



IT 175H

ASSEMBLY MANUAL



FOREWORD

This Assembly manual contains the information required for the unpacking and assembly of Yamaha motorcycles 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 motorcycles using the relevant service manuals. This Assembly Manual should be used in conjunction with the Owner's service manual and Parts list for this model.

NOTICE

This service specifications given in the 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 procedure 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.

IT175H
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.

Work shop

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

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.

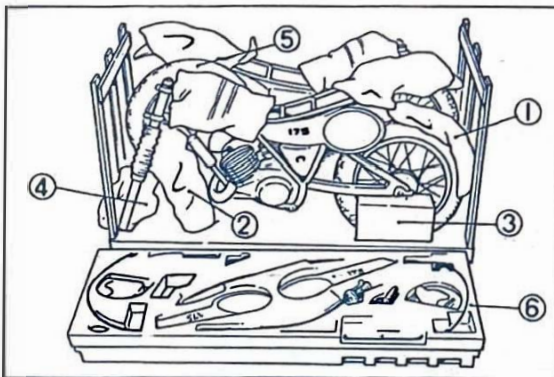
Procedure for unpacking

To remove the machine and parts packed in the cardboard crate, cut the vinyl bands around the box using scissors. Next, remove the exterior carton by lifting it straight up, and remove the foam tray and front wheel.

Remove the nails from each corner of the crate, and remove the struts.

Remove the front fender held between the rear tire and the rear fender.

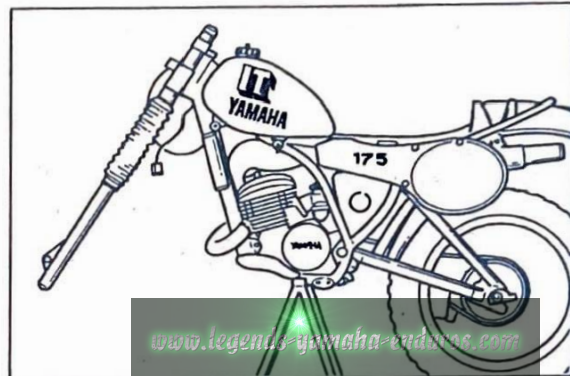
Remove the headlight body assembly, cardboard crate, and semi double seat.



- | | |
|---------------------|----------------------------|
| 1. Front fender | 4. Headlight body assembly |
| 2. Semi double seat | 5. Front wheel |
| 3. Card board crate | 6. Foam tray |

Lift up the machine, and remove the rear wheel section from the lower wooden case. Then take out the machine.

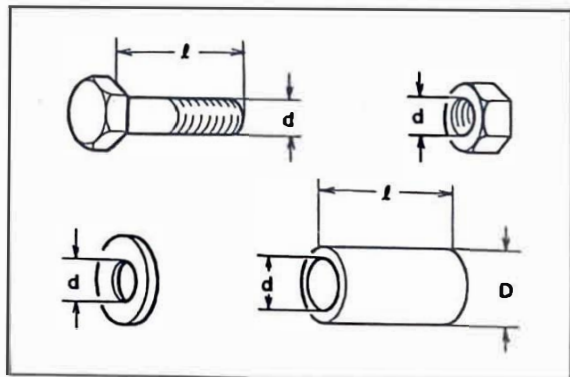
Place a proper-size wooden box or a machine stand under the engine to keep the front of the machine raised off the floor. Take care so that the machine does not fall over.



PARTS CHECK LIST

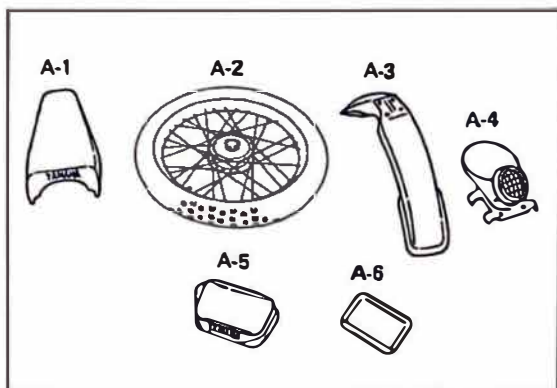
Before starting the assembly, check for damaged or missing parts (listed below). Also check the machine for damage, scratches and other defects.

The following parts are contained in the cardboard box and the vinyl bag in the box. Check the quantity of parts. Also check for damage.



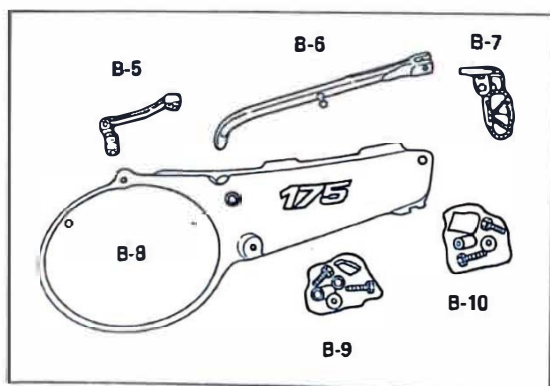
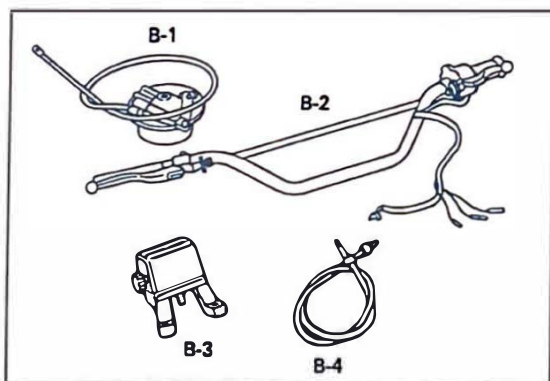
Part list A: Carton box

No.	Part name	Q'ty
A-1	Semi double seat	1
A-2	Front wheel	1
A-3	Front fender	1
A-4	Headlight assembly	1
A-5	Carrier box	1
A-6	Carrier bracket	1



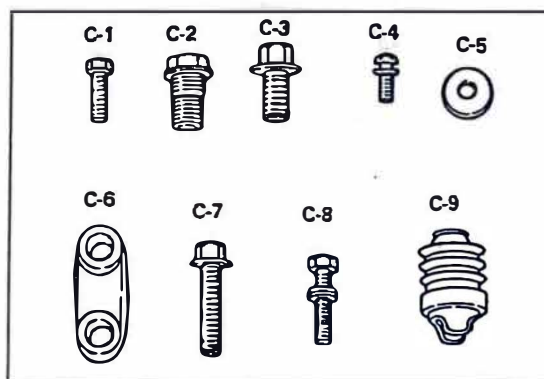
Part list B: Foam tray

No.	Part name	Q'ty
B-1	Brake shoe plate (with brake wire)	1
B-2	Handlebar assembly	1
B-3	Speedometer assembly	1
B-4	Speedometer cable	1
B-5	Change pedal	1
B-6	Side stand	1
B-7	Foot rest (Left)	1
B-8	Side cover (Right)	1
B-9	Vinyl bag "1"	1
B-10	Vinyl bag "2"	1



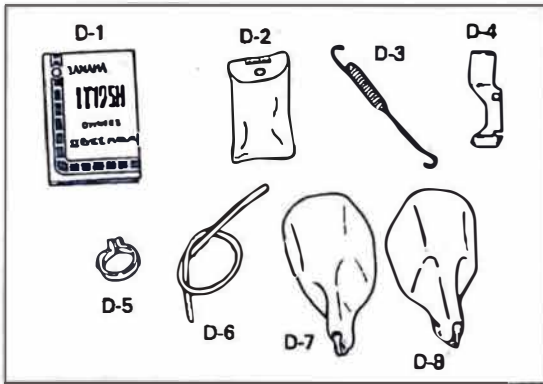
Part list C: Vinyl bag "1"

No.	Part name	Q'ty	Remarks
C-1	Bolt (d = 6mm, l = 25mm)	1	Change pedal
C-2	Washer based head bolt (d = 12mm, l = 25mm)	1	Foot rest
C-3	Flange bolt (d = 10mm, l = 20mm)	1	
C-4	Panhead screw with washer (d = 6mm, l = 16mm)	2	Side cover
C-5	Plate washer (d = 6mm)	2	
C-6	Handle upper holder	2	Handle bar
C-7	Flange bolt (d = 8mm, l = 35mm)	4	
C-8	Bolt with washer (d = 6mm, l = 30mm)	2	Meter
C-9	Boot	2	Clutch and Brake wires



Part list D: Carton box

No.	Part name	Q'ty
D-1	Owner's service manual	1
D-2	Tool kit	1
D-3	Tension spring	1
D-4	Headlight under bracket	1
D-5	Wire holder	1
D-6	Fuel tank breather pipe	1
D-7	Bush guard (L)	1
D-8	Bush guard (R)	1



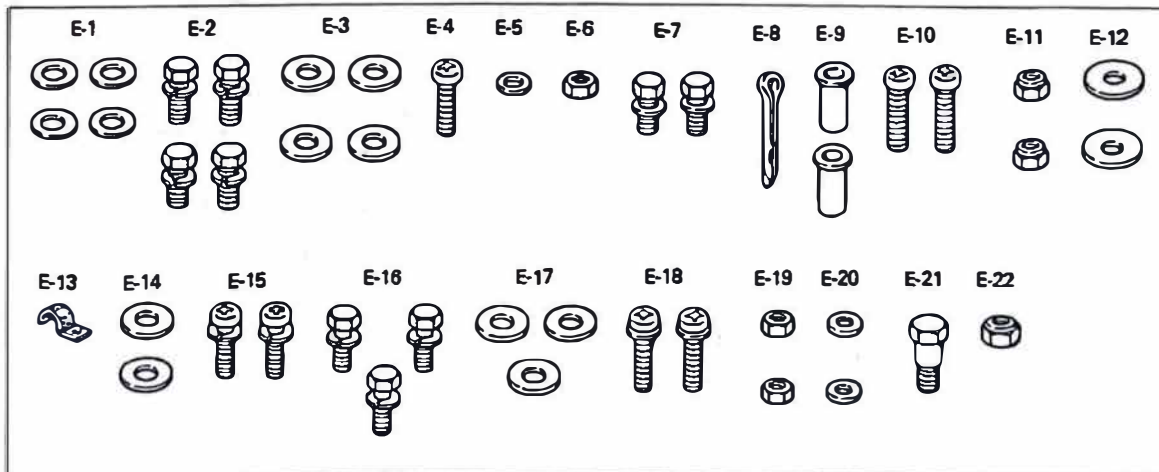
Detail of Owner's tool kit

No.	Part name	Q'ty
1	Bag	1
2	Spanner (10 × 12 mm)	1
3	Spanner (14 × 17 mm)	1
4	Spanner	1
5	Spoke nipple wrench	1
6	Driver grip	1
7	Driver cap	1
8	Driver plus (+)	1
9	Driver plus and minus (+, -)	1
10	Box wrench (21 mm)	1
11	Pliers	1
12	Hexagon wrench	1
13	Special spanner	1

Part list E: Vinyl bag "2"

No.	Part name	Q'ty	Remarks
E-1	Washer (d = 6mm)	4	F. Fender

No.	Part name	Q'ty	Remarks
E-2	Hexagon head bolt with washer (d = 6mm, l = 20mm)	4	Front fender
E-3	Plate washer (d = 6mm)	4	
E-4	Panhead screw (d = 5mm)	1	Wire holder
E-5	Plate washer (d = 5mm)	1	
E-6	Nut (d = 5mm)	1	
E-7	Hexagon head bolt with washer (d = 6mm, l = 14mm)	2	Semi double seat
E-8	Cotter pin (Large)	1	Front axle
E-9	Collar screw	2	Headlight body (upper)
E-10	Panhead screw (d = 6mm)	2	
E-11	U-nut (d = 6mm)	2	
E-12	Plate washer	2	
E-13	Clamp	1	Headlight body (lower)
E-14	Plate washer (d = 6mm)	2	
E-15	Panhead screw with washer (d = 6mm)	2	Carrier box
E-16	Bolt with washer (d = 6mm)	3	
E-17	Plate washer (d = 6mm)	3	
E-18	Panhead screw with washer (d = 6mm)	2	Brush guard
E-19	Nut (d = 6mm)	2	
E-20	Washer (d = 6mm)	2	
E-21	Bolt (d = 10mm)	1	Side stand
E-22	Nut	1	

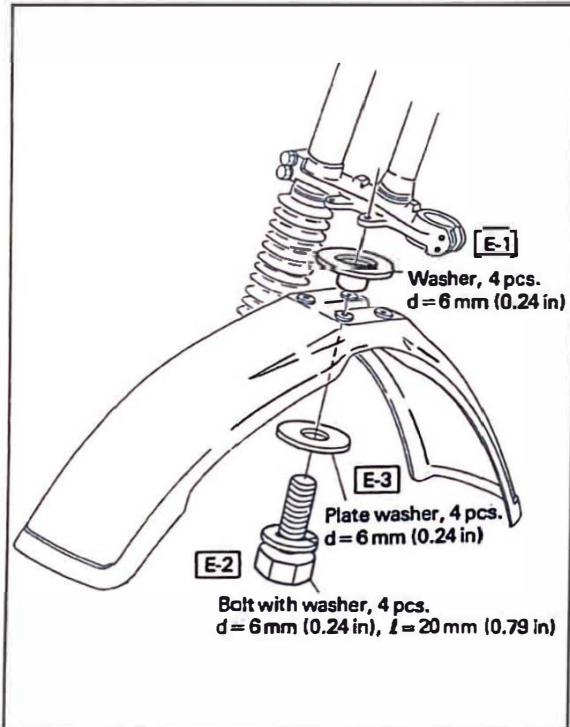


SET-UP PROCEDURES

Front fender Installation

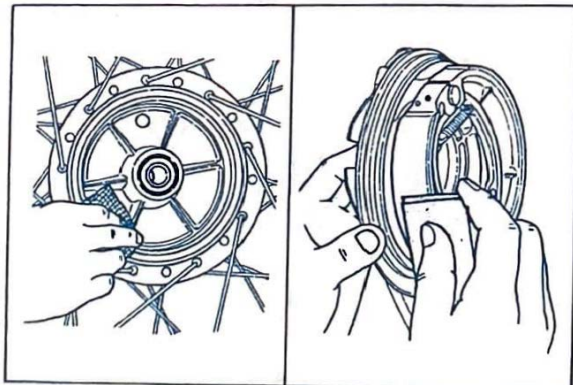
1. Insert the front fender between the front forks, and secure the front fender using bolts with spring washers, flat washers, and washers.

Tightening torque: 0.45 m·kg (3.25 ft·lb)

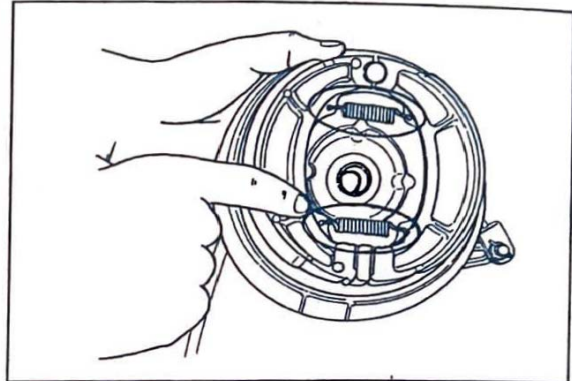


Front wheel installation

1. Clean the brake shoe linings and wheel hub with a clean cloth.



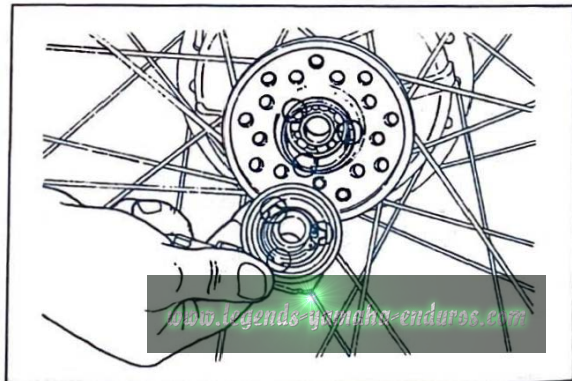
2. Make sure the brake shoes and springs are correctly installed in the shoe plate assembly. If any one of them is out of place, correct per the figure.



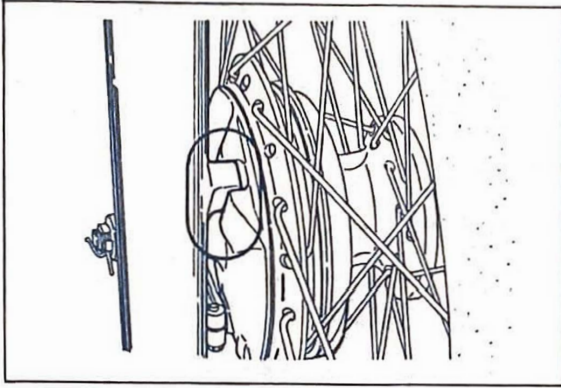
3. Install the meter gear unit assembly in the wheel hub on the right side of the front wheel.

NOTE:

- a. To avoid damaging the oil seal lip, apply a light coat of lithium base grease to the oil seal lip and meter gear unit assembly.
- b. Make sure that the three projections on the inside of the wheel hub are respectively placed between the projections on the meter clutch.

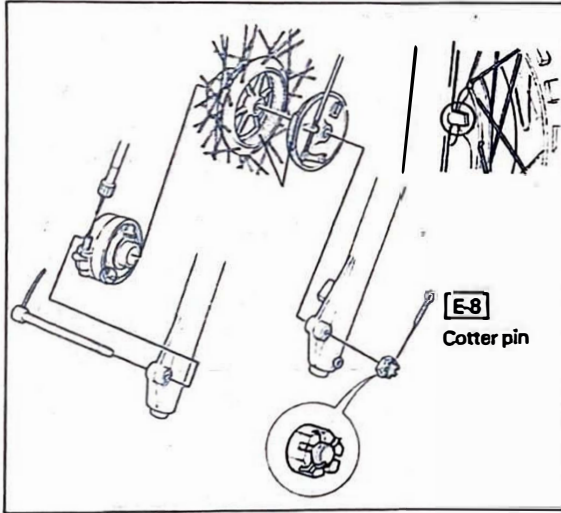


4. Insert the front wheel between the front fork legs so the stopper (projection) on the front fork end correctly engages the slot in the brake shoe plate.

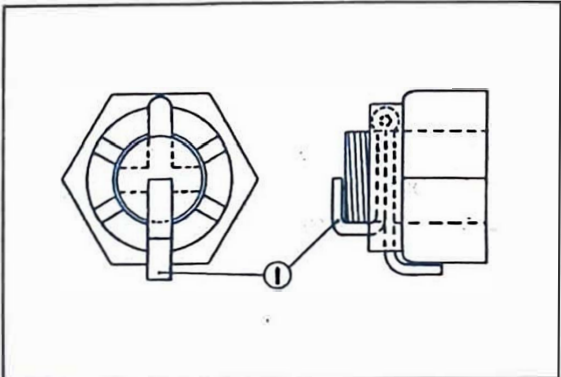


5. Insert the axle, and torque the axle nut to specification.

Tightening torque: 8.5 m·kg (60 ft·lb)



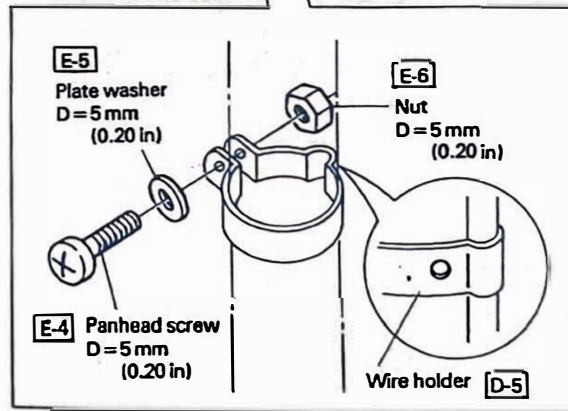
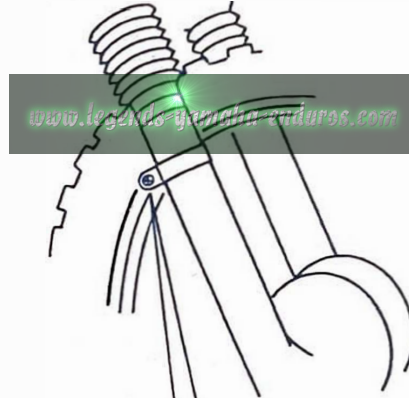
6. Lock the nut with cotter pin. The pin should be inserted downward, and the pin ends should be bent.



1. Cotter pin

Wire holder installation

1. Install the wire holder to the right side fork leg so that the stopper (projection) on the leg correctly engages the hole in the wire holder as shown.
2. Secure the wire holder.



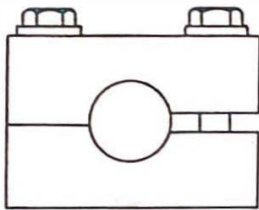
Handlebar installation

1. Install the handlebar assembly.

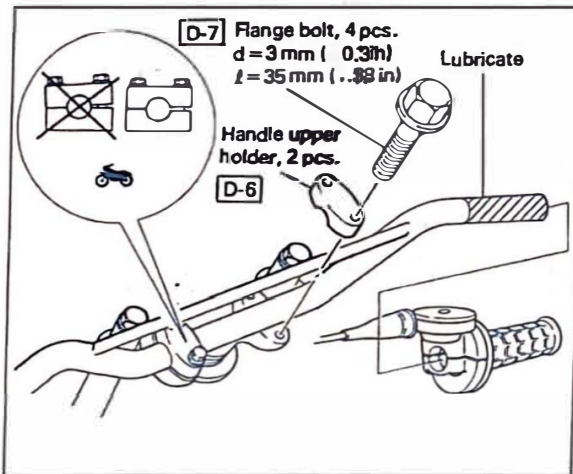
Tightening torque: 2.3 m·kg (16 ft·lb)

CAUTION:

First tighten the bolts on the front side of the handlebar holder then tighten the bolts on the rear side.

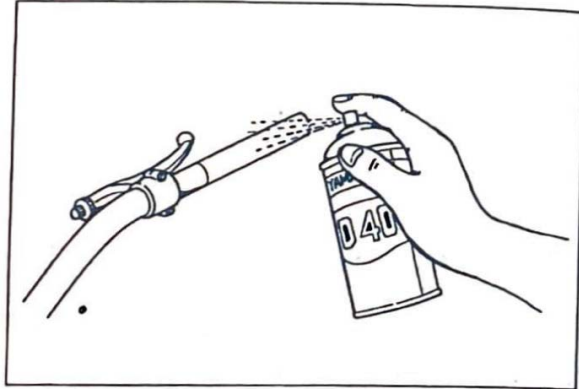


F.W.D.



Throttle grip installation

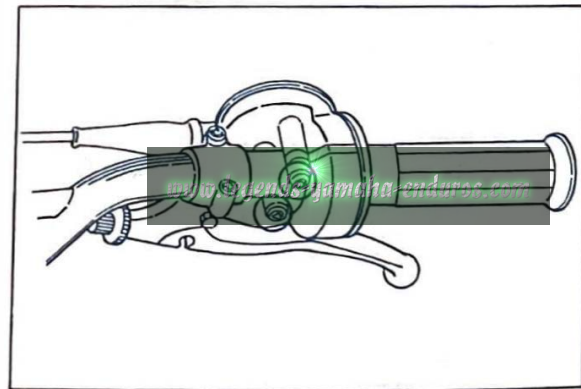
1. Wipe off any dust on the right handlebar end, and spray the lubricant to the handlebar end and the throttle grip end.



2. Slip the throttle grip over the handlebar, and push the grip onto the handlebar until it bottoms. Slide it back about 2 mm (0.08 in), and assemble the throttle housing using the screws provided. Check to see that the throttle grip moves smoothly.

CAUTION:

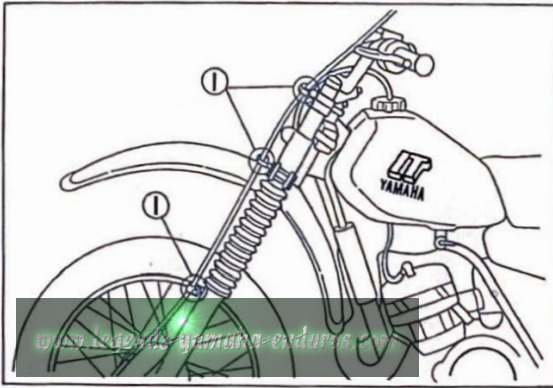
Tighten the screws in the stages and maintain an equal gap on each side of holder.



Brake and clutch wire installation

1. Pass the front brake wire through three wire holders. Tighten the screw.

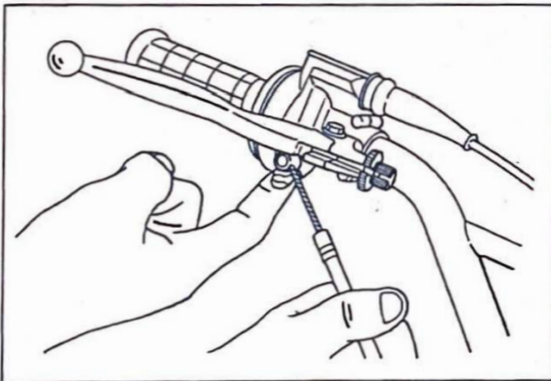
*For detailed cable routing, refer to "CABLE ROUTING DIAGRAM".



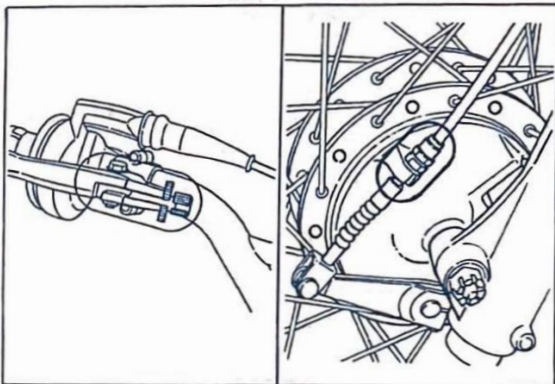
1. Wire holder

NOTE:

Before assembly, lubricate cables with a suitable cable lubricant.

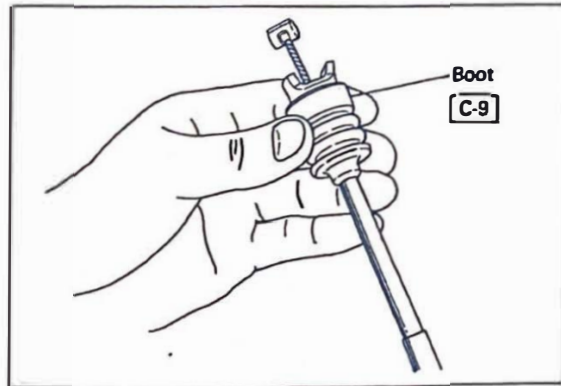


2. Screw in the cable length adjusters on the brake shoe plate (brake wire) and cable length adjuster (clutch wire).



3. Fully loosen the lever adjuster lock nut and screw in the adjuster until it is tight. Next, align the slits in the adjuster and adjuster lock nut with the slit in the lever holder.

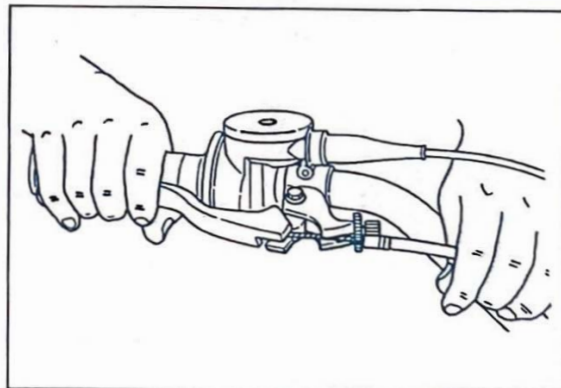
4. Insert the wire end into the boots.



5. Insert the wire end into the lever holder 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 the lever, release the lever quickly. While releasing it, seat the outer cable into the adjuster.

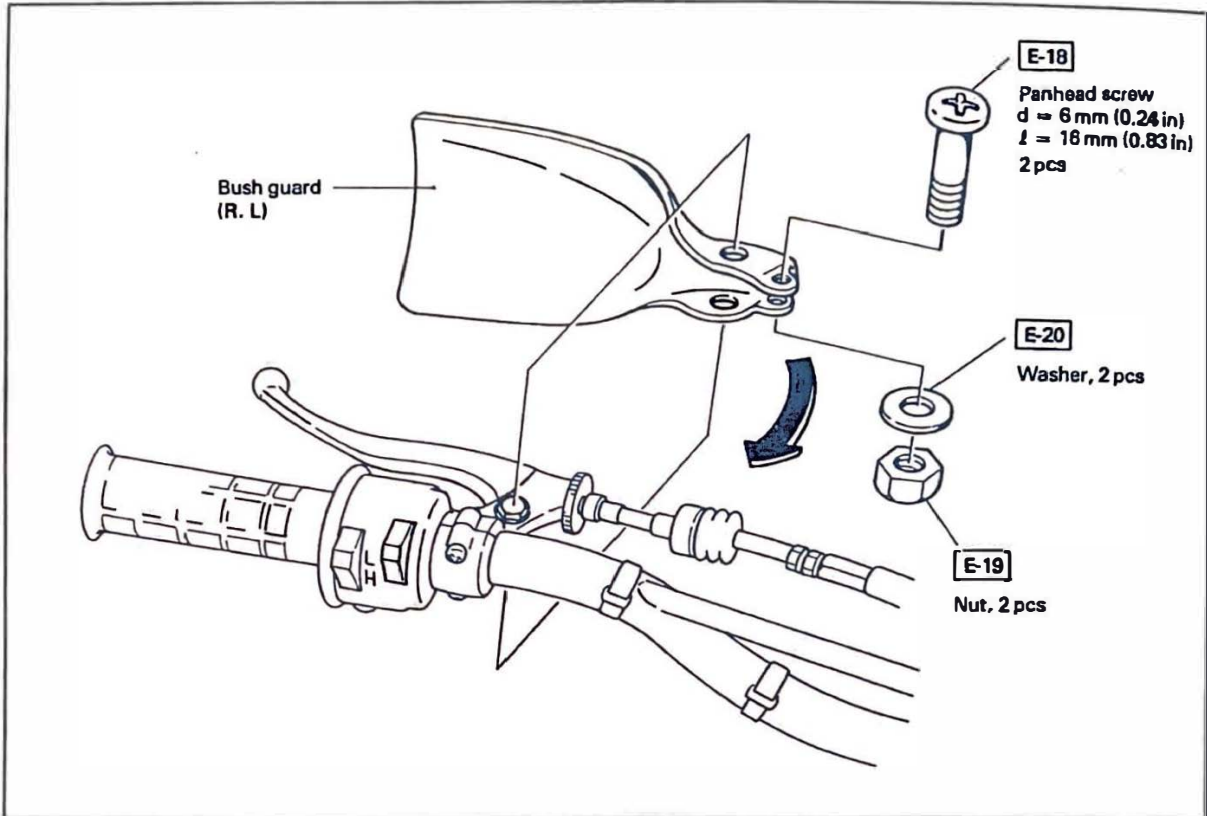
WARNING:

Route throttle cable, clutch cable and brake cable with special care so that they have a proper amount of play. Be sure that the throttle is not affected when the handlebars are turned to the right or left.

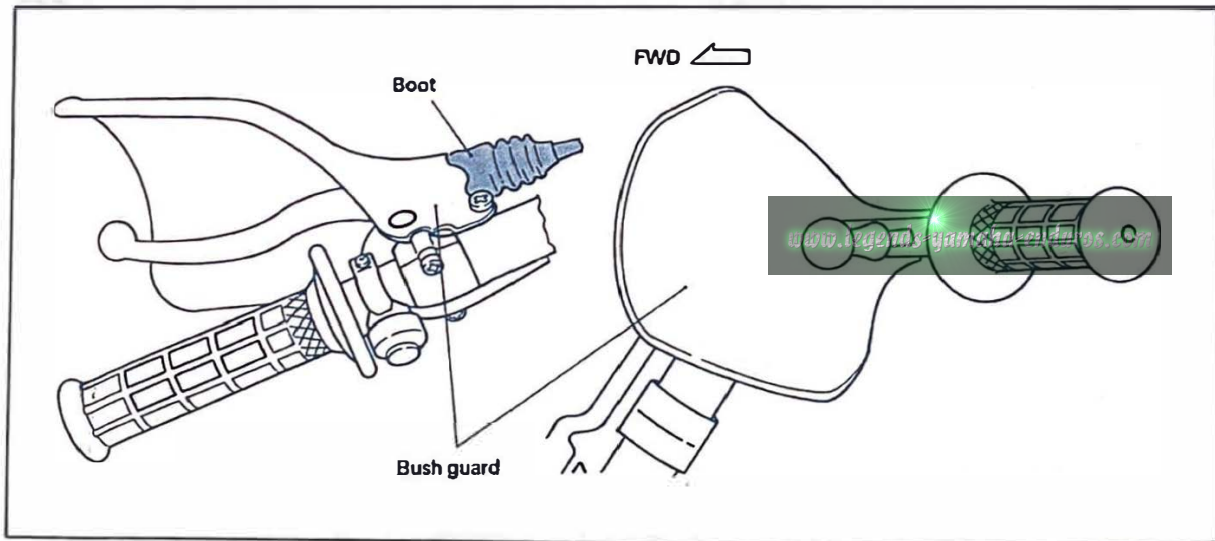


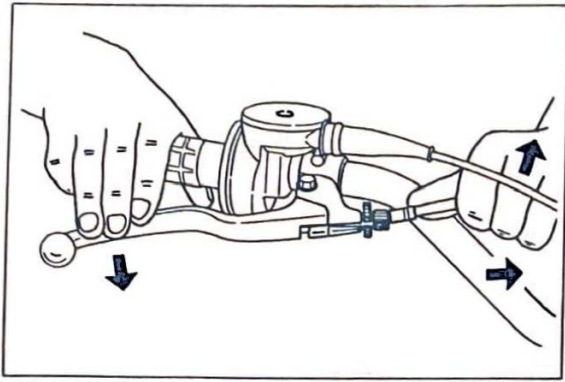
Bush guard installation

1. Install the bush guard on the lever using the panhead screw, nut and washer.

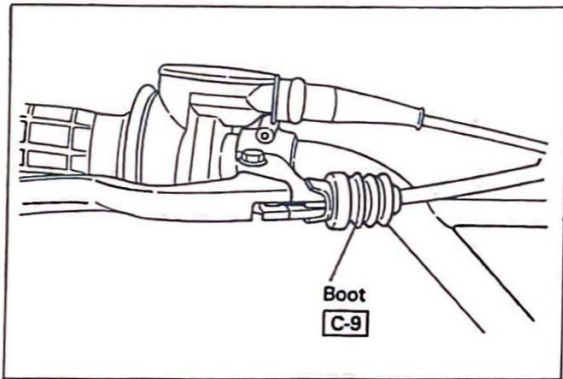


2. After installing the bush guard, cover the guard ends with boots.

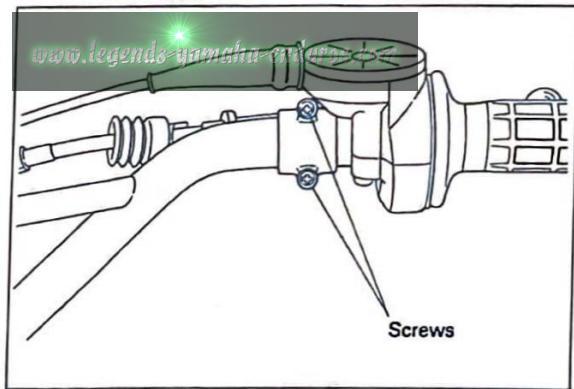




6. Cover the brake and clutch wire holders with boots.

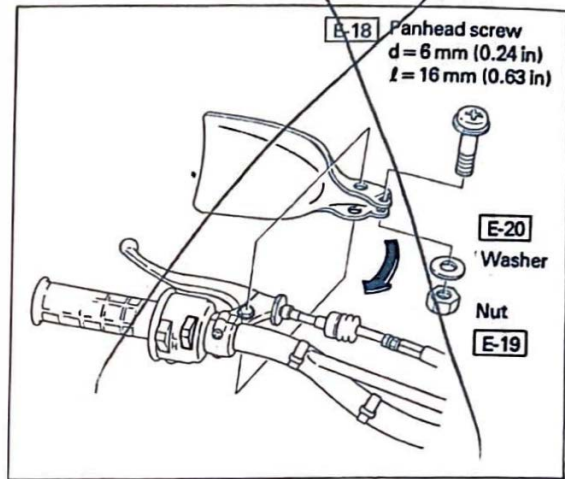


7. To protect the clutch and brake levers against breakage when the machine overturns, it is advisable to screw in the lever holder bolts so that they are lightly seated.



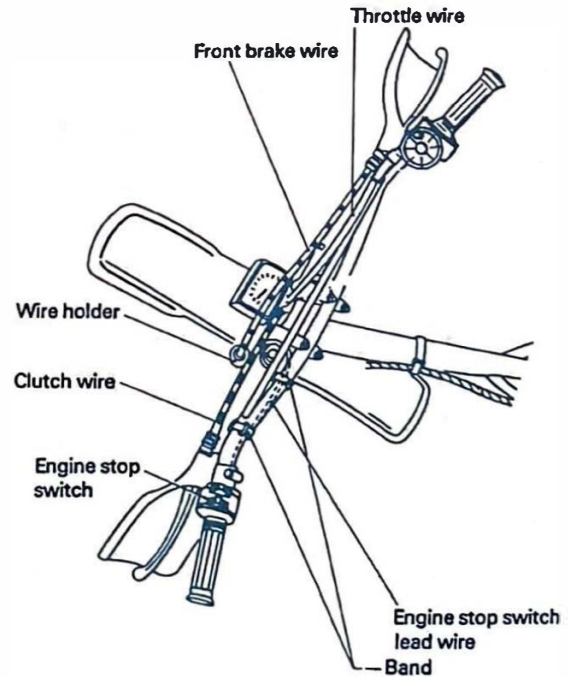
Bush guard installation

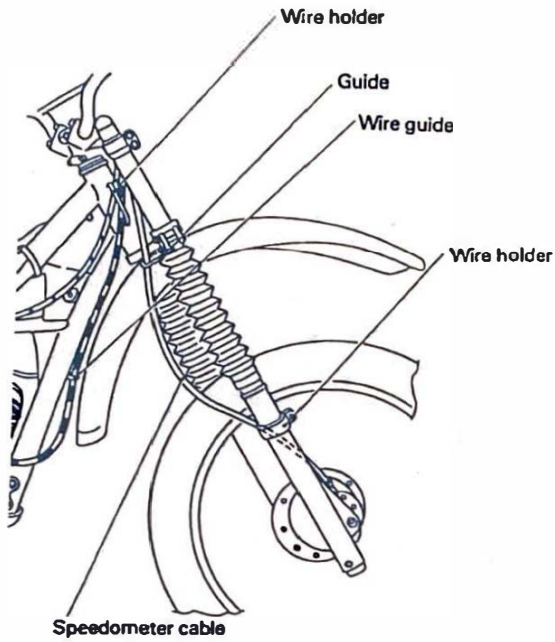
1. Install the bush guard on the lever using the panhead screw with washer, nut and washer.



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CABLE ROUTING DIAGRAM

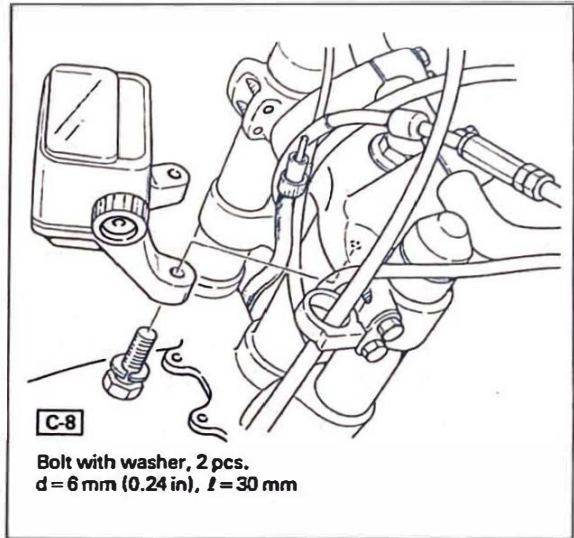




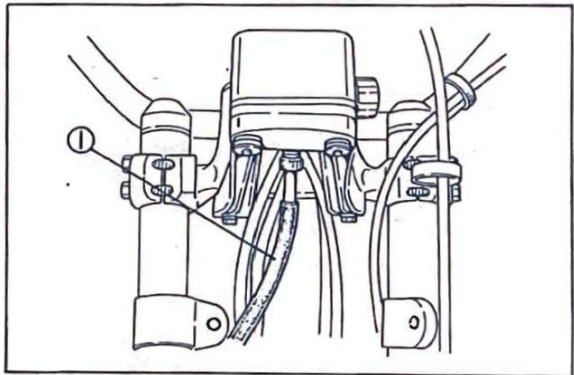
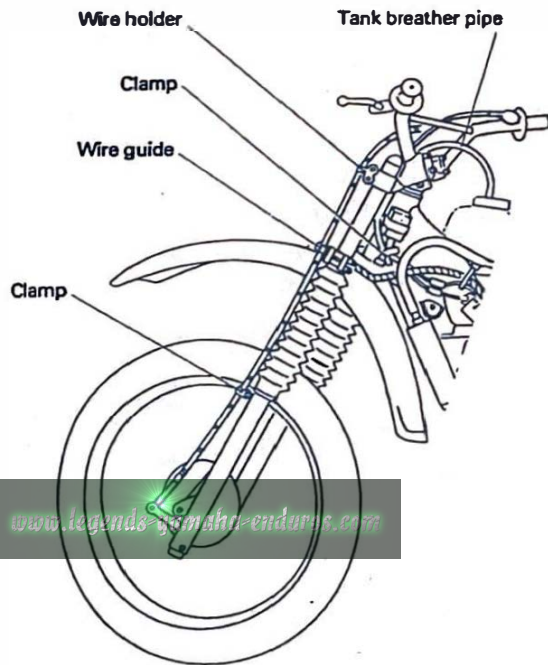
Meter bracket installation

1. Install the speedometer assembly under the handle crown and secure it as illustrated.

Tightening torque: 1.0 m·kg (7.2 ft·lb)



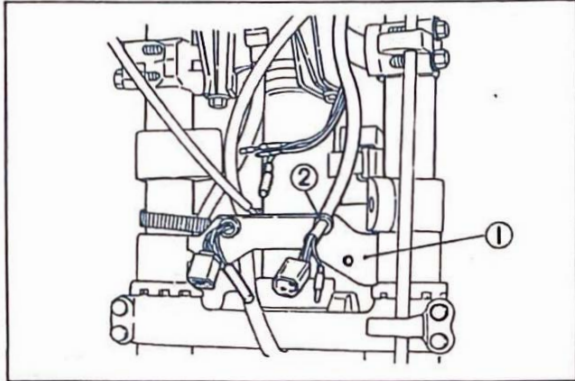
2. Connect the speedometer cable to the speedometer.



1. Speedometer cable

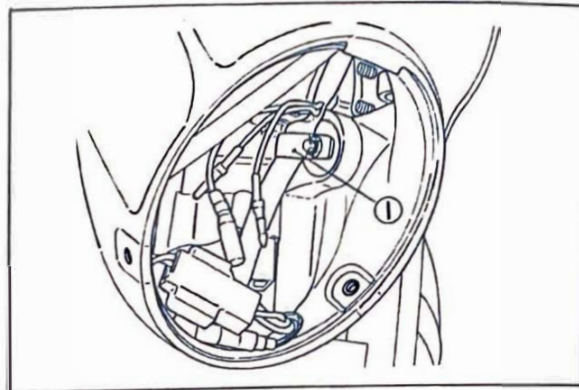
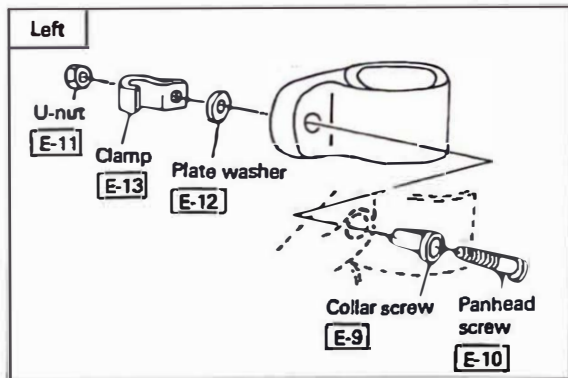
Headlight installation

1. Place the headlight under-bracket between the front forks and install the grommet, which is attached to the wire harness, on the bracket.



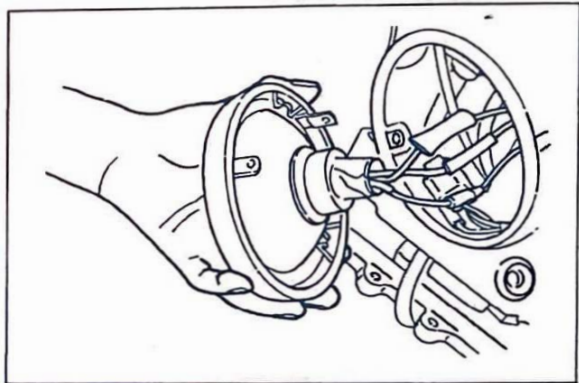
1. Under bracket 2. Grommet

2. When securing the upper part of the headlight assembly, the headlight unit must be removed from the headlight body.
3. Install the headlight assembly on the front fork.
When tightening the left side bolt, secure the clamp at the same time.

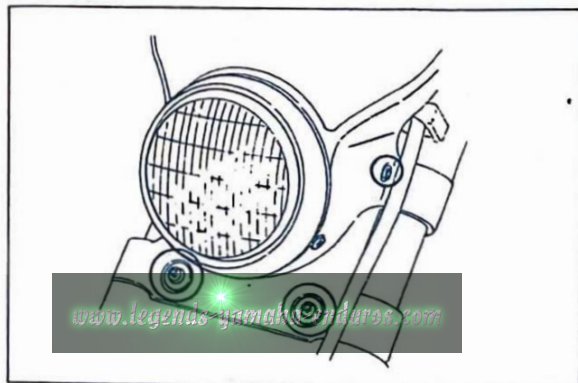


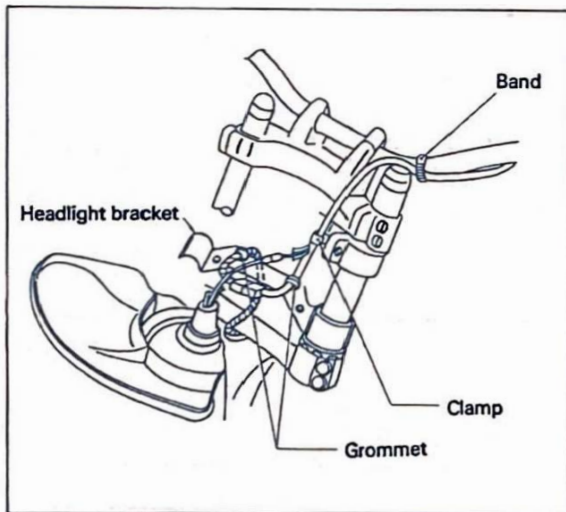
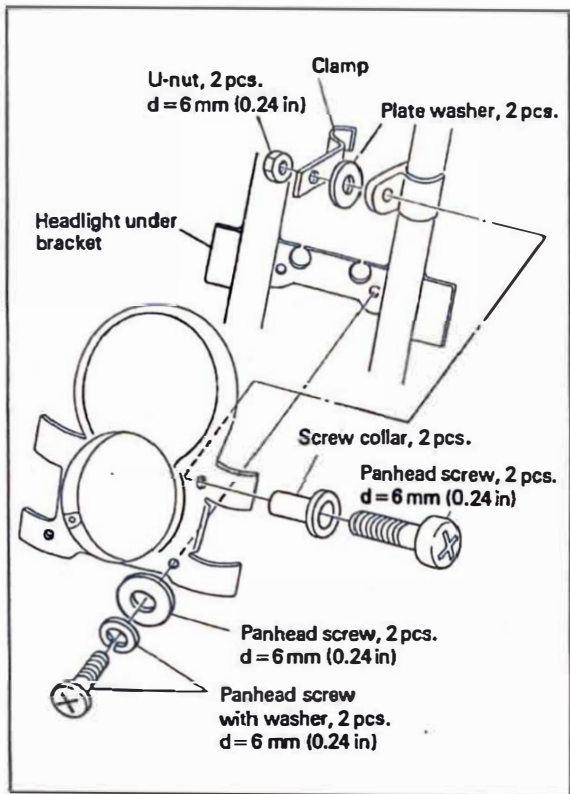
1. Clamp (E-11)

4. Connect the wire harness, headlight switch wire and headlight lead wires through couplers.



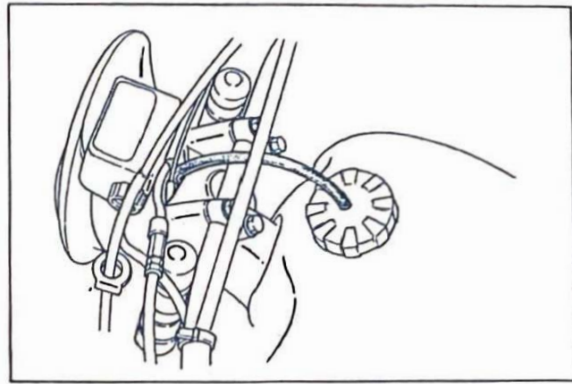
5. Install the headlight assembly on the front fork.
6. Install the headlight unit assembly on the headlight body.
When installing the headlight lens assembly, care should be used so that wires are not pinched.





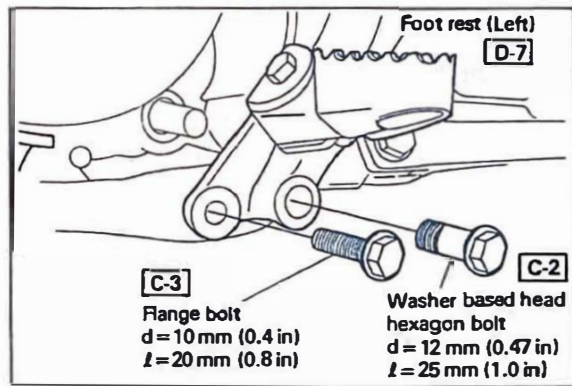
Fuel tank breather pipe installation

1. Pass through between the handle crown and meter bracket and let it hang down.



Foot rest installation

1. Secure the foot rest with the flange bolt.

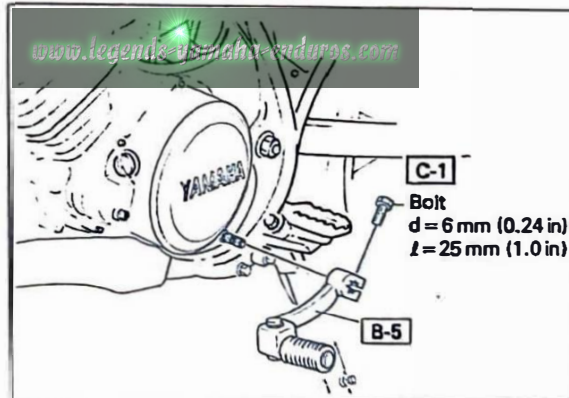


Tightening torque:

- M10: 6.5 m-kG (46 ft-lb)
M12: 8.5 m-kG (60 ft-lb)

Change pedal installation

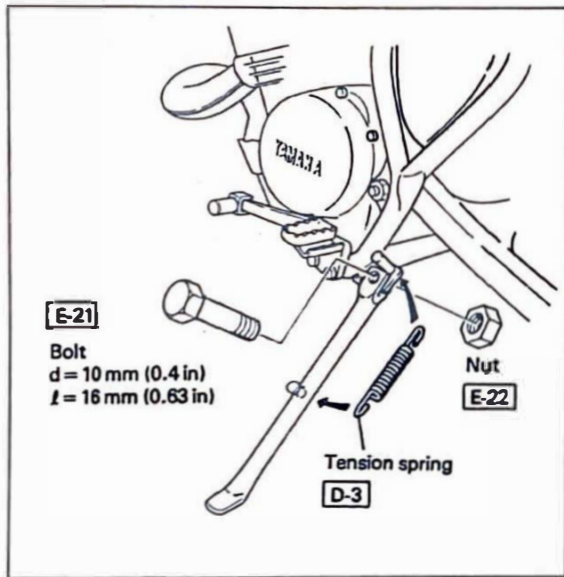
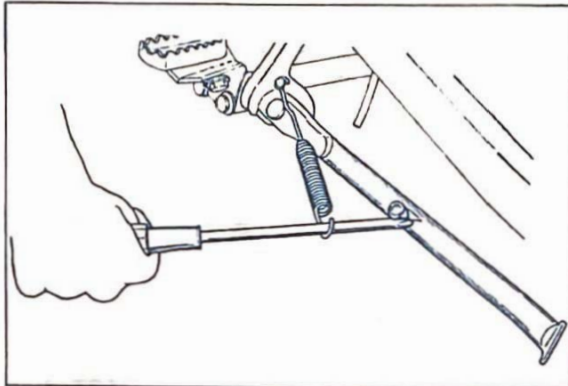
1. Install the change pedal so it is almost parallel to the top end of the footrest.



Tightening torque: 1.0 m-kG (7 ft-lb)

Side stand installation

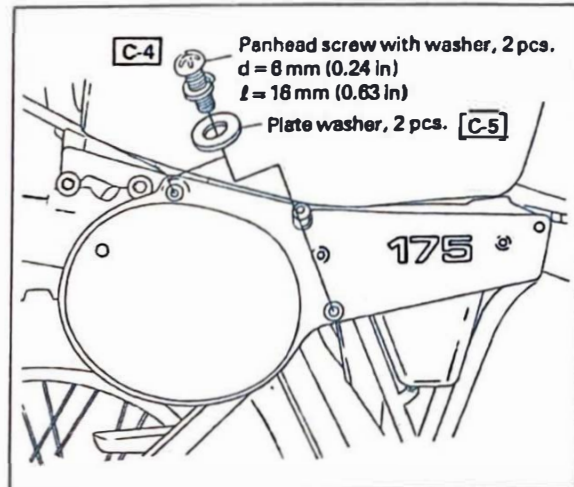
1. Install the side stand onto the frame.
2. Install the spring onto the side stand.



Tightening torque: 3.0 m·kg (22 ft·lb)

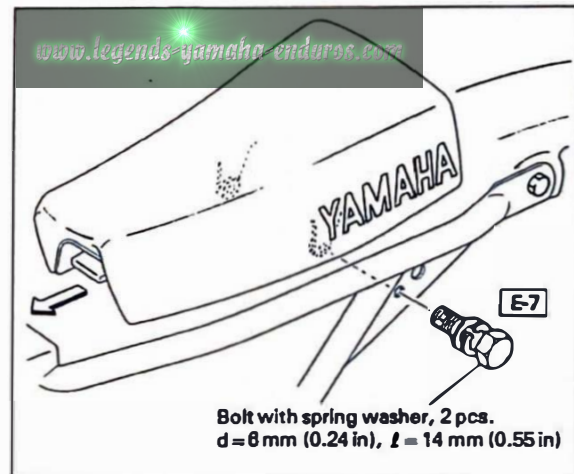
Side cover (R) installation

1. Install the side cover using the panhead screw with washers and plate washers.
2. When installing the side cover, be careful not to tighten it excessively.



Seat installation

1. Put the seat tab under the frame, and install the seat.

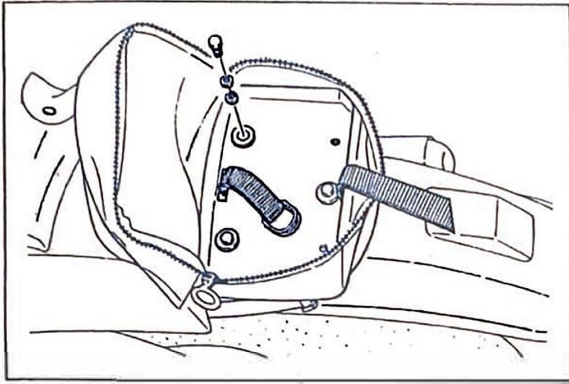


Tightening torque: 1.0 m·kg (7 ft·lb)

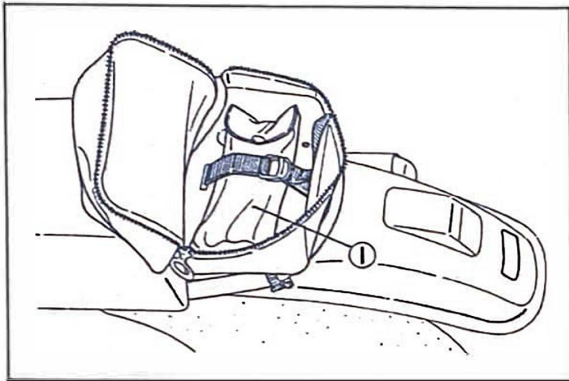
Tool kit installation

1. Install the carrier box using bolt with washer and plate washer.

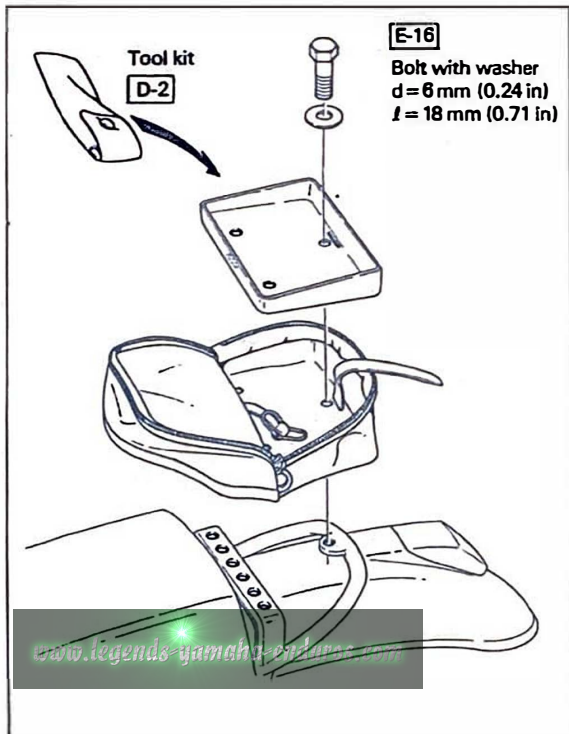
Tightening torque: 0.7 m·kg (5 ft·lb)



2. Install the tool kit in the carrier box and secure the kit with a band.



1. Tool kit (D-2)



TORQUE SPECIFICATIONS

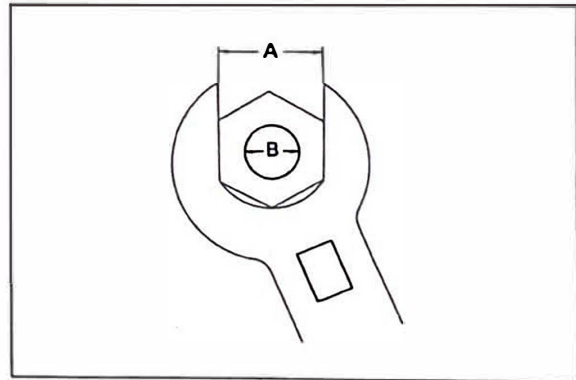
The following torque specifications must be adhered to on every machine. Components with several studs should be tightened in gradual stages and in a pattern that will avoid warpage to the item being secured.

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 (Nut)	B (Bolt)	Standard tightening torque	
		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



Engine	Tightening torque
Cylinder head	M8 2.5 m-k _g (18 ft-lb)
Spark plug	M14 2.5 m-k _g (18 ft-lb)
Change pedal	M6 1.0 m-k _g (8 ft-lb)
Flywheel magneto	M12 7.5 m-k _g (50 ft-lb)
Starter	M6 0.8 m-k _g (6 ft-lb)
Chassis	
Engine mounting bolt:	
Front	M8 3.0 m-k _g (22 ft-lb)
Center	M8 3.0 m-k _g (22 ft-lb)
Engine mount stay:	M8 3.0 m-k _g (22 ft-lb)
Handle crown:	
Steering shaft	M14 9.5 m-k _g (68 ft-lb)
Steering pinch	M8 2.3 m-k _g (16 ft-lb)
Inner tube	M8 2.3 m-k _g (16 ft-lb)
Handle holder	M8 2.3 m-k _g (16 ft-lb)
Steering bearing	M25 1.0 m-k _g (7 ft-lb)
Front fork:	
Cap bolt	M32 2.3 m-k _g (16 ft-lb)
Front wheel axle	M14 8.5 m-k _g (60 ft-lb)
Pivot shaft	M16 8.5 m-k _g (60 ft-lb)
Rear wheel axle	M14 8.5 m-k _g (60 ft-lb)
Foot rest	M10 6.5 m-k _g (46 ft-lb)
	M12 8.5 m-k _g (60 ft-lb)

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

Front wheel rim
..... Deflection

Front wheel tire
..... Tire pressure

Front wheel axle nut
..... Cotter pin, Tightening torque

Steering head
..... Adjustment, Tightening torque

Handle holder
..... Tightening torque

Clutch lever

..... Freeplay, Tightening torque

Clutch wire
..... Routing, Lubrication

Brake lever
..... Freeplay, Tightening torque

Front brake wire
..... Routing, Lubrication

Throttle wire
..... Routing

Throttle housing
..... Position, Operation, Freeplay

Carburetor joints
..... Tightness

Footrest
..... Position, Tightness

Change pedal
..... Tightness, Operation

Brake pedal
..... Position, Freeplay, Operation

Seat
..... Mounting

Fuel tank
..... Mounting

Fuel pipe
..... Routing, Connection

Rear fender
..... Mounting

Taillight
..... Mounting, Routing

Fuel breather pipe
..... Routing, Connection

Rear shock absorber
..... Cotter pin, Mounting

Swing arm pivot shaft
..... Tightening torque

Rear wheel axle nut
..... Cotter pin, Tightening torque

Rear wheel
..... Spoke tension

Rear wheel rim
..... Deflection

Rear wheel tire
..... Tire pressure

Handle switch lead wire
..... Routing, Clamp

Speedometer cable
..... Routing

Transmission
..... Oil level

TROUBLESHOOTING

If the engine will not start or will not start easily after inspections and adjustment, check the following parts.

1. Ignition timing — Checking and adjustment

After starting the engine, check the ignition timing, and if necessary, adjust.

Ignition timing (B.T.D.C.):
2.6 mm (0.102 in)

2. Spark plug-checking and adjustment
When the machine is stored or not used for a long period of time, oil may accumulate on the spark plug. If so, hard starting will result. Remove the spark plug, and clean it as required.

Spark plug: N-2G (CHAMPION)

3. Carburetor — Cleaning
 - a. Put a rag under the carburetor so fuel does not contact the crankcase.
 - b. Loosen the drain screws and drain the standing fuel.

WARNING:

FUEL IS HIGHLY FLAMMABLE:

- * Always turn off 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.

- c. Retighten the drain screws securely.

NOTE:

For details, refer to the Owner's service manual for this model.

ADJUSTMENTS

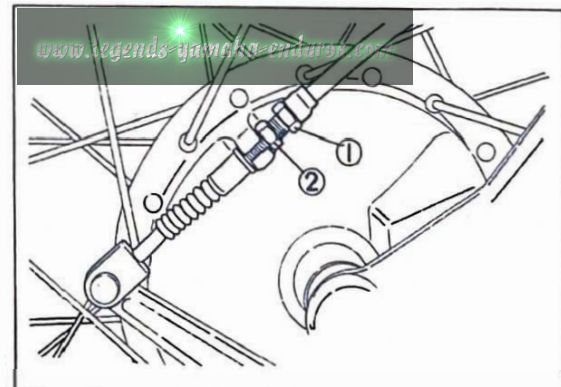
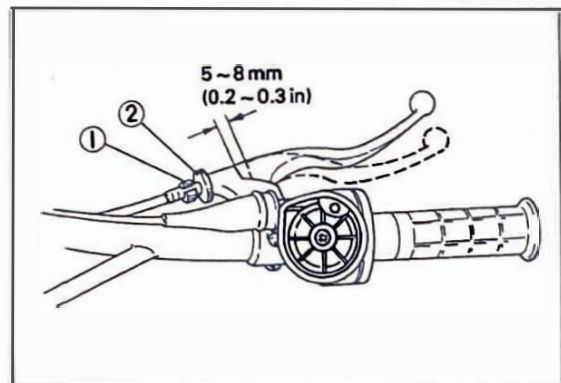
NOTE:

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

Front brake

The front brake should be adjusted to suit rider preference within a 5 ~ 8 mm (0.2 ~ 0.3 in) free play at the lever pivot side.

1. Loosen the adjuster lock nut.
2. Turn the cable length adjuster in or out until adjustment is suitable.
3. Tighten the adjuster lock nut.



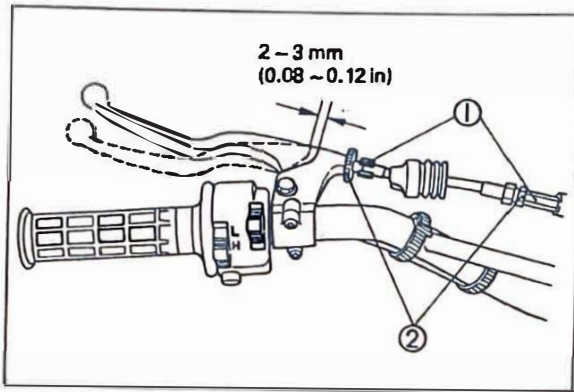
1. Adjuster 2. Lock nut

Clutch wire

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.

Loosen the clutch wire adjuster lock nut at the clutch lever, and adjust the clutch wire by turning the wire adjuster.

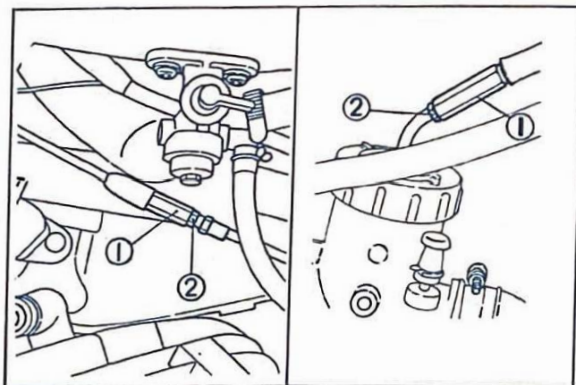
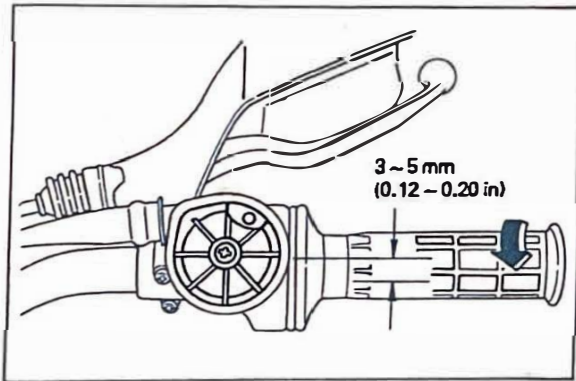
Turning the adjuster clockwise (the adjuster is tightened) increases clutch wire play, while turning counterclockwise decreases the play.



1. Adjuster 2. Lock nut

Throttle cable freeplay

Check free play by turning the throttle grip. The free play should be 3 ~ 5 mm (0.12 ~ 0.20 in) at the grip flange. Loosen the lock nut and turn the adjuster to make the necessary adjustment. After adjusting be sure to tight the lock nut properly.

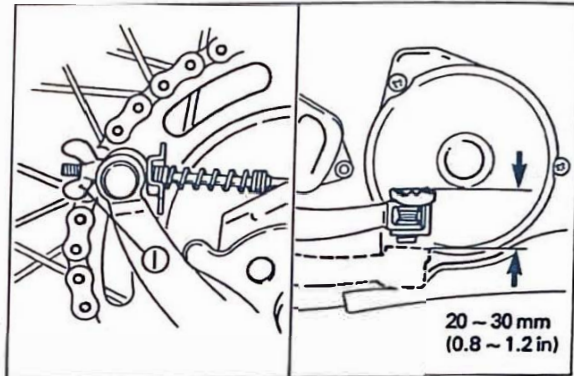


1. Adjuster 2. Lock nut

Rear Brake

The rear brake should be adjusted to suit rider preference within a 20 ~ 30 mm (0.8 ~ 1.2 in) free play at the brake pedal end.

Turn the adjusting nut on the rear brake ferule in or out until brake pedal freeplay is suitable.

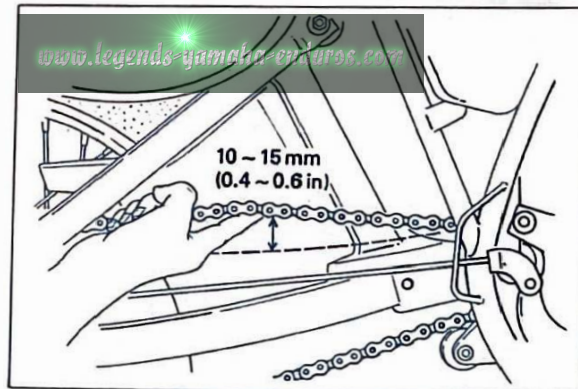


1. Adjuster

Drive chain tension check

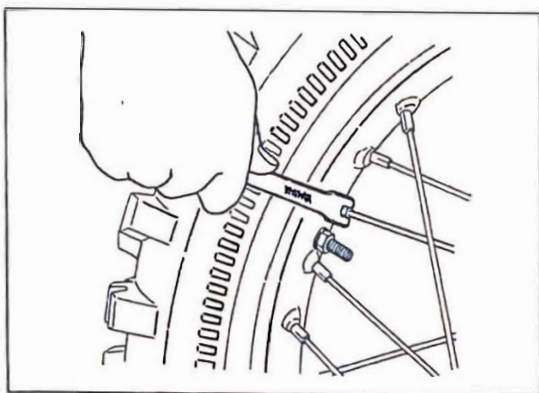
To check the chain play, the machine must stand vertically with its both wheels on the ground and without operator on it.

Check the tension at the position shown in the illustration. The normal vertical deflection is approximately 10 ~ 15 mm (0.39 ~ 0.59 in). If the deflection exceeds 15 mm (0.59 in) adjust the chain tension.



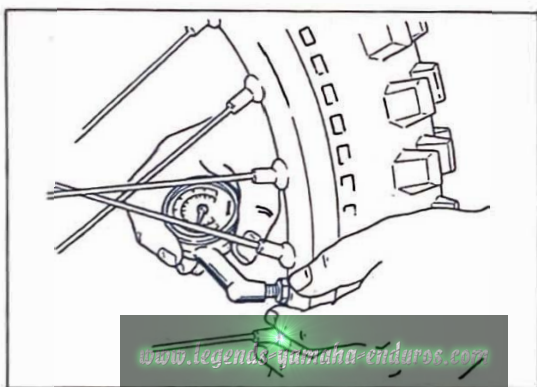
Spokes

Tap each spoke with an iron rod for sound. If one spoke makes a dull flat sound, then check it for looseness. And tighten it.



Tire pressures

To prevent flat-spotting during shipment, the tires are overinflated before crating. Adjust the tire pressures to 1.0 kg/cm² (14 psi).



FUEL AND OIL

Fuel

Use premium gasoline with an octane rating of 90 +. Mix the gasoline and oil at the specified gas/oil ratio.

Fuel tank capacity: 11 l (2.9 US gal)

Engine mixing oil

Recommended oil: Yamalube "R"
(Yamalube Racing 2-cycle oil)
Mixing ratio: 16 : 1

If for any reason you should use another oil, select it from the following list.

*Shell Super M
*Castrol R30
Mixing ratio: 20 : 1

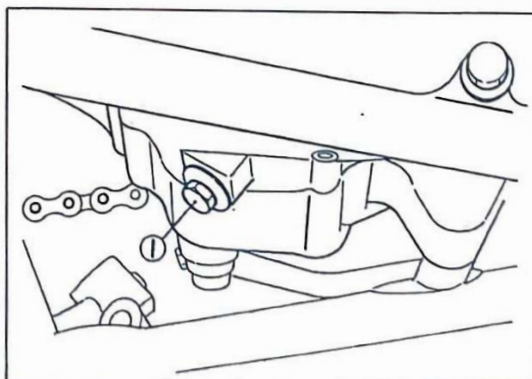
CAUTION:

Always use the same brand oil. Use only one of the recommended oils.

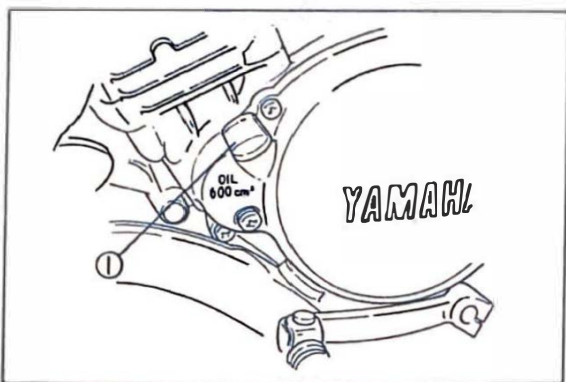
Transmission oil

Recommended oil:
Yamalube 4-cycle oil or SAE
10W/30 "SE" motor oil

OIL REPLACEMENT



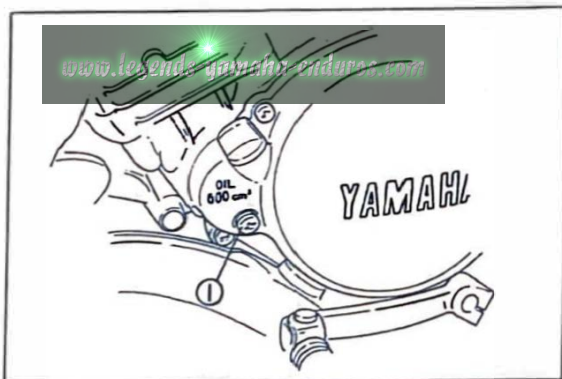
1. Drain plug



1. Filler plug

CHECKING THE OIL LEVEL

On the left side of the engine there is a checking screw. To check the oil level, warm up the engine for 2 ~ 3 minutes. Stop the engine. Place the machine upright and remove the oil level checking screw. If oil flows out, the oil level is correct. If the oil level is lower than specification, add oil.



1. Checking screw

Oil capacity;
Periodic oil change: 600 cc (0.65 US qt)

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