



# YAMAHA

# YZ250D/YZ400D

## ASSEMBLY MANUAL

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90894 - 07629

## FOREWORD

This Assembly Manual contains information required for the correct unpacking and assembly of the specified Yamaha motorcycles.

To perform machine assembly, a basic knowledge of Yamaha machine and service procedures is required.

Therefore, all Yamaha dealers are urged to study the service of Yamaha motorcycles using the relevant service manuals.

## NOTICE

The service specifications given in this Assembly Manual are based on the model as manufactured.

Yamaha is continually improving its products, and service specifications may be subject to change in the future.

If any significant is introduced into the specifications or service procedures, Yamaha dealers will be notified through technical service information to be published by Yamaha.

The assembly procedure is described in the order that the mechanic should follow, and the proper service tools should be used correctly.

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 cleaner.

**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.

**YAMAHA YZ250D/YZ400D  
ASSEMBLY MANUAL  
1st EDITION, DECEMBER 1976  
OVERSEAS SERVICE DEPARTMENT  
YAMAHA MOTOR CO., LTD.  
IWATA JAPAN  
LIT-11666-00-46**

# CONTENTS

PREPARATION .....	1
UNPACKING .....	1
Notes on transportation .....	1
Procedure for unpacking .....	1
PARTS CHECK LIST .....	1
INSTALLATION GUIDE .....	3
SET-UP PROCEDURES .....	4
INSPECTIONS AND ADJUSTMENTS .....	11
Inspections .....	11
Adjustments .....	13
Service specifications .....	15

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## PREPARATION

To assemble the machine correctly, the following service tools, supplies and working space are required:

## UNPACKING

### Note on transportation

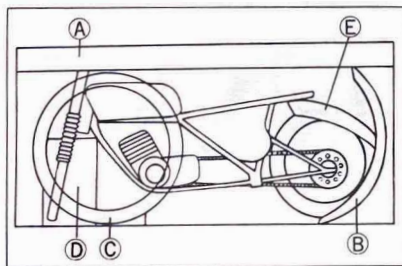
Use care not to butt the machine packed in the crate against a hard object or give it a heavy shock during transportation or in the service shop.

### Procedure for unpacking

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

Remove the foam tray, front wheel and seat. Next, remove the nails from each corner of crate, and remove the struts.

Remove the front fender and double seat.



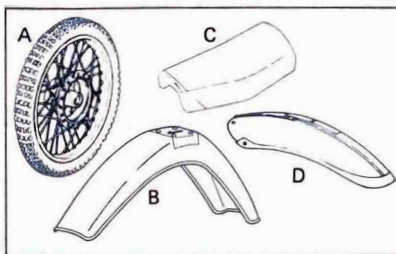
- A. Foam styrol case
- B. Front fender
- C. Front wheel
- D. Seat
- E. Rear fender

## PARTS CHECK LIST

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

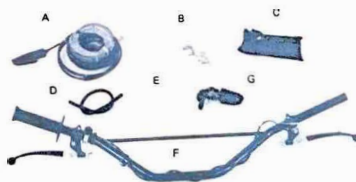
Check parts in card board crate.

No.	Q'ty	Part name
A	1	Front wheel
B	1	Front fender
C	1	Seat
D	1	Rear fender



Check parts on foam styrol case

No.	Q'ty	Part name
A	1	Brake shoe plate assembly
B	1	Vinyl bag 1,2
C	1	Tool bag
D	1	Breather pipe
E	1	Vinyl bag 3
F	1	Handle bar assembly
G	1	Right footrest assembly



Details of parts in vinyl bag 1

No.	Q'ty	Part name	Remarks
1-a	1	Owner's manual	

Details of parts in vinyl bag 2

No.	Q'ty	Part name	Remarks
2-a	2	Hexagon head with washer bolt	foot-rest
2-b	2	Hexagon head with washer bolt	Double seat
2-c	1	Collar	Front wheel
2-d	2	Plate washer	Rear fender
	2	Hexagon head with washer bolt	

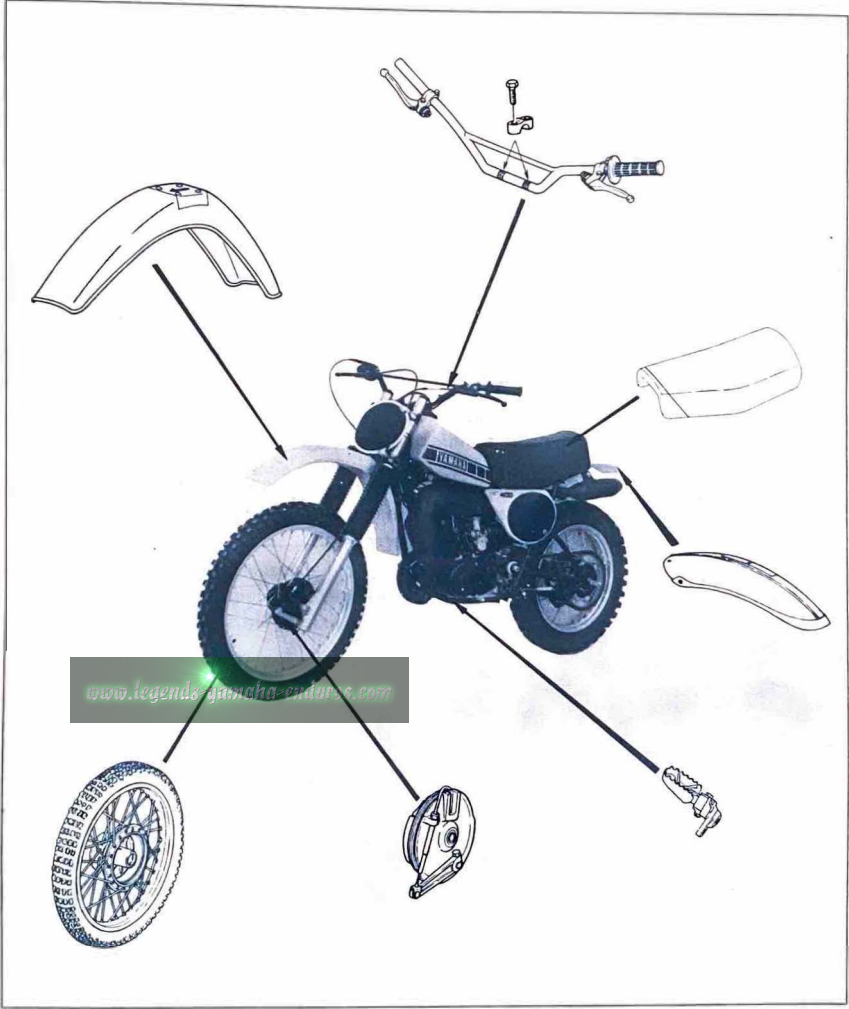
Details of parts in vinyl bag 3

No.	Q'ty	Part name	Remarks
3-a	2	Hexagon head with washer bolt	Rear fender
	2	Plate washer	



# INSTALLATION GUIDE

The removed parts should be installed in the positions indicated in the chart below:



## SET-UP PROCEDURES

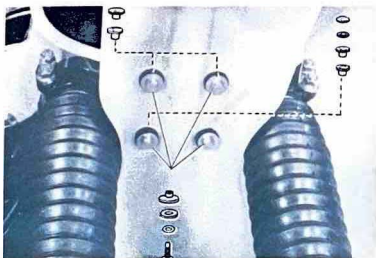
Lift up the machine and take out the rear wheel from the lower wooden case.

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 fender using the specified number of bolts with spring washers, plate washers, fender dampers, fender collars, and special washers.

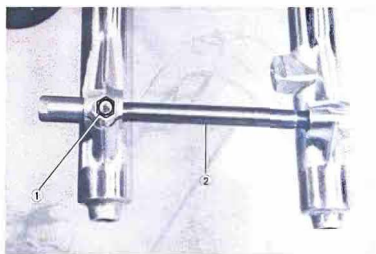
Bolt with spring washer:	6 mm x 4 pcs.
Plate washer:	6 mm x 4 pcs.
Fender damper:	8 pcs.
Fender collar:	4 pcs.
Special washer:	2 pcs.



**NOTE:**  
The front fender should be installed with the arrow mark in the left facing forward.



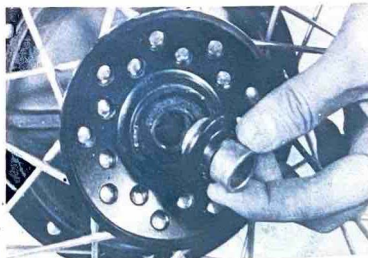
Loosen the axle pinch bolt, and unscrew the wheel axle. Pull out the wheel axle.



1. Axle pinch bolt
2. Wheel axle

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

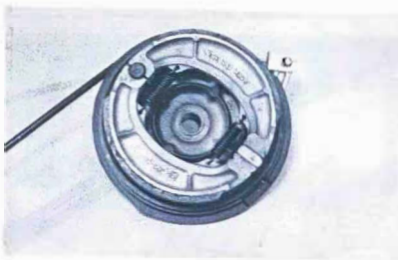
**NOTE:**  
To avoid damaging the oil seal lip, apply a light coat of lithium base grease to the oil seal lip and axle collar. If the collar is dirty, clean with a rag.



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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.



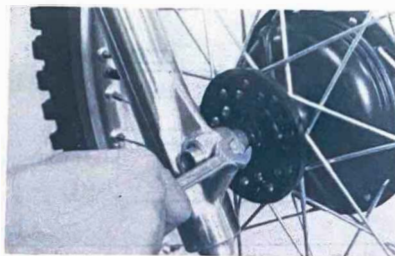
Install the front wheel on the front forks.

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 distance collar between the right fork leg and front wheel hub. Then, insert the axle.



3. Tighten the wheel axle pinch bolt with specified torque.

Tightening torque:  
0.8 ~ 1.1 m·kg  
(6 ~ 8 ft·lb)



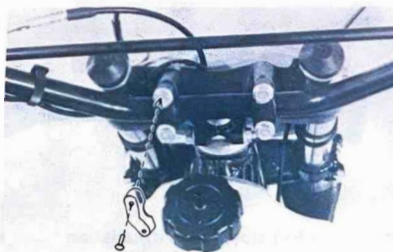
Thread the front brake wire through the wire holders.



Handlebar installation

Install the handlebar using the two upper holders and four hexagon bolts.

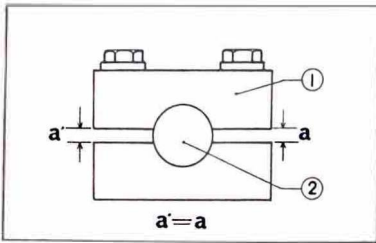
Tightening torque:  
1.1 ~ 1.8 m·kg  
(8 ~ 13 ft·lb)



**CAUTION:**

Tighten bolts in stages and maintain an equal gap on each side of both holders.



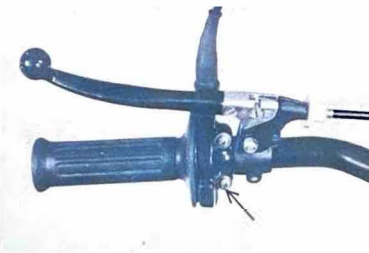
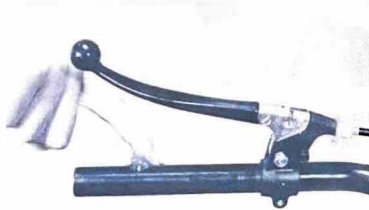


1. Holder
2. Handlebar

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.



#### Brake wire and clutch wire installation

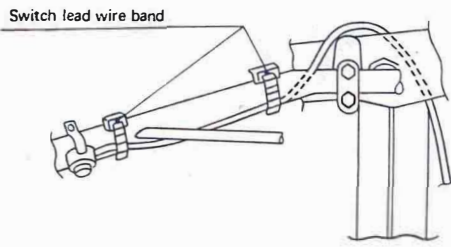
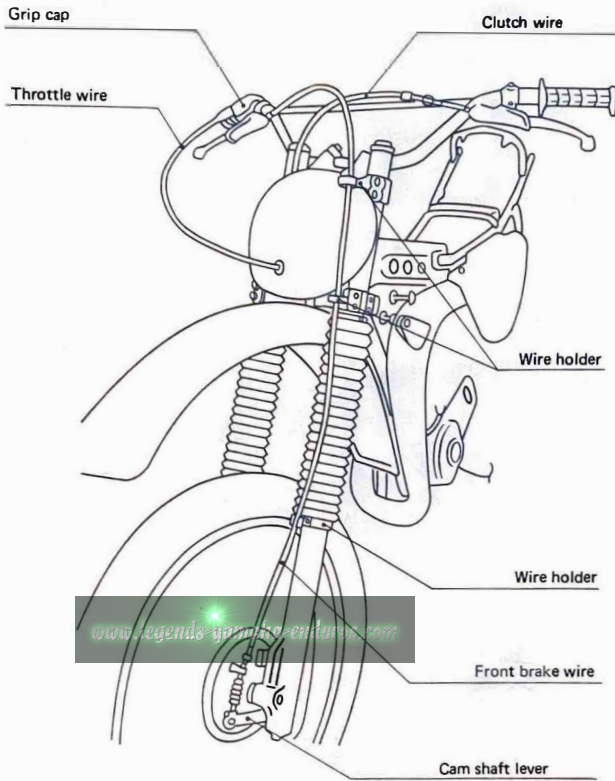
1. Fully loosen the lever adjuster lock nut, and screw in the adjuster until tight. Next, align the slit in the adjuster and adjuster lock nut with the slit in the lever holder.
2. Insert the wire end into the lever hole,

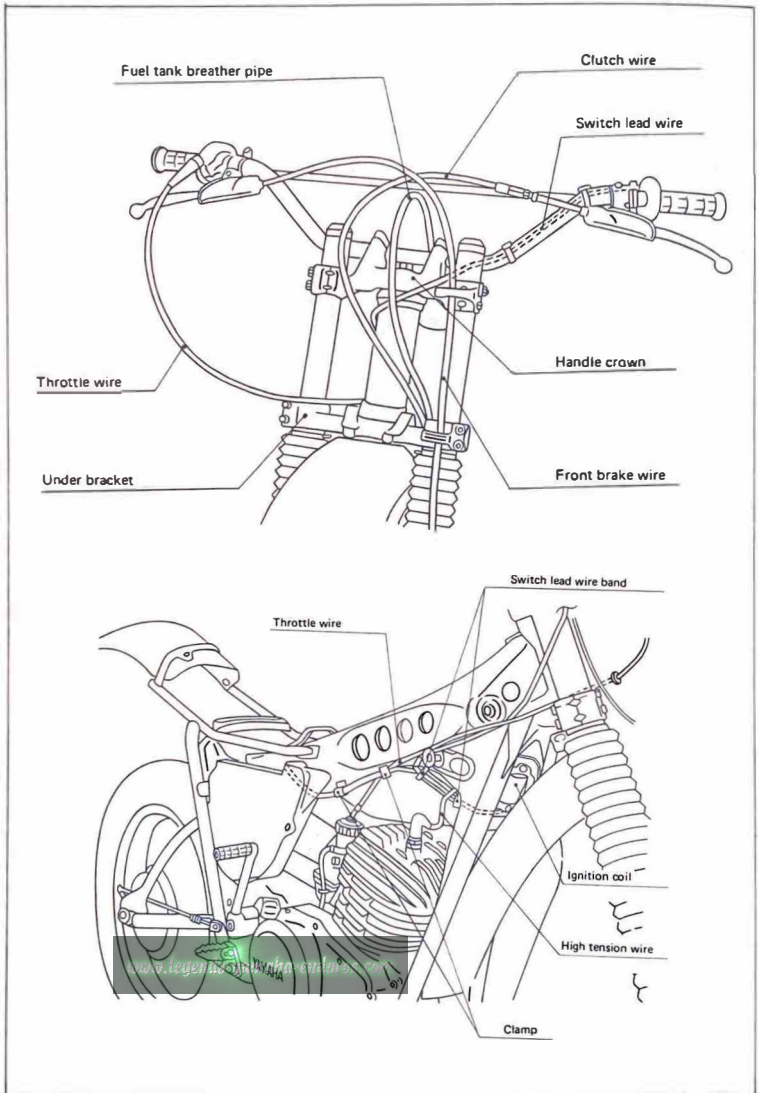
and hook the outer cable end onto the adjuster lock nut, then squeeze the lever. Next, while pulling the outer cable in the direction opposite to the lever, release the lever quickly. While releasing it, seat the outer into the adjuster.

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

Proper cable and wire routing is essential to insure safe vehicle operation. For details of the cable routing, refer to the cable routing diagram.

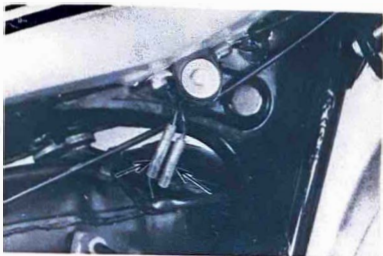






### Engine stop switch

1. Connect the engine stop switch lead wire (Black and Black/White) to the lead wire of C.D.I., and clamp the wire connection.

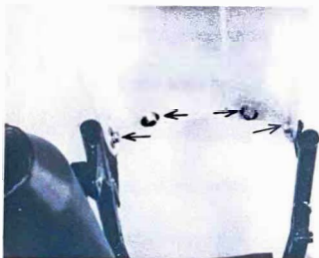


**NOTE:** \_\_\_\_\_

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

### Rear fender

- Install the rear fender to frame.  
Tighten the rear fender securing bolts.



### Semi double seat

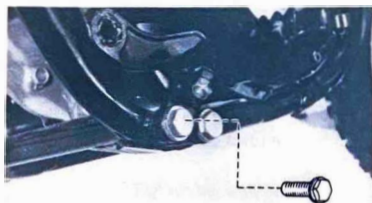
1. Tighten the seat securing bolt after inserting a rear flap to inside the both seat rail.

Tightening torque:  
0.4 ~ 0.6 m·kg  
(3 ~ 4.3 ft)



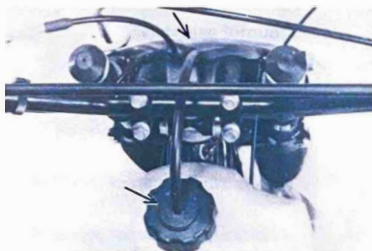
### Footrest

- Install the footrest using two with washer bolts.



### Fuel tank breather pipe

- Connect one end of the air breather pipe to the fuel tank filler cap, and insert the other end between the humber plate and handle crown.



### Holder cover

- Cover the brake and clutch lever holders with holder covers.



# INSPECTION 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	..... Hopping, deflection
Front wheel tire	..... Tire pressure
Front wheel axle pinch bolt	..... Tightening torque
Steering head lock bolt	..... Tightening torque
Front fork pinch bolts	..... Tightening torque
Steering head lock nut	..... Tightening torque
Handlebar holder	..... Tightening torque
Clutch lever holder	..... Tightening torque
Brake lever holder	..... Tightening torque
Throttle housing	..... Position, operation, tightness
Engine mounting bolt	..... Tightening torque
Carburetor joint	..... Tightness
Footrests	..... Position, tightening torque
Change pedal	..... Position, looseness, operation
Brake pedal	..... Position, looseness, operation
Seat	..... Mounting, clevis pin, clips
Fuel tank	..... Mounting

Fuel pipe	Connection
Rear fender	Mounting
Rear shock absorber	Mounting
Rear swing arm pivot shaft	Tightening torque
Rear axle nut	Cotter pin, tightening torque
Chain puller	Lock nut
Rear wheel	Spoke tension
Rear wheel rim	Hopping, deflection
Rear wheel tire	Tire pressure
Transmission	Oil level
Engine oil	Oil level

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## Adjustments

### NOTE:

This section deals with the main points only. For details, refer to the DT250D/400D Service Manual.

#### Idle speed and idle air adjustments

1. Turn pilot air screw until lightly seated.
2. Back out give back not to specified below.

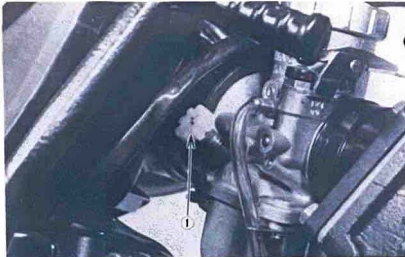
Back out	YZ250D	1-1/2	turn
	YZ400D	1-1/2	

3. Turn the throttle stop screw until idle is at desired rpm.

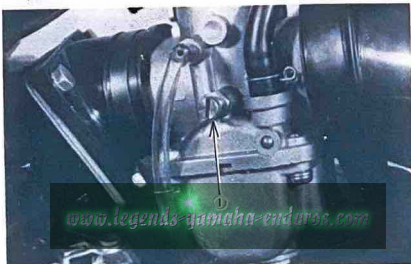
### NOTE:

A locknut is incorporated on the screws for positive retention.

4. Turn the pilot air screw in or out until idle speed is at highest rpm.
5. Turn the throttle stop screw in or out until idle speed is at desired rpm.



1. Pilot air screw



1. Throttle stop screw

### NOTE:

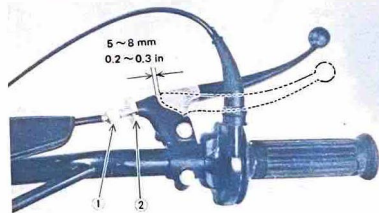
Pilot air and throttle stop screws should be so adjusted that engine response to throttle changes from idle position is rapid and without hesitation.

#### 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:

5 ~ 8 mm  
(0.2 ~ 0.3 in)



1. Adjuster 2. Lock nut

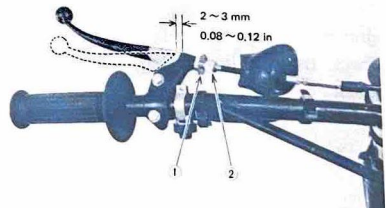
#### Clutch wire adjustment

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.

#### Standard value:

2 ~ 3 mm  
(0.08 ~ 0.12 in)



1. Lock nut 2. Adjuster

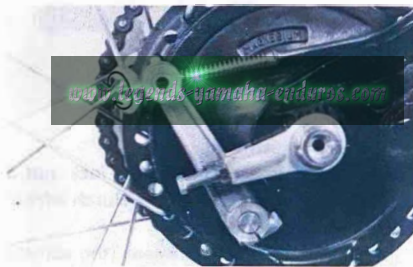
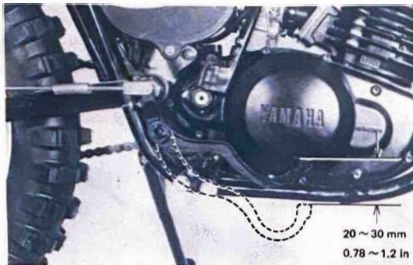


### Rear brake pedal adjustment

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 counterclockwise (loosening) increases play.

Standard value:  
20 ~ 30 mm  
(0.8 ~ 1.2 in)



If the engine will not start or will not start easily after inspection and adjustments are complete, check the following parts.

### Carburetor

Remove the drain screw attached to the carburetor float bowl, and drain off the gasoline.

### Ignition timing

Check the ignition timing, and if necessary, adjust.

### Ignition timing:

YZ250D:  $2.3 \pm 0.15$  mm  
( $0.0905 \pm 0.006$  in)  
B.T.D.C.

YZ400D:  $2.7 \pm 0.15$  mm  
( $0.106 \pm 0.006$  in)  
B.T.D.C.

### NOTE:

For details, refer to the DT250D/400D Service Manual.

### 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.

## SERVICE SPECIFICATIONS

### SERVICE DATA

ITEM	SERVICE STANDARDS	
	YZ250D	YZ400D
Engine Ignition timing	2.3 ± 0.15 mm (0.0905 ± 0.006 in)	2.7 ± 0.15 mm (0.106 ± 0.006 in)
Carburetor: Main jet Jet needle/Clip position Air screw turns out	# 360 6F15-2 1-1/2	# 370 6F16-3 1-1/2
Idling engine speed	as desired	
Fuel tank: Capacity	7.6 lit (2.0 gal.)	
Transmission oil: Oil quantity	Exchange : 1100 ± 50 cc (1162 ± 53 qt) Total : 1200 ± 50 cc (1270 ± 53 qt)	
Front fork: Oil quantity	338 cc (357 qt)	
Tire pressure: Front Rear	0.9 kg/cm <sup>2</sup> (13 psi) 1.1 kg/cm <sup>2</sup> (16 psi)	

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