



YAMAHA

YFZ350A

**SUPPLEMENTARY
SERVICE MANUAL**

FOREWORD

This Supplementary Service manual has been prepared to introduce new service and new data for the YFZ350A. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with following manual.

YFZ350T Service Manual (LIT-11616-05-87)

YFZ350A

**SUPPLEMENTARY
SERVICE MANUAL**

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NOTICE

This manual was by the Yamaha Motor Company primary for use by Yamaha dealers and their qualified mechanics. It is not possible to put an entire mechanic's education into one manual, so it is assumed that person using this book to perform maintenance and repairs on Yamaha machine have a basic understanding of the mechanical concepts and procedures inherent in machine repair technology. Without such knowledge, attempt repairs or service to this model may render it unfit to use and/or unsafe. Yamaha Motor Company, Ltd. is continually striving to improve all models manufactured by Yamaha. Modifications and significant changes in specifications or procedures will be forwarded to all Authorized Yamaha dealers and will, there applicable, appear in future editions of this manual.

**TECHNICAL PUBLICATIONS
SERVICE DIVISION
MOTORCYCLE GROUP
YAMAHA MOTOR CO., LTD.**

PARTICULARLY IMPORTANT INFORMATION

This material is distinguished by the following notation.



The Safety Alert Symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



Failure to follow **WARNING** instructions could result in severe injury or death to the machine operator, a bystander, or a person inspecting or repairing the machine.



A **CAUTION** indicates special precautions that must be taken to avoid damage to the machine.

NOTE:

A **NOTE** provides key information to make procedures easier or clearer.

HOW TO USE THIS MANUAL

CONSTRUCTION OF THIS MANUAL

This manual consists of chapters for the main categories of subjects. (See "Illustrated symbols")

- 1st title ① : This is a chapter with its symbol on the upper right of each page.
- 2nd title ② : This title appears on the upper of each page on the left of the chapter symbol. (For the chapter "Periodic inspection and adjustment" the 3rd title appears.)
- 3rd title ③ : This is a final title.

MANUAL FORMAT

All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspections.

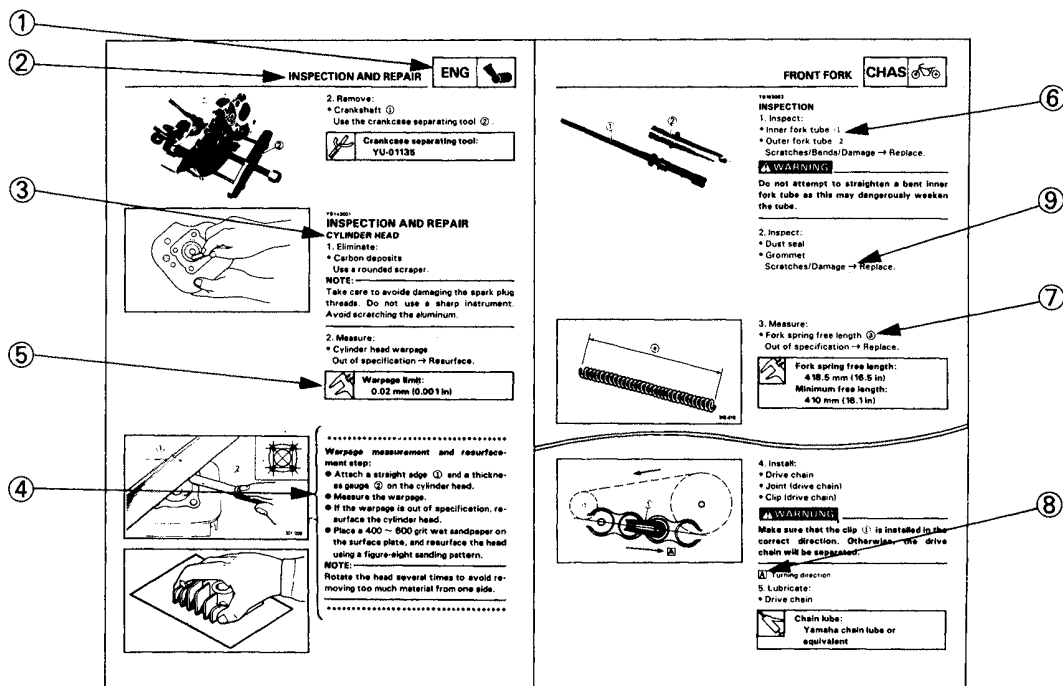
A set of particularly important procedure ④ is placed between a line of asterisks "*" with each procedure preceded by "●".

















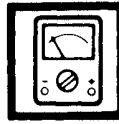







IMPORTANT FEATURES

- Data and a special tool are framed in a box preceded by a relevant symbol ⑤.
- An encircled numeral ⑥ indicates a part name, and an encircled alphabetical letter data or an alignment mark ⑦, the others being indicated by an alphabetical letter in a box ⑧.
- A condition of a faulty component will precede an arrow symbol and the course of action required the symbol ⑨.

EXPLODED DIAGRAM

Each chapter provides exploded diagrams before each disassembly section for ease in identifying correct disassembly and assembly procedures.



① GEN INFO 	② SPEC 	
③ INSP ADJ 	④ ENG 	
⑤ COOL 	⑥ CARB 	
⑦ DRIV 	⑧ CHAS 	
⑨ ELEC 	⑩ TRBL SHTG ? 	
⑪ 	⑫ 	
⑬ 	⑭ 	
⑮ 	⑯ 	
⑰ 	⑱ 	
⑲ 	⑳ 	㉑ 
㉒ 	㉓ 	㉔ 

ILLUSTRATED SYMBOLS

(Refer to the illustration)

Illustrated symbols ① to ⑩ are designed as thumb tabs to indicate the chapter's number and content.

- ① General information
- ② Specifications
- ③ Periodic inspection and adjustment
- ④ Engine
- ⑤ Cooling system
- ⑥ Carburetion
- ⑦ Drive train
- ⑧ Chassis
- ⑨ Electrical
- ⑩ Troubleshooting

Illustrated symbols ⑪ to ⑰ are used to identify the specifications appearing in the text.

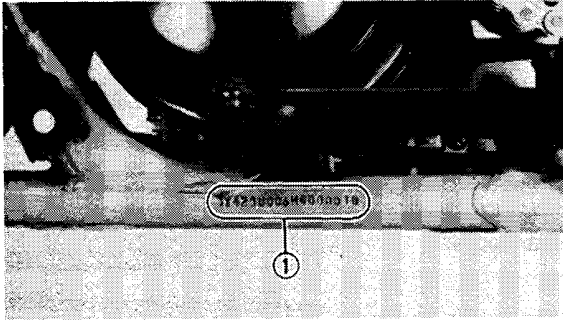
- ⑪ Filling fluid
- ⑫ Lubricant
- ⑬ Special tool
- ⑭ Tightening
- ⑮ Wear limit, clearance
- ⑯ Engine speed
- ⑰ Ω , V, A

Illustrated symbols ⑱ to ㉔ in the exploded diagram indicate grade of lubricant and location of lubrication point.

- ⑱ Apply locking agent (LOCTITE®)
- ⑲ Apply engine oil
- ⑳ Apply gear oil
- ㉑ Apply molybdenum disulfide oil
- ㉒ Apply wheel bearing grease
- ㉓ Apply lightweight lithium-soap base grease
- ㉔ Apply molybdenum disulfide grease

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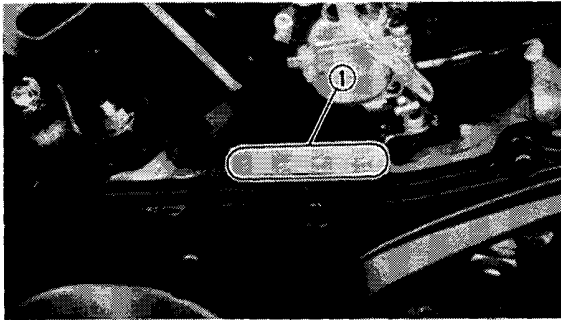
GENERAL INFORMATION**MACHINE IDENTIFICATION****VEHICLE IDENTIFICATION NUMBER**

The vehicle identification number ① is stamped into the left side of the frame.

NOTE: _____

The vehicle identification number is used to identify your machine and may be used to register your machine with the licensing authority in your state.

Starting serial number:
JY43GGA0 *LC010101

**ENGINE SERIAL NUMBER**

The engine serial number ① is stamped into the right side of the engine.

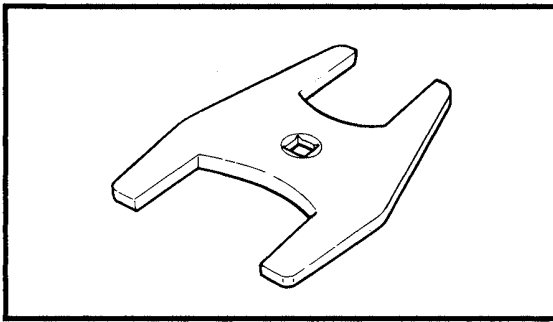
NOTE: _____

The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.

Starting serial number:
3GG-010101

NOTE: _____

Designs and specifications are subject to change without notice.



SPECIAL TOOLS

The following shows only the difference(s) from the YFZ350T.

FOR CHASSIS SERVICE

1. Rear axle nut wrench
P/N YM-37132

This tool is used to loosen and tighten the Nut (Rear axle).



SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	YFZ350A
Model Code Number	3GG2
Engine Starting Number	3GG-010101
Vehicle Identification Number	JY43GGA0 *LC010101
DIMENSIONS: Overall Length Overall Width Overall Height Seat Height Wheelbase Minimum Ground Clearance	1,855 mm (73 in) 1,100 mm (43.3 in) 1,080 mm (42.5 in) 800 mm (31.5 in) 1,280 mm (50.4 in) 135 mm (5.31 in)
BASIC WEIGHT: With Oil and Full Fuel Tank	185 kg (408 lb)
FUEL: Type Capacity: Total Reserve Amount	PREMIUM UNLEADED FUEL, Premix (20:1) 12 L (2.64 Imp gal, 3.17 US gal) 2.5 L (2.2 Imp qt, 2.64 US qt)
TRANSMISSION: Primary Reduction System Primary Reduction Ratio Secondary Reduction System Secondary Reduction Ratio Transmission Type Operation Gear Ratio: 1st 2nd 3rd 4th 5th 6th	Helical Gear 66/23 (2.869) Chain Drive 41/14 (2.929) Constant Mesh 6-Speed Left Foot Operation 32/13 (2.461) 29/16 (1.812) 27/18 (1.500) 25/20 (1.250) 23/22 (1.045) 21/24 (0.875)
CHASSIS: Frame Type Caster Angle Trail Tread (Standard): Rear Front Toe-in	Steel Tube Frame 9° 40 mm (1.57 in) 870 mm (34.3 in) 900 mm (35.4 in) 0 ~ 10 mm (0 ~ 0.39 in)
TIRE: Type Size: Front Rear Wear Limit	Tubeless AT21 × 7-10 AT20 × 11-10 3 mm (0.12 in)

MAINTENANCE SPECIFICATIONS

SPEC



Model	YFZ350A	
TIRE PRESSURE:	Front	Rear
	30 kPa (0.30 kg/cm ² , 4.4 psi)	25 kPa (0.25 kg/cm ² , 3.6 psi)
WHEEL TRAVEL:		
Front	220 mm (8.66 in)	
Rear	230 mm (9.1 in)	

MAINTENANCE SPECIFICATIONS

ENGINE

Model	YFZ350A
CARBURETOR:	
I.D. Mark	2GU-01
Fuel Level (F.L.) (With Special Tool)	0.5 ~ 1.5 mm (0.020 ~ 0.059 in)
Float Height (F.H.)	20 ~ 22 mm (0.80 ~ 0.88 in)
Main Jet (M.J.)	#200
Main Air Jet (M.A.J.)	ø1.6
Jet Needle (J.N.)	5N7-3
Needle Jet (N.J.)	O-8
Cutaway (C.A.)	2.0
Pilot Outlet (P.O.)	ø0.6
Pilot Jet (P.J.)	#25
Bypass 1 (B.P.1.)	1.4
Air Screw (A.S.)	2.0 turns out
Valve Seat Size (V.S.)	2.8
Starter Jet (G.S.)	ø1.4

CHASSIS

Model	YFZ350A
FRONT SUSPENSION:	
Cushion stroke	110 mm (4.33 in)
Suspension Spring Free Length	282 mm (11.1 in)
Spring Rate (K1)	28.4 N/mm (2.9 kg/mm, 162 lb/in)
(K2)	33.3 N/mm (3.4 kg/mm 190 lb/in)
Stroke (K1)	Zero ~ 65 mm (Zero ~ 2.56 in)
(K2)	65 mm ~ 135.5 (2.56 ~ 5.33 in)
REAR SUSPENSION:	
Shock Absorber Travel	89 mm (3.50 in)
Spring Free Length	234.5 mm (9.23 in)
Fitting Length	218.5 mm (8.6 in)
Spring Rate (K1)	63.7 N/mm (6.5 kg/mm, 364 lb/in)
Stroke (K1)	Zero ~ 110 mm (Zero ~ 4.3 in)
DRIVE CHAIN:	
Type/Manufacturer	520V6/DAIDO
No. of Links	104
Chain Free Play	15 ~ 20 mm (0.6 ~ 0.78 in)

MAINTENANCE SPECIFICATIONS



TIGHTENING TORQUE

Part to be tightened	Thread size	Tightening torque			Remarks	
		Nm	m·kg	ft·lb		
Steering knuckle & Castle nut	M14 × 1.5	85	8.5	61	Use lock washer	
Wheel panel nut	M10 × 1.25	45	4.5	32		
Steering knuckle & Knuckle arm	M10 × 1.25	38	3.8	27		
Caliper (Front)	M 8 × 1.25	28	2.8	20		
Brake disc (Front & Rear)	M 8 × 1.25	28	2.8	20		
Steering knuckle & Ball joint	M10 × 1.25	25	2.5	18		
Ball joint (Tie-rod) & Knuckle arm	M10 × 1.25	25	2.5	18		
Ball joint (Tie-rod) & Steering shaft	M10 × 1.25	25	2.5	18		
Ball joint & Tie-rod	M10 × 1.25	30	3.0	22		
Steering shaft & Frame	M10 × 1.25	30	3.0	22		
Steering bearing bracket & Frame	M 8 × 1.25	23	2.3	17		
Handlebar holder	M 8 × 1.25	20	2.0	14		
Bearing holder (Steering shaft)	M42 × 1.0	40	4.0	29		
Upper & Lower arm & Frame	M10 × 1.25	30	3.0	22		
Front shock absorber (Upper & Lower)	M10 × 1.25	45	4.5	32		
Engine mount:						
Frame & Front engine stay	M 8 × 1.25	30	3.0	22		
Engine & Front engine stay	M10 × 1.25	45	4.5	32		
Engine & Rear engine stay	M10 × 1.25	45	4.5	32		
Tension rod & Engine	M10 × 1.25	25	2.5	18		
Tension rod & Tension rod stay	M10 × 1.25	45	4.5	32		
Tension rod stay & Frame	M10 × 1.25	45	4.5	32		
Pivot shaft	M16 × 1.5	85	8.5	61		
Rear shock absorber (Upper & Lower)	M10 × 1.25	30	3.0	22		
Relay arm & Frame	M10 × 1.25	30	3.0	22		
Connecting rod & Swingarm	M10 × 1.25	30	3.0	22		
Relay arm & connecting rod	M10 × 1.25	30	3.0	22		
Footrest	M10 × 1.25	55	5.5	40		
Caliper (Rear)	M 8 × 1.25	23	2.3	17		SEE NOTE
Rear axle ring nut	M33 × 1.5	-	-	-		
Rear axle & Castle nut	M14 × 1.5	120	12.0	85		
Rear hub & Swingarm (Upper)	M12 × 1.25	120	12.0	85		
(Lower)	M10 × 1.25	60	6.0	43		
Brake hose union bolt	M10 × 1.25	25	2.5	18		
Brake hose & Caliper	M10 × 1.25	25	2.5	18		
Brake hose joint & Brake pipe	M10 × 1.0	18	1.8	13		
Brake hose joint	M 8 × 1.25	20	2.0	14		
Rear master cylinder	M 8 × 1.25	20	2.0	14		
Driven sprocket	M10 × 1.25	60	6.0	43		
Chain puller & Locknut	M 8 × 1.25	16	1.6	11		
Locknut (Rear brake caliper adjustment)	M 8 × 1.25	16	1.6	11		
Swingarm & Swingarm guard	M 8 × 1.25	28	2.8	20		
Fuel tank & Fuel cock	M 6 × 1.0	5	0.5	3.6		
Bumper: (Front)	M 8 × 1.25	23	2.3	17		
(Rear)	M 8 × 1.25	23	2.3	17		
Master cylinder & bracket	M 6 × 1.0	10	1.0	7.2		
Fender stay & Frame	M 6 × 1.0	10	1.0	7.2		
Stay & Frame	M 8 × 1.25	23	2.3	17		

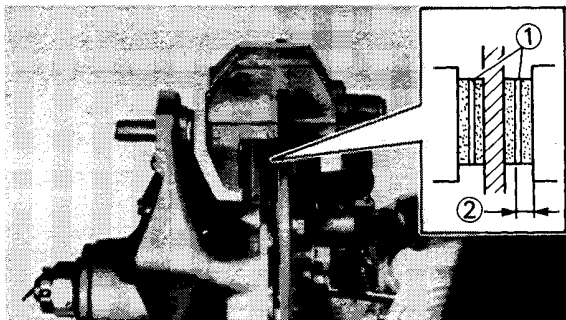
MAINTENANCE SPECIFICATIONS



NOTE:

1. Tighten the inside-ring nut to 55 Nm (5.5 m • kg, 40 ft • lb) while holding the rear axle.
 2. Hold the inside-ring nut and tighten the outside-ring nut to 190 Nm (19.0 m • kg, 140 ft • lb).
 3. Hold the outside-ring nut and tighten back the inside-ring nut to 240 Nm (24.0 m • kg, 170 ft • lb).
-

PERIODIC INSPECTION AND ADJUSTMENT



CHASSIS

FRONT BRAKE


Front Brake Pad

1. Activate the brake lever.

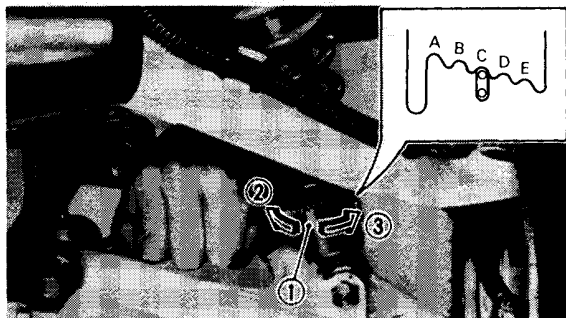
2. Inspect:

- Brake pads

Wear indicator ① (White line) almost contacts brake disc → Replace brake pads as a set. Refer to the "BRAKE PAD REPLACEMENT" section.



Front Brake Pad Wear Limit: ②
1.0 mm (0.04 in)



FRONT AND REAR SHOCK ABSORBER ADJUSTMENT

Front Shock Absorber

1. Adjust:

- Spring preload

Turn the adjuster ① to increase or decrease the spring preload.

Front Shock Absorber Preload			
Preload	Softer ② ←	Standard	Stiffer ③ →
Position	A, B	C	D, E

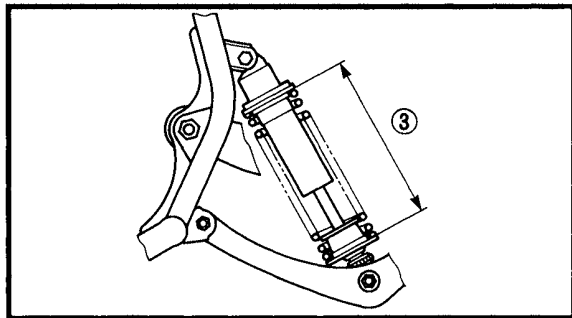
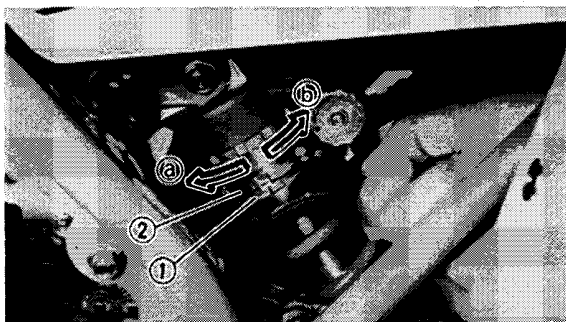
Rear Shock Absorber

⚠ WARNING

This shock absorber contains highly pressurized nitrogen gas. Read and understand the following information before handling the shock absorber. The manufacture cannot be held responsible for property damage or personal injury that may result from improper handling.

- Do not tamper with or attempt to open the cylinder assembly.
- Do not subject shock absorber to an open flame or other high heat source. This may cause the unit to explode due to excessive gas pressure.
- Do not deform or damage the cylinder in any way. Cylinder damage will result in poor damping performance.

FRONT AND REAR SHOCK ABSORBER ADJUSTMENT



1. Adjust:
- Spring preload

Spring preload adjustment steps:

- Elevate the rear wheels by placing the suitable stand.
- Loosen the locknut ② .
- Adjust the spring preload.

NOTE: _____

The length of the spring (installed) changes 1 mm (0.04 in) per turn of the adjuster.

③ Spring length

Stiffer ①	→ Increase the spring preload. (Turn the adjuster ① in.)
Softer ②	→ Decrease the spring preload. (Turn the adjuster ① out.)

	Standard Spring Length (Installed): 218.5 mm (8.6 in)
	Minimum Length (Installed): 213.5 mm (8.4 in)
	Maximum Length (Installed): 228.5 mm (9.0 in)

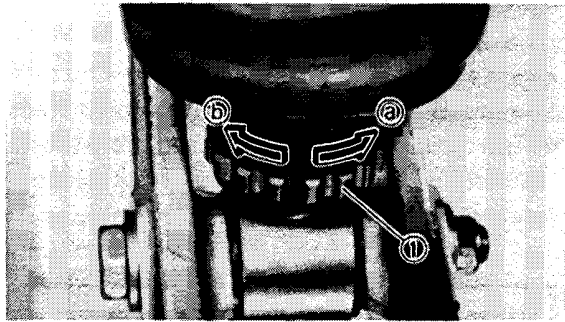
CAUTION: _____

Never attempt to turn the adjuster beyond the maximum or minimum setting.

- Tighten the locknuts.

	Locknut: 54 Nm (5.4 m · kg, 39 ft · lb)
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FRONT AND REAR SHOCK ABSORBER ADJUSTMENT

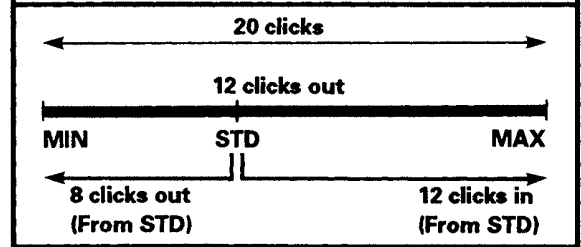


2. Adjust:
- Rebound damping force

- Rebound damping force adjustment steps:**
- Turn the adjuster ① 12 clicks back from the fully turned-in position. (It is standard position)
 - Adjust the rebound damping force.

Slower (a) → Increase the rebound damping force. (Turn the adjuster ① in.)
 Faster (b) → Decrease the rebound damping force. (Turn the adjuster ① out.)

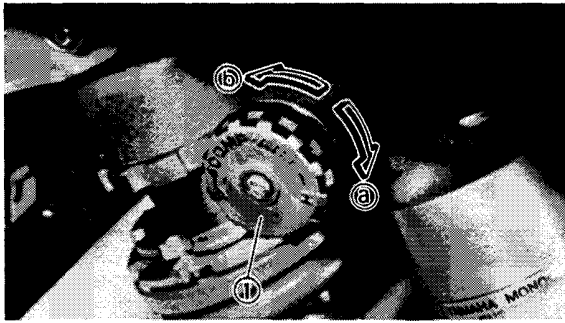
Standard setting:
 12 clicks turns out (From the fully turned-in position)
Minimum setting:
 8 clicks turns out (From standard position)
Maximum setting:
 12 clicks turns in (From standard position)



CAUTION:

Do not turn out (in) the adjuster from the damping force minimum (maximum) setting.

FRONT AND REAR SHOCK ABSORBER ADJUSTMENT



3. Adjust:

- Compression damping force

Compression damping force adjustment steps:

- Turn the adjuster ① 11 clicks back from the fully turned-out position. (It is standard position).
- Adjust the compression damping force.

Stiffer (a) → Increase the compression damping force. (Turn the adjuster ① clockwise.)
Softer (b) → Decrease the compression damping force. (Turn the adjuster ① counterclockwise.)

Standard setting:

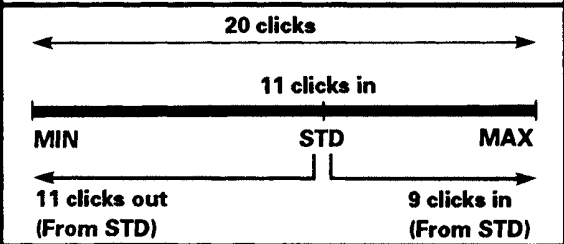
8 clicks turn in (From the fully turned out position)

Minimum setting:

11 clicks out (From standard setting)

Maximum setting:

9 clicks in (From standard setting)



CAUTION:

Do not turn out (in) the adjuster from the damping force minimum (maximum) setting.

⚠ WARNING

The compression damping adjuster is very hot immediately after a run.

Never allow your bare hand or part of your body to touch it.

CHASSIS

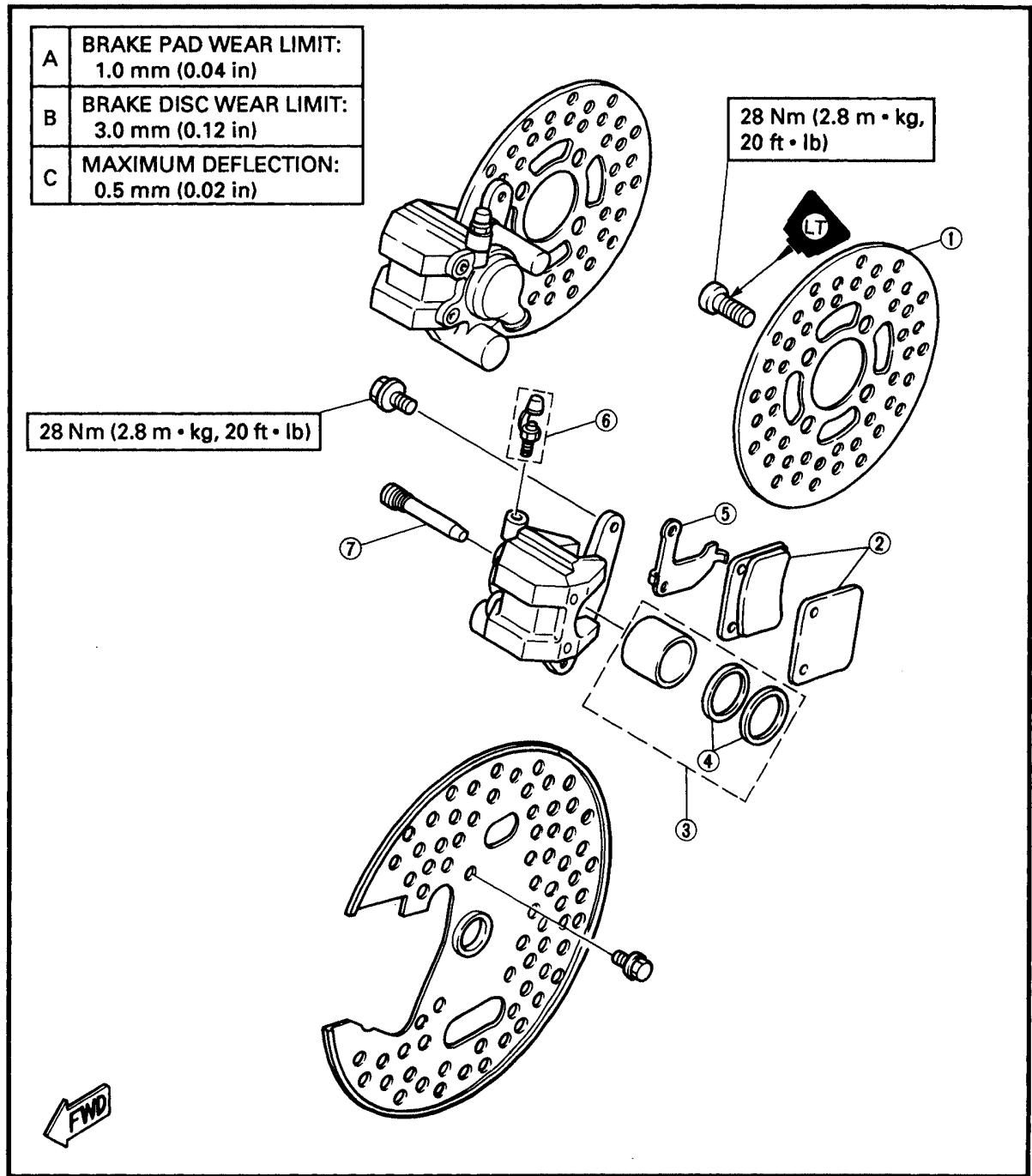
FRONT BRAKE

BRAKE CALIPER AND BRAKE DISC

- ① Brake disc
- ② Brake pads
- ③ Caliper piston assembly
- ④ Piston seal kit
- ⑤ Shim
- ⑥ Air bleed screw
- ⑦ Retaining bolt

NOTE:

- Drain the brake fluid before removing the brake hose.
- Always replace the brake pads as a set.



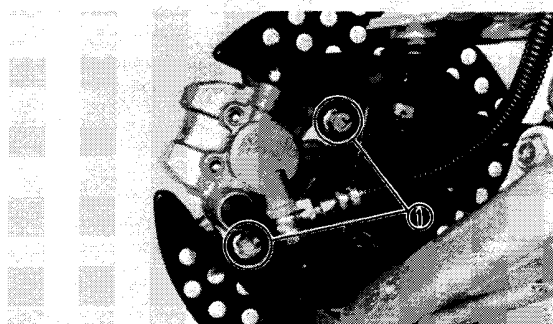
**CAUTION:**

Disc brake components rarely require disassembly. **DO NOT:**

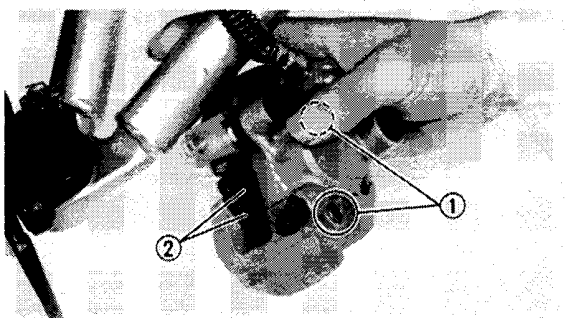
- Disassembly components unless absolutely necessary.
- Use solvents on internal brake component.
- Use contaminated brake fluid for cleaning.
- Use only clean brake fluid.
- Allow brake fluid to come in contact with the eyes otherwise eye injury may occur.
- Allow brake fluid to contact painted surfaces or plastic parts otherwise damage may occur.
- Disconnect any hydraulic connection otherwise the entire system must be disassembled, drained, cleaned, and then properly filled and bled after reassembly.

NOTE:

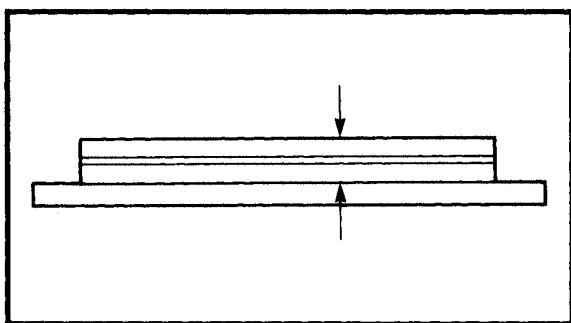
Drain the brake fluid before removing brake hose.

**BRAKE PAD REPLACEMENT****1. Remove:**

- Front wheel
- Disc cover (Outer)
- Bolt (Caliper) ①

**2. Remove:**

- Retaining bolt ①
- Brake pads ②

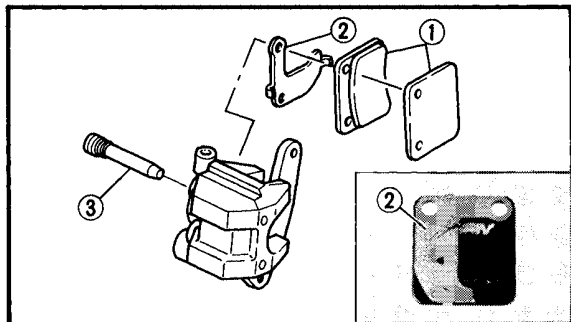


NOTE:

Replace pads as a set if either is found to be worn to the wear limit.



Brake Pad Wear Limit:
1.0 mm (0.04 in)



3. Install:

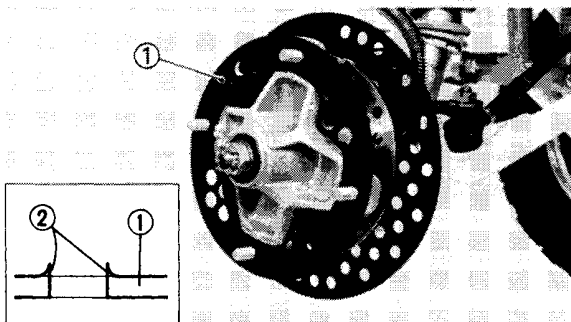
- Pads (New) ①
- Shim ②
- Retaining bolt ③

NOTE:

Be sure to install the shim ② at piston side.



Retaining Bolt:
18 Nm (1.8 m · kg, 13 ft · lb)



4. Install:

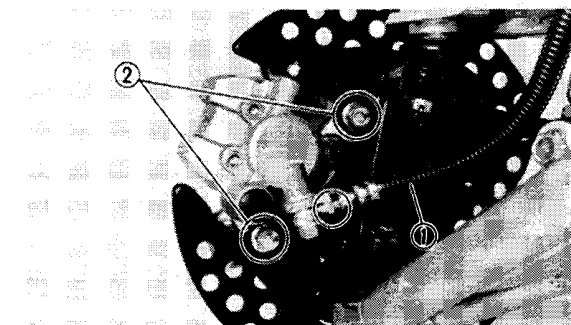
- Disc cover (Outer) ①
- Front wheel



Nut (Wheel Panel):
45 Nm (4.5 m · kg, 32 ft · lb)

NOTE:

Install the disc cover (Outer) ① with punched burrs ② on the hub side.

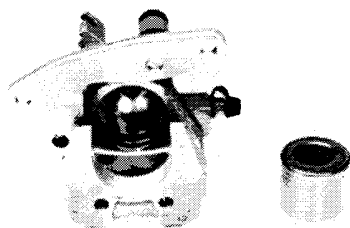
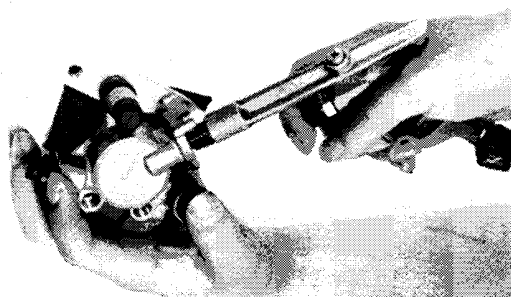
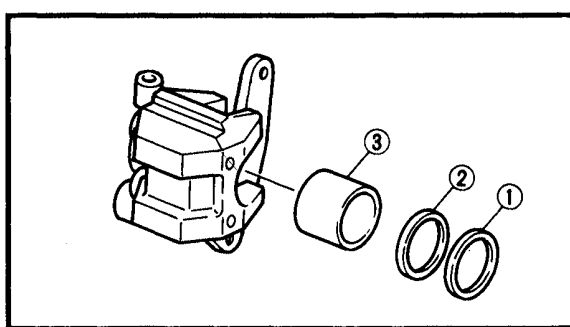


CALIPER

Caliper Removal

1. Remove:

- Front wheel
- Disc cover (Outer)
- Brake hose ①
- Drain the brake fluid.
- Bolt (Caliper) ②
- Disc cover (Inner)
- Brake pads
- Pad spring



Caliper Disassembly

1. Remove:

- Dust seal ①
- Piston seal ②
- Piston ③

Use compressed air and proceed carefully.

⚠ WARNING

- Cover piston with rag and use extreme caution when expelling piston from cylinder.
- Never attempt to pry out piston.

Caliper piston removal steps:

- Insert the rag into the caliper to lock the piston.
- Blow compressed air into the hose joint opening to force out the piston from the caliper body.

Inspection

1. Inspect:

- Piston
Rust/Wear Replace.
- Caliper cylinder body
Wear/Scratches Replace.

Installation

1. Assemble:

- Brake caliper (s)
Reverse disassembly steps.

⚠ WARNING

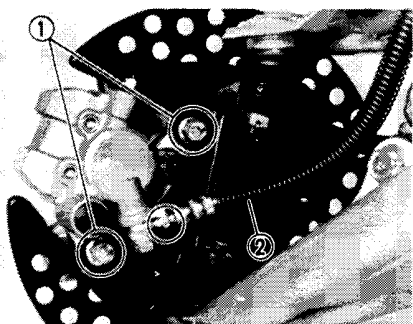
- All internal parts should be cleaned in new brake fluid only.
- Internal parts should be lubricated with brake fluid when installed.



Recommend Brake Fluid:
DOT #4 If DOT #4 is not available,
#3 can be used.

- Replace the dust seal, piston seal and clip whenever a caliper is disassembled.

FRONT BRAKE



2. Tighten:

- Bolt (Caliper) ①



Bolt (Caliper):
28 Nm (2.8 m • kg, 20 ft • lb)

- Bolt (Brake hose) ②



Bolt (Brake Hose):
27 Nm (2.7 m • kg, 19 ft • lb)

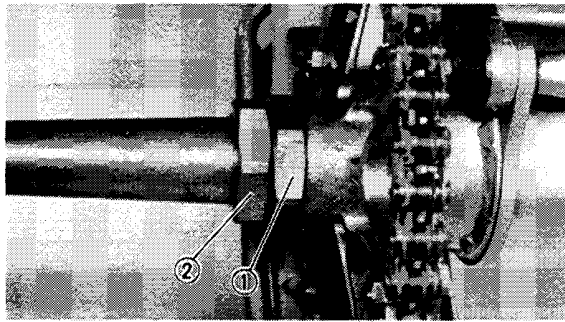
3. Bleed the air completely from the brake system.

4. Install:

- Disc cover (Outer)
- Front wheel



Nut (Wheel Panel):
45 Nm (4.5 m • kg, 32 ft • lb)



REAR AXLE

The following shows only the difference(s) from the YFZ350T.

INSTALLATION

1. Tighten:

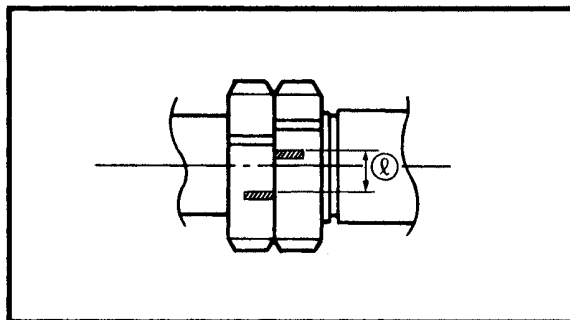
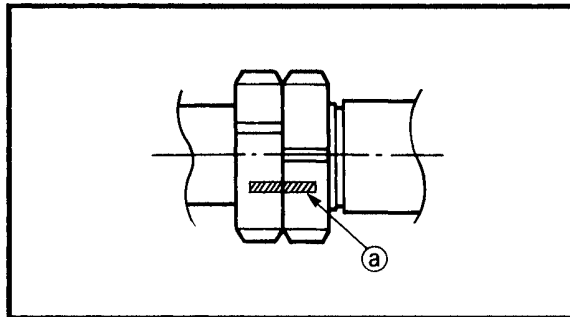
- Nuts (Rear axle) ①, ②



Nuts tightening steps:

NOTE:


Before tightening the nuts, apply the LOCTITE® to the thread portion of the rear axle.

- Finger tighten the inside nut ② while checking the ring gear engagement.
- Tighten the inside nut with Rear Axle Nut Wrench to specification while holding the rear axle.




	Rear Axle Nut Wrench: YM-37132
	Inside Nut (First Tightening): 55 Nm (5.5 m · kg, 40 ft · lb)

- Hold the inside nut ② and tighten the outside nut ① with Rear Axle Nut Wrench to specification.

	Outside Nut: 190 Nm (19.0 m · kg, 140 ft · lb)
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- Draw the line ③ on inside and outside nut.
- Hold the outside nut ① and tighten BACK the inside nut ② with Rear Axle Nut Wrench to specification.

	Inside Nut (Final Tightening): 240 Nm (24.0 m · kg, 170 ft · lb)
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- Measure the distance ④ between lines. If distance ④ is less than 3 mm (0.12 in), retighten BACK the inside nut.



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