



**YAMAHA**

**DT 100C**

1976

**ASSEMBLY MANUAL**



90894-07505

## UNPACKING

### Note on transportation

Use care not to butt the machine packed in the crate against a hard object or give it a heavy shock during transportation or in the service shop.

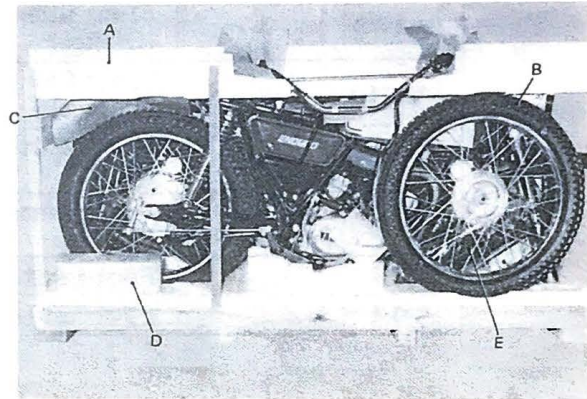
### Procedure for unpacking

To remove the machine and parts packed in the card board crate, cut the vinyl bands around the box using a cutter or scissors. Next, remove the exterior carton by lifting it straight up.

### PARTS CHECK LIST

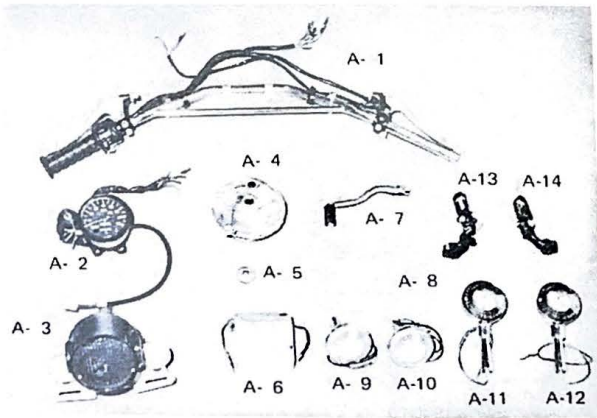
Before starting the assembly, check for damaged or missing. Also check the machine for damage, scratches and other defects.

No.	Q'ty/Unit	Parts name
A	1	Foam styrol case
B	1	Front wheel
C	1	Front fender
D	1	Card board case
E	1	Seat



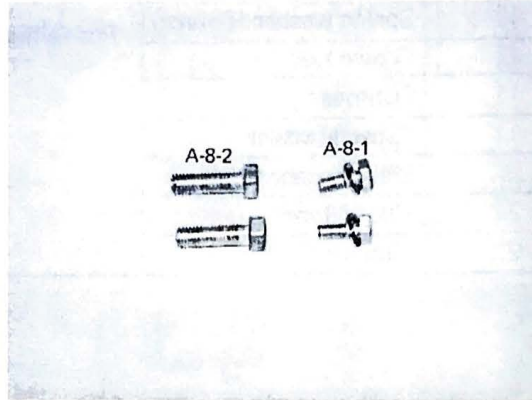
Details of parts on foam styrol case "A"

No.	Q'ty/Unit	Parts name	Remarks
A- 1	1	Handlebar assembly	
A- 2	1	Meter panel assembly	Main switch key installed
A- 3	1	Taillight assembly	
A- 4	1	Front brake shoe plate assembly	
A- 5	1	Distance collar	For front wheel
A- 6	1	Battery	
A- 7	1	Change pedal	Securing bolt installed
A- 8	1	Vinyl bag	
A- 9	1	Front flasher light (R) (Orange)	Dark green marked
A-10	1	Front flasher light (L) (Orange)	Dark brown marked
A-11	1	Rear flasher light (R) (Red)	Dark green lead wire
A-12	1	Rear flasher light (L) (Red)	Dark brown lead wire
A-13	1	Foot rest (R)	
A-14	1	Foot rest (L)	



Details of parts in the vinyl bag "A-8"

No.	Q'ty/Unit	Parts name	Remarks
A-8-1	2	Bolt (6 x 15 mm) with spring washer	For meter panel
A-8-2	2	Bolt (8 x 25 mm)	For foot rest



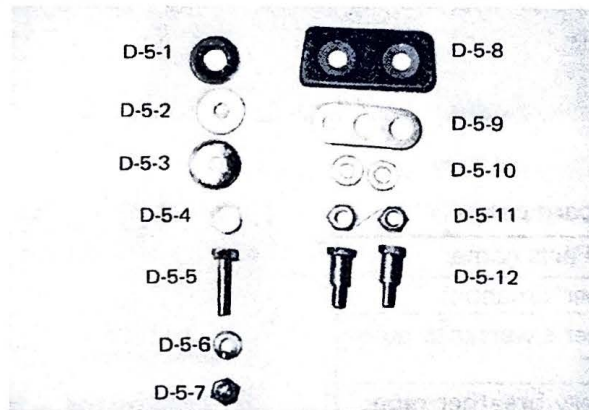
Details of parts in card board case "D"

No.	Q'ty/Unit	Parts name
D-1	1	Owner's manual
D-2	1	Owner's warranty guide book
D-3	1	Battery breather pipe
D-4	1	Battery seat
D-5	1	Vinyl bag
D-6	1	Connector cover
D-7	1	Vinyl bag
D-8	1	Service tool assembly
D-9	1	Rear view mirror



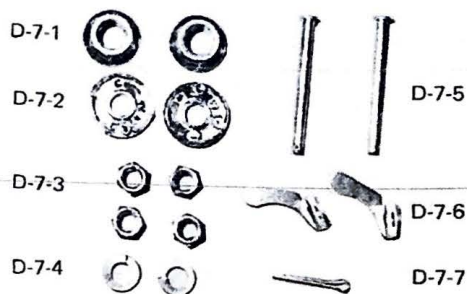
Details of parts in the vinyl bag "D-5"

No.	Q'ty/Unit	Parts name	Remarks
D-5- 1	1	Damper	For taillight assembly
D-5- 2	1	Plain washer	
D-5- 3	1	Washer with cover	
D-5- 4	1	Fender mount collar	
D-5- 5	1	Bolt (6 x 25 mm)	
D-5- 6	1	Spring washer (6 mm)	
D-5- 7	1	Crown nut	
D-5- 8	1	Damper	
D-5- 9	1	Special washer	
D-5-10	2	Plain washer (6 mm)	
D-5-11	2	Nut (6 mm)	
D-5-12	2	Shoulder bolt	



Details of parts in the vinyl bag "D-7"

No.	Q'ty/Unit	Parts name	Remarks
D-7-1	2	Nut (12 mm)	For foot rest
D-7-2	2	Flasher collar	For rear flasher light
D-7-3	4	Nut (8 mm)	For front and rear flasher light
D-7-4	2	Spring washer (8 mm)	For rear flasher light
D-7-5	2	Clevis pin	For seat
D-7-6	2	Stopper	
D-7-7	1	Cotter pin	For front wheel axle



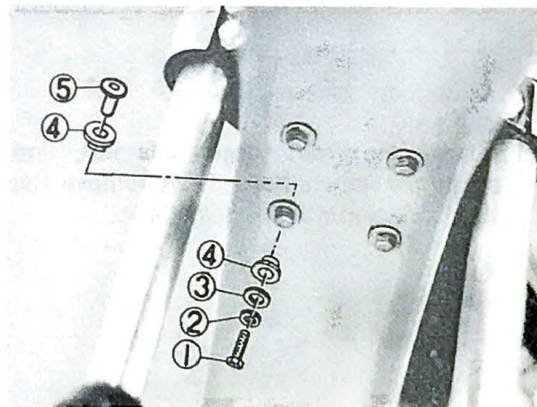
## SET-UP PROCEDURES

1. Remove the front fender held between the rear tire and the rear fender. Next, remove the front wheel.
2. Remove the seat, front wheels and card board cases and remove the nails from each corner of the crate, and remove the struts.
3. Lift up the machine, and remove the rear wheel section from the foam styrol base. Then take out the machine.
4. To install the front fender and front wheel, place a proper-size wooden box or a wooden block under the engine to keep the front of the machine raised off the floor. Take care so that the machine does not fall over.
5. Insert the front fender between the front fork legs, and secure the front fender using the specified number of bolts, spring washers, plain washer, fender collars, plain washers and dampers.

Bolts: 6 mm x 4 pcs.  
Spring washers: 6 mm x 4 pcs.  
Plain washers: 6.5 mm x 4 pcs.  
Dampers: 8 pcs.  
Fender collars: 4 pcs.

Tightening torque:

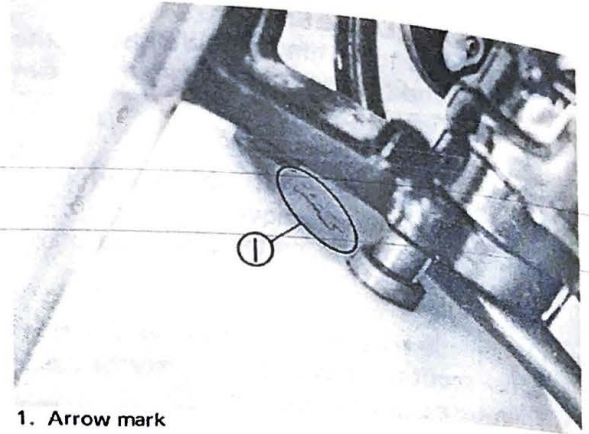
0.35 – 0.55 m·kg (30 – 48 in·lb)



- |                  |                  |
|------------------|------------------|
| 1. Bolt          | 4. Damper        |
| 2. Spring washer | 5. Fender collar |
| 3. Plain washer  |                  |

**NOTE:** \_\_\_\_\_

- a) The front fender should be installed with the arrow mark in the center facing forward.
- b) Bolts, spring washers, plain washers, dampers and fender collars are fitted to under bracket.

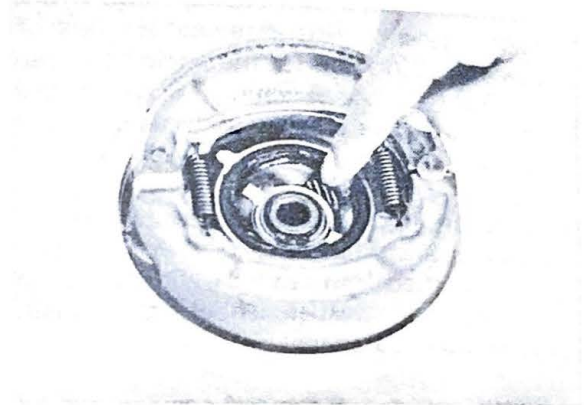


1. Arrow mark

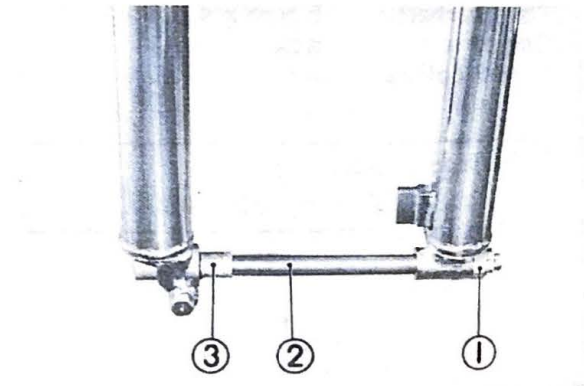
- 6. Apply a light coat of grease to the speedometer drive gear and oil seal.

**CAUTION:** \_\_\_\_\_

Take care not to put grease on the brake linings or inner surface of the brake drum. If you do so, clean using a rag dampened with a solvent. Foreign material on braking surface can cause impaired braking action.



- 7. Remove the front wheel axle nut, and loosen the pinch bolt. Then remove the wheel axle and wheel axle collar.

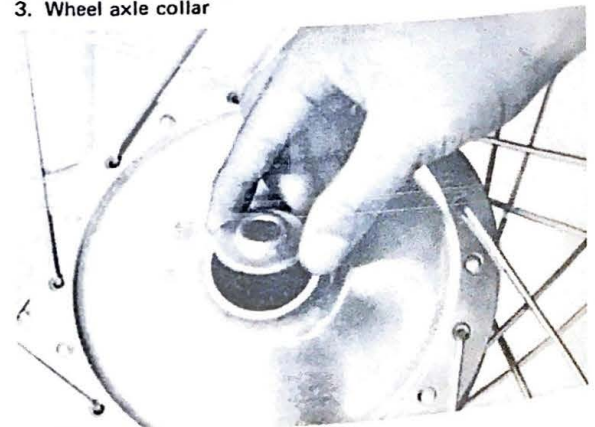


1. Axle nut    2. Wheel axle  
3. Wheel axle collar

- 8. Install the distance collar (A-5) in the wheel hub on the right side of the front wheel.

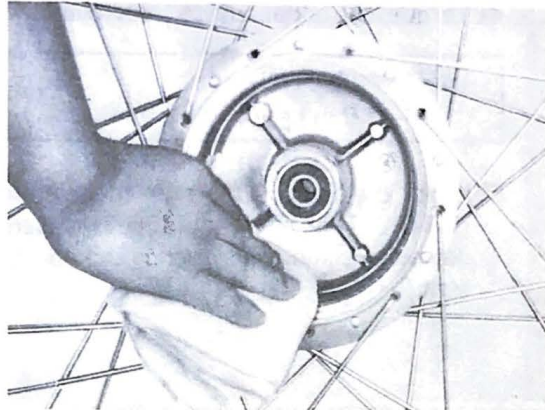
**NOTE:** \_\_\_\_\_

To avoid damaging the oil seal lip, apply a light coat of lithium base grease to the oil seal lip and collar. If the collar is dirty, clean with a rag.

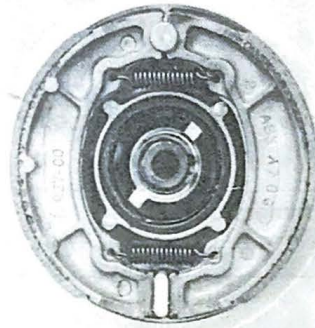


9. Install the brake shoe plate assembly in the front wheel hub.

1) Clean the inner surface of the front wheel hub with a clean cloth.



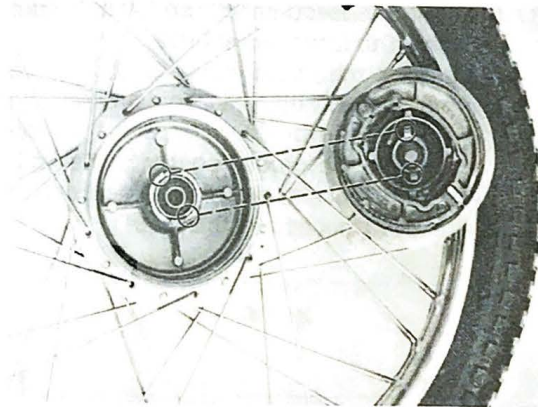
2) Make sure the brake shoes and springs are correctly installed in the shoe plate assembly. If any one of them is out of place, correct per the figure.



3) Install the brake shoe plate assembly in the wheel hub.

**NOTE:**

Make sure the two legs in the wheel hub align with the two slots in the speedometer clutch assembly.

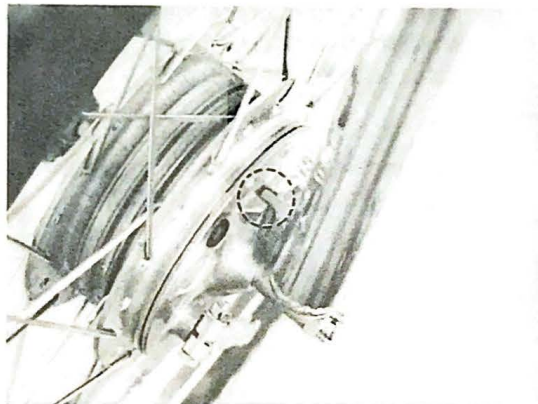


10. Install the front wheel on the front forks.

1) Insert the front wheel between the front fork legs so that the stopper (projection) on the front fork end is correctly engaged the slot in the brake shoe plate.

2) Install the axle collar on the wheel axle. Then, insert the axle, mount the plain washer on the axle, and install the axle nut.

3) Lightly tighten the pinch bolt so that the axle does not turn while the axle nut is tightened.

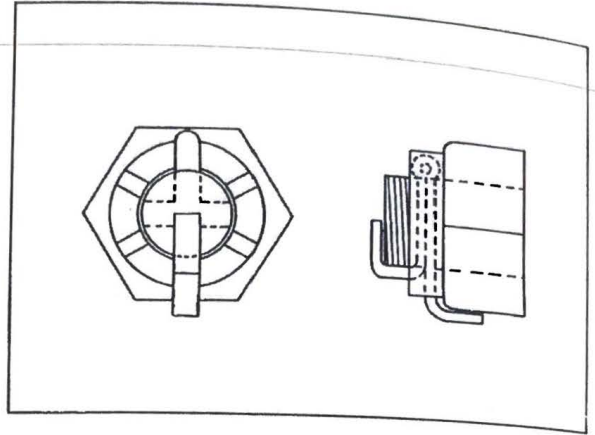




4) Torque the axle nut to specification.

Tightening torque:  
5.0 – 7.0 m-k<sub>g</sub> (36 – 51 ft-lb)

5) Lock the nut with the cotter pin (D-7-7). The pin should be inserted downward, and the pin ends should be bent.

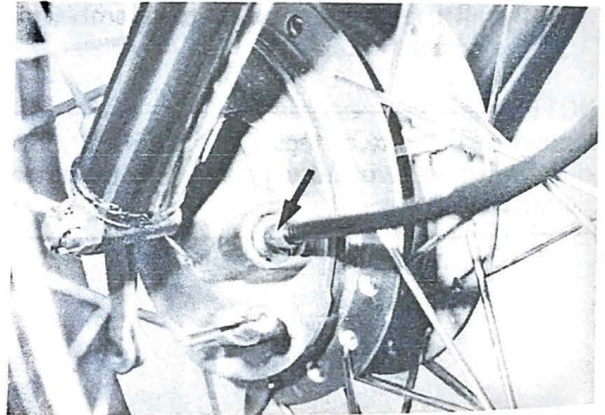


6) Torque the axle pinch bolt to specification.

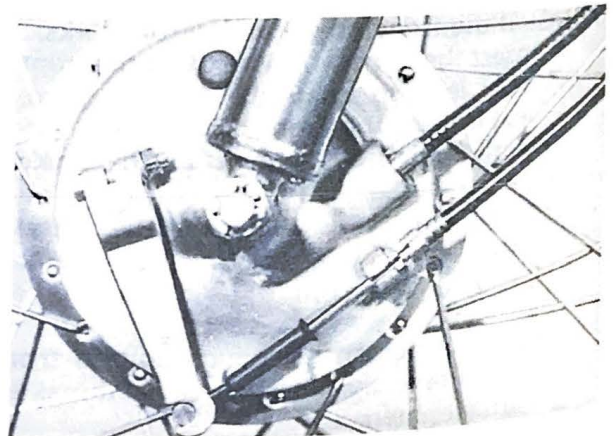
Tightening torque:  
1.4 – 2.2 m-k<sub>g</sub> (10 – 16 ft-lb)

11. Install the speedometer and front brake cables to the front wheel hub.

a) Connect the speedometer cable to the front wheel hub gear unit. Insert the cable end into the gear unit, fit the circlip in the groove on the wheel hub side, and lock the cable. (The circlip is already attached to the cable.)



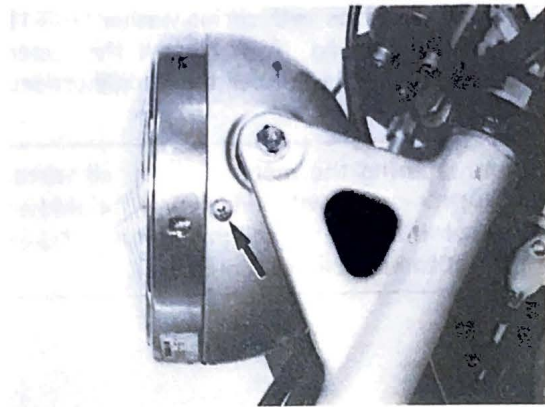
b) Insert the front brake wire end to the camshaft lever and hook the outer cable end onto the adjuster.



\* For detailed cable routing, refer to "CABLE ROUTING DIAGRAM".

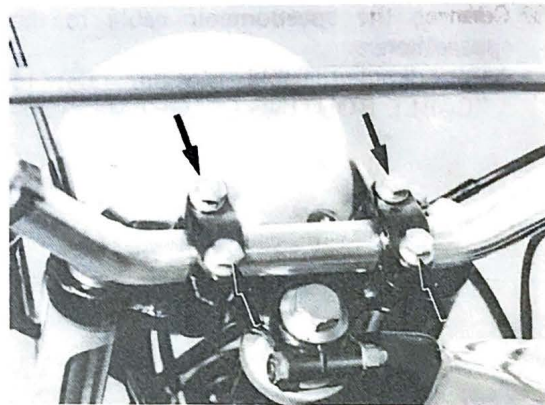
12. Remove the anchor screw from the left side of the headlight body. Insert a slotted head screw driver between the headlight body and the headlight rim, pry out the lens assembly.

**NOTE:** \_\_\_\_\_  
 During the operation, care should be taken not to scratch the headlight body and lens rim. Also take care so that the anchor screw is not lost.



13. Handlebar installation  
 1) Remove the four hexagon bolts, and remove the two handlebar holders.  
 2) Insert the all lead wire coming from the handle switches into the headlight body.

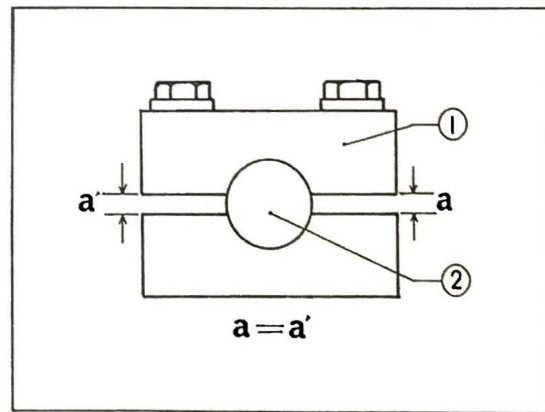
**NOTE:** \_\_\_\_\_  
 Left handle switch lead wire (multiple connector installed) will be connected under the fuel tank.



- 3) Install the handlebar using the two removed upper holders, four spring washers and hexagon bolts.

Tightening torque: 0.8 – 1.25 m·kg (70 – 110 in·lb)
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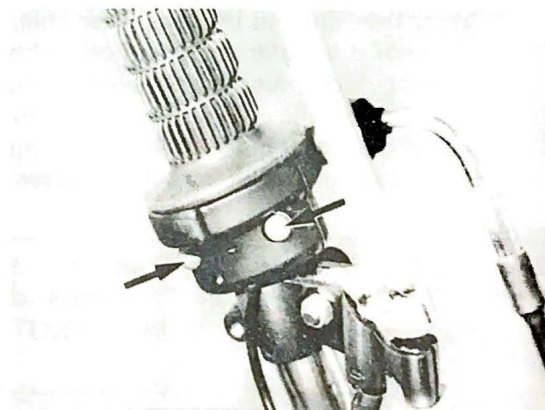
**CAUTION:** \_\_\_\_\_  
 Tighten bolts in stages and maintain an equal gap on each side of both holders.



1. Holder 2. Handlebar

14. Grease the right end of the handlebar and the throttle grip housing, and install the throttle grip.

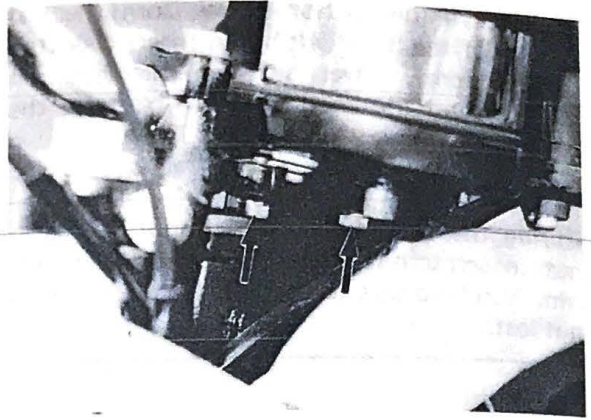
**CAUTION:** \_\_\_\_\_  
 Make certain throttle grip rotates on handlebar freely without binding. If not, normal throttle return will be impaired.



15. Using the bolts with spring washer (A-8-1) in the vinyl bag "A-8", install the meter bracket assembly under the handle crown.

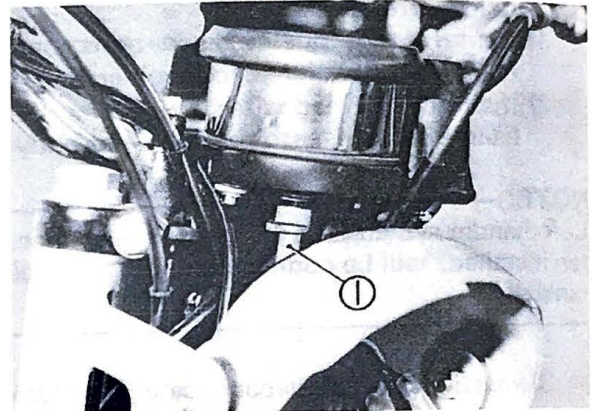
**NOTE:**

Before securing the meter bracket, all wires (except for main switch lead wire) should be threaded into the headlight body. Take care not to kink wires by pressure.



16. Connect the speedometer cable to the speedometer.

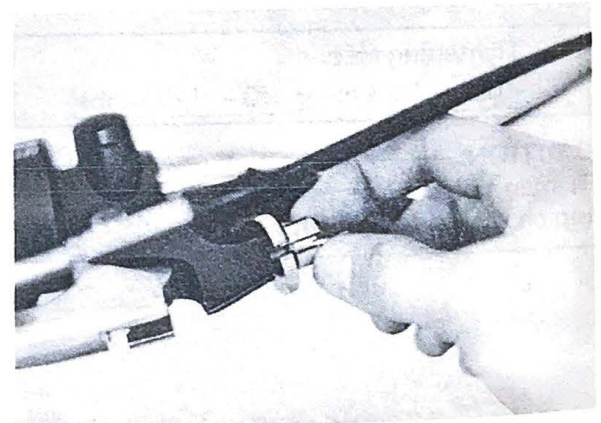
\* For detailed cable routing, refer to "CABLE ROUTING DIAGRAM".



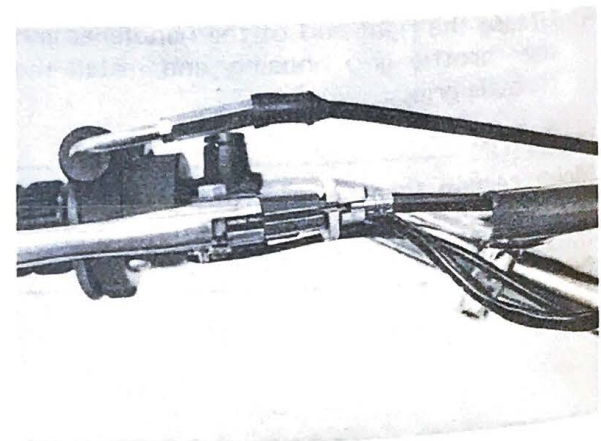
1. Speedometer cable

17. Brake wire and clutch wire installation.

- 1) Screw in the cable length adjustor on the front brake shoe plate.
- 2) Fully loosen the lever adjustor locknut, and screw in the adjustor until tight. Next, align the slit in the adjustor and adjustor lock nut with the slit in the lever holder.



- 3) Insert the wire end into the lever hole, and hook the outer cable end onto the adjustor lock nut, then squeeze the lever. Next, while pulling the outer cable release the lever quickly. While releasing it, seat the outer cable into the adjustor.

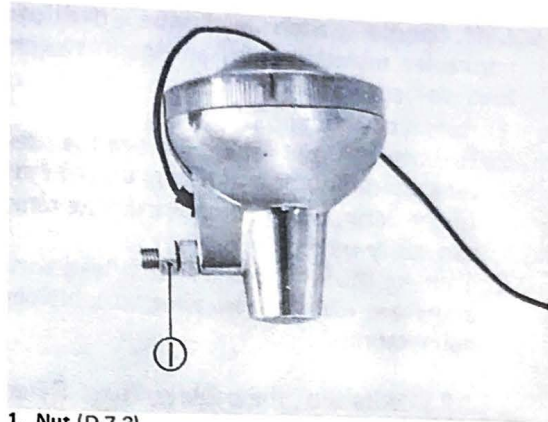


**CAUTION:**

Proper cable and wire routing is essential to insure safe vehicle operation. For details of the cable routing, refer to "CABLE ROUTING DIAGRAM".

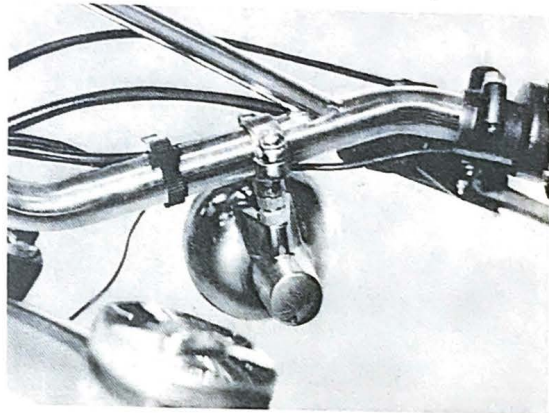
18. Front flasher light installation

- 1) Install the nuts (D-7-3) on the flasher lights.

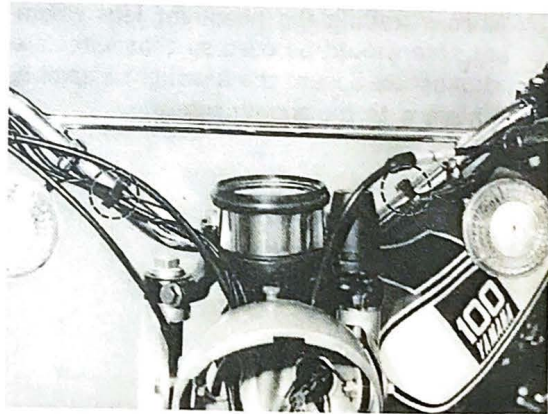


1. Nut (D-7-3)

- 2) Install both right and left front flasher lights to flasher stays of handlebar.
- 3) Lock the nuts.



- 4) Hold the light lead wire to the handlebar with a rubber band, and insert the lead wire end into the headlight body.



19. Connect all lead wires inside the headlight body. The wires of identical colors should be connected.

**NOTE:** \_\_\_\_\_

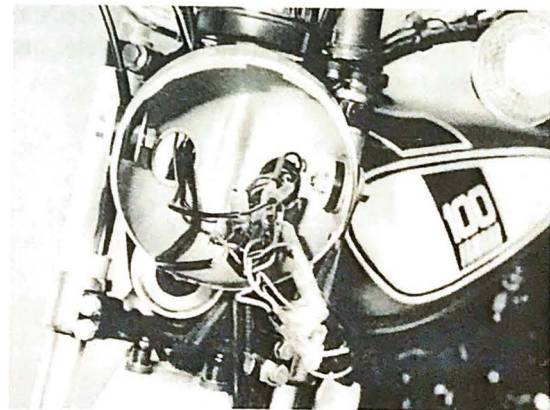
Flasher light lead wires are excluded.

Right flasher light lead wire

↔ Dark green lead wire

Left flasher light lead wire

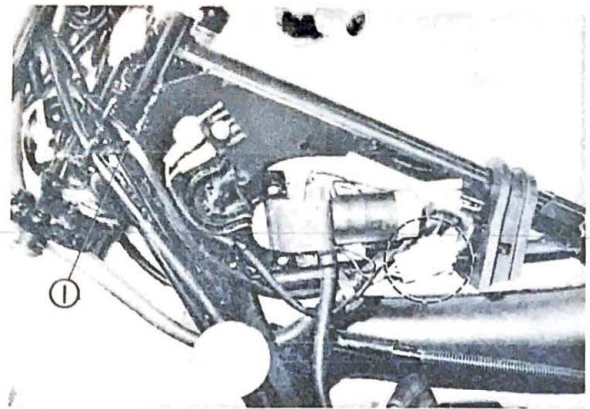
↔ Dark brown lead wire



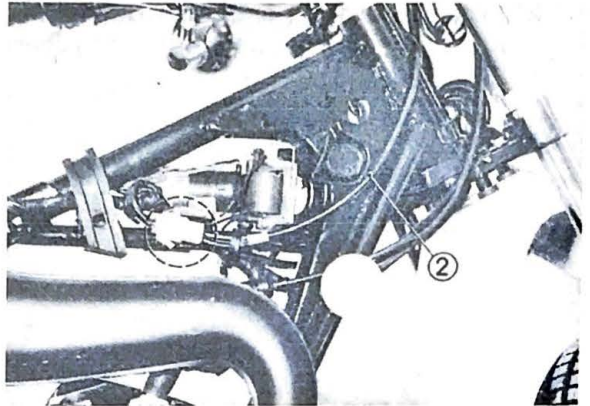
20. Left handle switch lead wire (multiple connector installed only) and main switch lead wire connection.

- 1) Remove the fuel pipe.
- 2) Remove the fuel tank. Remove the fuel tank holding bolt and lifting up the rear of the tank, pull it backward. The tank can easily be removed.
- 3) Connect the left handle switch lead wire and main switch lead wire to multiple connectors.

\* For details of the cable routing. Refer to "CABLE ROUTING DIAGRAM".

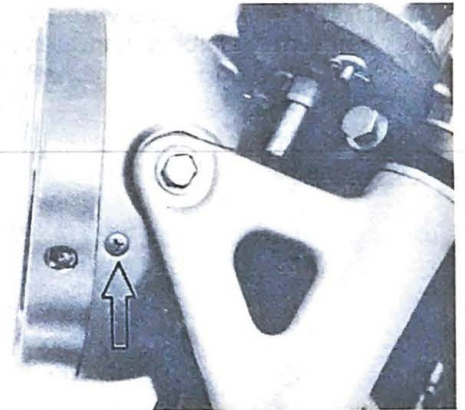


1. Left handle switch lead wire

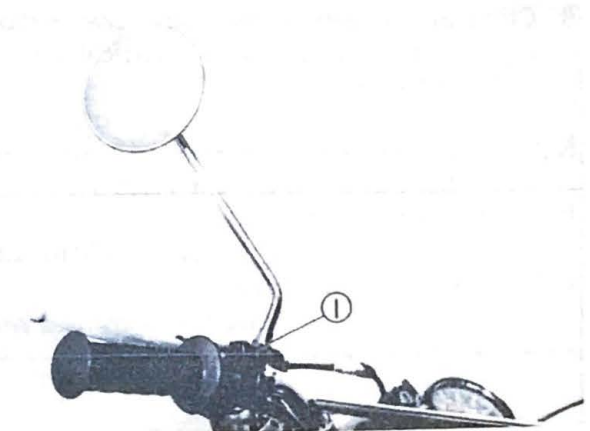


2. Main switch lead wire

21. When installing the headlight lens assembly, care should be used so that wires are not pinched. Secure the headlight assembly in place with the anchor screw.

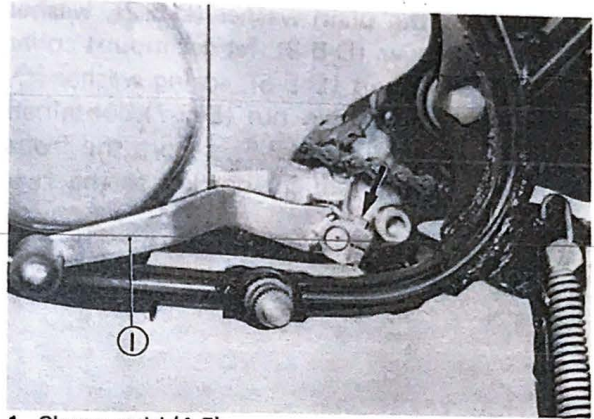


22. Install the rear view mirror (D-9) on the clutch lever holder (lefthand side), and tighten the lock nut.



1. Lock nut

23. Install the change pedal (A-7) on the change shaft, and secure it using the securing bolt.

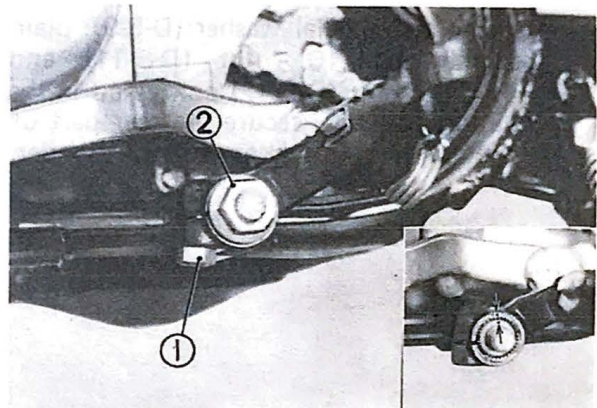


1. Change pedal (A-7)

24. Align the punch marks on foot rest bracket and frame bracket. Insert the footrest bracket into the frame bracket from under the frame. Next, lock the right and left foot rests with special nuts (D-7-1), and secure with the lock bolts (A-8-2).

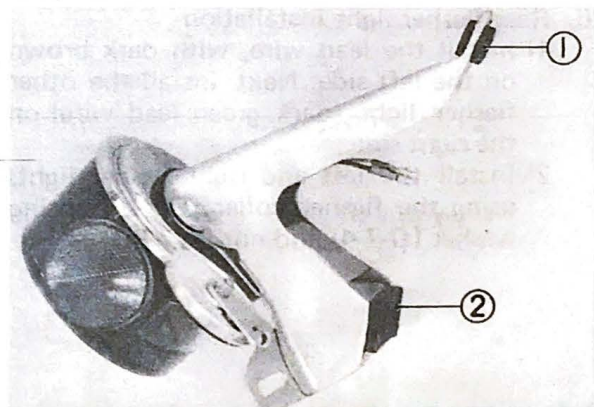
**Tightening torque:**

Special nut:	3.0 – 4.8 m-kg (26 – 46 ft-lb)
Foot rest lock bolt:	0.8 – 1.25 m-kg (70 – 110 in-lb)



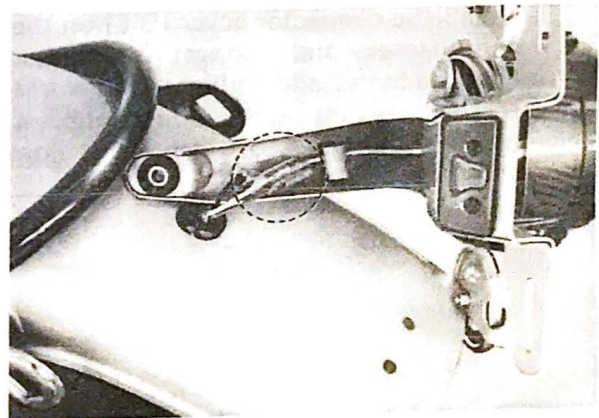
1. Foot rest lock bolt  
2. Special nut

25. Taillight assembly (A-3) installation  
1) Install the two rubber dampers (contained in the vinyl bag (D-5) on the taillight bracket.

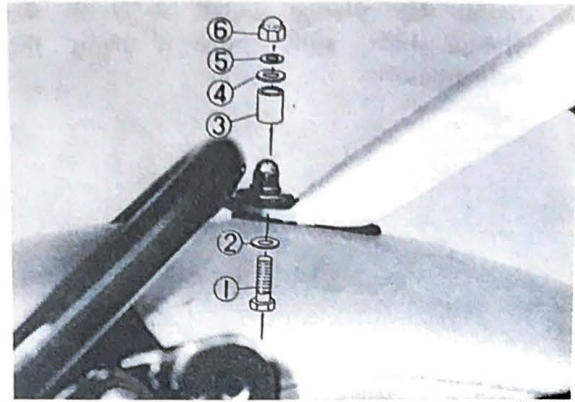


1. Damper (D-5-1) 2. Damper (D-5-8)

- 2) Connect the taillight assembly lead wire to the wire harness, and lock it with the hook. (The wires of identical color should be connected.)

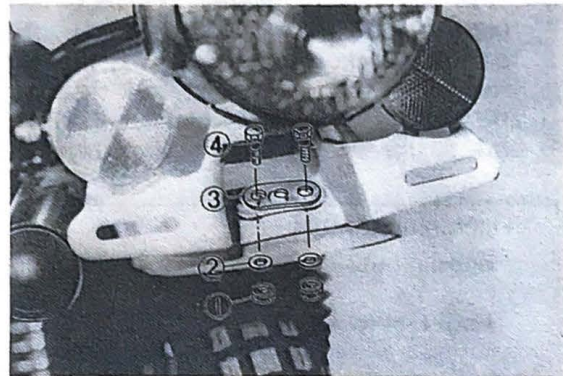


- 3) Using the plain washer (D-5-2), washer with cover (D-5-3), fender mount collar (D-5-4), bolt (D-5-5), spring washer (D-5-6), and crown nut (D-5-7) contained in the vinyl bag (D-5), secure the front part of the taillight bracket to the rear fender.



1. Bolt (D-5-5)
2. Plain washer (D-5-2)
3. Fender mount collar (D-5-4)
4. Washer with cover (D-5-3)
5. Spring washer (D-5-6)
6. Crown nut (D-5-7)

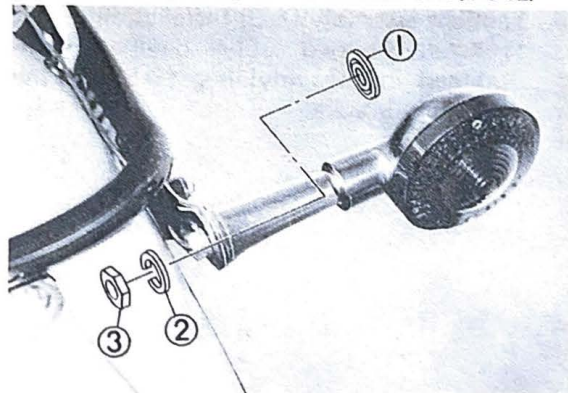
- 4) Using the special washer (D-5-9), plain washer (D-5-10), nut (D-5-11) and shoulder bolt (D-5-12) contained in the vinyl bag (D-5), secure the rear part of the taillight bracket to the fender.



1. Nut (D-5-11)
2. Plain washer (D-5-10)
3. Special washer (D-5-9)
4. Shoulder bolt (D-5-12)

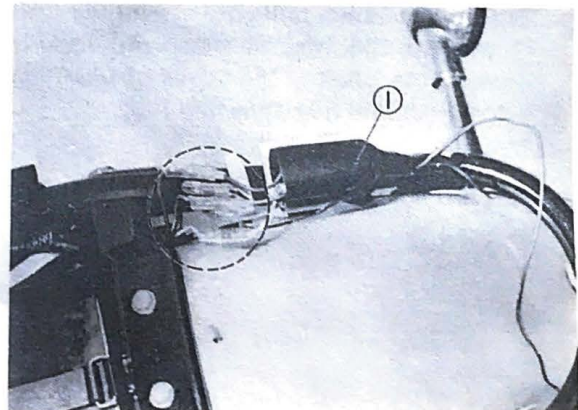
## 26. Rear flasher light installation

- 1) Install the lead wire, with dark brown on the left side. Next, install the other flasher light (dark green lead wire) on the right side.
- 2) Install the left and right flasher lights using the flasher collar (D-7-2), spring washer (D-7-4) and nut (D-7-3).



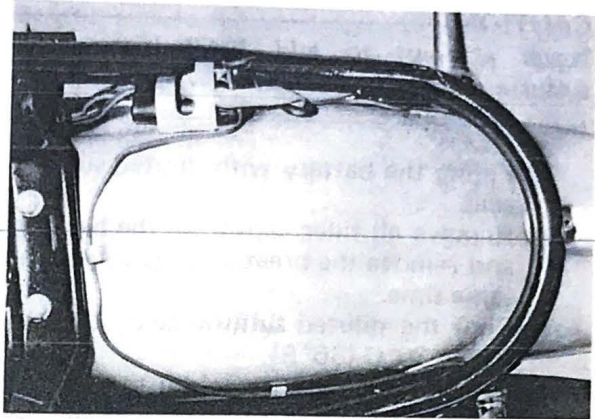
1. Flasher collar (D-7-2)
2. Spring washer (D-7-4)
3. Nut (D-7-3)

- 3) Install the connector cover (D-6) on the wire harness and connect the flasher light leadwires and taillight lead wires to the wires inside the wire connector cover. The wires of identical colors should be connected.



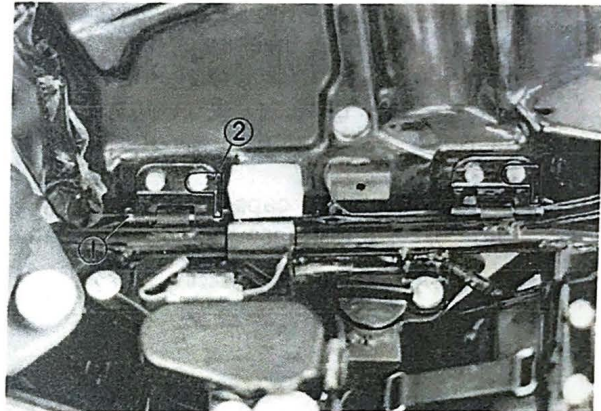
1. Connector cover (D-6)

- 4) Secure the lead wires with the clamp located on the rear fender.



27. Seat installation

Remove the rear side seat hinge securing bolts with spring washer, and using the clevis pins (D-7-5), secure the seat to the frame. The clevis should be installed into the hinge from the rear side, and its front end should be locked with stoppers (D-7-6).



1. Clevis pin (D-7-5)  
2. Stopper (D-7-6)

28. Battery

- 1) When filled with diluted sulfuric acid electrolyte, this battery can be put into use immediately. That is, it is a dry-charged battery. It is advisable, however, that the battery be charged as much as possible before using for the first time for maximum performance. This initial charge will prolong the life of the battery.

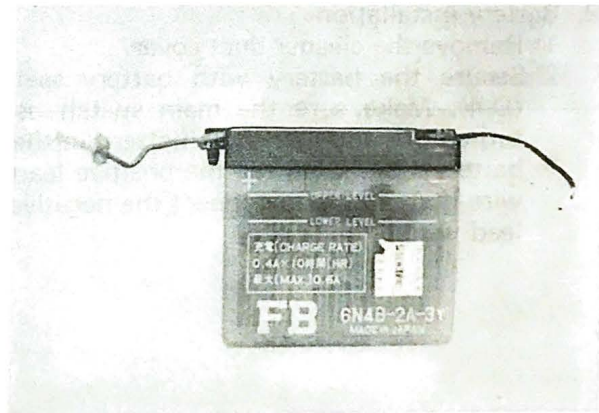
charging current: 0.4A  
charging hours: 10 hrs.

- 2) How to prepare diluted sulfuric acid. The diluted sulfuric acid can be prepared by adding sulfuric acid to distilled water at a specific mixing ratio.

Specific gravity at 20°C - 1.26

Ratio of distilled water to sulfuric acid - 3.2

Pour distilled water into a glass container and add sulfuric acid while stirring with a glass stick. Adding the acid will generate heat, and therefore, care should be taken so that heat does not excessively.





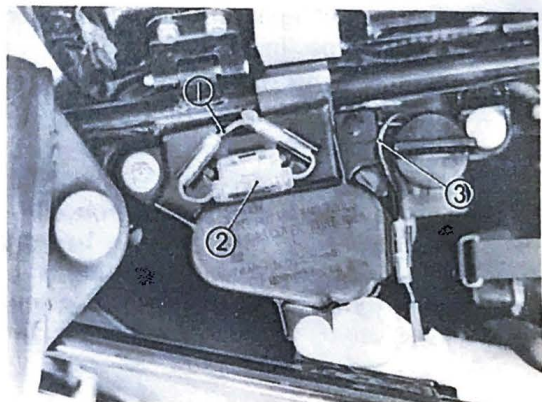
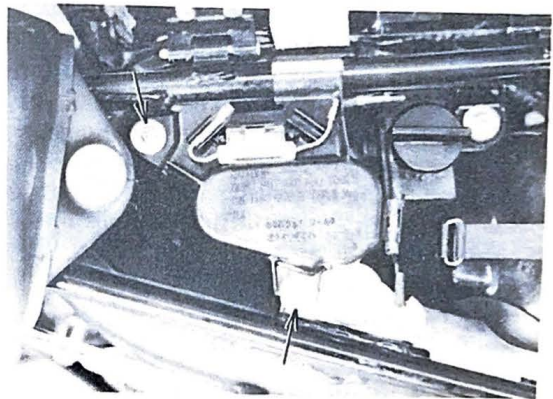
**CAUTION:** \_\_\_\_\_  
Never attempt to add distilled water to sulfuric acid.

---

- 3) Filling the battery with diluted sulfuric acid.
  - a. Remove all filler caps from the battery, and remove the breather pipe cap at the same time.
  - b. Cool the diluted sulfuric acid down to below 30°C (86° F).
  - c. Pour diluted sulfuric acid into each cell little by little up to the upper level line, and leave it for a while. When the battery fluid permeates the plates and separators, the fluid level begins to lower. Add diluted sulfuric acid again.
  - d. Charge the battery as required, and measure the specific gravity of the fluid.
  - e. Install the filler caps, and thoroughly wipe off the fluid around the filler caps.

29. Battery installation

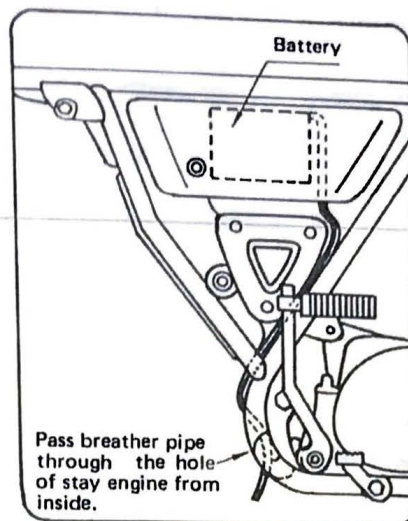
- 1) Remove the cleaner duct cover.
- 2) Secure the battery with battery seat (D-4). Make sure the main switch is turned off, and install the battery in the battery box. Connect the positive lead wire first, and then connect the negative lead wire.



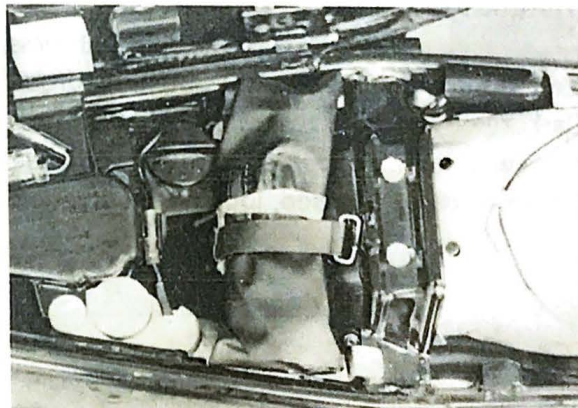
1. Positive lead wire      2. Fuse  
3. Negative lead wire

- 3) The breather pipe should be connected as illustrated.

**NOTE:**  
Route the breather pipe outlet down and away from any part of the machine.

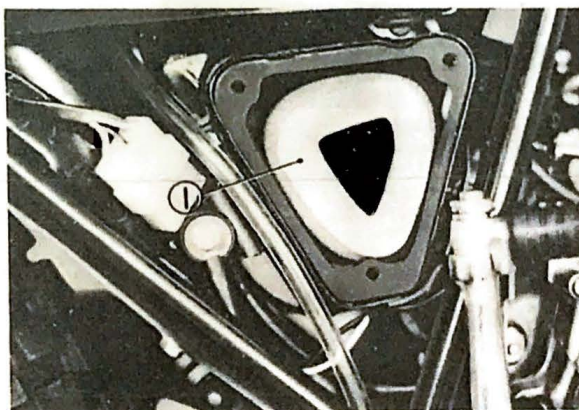


30. Install the service tool assembly (D-8) as photo.



31. Air filter preparation

Remove air filter element from the case. Remove foam from wire mesh core. Wash foam clean in solvent. Remove all dirt and oil. Wring out foam until almost dry. Pour a few ounces of 30 wt. motor oil over a few ounces of 30 wt. motor oil over foam and work it into the entire surface. Wring out gently to remove excess oil (foam should be wet but not dripping). Install wire mesh core. Apply all purpose grease to ends of foam. Install element in case.



1. Air filter element

## INSPECTIONS AND ADJUSTMENTS

### Inspections

After all packed parts are installed, check to see that all these parts and other parts (mounted or installed at the Yamaha factory) are correctly mounted or installed, or tightened to specification. This check-up should be started with the front of the machine.

### Item

Front wheel spokes .....	Tension	Brake pedal .....	Position, looseness, operation
Front wheel rim .....	Hopping, deflection	Seat .....	Mounting, clevis pin, stoppers
Front wheel tire .....	Tire pressure	Fuel tank .....	Mounting
Front wheel axle nut		Fuel pipe .....	Connection
..... Cotter pin, tightening torque		Battery .....	Mounting, fluid level, wiring
Front wheel axle pinch bolt		Rear fender .....	Mounting
..... Tightening torque		Taillight .....	Mounting, wiring
Front fork pinch bolts .....	Tightening torque	Rear flasher light .....	Mounting, wiring
Steering head lock nut .....	Tightening torque	Rear shock absorber	
Handlebar holder .....	Tightening torque	..... Mounting, tightening torque	
Clutch lever holder .....	Tightening torque	Rear swing arm pivot shaft	Tightening torque
Brake lever holder .....	Tightening torque	..... Tightening torque	
Front flasher light .....	Mounting, wiring	Rear axle nut .....	Cotter pin, tightening torque
Throttle housing		Chain puller .....	Lock nut
..... Position, operation, tightness		Rear wheel .....	Spoke tension
Engine mounting bolts .....	Tightening torque	Rear wheel rim .....	Hopping, deflection
Carburetor joint(s) .....	Tightness	Rear wheel tire .....	Tire pressure
Footrests .....	Position, tightening torque	Transmission oil .....	Oil level
Change pedal ...	Position, looseness, operation	Engine oil .....	Oil level

## Adjustments

### NOTE:

This section deals with the main points only. For details, refer to the service manual for this model.

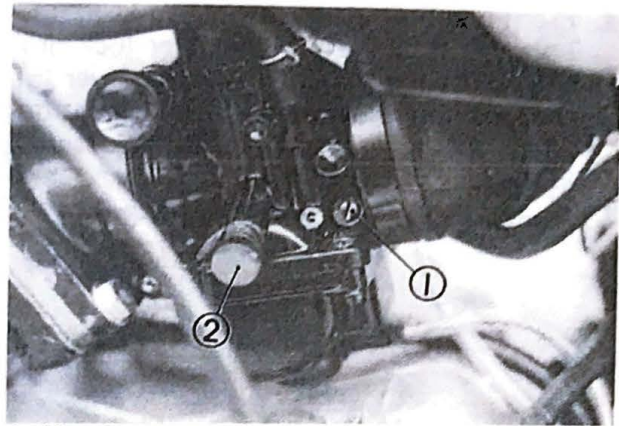
#### 1. Idling speed adjustment

- 1) Before adjustment, fully warm up the engine.
- 2) Fully tighten the air screw, and turn in and out the throttle stop screw so that the engine runs at the lowest possible speed.
- 3) Slowly back out the air screw, and the engine speed increase. When the engine idles faster, stop turning the air screw. Standard turns out: 1-½
- 4) Next, back out the throttle stop screw so that the engine idles at the specified speed.

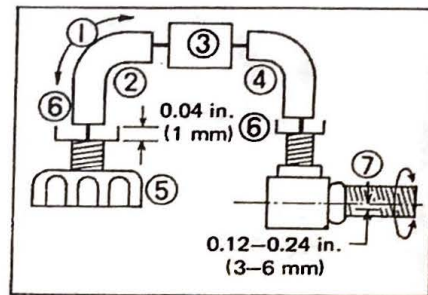
Standard speed: 1350 – 1450 r.p.m.

#### 2. Throttle wire adjustment

- 1) After adjusting the idling speed, adjust the play in throttle wire 2 to 0.04 in. (1.0 mm)
- 2) Next, adjust the play to throttle wire 1 to 0.12 – 0.24 in. (3–6mm) at the throttle grip flange.



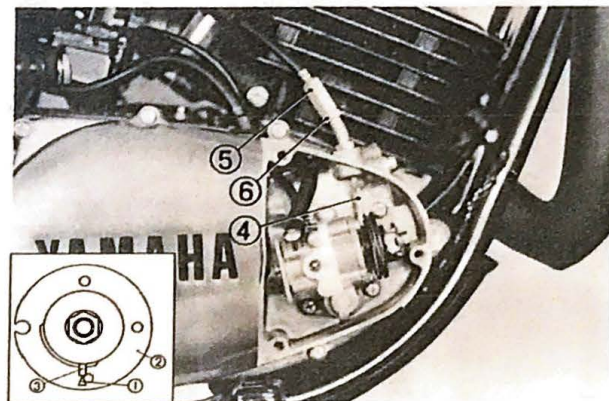
1. Pilot air screw  
2. Throttle stop screw



1. Slide  
2. Cable 2  
3. Junction block  
4. Cable 1  
5. Carburetor cap  
6. Cable adjuster  
7. Throttle grip

#### 3. Pump wire adjustment

- 1) Remove pump cover
- 2) Open throttle slightly to take up all play.
- 3) Loosen wire adjuster lock nut and turn adjuster in or out until the proper mark on the adjusting pulley is aligned with the guide pin.

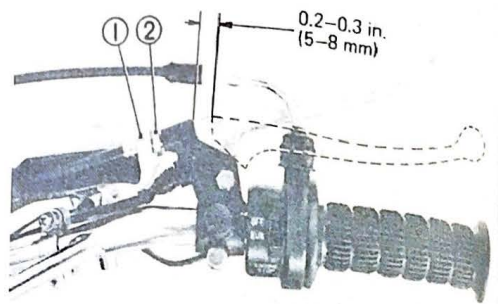


1. Mark (Δ)  
2. Adjust pulley  
3. Pin  
4. Pump cable  
5. Adjuster  
6. Adjuster lock nut

4. Front brake wire adjustment

Loosen the brake wire adjuster lock nut, and adjust the play of the brake lever (at the position illustrated) to specification. After the adjustment, be sure to screw in the lock nut until tight.

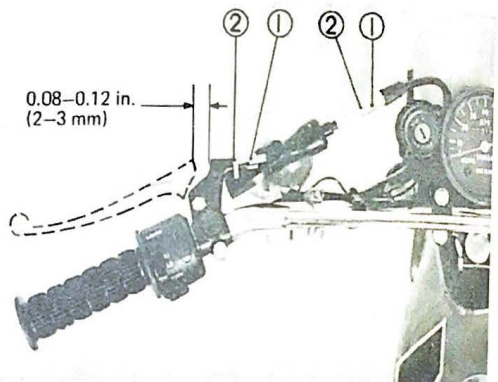
Standard value: 0.2–0.3 in. (5–8 mm)



1. Adjuster  
2. Adjuster lock nut

5. Clutch wire adjustment

Loosen the clutch wire adjuster lock nut, and adjust the clutch wire by turning the wire adjuster. Turning the adjuster clockwise (the adjuster is tightened) increases clutch wire play, while turning counter-clockwise decreases the play. The play should be 0.08–0.12 in. (2–3 mm) at the position shown in the figure.

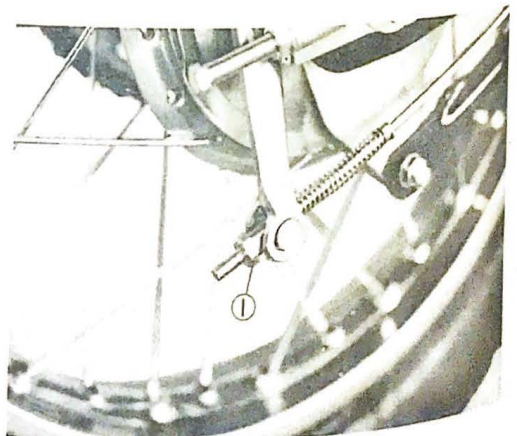
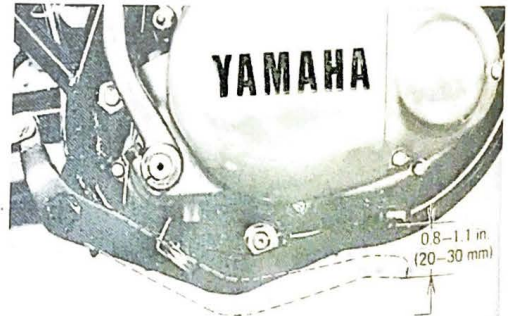


1. Adjuster  
2. Adjuster lock nut

6. Rear brake pedal adjustment

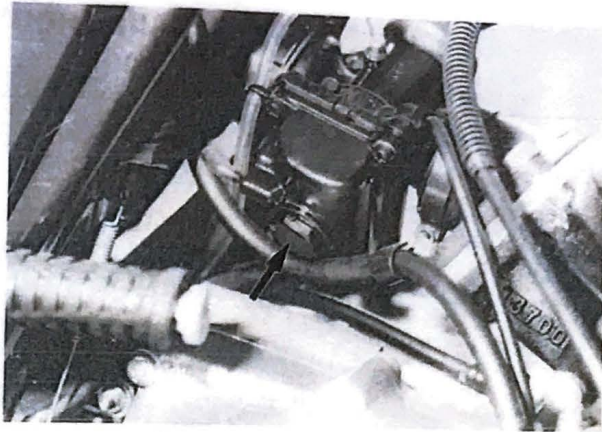
Rear brake pedal play can be adjusted by turning the adjusting nut on the rear end of the brake rod. Turning clockwise (tightening) decreases play. Turning counter-clockwise (loosening) increases play.

Standard value: 0.8–1.1 in. (20–30 mm)  
/ at the brake pedal

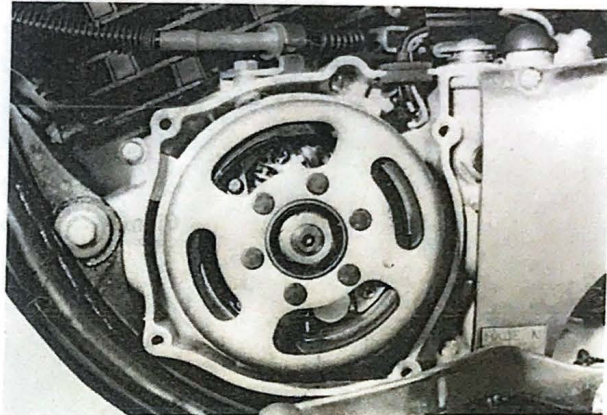


1. Adjusting nut

7. If the engine will not start or will not start easily after inspection and adjustments are complete, check the following parts.
- 1) Carburetor  
Remove the drain screw attached to the carburetor float bowl, and drain off the gasoline.

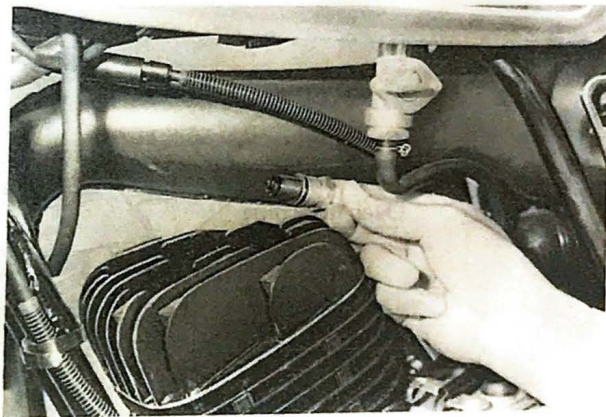


- 2) Breaker points — checking and cleaning  
If the engine is hard to start, the breaker point surfaces are considered to be dirty. Clean with a clean cloth damped with a solvent, and try to start the engine.

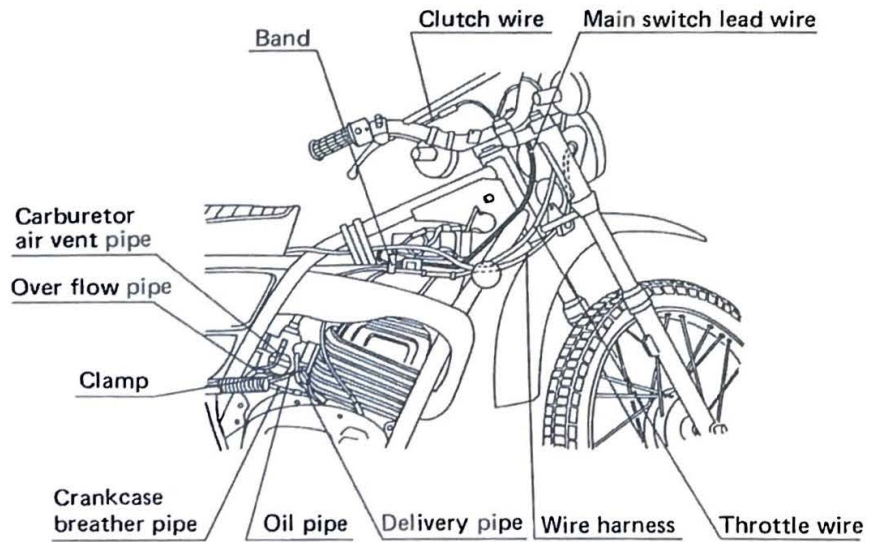
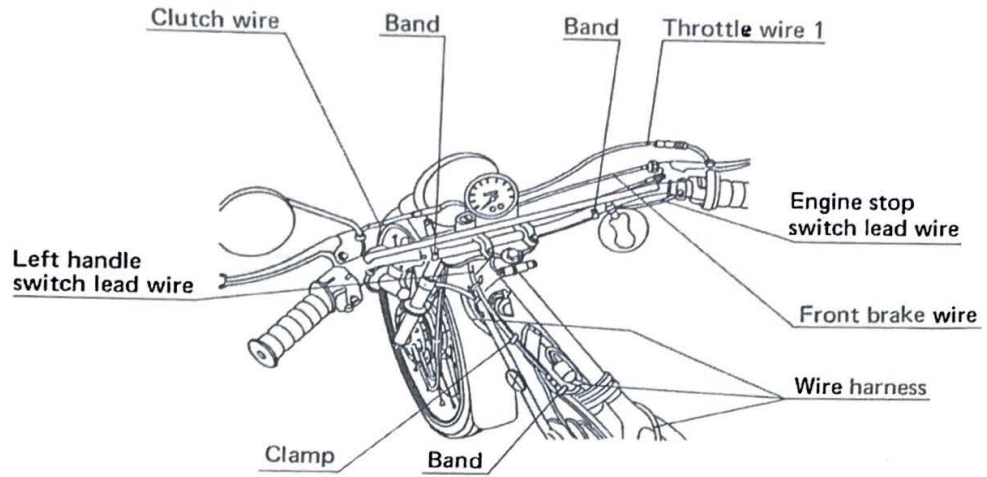


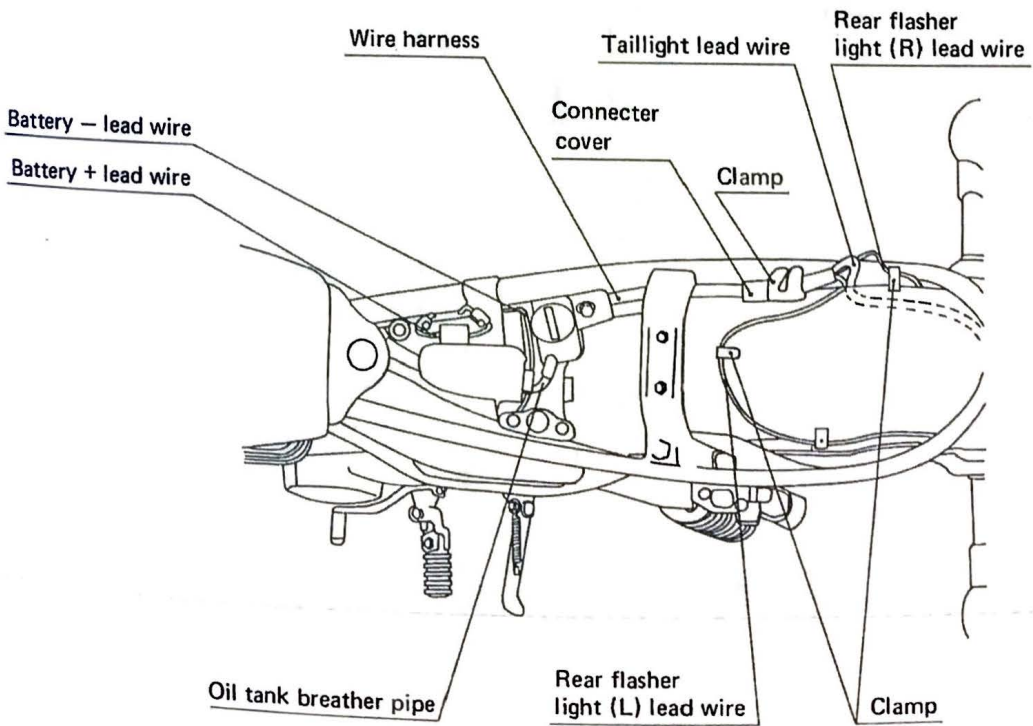
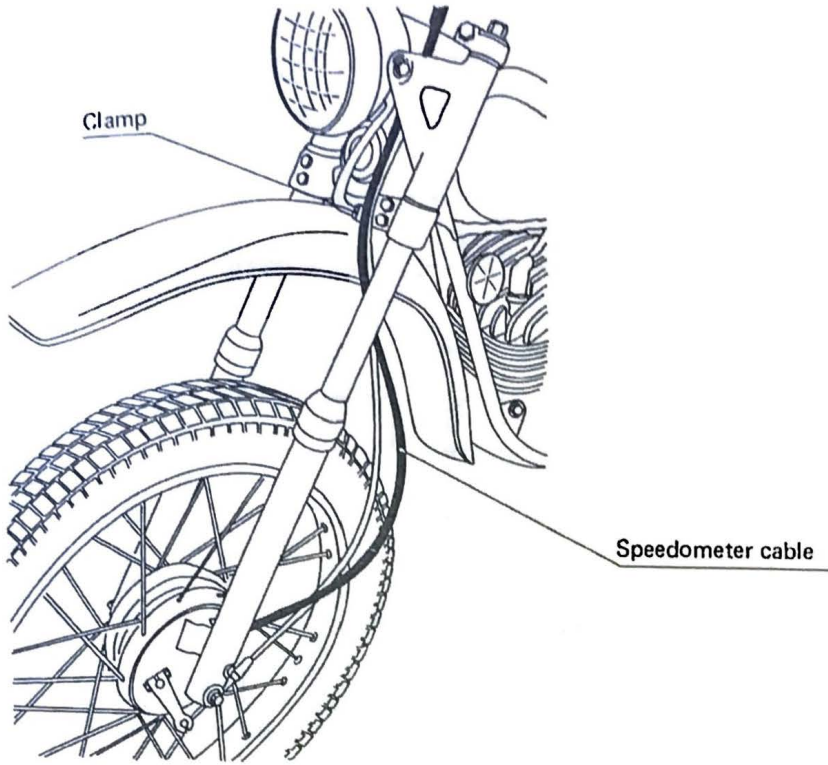
- 3) Ignition timing — checking and adjustment  
After starting the engine, check the ignition timing, and if necessary, adjust.  
Ignition timing:  $0.071 \pm 0.006$  in.  
( $1.8 \pm 0.15$  mm)

- 4) Spark plug — checking and adjustment  
When the machine is stored or not used for a long period of time, the spark plug may get wet with oil. If so, hard starting will result. Remove the spark plug, and clean as required.



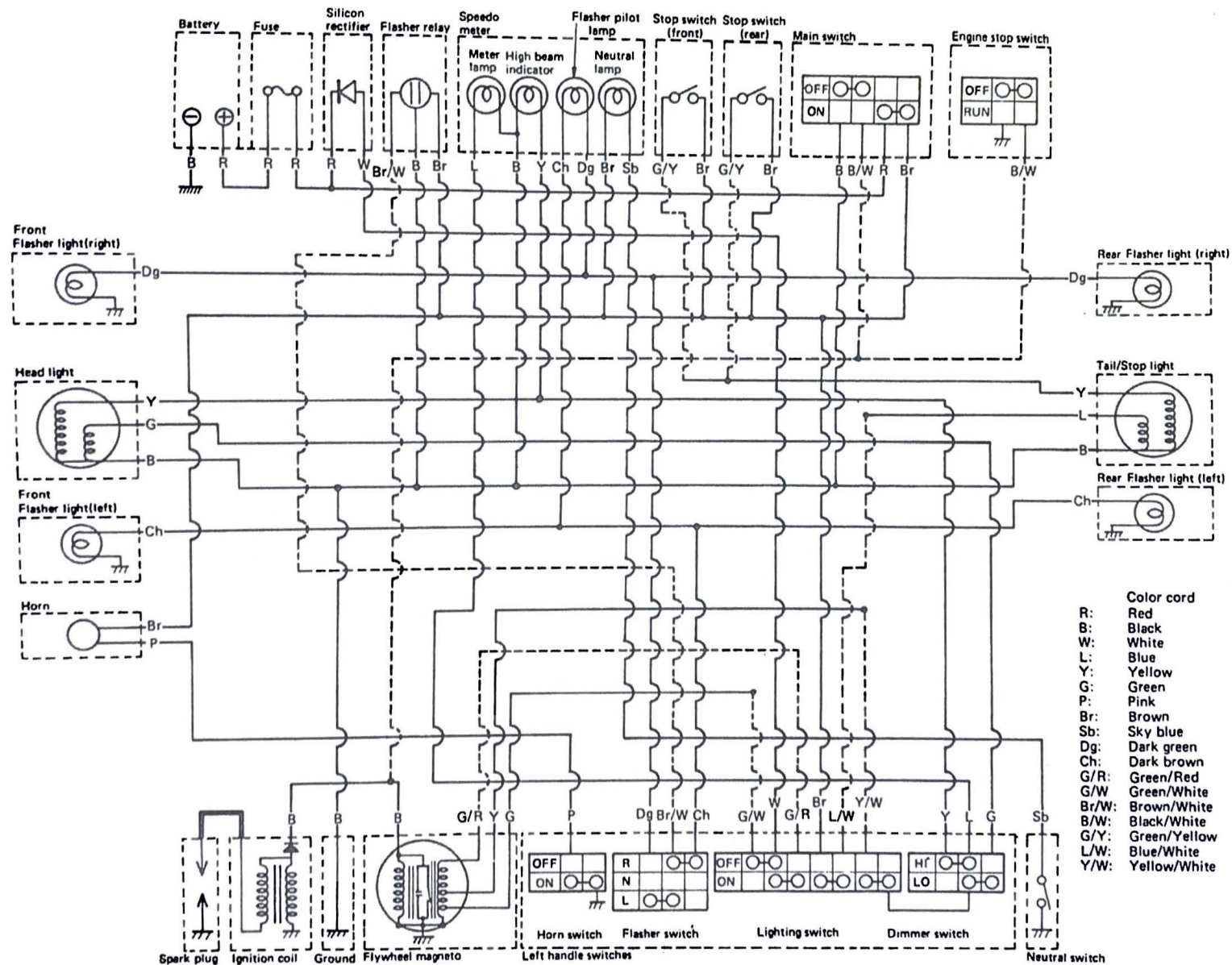
# CABLE ROUTING DIAGRAM







# DT100C WIRING DIAGRAM





SINCE 1887

**YAMAHA MOTOR CO., LTD.**

IWATA, JAPAN

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