



**YAMAHA**

# YZ60H

## ASSEMBLY MANUAL



## FOREWORD

This Assembly Manual contains the information required for the unpacking and assembly of Yamaha machines so that the Yamaha serviceman can assemble the machines in the correct manner. To perform machine assembly, a basic knowledge of service and Yamaha machines is required. Therefore, all Yamaha dealers are urged to study the service of Yamaha machines using the relevant service manuals.

## NOTICE

This service specifications given in this Assembly Manual are based on the model as manufactured. When this model may require improvements, the service specifications may be subject to change in the future. Modifications are inevitable and significant changes in specifications or procedures will be forwarded to Authorized Yamaha dealers. The assembly procedure is described in the order that the mechanic should follow, and the correct service tools should be used in the correct manner. Failure to do this may result in poor performance and harm to the rider.

Particularly important information is distinguished in this manual by the following notations:

- NOTE:** A NOTE provides key information to make procedures easier or clearer.
- CAUTION:** A CAUTION indicates special procedures that must be followed to avoid damage to the machine.
- WARNING:** A WARNING indicates special procedures that must be followed to avoid injury to a machine operator or person inspecting or repairing the machine.

**YZ60H ASSEMBLY MANUAL**  
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# PREPARATION

To assemble the machine correctly, the following supplies and working space are required.

### Supplies

Oils, greases, shop rags, electrical contact cleaner.

### Workshop

The workshop where the machine is assembled should be clean and large. The floor should be level.

# UNPACKING

### Note on transportation

Use caution when transporting the crate to service shop. Do not subject crate to heavy shock.

### Procedure for unpacking

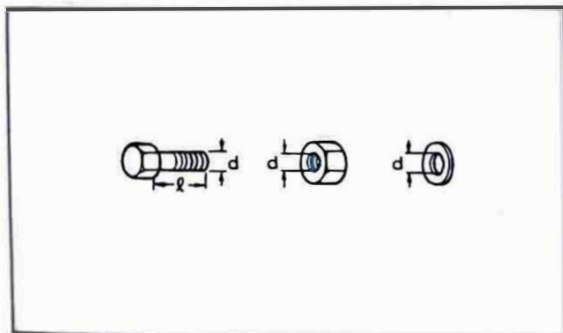
To remove the machine and parts packed in the card board crate, cut the vinyl bands around the box using a cutter or scissors. Next, remove the exterior carton by lifting it straight up.

# PARTS CHECK LIST

Before starting the assembly, check for damaged or missing parts (listed below). Also check the machine for damage, scratches and other defects.

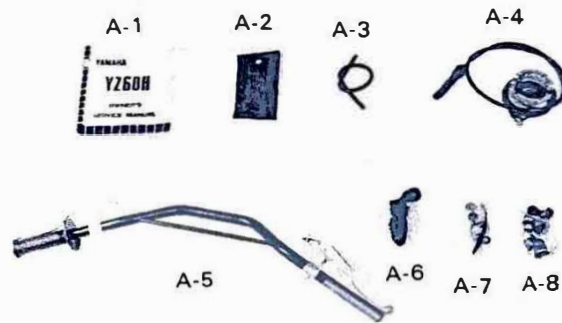
### NOTE:

The sizes of bolts, nuts, washers and collars are shown below. The sizes of special parts are indicated in the respective tables.



### Parts list "A": Foam tray

| No. | Part name              | Q'ty |
|-----|------------------------|------|
| A-1 | Owner's service manual | 1    |
| A-2 | Tool kit               | 1    |
| A-3 | Tank breather hose     | 1    |
| A-4 | Front brake shoe plate | 1    |
| A-5 | Handle bar assembly    | 1    |
| A-6 | Footrest (R)           | 1    |
| A-7 | Vinyl bag "A"          | 1    |
| A-8 | Vinyl bag "B"          | 1    |



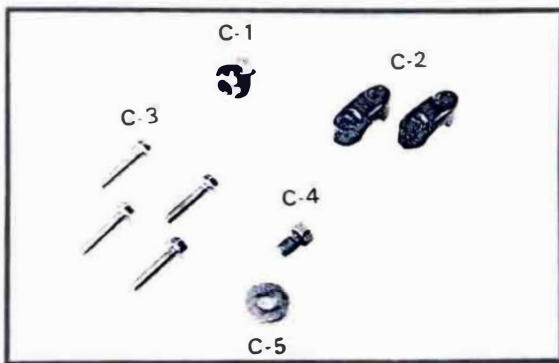
### Parts list "B": Vinyl bag "A"

| No. | Part name   | Q'ty | Remarks       |
|-----|---|------|---------------|
| B-1 | Plate washer<br>(d = 6 mm (0.24 in))                                    | 4    | Front fender  |
| B-2 | Bolt with spring washer<br>(d = 6 mm (0.24 in),<br>ℓ = 20 mm (0.79 in)) | 4    |               |
| B-3 | Cotter pin  | 1    | Front wheel   |
| B-4 | Switch cord band  | 1    | Handle switch |



Parts list "C": Vinyl bag "B"

| No. | Part name   | Q'ty | Remarks     |
|-----|---|------|-------------|
| C-1 | Collar  | 1    | Front wheel |
| C-2 | Handle upper holder   | 2    | Handlebar   |
| C-3 | Flange bolt<br>(d = 8 mm (0.30 in),<br>ℓ = 35 mm (1.38 in)) | 4    |             |
| C-4 | Bolt<br>(d = 10 mm (0.39 in),<br>ℓ = 16 mm (0.63 in))       | 1    | Footrest    |
| C-5 | Plate washer<br>(d = 10 mm (0.39 in))                       | 1    |             |

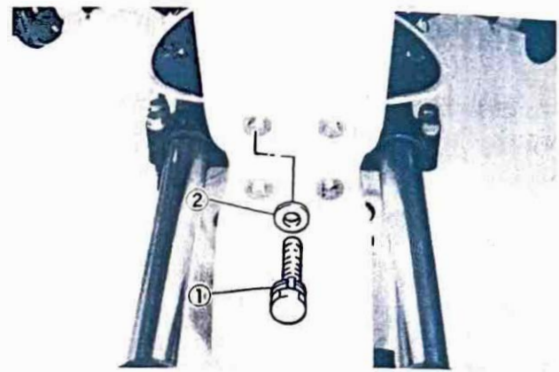


Detail of Owner's tool kit

| No. | Part name             | Q'ty |
|-----|-----------------------|------|
| 1   | Tool bag              | 1    |
| 2   | Box wrench (19-21 mm) | 1    |
| 3   | Handle                | 1    |

**SET-UP PROCEDURES**

- 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.
- Insert the front fender between the front fork legs, and secure the front fender using the bolts with washers and plate washers.

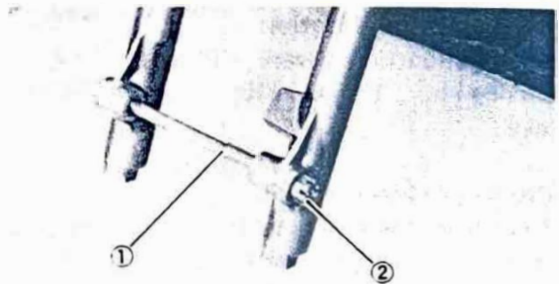


1. Bolt with spring washer (B-2)

2. Plain washer (B-1)

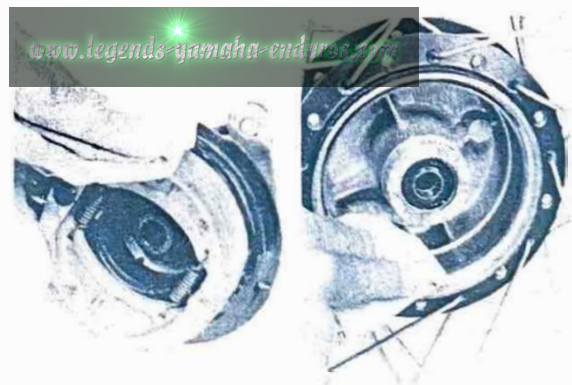
Tightening torque: 0.6 m·kg (4 ft·lb)

- Remove the front wheel axle nut. Then remove the wheel axle.

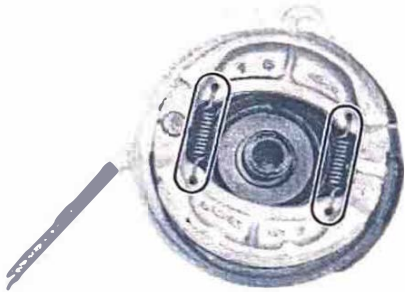


1. Wheel axle 2. Wheel axle nut

- Install the brake shoe plate assembly in the front wheel hub.
  - Clean the inner surface of the front wheel hub with a clean cloth.



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

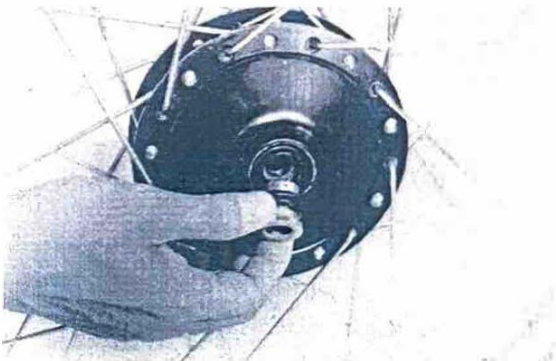


- c. Install the brake shoe plate assembly in the wheel hub.

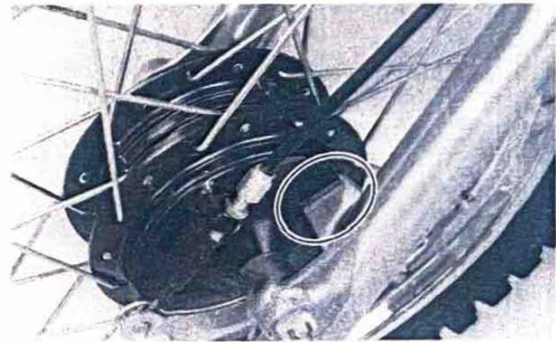
5. Install the axle collar in the wheel hub on the right side of the front wheel.

**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.



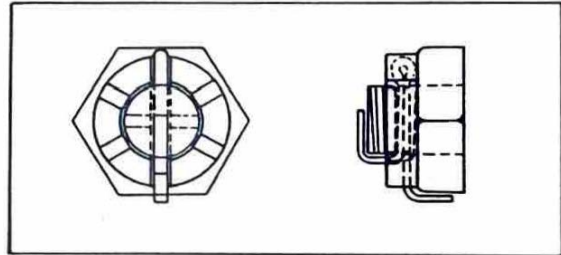
6. Install the front wheel on the front forks.  
a. Insert the front wheel between the front fork legs so that the stopper (projection) on the front fork end is correctly engaged the slot in the brake shoe plate.



- b. Insert axle, and install the axle nut.  
c. Torque the axle nut to specification.

Tightening torque: 3.5 m·kg (26 ft·lb)

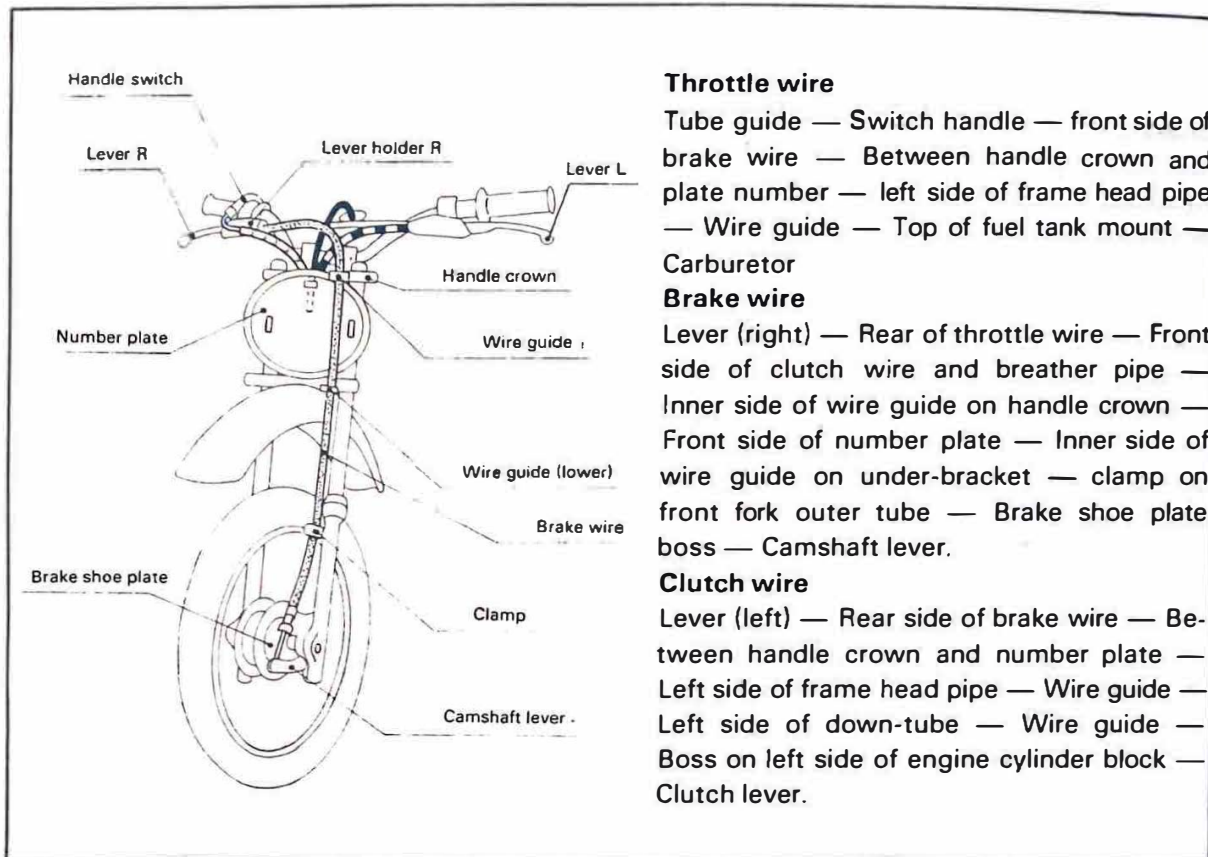
- d. Lock the nut with the cotter pin. The pin should be inserted downward, and the pin ends should be bent.



7. Install the front brake cable to the wheel hub.

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





**Throttle wire**

Tube guide — Switch handle — front side of brake wire — Between handle crown and plate number — left side of frame head pipe — Wire guide — Top of fuel tank mount — Carburetor

**Brake wire**

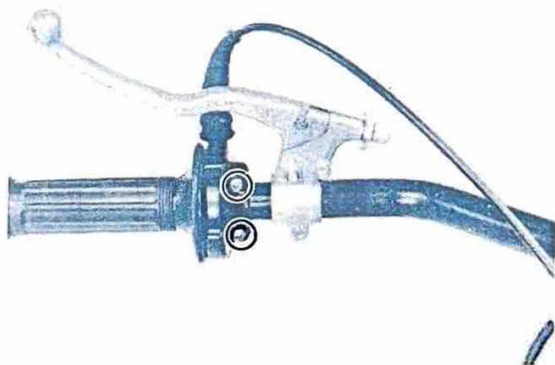
Lever (right) — Rear of throttle wire — Front side of clutch wire and breather pipe — Inner side of wire guide on handle crown — Front side of number plate — Inner side of wire guide on under-bracket — clamp on front fork outer tube — Brake shoe plate boss — Camshaft lever.

**Clutch wire**

Lever (left) — Rear side of brake wire — Between handle crown and number plate — Left side of frame head pipe — Wire guide — Left side of down-tube — Wire guide — Boss on left side of engine cylinder block — Clutch lever.

- 8. Loosen the two screws securing the throttle housing assembly. Grease the right end of handlebar and the throttle grip housing. Install the throttle grip and tighten the screws.

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



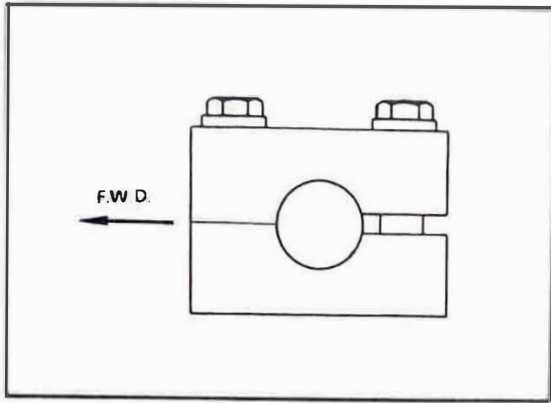
- 9. Handlebar installation  
 Install the handlebar using the two handle upper holders and four flange bolts.



1. Flange bolt (C-3)      2. Handle upper holder (C-2)

Tightening torque: 2.0 m-kG (14 ft-lb)

**CAUTION:**  
 First tighten the bolts on the front side of the handlebar holder and tighten the bolts on the rear side.



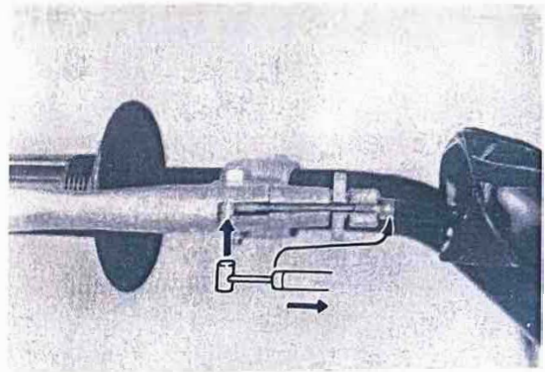
10. Brake wire and clutch wire installation
- Screw in the cable length adjuster on the front brake shoe plate.
  - Fully loosen the lever adjuster lock nut, and screw in the adjuster until tight. Next, align the slit in the adjuster and adjuster lock nut with the slit in the lever holder.



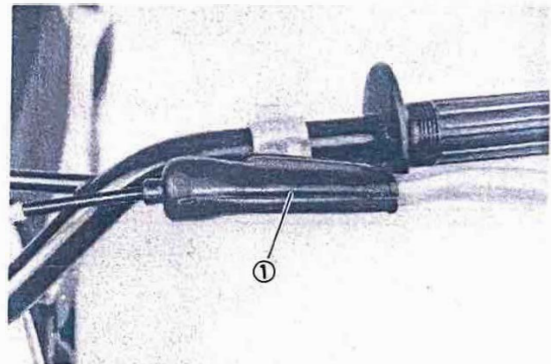
- Insert the wire end into the lever hole, and hook the outer cable end onto the adjuster lock nut, then squeeze the lever. Next, while pulling the outer cable in the direction opposite to the lever, release the lever quickly. While releasing it, seat the outer cable into the adjuster.

**CAUTION:**

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



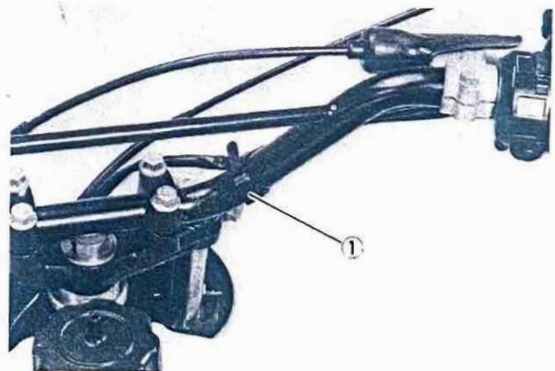
- Install the lever covers on clutch and brake wires.



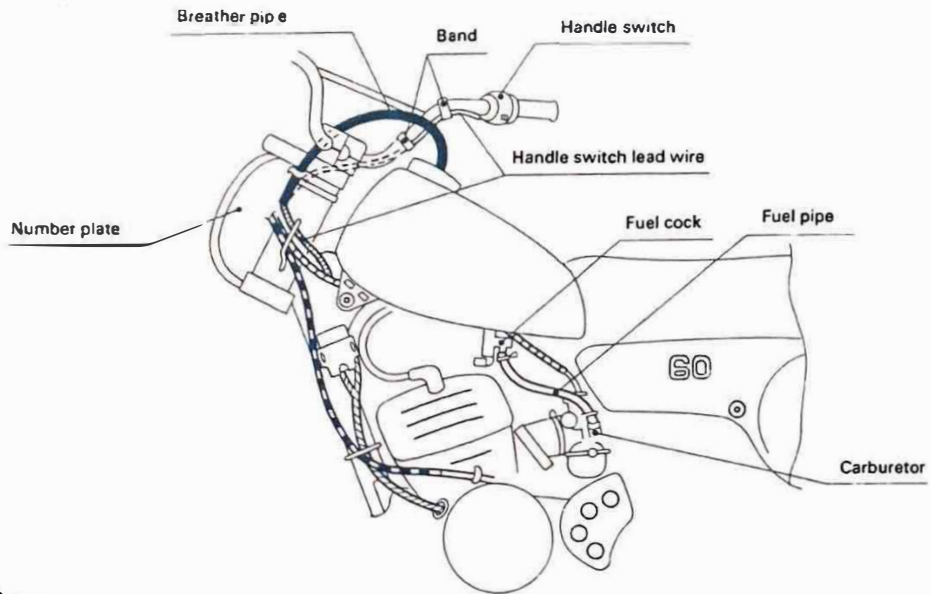
1. Lever cover

11. Engine stop switch cord band installation

Install the engine stop switch lead wire on the handlebar using switch cord band.

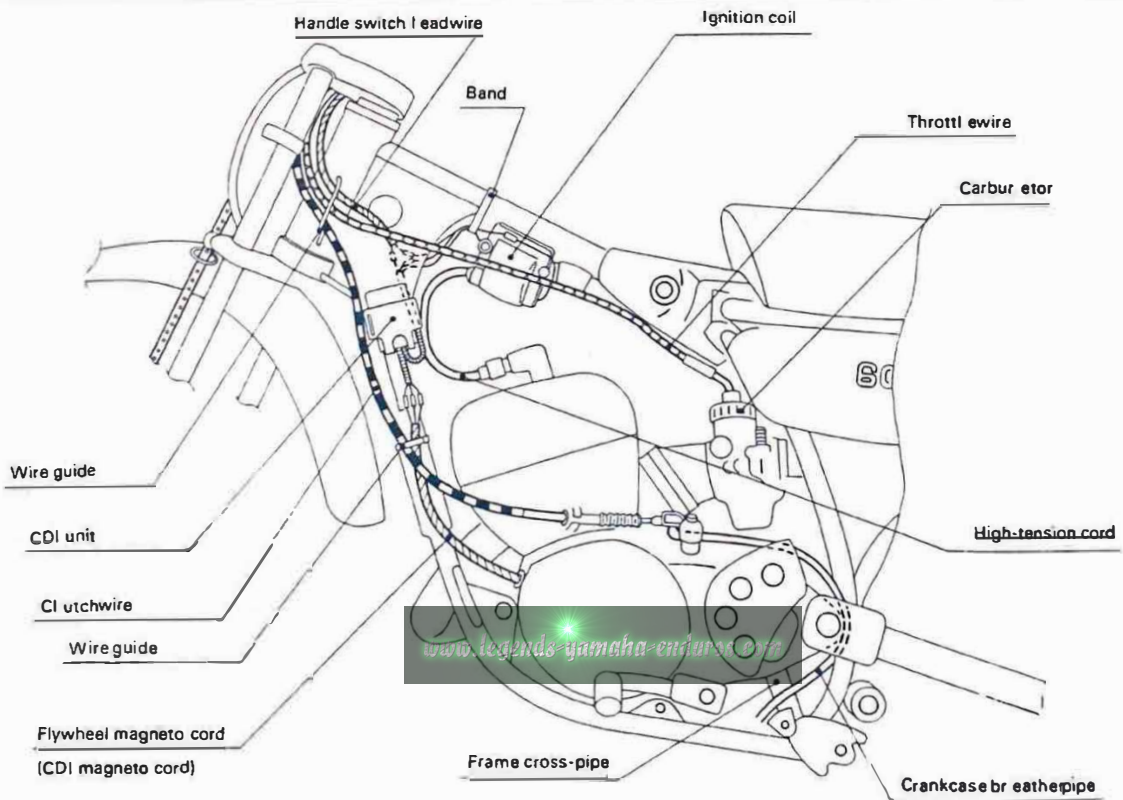


1. Switch cord band (B-4)



**Breather pipe**

Fuel tank cap — Under the handle tension bar — Number plate mount



**Throttle wire**

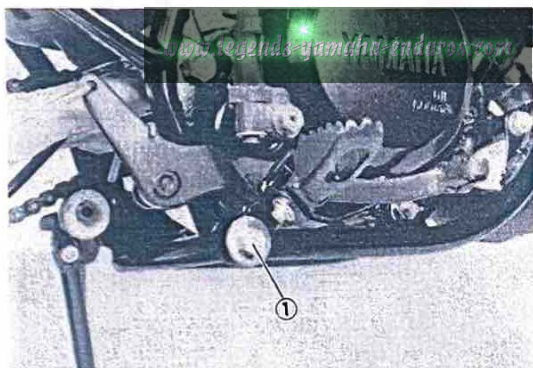
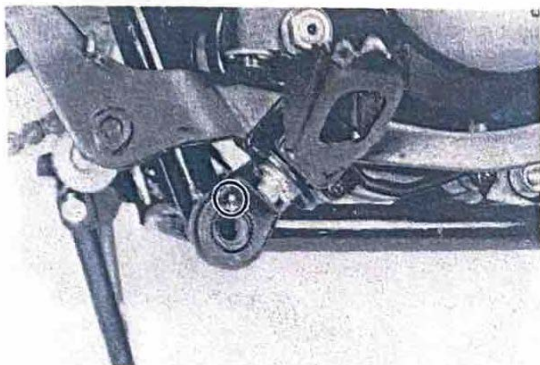
Tube guide — Switch handle — front side of brake wire — Between handle crown and plate number — left side of frame head pipe — Wire guide — Top of fuel tank mount — Carburator.

**Clutch wire**

Lever (left) — Rear side of brake wire — Between handle crown and number plate — Left side of frame head pipe — Wire guide — Left side of down-tube — Wire guide — Boss on left side of engine cylinder block — Clutch lever.



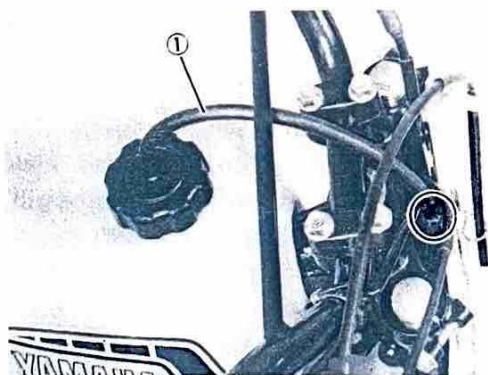
12. Install the footrest using the bolt and plate washer.



1. Bolt (C-4)

Tightening torque: 5.0 m·kg (36 ft·lb)

13. Connect the tank breather pipe to the fuel tank cap.



1. Breather pipe

## INSPECTIONS AND ADJUSTMENTS

### Inspection

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, tightened or adjusted to specification. This check-up should be started with the front of the machine.

|                      |  |
|----------------------|--|
| Item                 |  |
| Wheel spokes         | .....Tension                                 |
| Wheel rims           | .....Deflection, alignment                   |
| Wheels tires         | .....Tire pressure                           |
| Wheel axle nuts      | .....Tightening torque                       |
| Fenders              | .....Mounting                                |
| Steering head        | .....Operation, adjustment                   |
| Handle holder        | .....Tightening torque                       |
| Clutch lever         | .....Operation, freeplay, mounting           |
| Brake lever          | .....Operation, freeplay, mounting           |
| Throttle housing     | .....Operation, position, freeplay, mounting |
| Number plate         | .....Mounting                                |
| Engine mounting bolt | .....Tightening torque                       |
| Carburetor joints    | .....Tightness                               |
| Footrest             | .....Position, mounting                      |
| Shift pedal          | .....Operation, mounting                     |
| Brake pedal          | .....Operation, freeplay, mounting           |
| Seat                 | .....Mounting                                |
| Fuel tank            | .....Mounting                                |

Fuel pipe  
 .....Connection, mounting

Fuel breather pipe  
 .....Connection, routing

Rear shock absorber  
 .....Mounting, cotter pin

Swing arm pivot shaft  
 .....Tightening torque

Chain puller  
 .....Alignment

Transmission  
 .....Oil level

Control cables  
 .....Lubrication

Electrical components  
 .....Operation, adjustment

**Adjustment**

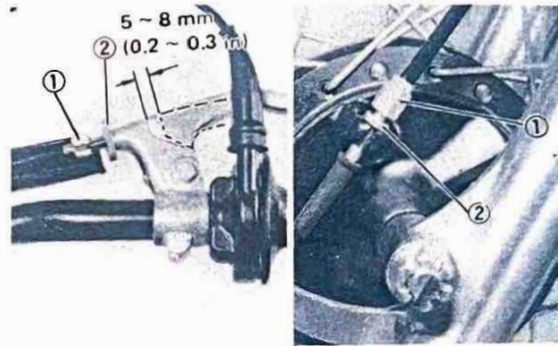
**NOTE:** \_\_\_\_\_  
 This section deals with the main points only. For details, refer to the YZ60H Owner's Service Manual.

**Front brake adjustment**

Front brake cable free play can be adjusted to suit rider preference, but a minimum free play of 5 ~ 8 mm (0.2 ~ 0.3 in) should be maintained.

Free play can be adjusted at handle bar lever and brake shoe plate.

1. Loosen the adjuster lock nut on the brake lever holder, fully turn the adjuster in.
2. Loosen the lock nut on the shoe plate and turn the adjuster in or out until proper adjustment is achieved.
3. Unless the shoe plate adjuster helps bring a proper play, turn to the lever holder adjuster.
4. Tighten the adjuster lock nut.



1 Adjuster 2 Lock nut

**Rear brake adjustment**

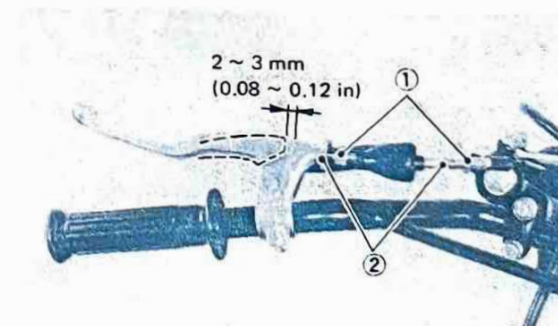
The rear brake should be adjusted so the end of the brake pedal moves 20 ~ 30 mm (0.8 ~ 1.2 in). To adjust, turn the adjuster on the brake rod clockwise to reduce play; turn the adjuster counterclockwise to increase play.



1 Adjuster

**Clutch adjustment**

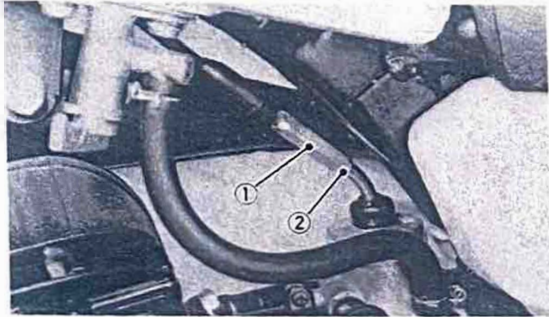
The clutch should be adjusted to suit rider preference within a 2 ~ 3 mm (0.08 ~ 0.12 in) free play at the lever pivot side. To adjust, loosen either the handle lever adjuster lock nut or the cable in-line length adjuster lock nut. Next, turn the adjuster either in or out until proper lever free play is achieved.



1 Adjuster 2 Lock nut

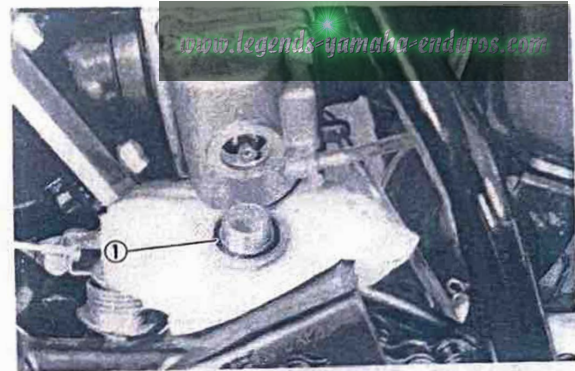
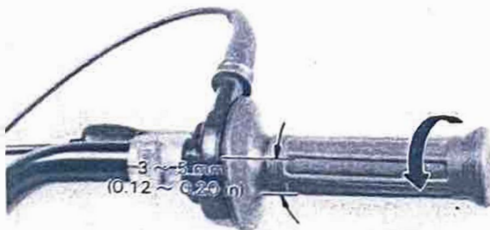
### Throttle cable adjustment

Check play in turning direction of throttle grip. The play should be 3 ~ 5 mm (0.12 ~ 0.2 in) at grip flange, loosen the lock nut and turn the wire adjuster to make the necessary adjustment. Tighten the adjuster lock nut.



1 Adjuster

2 Lock nut



1 Cover bolt

3. Retighten the cover bolt securely.

### Fuel draining

1. Put a rag under the carburetor so fuel does not contact the crankcase.
2. Loosen the cover bolt and drain the standing fuel.

#### WARNING:

#### FUEL IS HIGHLY FLAMMABLE:

- \*Always turn off the engine when draining.
- \*Take care not to spill any fuel on the engine or exhaust pipes/mufflers when draining.
- \*Never drain fuel while smoking or in the vicinity of an open flame.

## Specification

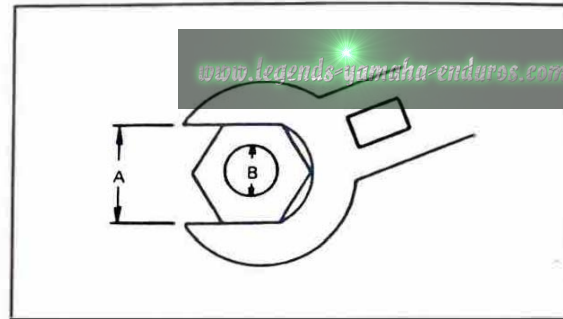
|                            |   |
|----------------------------|---|
| Ignition timing:           | 1.0 mm (0.039 in) B.T.D.C.  |
| Carburetor:                |   |
| Main jet                   | #200  |
| Jet needle/clip position   | 4G6-3   |
| Air screw                  | 1 and 1/2   |
| Fuel tank capacity:        | 3.0 lit (0.8 US.gal)  |
| Transmission oil capacity: | Periodic oil change: 650 ~ 700 cc (0.69 ~ 0.74 US.qt)<br>Overhaul: 700 ~ 750 cc (0.74 ~ 0.79 US.qt) |

## TORQUE SPECIFICATIONS

The following torque specifications must be adhered to on every machine. Components with several studs should be tightened in gradual stages and in a pattern that will avoid warpage to the item being secured. Torque settings are for dry, clean threads. Torquing should always be done to the nut, never the bolt head.

### NOTE:

Certain items with other than standard thread pitches may require differing torque. Consult the model Owner's service manual or distributor if a question arises.



| A<br>(Nut) | B<br>(Bolt) | General torque specifications |       |
|------------|-------------|-------------------------------|-------|
|            |             | m-kg                          | ft-lb |
| 10 mm      | 6 mm        | 0.6                           | 4.5   |
| 12 mm      | 8 mm        | 1.5                           | 11    |
| 14 mm      | 10 mm       | 3.0                           | 22    |
| 17 mm      | 12 mm       | 5.5                           | 40    |
| 19 mm      | 14 mm       | 8.5                           | 61    |
| 22 mm      | 16 mm       | 13.0                          | 94    |

## Tightening torque

| Engine:                 | Specified torque |          |            |
|-------------------------|------------------|----------|------------|
| Cylinder head           | M8               | 3.0 m-kg | (21 ft-lb) |
| Spark plug              | M14              | 2.5 m-kg | (18 ft-lb) |
| Carburetor joint        | M6               | 1.0 m-kg | ( 7 ft-lb) |
| Crank case cover        | M6               | 0.8 m-kg | ( 6 ft-lb) |
| Drain plug              | M12              | 2.0 m-kg | (14 ft-lb) |
| Kick crank              | M6               | 1.2 m-kg | ( 8 ft-lb) |
| Chassis:                | Specified torque |          |            |
| Front wheel axle        | M10              | 3.5 m-kg | (26 ft-lb) |
| Front fender            | M6               | 0.6 m-kg | ( 4 ft-lb) |
| Brake cam lever         | M6               | 1.0 m-kg | ( 7 ft-lb) |
| Handle crown — Steering | M14              | 6.0 m-kg | (43 ft-lb) |
| — Inner tube            | M8               | 1.6 m-kg | (12 ft-lb) |
| — Handle holder         | M8               | 1.6 m-kg | (12 ft-lb) |
| Engine mount            | M8               | 2.4 m-kg | (17 ft-lb) |
| Foot rest bracket       | M10              | 5.0 m-kg | (36 ft-lb) |
| Rear wheel axle         | M12              | 4.5 m-kg | (32 ft-lb) |
| Fuel tank fittings      | M6               | 0.6 m-kg | ( 4 ft-lb) |
| Side stand              | M8               | 2.0 m-kg | (14 ft-lb) |
| Rear fender             | M6               | 0.6 m-kg | ( 4 ft-lb) |
| Chain case              | M5               | 0.3 m-kg | ( 2 ft-lb) |

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