your Yamaha dealer. Yamaha cannot be responsible for repairs or adjustments to such parts done privately.

NOTE : The inspection and maintenance of the YAMAHA AUTOLUBE are the dealer's job.

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6-4 Troubleshooting charts

1 Engine does not start.

a Main switch key is in "I (DAY DRIVING)" position but charge lamp (red) does not light.

| | |
|------------------------------|--|
| 1 Disconnected battery cable | Check battery terminals under left side cover. Tighten up loose or disconnected screws. |
| 2 Burnt-out fuse | Replace. Have your dealer inspect. |
| 3 Dead battery | Try push starting. See Section 4-3-5. Have your dealer inspect. |

b Battery is good but engine does not start.

| | |
|--|---|
| 1 a Empty gasoline tank b Closed fuel cock | Replenish. Open. |
| 2 Incorrect usage of starter lever. | See Section 4-3-1. |
| 3 Dirty or worn spark plug | If plug soots up with carbok, clean and blow dry, or replace. |
| 4 No spark (To see if there is no spark, remove plug with high-tension cord left in place; ground it to cylinder head; and then kick down crank pedal). | Replace. If plug is not defective, either ignition coil or point breaker is faulty. Have your dealer repair. |
| 5 Fuel in carburetor is overflowing. | Inspect carburetor for overflowing. Have your dealer disassemble and clean. |

2 Engine overheats and speed is slow.

| | | |
|---|--|---------------------------|
| 1 | Improper ignition timing | Have your dealer inspect. |
| 2 | Clogged bypass in carburetor | Have your dealer clean. |
| 3 | Loose carburetor fitting section and/or cylinder head tightening section | Tighten |
| 4 | Dirty or clogged air cleaner | Clean. |
| 5 | Lack of oil in drive chain | Apply oil. |
| 6 | Carbon coated muffler | Clean. |

If any troubles should occur, please consult with your Yamaha dealer. He is always glad to answer your questions.

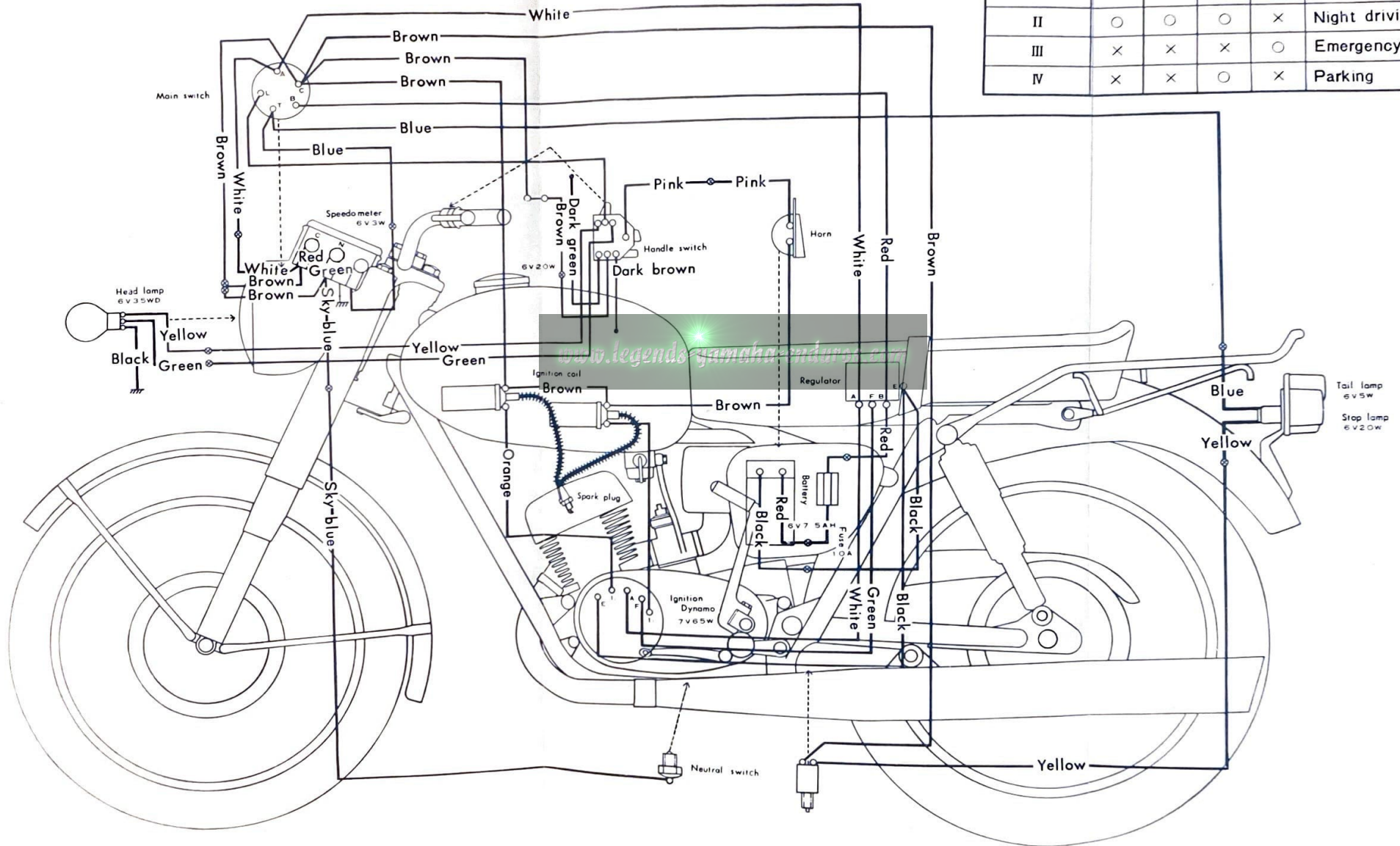
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Circuit

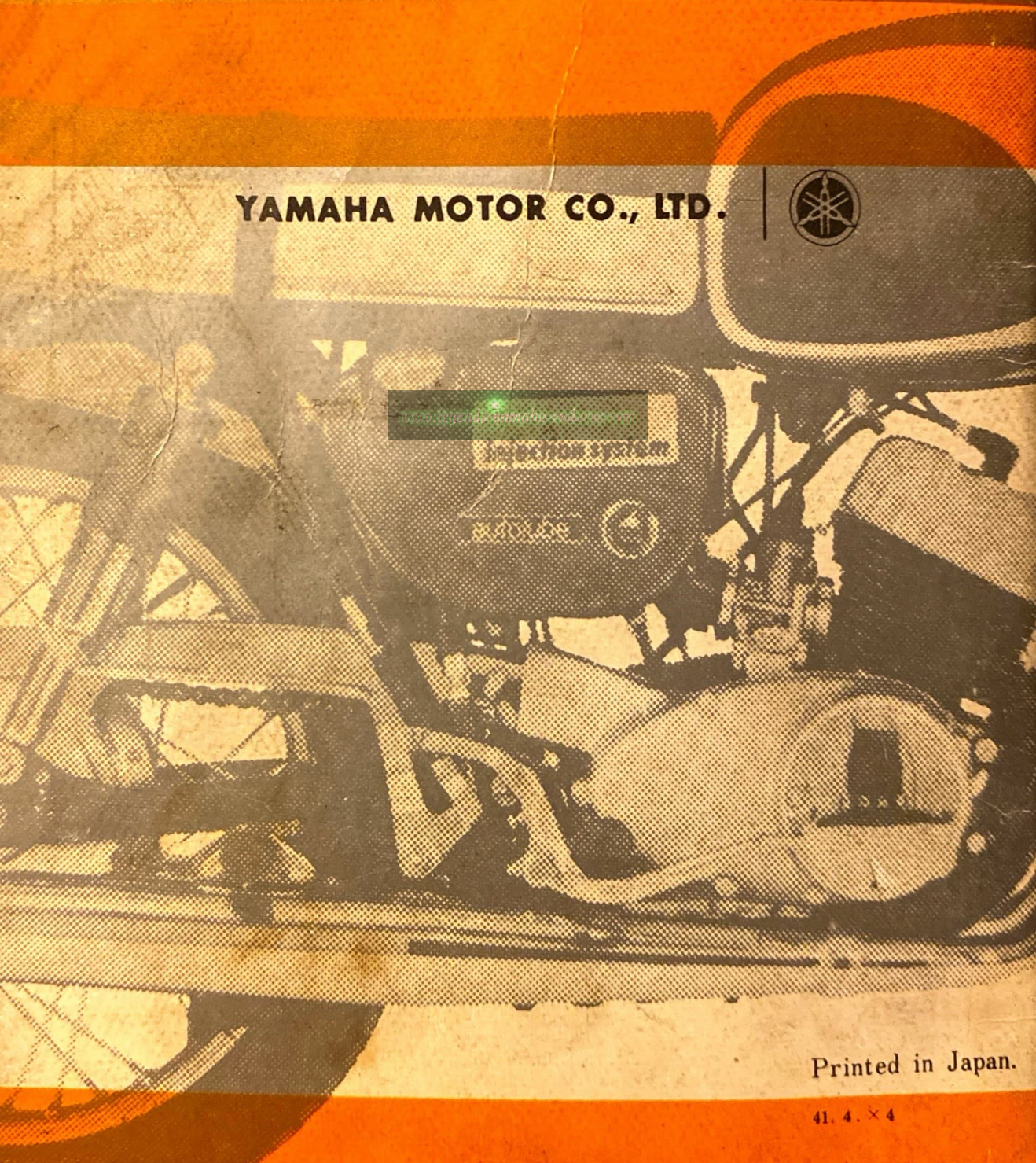
Main switch connecting

| Key position | B- C | B- L | B- T | A- C | |
|--------------|------|------|------|------|--------------------|
| 0 | × | × | × | × | Stop |
| I | ○ | × | × | × | Day driving |
| II | ○ | ○ | ○ | × | Night driving |
| III | × | × | × | ○ | Emergency starting |
| IV | × | × | ○ | × | Parking |



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