

EAS00514

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FRONT WHEEL AND BRAKE DISCS



Order	Job/Part	Q'ty	Remarks		
	Removing the front wheel and brake		Remove the parts in the order listed.		
	discs				
			NOTE:		
			Place the motorcycle on a suitable stand		
			so that the front wheel is elevated.		
1	Brake hose holder (left and right)	2			
2	Brake caliper (left and right)	2			
3	Wheel axle pinch bolt	4	Loosen.		
4	Wheel axle bolt	1			
5	Front wheel axle	1			
6	Front wheel	1			
7	Collar (left and right)	2			
8	Oil seal cover (left and right)	2			
9	Brake disc (left and right)	2			
			For installation, reverse the removal		
			procedure.		
4 - 1					

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EAS00518

FRONT WHEEL



Order	Job/Part	Q'ty	Remarks
	Disassembling the front wheel		Remove the parts in the order listed.
1	Oil seal (left and right)	2	
2	Wheel bearing (left and right)	2	
3	Spacer	1	
			For assembly, reverse the disassembly
			procedure.

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EAS00521 REMOVING THE FRONT WHEEL

1. Stand the motorcycle on a level surface.

A WARNING

Securely support the motorcycle so that there is no danger of it falling over.

NOTE: _

Place the motorcycle on a suitable stand so that the front wheel is elevated.

- 2. Remove:
- · left brake caliper
- right brake caliper

NOTE: _

Do not apply the brake lever when removing the brake calipers.

- 3. Elevate:
- front wheel

NOTE: _

Place the motorcycle on a suitable stand so that the front wheel is elevated.



EAS00525

CHECKING THE FRONT WHEEL

1. Check:

wheel axle
 Roll the wheel axle on a flat surface.
 Bends → Replace.

A WARNING

Do not attempt to straighten a bent wheel axle.

- 2. Check:
- tire

 front wheel Damage/wear → Replace. Refer to "CHECKING THE TIRES" and "CHECKING THE WHEELS" in chapter 3.

FRONT WHEEL AND BRAKE DISCS













- 3. Measure:
- radial wheel runout ①
- lateral wheel runout ②
 Over the specified limits → Replace.



Radial wheel runout limit 1.0 mm (0.04 in) Lateral wheel runout limit 0.5 mm (0.02 in)

- 4. Check:
- wheel bearings

Front wheel turns roughly or is loose \rightarrow Replace the wheel bearings.

- oil seals Damage/wear \rightarrow Replace.
- 5. Replace:
- wheel bearings New
- oil seals
 New

- a. Clean the outside of the front wheel hub.
- b. Remove the oil seals ① with a flat-head screwdriver.

NOTE: .

To prevent damaging the wheel, place a rag 2 between the screwdriver and the wheel surface.

- c. Remove the wheel bearings ③ with a general bearing puller.
- d. Install the new wheel bearings and oil seals in the reverse order of disassembly.

CAUTION:

Do not contact the wheel bearing inner race (1) or balls (2). Contact should be made only with the outer race (3).

NOTE: _

Use a socket ④ that matches the diameter of the wheel bearing outer race and oil seal.



EAS00533 CHECKING THE BRAKE DISCS

The following procedure applies to all of the brake discs.

- 1. Check:
- brake disc
 - Damage/galling \rightarrow Replace.
- 2. Measure:
- brake disc deflection

Out of specification \rightarrow Correct the brake disc deflection or replace the brake disc.







Brake disc deflection limit (maximum) Front: 0.1 mm (0.04 in) Rear: 0.15 mm (0.06 in)

- a. Place the motorcycle on a suitable stand so that the wheel is elevated.
- b. Before measuring the front brake disc deflection, turn the handlebars to the left or right to ensure that the front wheel is stationary.
- c. Remove the brake caliper.
- d. Hold the dial gauge at a right angle against the brake disc surface.
- e. Measure the deflection 2 ~ 3 mm below the edge of the brake disc.

- 3. Measure:
- brake disc thickness
 Measure the brake disc thickness at a few different locations.
 Out of specification → Replace.

Brake disc thickness limit (minimum) Front: 4.5 mm (0.18 in) Rear: 4.5 mm (0.18 in)

- 4. Adjust:
- brake disc deflection

- a. Remove the brake disc.
- b. Rotate the brake disc by one bolt hole.
- c. Install the brake disc.

NOTE:

Tighten the brake disc bolts in stages and in a crisscross pattern.





Brake disc bolt 18 Nm (1.8 m · kg, 13 ft · lb) LOCTITE[®]

- d. Measure the brake disc deflection.
- e. If out of specification, repeat the adjustment steps until the brake disc deflection is within specification.
- f. If the brake disc deflection cannot be brought within specification, replace the brake disc.

EAS00545

INSTALLING THE FRONT WHEEL

The following procedure applies to both brake discs.

- 1. Lubricate:
- wheel axle
- oil seal lips



- 2. Lift the wheel up between the fork legs.
- 3. Insert the wheel axle.

NOTE:

Install the tire with the mark ① pointing in the direction of wheel rotation.

- 4. Lower the front wheel so that it is on the ground.
- 5. Install the brake calipers by installing the bolts, and then tightening them to the specified torque.

NOTE: .

Make sure that there is enough space between the brake pads before installing the brake calipers onto the brake discs.



Brake caliper bolt 40 Nm (4.0 m · kg, 29 ft · lb)

- 6. Install the brake hose holders by installing the bolts and nuts.
- 7. Secure the wheel axle by installing the axle bolt, and then tightening it to the specified torque.

Axle bolt 90 Nm (9.0 m · kg, 65 ft · lb)







8. Tighten wheel axle pinch bolt ①, and then pinch bolt ② to the specified torque.



Wheel axle pinch bolt 18 Nm (1.8 m · kg, 13 ft · lb)

- 9. Tap the outer side of the right fork leg with a rubber mallet to align it with the end of the wheel axle.
- 10.Tighten wheel axle pinch bolt ③, and then pinch bolt ④ to the specified torque.



Wheel axle pinch bolt 18 Nm (1.8 m · kg, 13 ft · lb)

11. While applying the front brake, push down hard on the handlebar several times to check for proper fork operation.

EAS00549

ADJUSTING THE FRONT WHEEL STATIC BALANCE

NOTE: _

- After replacing the tire, wheel or both, the front wheel static balance should be adjusted.
- Adjust the front wheel static balance with the brake discs installed.
- 1. Remove:
- balancing weight(s)
- 2. Find:
- front wheel's heavy spot

NOTE: _

Place the front wheel on a suitable balancing stand.

FRONT WHEEL AND BRAKE DISCS











- a. Spin the front wheel.
- b. When the front wheel stops, put an "X1" mark at the bottom of the wheel.

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- c. Turn the front wheel 90° so that the "X₁" mark is positioned as shown.
- d. Release the front wheel.
- e. When the wheel stops, put an " X_2 " mark at the bottom of the wheel.
- f. Repeat steps (d) through (f) several times until all the marks come to rest at the same spot.
- g. The spot where all the marks come to rest is the front wheel's heavy spot "X".

- 3. Adjust:
- front wheel static balance

a. Install a balancing weight ① onto the rim exactly opposite the heavy spot "X".

NOTE: .

Start with the lightest weight.

- b. Turn the front wheel 90° so that the heavy spot is positioned as shown.
- c. If the heavy spot does not stay in that position, install a heavier weight.
- d. Repeat steps (b) and (c) until the front wheel is balanced.

- 4. Check:
- front wheel static balance

- a. Turn the front wheel and make sure it stays at each position shown.
- b. If the front wheel does not remain stationary at all of the positions, rebalance it.



REAR WHEEL AND BRAKE DISC



Order	Job/Part	Q'ty	Remarks
	Removing the rear wheel		Remove the parts in the order listed.
			NOTE:
			Place the motorcycle on a suitable stand so that the rear wheel is elevated.
1 2 3 4 5 6 7 8 9	Brake caliper Locknut (left and right) Adjusting bolt (left and right) Wheel axle nut Washer Rear wheel axle Left adjusting block Right adjusting block Rear wheel	1 2 2 1 1 1 1	Loosen. Loosen. NOTE: Make sure that the tapered side of the right adjusting block faces the wheel.
10	Brake caliper bracket	1	
			For installation, reverse the removal procedure.

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REAR WHEEL



Order	Job/Part	Q'ty	Remarks
	Disassembling the rear wheel		Remove the parts in the order listed.
1	Spacer	1	
2	Bearing	1	
3	Spacer	1	
4	Oil seal	1	
5	Circlip	1	
6	Bearing	1	
			For installation, reverse the disassembly
			procedure.

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Order	Job/Part	Q'ty	Remarks
	Remove the brake disc and rear		Remove the parts in the order listed.
	wheel sprocket		
1	Brake disc	1	
2	Rear wheel sprocket	1	
3	Collar (left and right)	2	
4	Oil seal	1	
5	Bearing	1	
6	Rear wheel drive hub	1	
7	Rear wheel drive hub damper	6	
			For installation, reverse the removal
			procedure.



REMOVING THE REAR WHEEL

1. Stand the motorcycle on a level surface.

A WARNING

Securely support the motorcycle so that there is no danger of it falling over.

NOTE: .

Place the motorcycle on a suitable stand so that the rear wheel is elevated.





- 2. Remove:
- brake caliper ①

NOTE:

Do not depress the brake pedal when removing the brake caliper.

- 3. Loosen:
- locknut (1)
- adjusting bolt 2
- 4. Remove:
- wheel axle nut ③
- wheel axle
- rear wheel

NOTE: .

Push the rear wheel forward and remove the drive chain from the rear wheel sprocket.





- 5. Remove:
- left collar ①
- rear wheel drive hub (2)
- rear wheel drive hub damper
- right collar

EAS00565 CHECKING THE REAR WHEEL

- 1. Check:
- wheel axle
- rear wheel
- wheel bearings
- oil seals Refer to "CHECKING THE FRONT WHEEL".
- 2. Check:
- tire
- rear wheel Damage/wear → Replace. Refer to "CHECKING THE TIRES" and "CHECKING THE WHEELS" in chapter 3.
- 3. Measure:
- radial wheel runout
- lateral wheel runout
- Refer to "CHECKING THE FRONT WHEEL".



EAS00567

CHECKING THE REAR WHEEL DRIVE HUB

- 1. Check:
- rear wheel drive hub ①
 Cracks/damage → Replace.
- rear wheel drive hub dampers (2) Damage/wear \rightarrow Replace.



CHECKING AND REPLACING THE REAR WHEEL SPROCKET

CHAS

- 1. Check:
- rear wheel sprocket More than 1/4 tooth ⓐ wear → Replace the rear wheel sprocket.

Bent teeth \rightarrow Replace the rear wheel sprocket.

- (b) Correct
- ① Drive chain roller
- ② Rear wheel sprocket



- 2. Replace:
- rear wheel sprocket

- a. Remove the self-locking nuts and the rear wheel sprocket.
- b. Clean the rear wheel drive hub with a clean cloth, especially the surfaces that contact the sprocket.
- c. Install the new rear wheel sprocket.



Rear wheel sprocket self-locking nut

100 Nm (10 m · kg, 72 ft · lb)

NOTE: .

Tighten the self-locking nuts in stages and in a crisscross pattern.

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INSTALLING THE REAR WHEEL

- 1. Lubricate:
- wheel axle
- wheel bearings
- oil seal lips





- 2. Adjust:
- drive chain slack



Drive chain slack 40 ~ 50 mm (1.57 ~ 1.97 in)

Refer to "ADJUSTING THE DRIVE CHAIN SLACK" in chapter 3.

- 3. Tighten:
- wheel axle nut

brake caliper bolts

💐 27 Nm (2.7 m ⋅ kg, 20 ft ⋅ lb)

A WARNING

Make sure the brake hose is routed properly.

CAUTION:

Do not loosen the wheel axle nut after tightening it to the specified torque. If the groove in the wheel axle nut is not aligned with the cotter pin hole in the wheel axle, tighten the nut further until they are aligned.

EAS00575

ADJUSTING THE REAR WHEEL STATIC BALANCE

NOTE:

- After replacing the tire, wheel or both, the rear wheel static balance should be adjusted.
- Adjust the rear wheel static balance with the brake disc and rear wheel drive hub installed.

1. Adjust:

• rear wheel static balance Refer to "ADJUSTING THE FRONT WHEEL STATIC BALANCE".



FRONT AND REAR BRAKES



Order	Job/Part	Q'ty	Remarks
	Removing the front brake pads		Remove the parts in the order listed.
			The following procedure applies to both
			of the front brake calipers.
1	Brake pad clip	2	
2	Brake pad pin	1	
3	Brake pad spring	1	
4	Brake pad	2	
5	Brake pad shim	2	
6	Bleed screw	1	
			For installation, reverse the removal
			procedure.



REAR BRAKE PADS



Order	Job/Part	Q'ty	Remarks
	Removing the rear brake pads		Remove the parts in the order listed.
1	Brake caliper	1	
2	Brake pad	2	
3	Brake pad shim	2/2	
4	Brake pad spring	2	
5	Bleed screw	1	
			For installation, reverse the removal
			procedure.

EAS00579



CAUTION

Disc brake components rarely require disassembly.

Therefore, always follow these preventive measures:

A WARNING

- Never disassemble brake components unless absolutely necessary.
- If any connection on the hydraulic brake system is disconnected, the entire brake system must be disassembled, drained, cleaned, properly filled, and bled after reassembly.
- Never use solvents on internal brake components.
- Use only clean or new brake fluid for cleaning brake components.
- Brake fluid may damage painted surfaces and plastic parts. Therefore, always clean up any spilt brake fluid immediately.
- Avoid brake fluid coming into contact with the eyes as it can cause serious injury.

FIRST AID FOR BRAKE FLUID ENTERING THE EYES:

• Flush with water for 15 minutes and get immediate medical attention.

EAS00582 REPLACING THE FRONT BRAKE PADS

The following procedure applies to both brake calipers.

NOTE: .

When replacing the brake pads, it is not necessary to disconnect the brake hose or disassemble the brake caliper.

- 1. Remove:
 - brake hose holder 1
 - brake caliper 2











- 2. Remove:
- \bullet brake pad clips ()
- brake pad pins (2)
- brake pad spring ③

- 3. Remove:
- brake pads ①

 (along with the brake pad shims)

- 4. Measure:
- brake pad wear limit
 Out of specification → Replace the brake pads as a set.



Brake pad wear limit 0.5 mm (0.02 in)

- 5. Install:
- brake pad shims (onto the brake pads)
- brake pads
- blake pau
- brake pad spring

NOTE: _

Always install new brake pads, brake pad shims, and a brake pad spring as a set.







- a. Connect a clear plastic hose ① tightly to the bleed screw ②. Put the other end of the hose into an open container.
- b. Loosen the bleed screw and push the brake caliper pistons into the brake caliper with your finger.
- c. Tighten the bleed screw.

Bleed screw 6 Nm (0.6 m · kg, 4.3 ft · lb)

- d. Install a new brake pad shim onto each new brake pad.
- e. Install new brake pads and a new brake pad spring.

NOTE: _

The arrow mark (a) on the brake pad spring must point in the direction of disc rotation.

- 6. Install:
- brake pad pins
- brake pad clips
- brake caliper 3/40 Nm (4.0 m · kg, 29 ft · lb)



- 7. Check:
- brake fluid level

Below the minimum level mark (a) \rightarrow Add the recommended brake fluid to the proper level.

Refer to "CHECKING THE BRAKE FLUID LEVEL" in chapter 3.

- 8. Check:
- brake lever operation
 Soft or spongy feeling → Bleed the brake system.

Refer to "BLEEDING THE HYDRAULIC BRAKE SYSTEM" in chapter 3.



REPLACING THE REAR BRAKE PADS

NOTE: ____

When replacing the brake pads, it is not necessary to disconnect the brake hose or disassemble the brake caliper.

- 1. Remove:
- \bullet brake caliper (1)

- 2. Remove:
- brake pads ①

 (along with the brake pad shims)

- 3. Measure:
- brake pad wear limit
 Out of specification → Replace the brake pads as a set.



- 4. Install:
- brake pad shims
- (onto the brake pads)
- brake pads

NOTE: _

Always install new brake pads and brake pad shims as a set.















- a. Connect a clear plastic hose ① tightly to the bleed screw ②. Put the other end of the hose into an open container.
- b. Loosen the bleed screw and push the brake caliper pistons into the brake caliper with your finger.
- c. Tighten the bleed screw.

Bleed screw 6 Nm (0.6 m · kg, 4.3 ft · lb)

d. Install a new brake pad shim ③ onto each new brake pad ④.

- 5. Install:
- brake caliper 27 Nm (2.7 m · kg, 20 ft · lb)
- 6. Check:
- brake fluid level

Below the minimum level mark (a) \rightarrow Add the recommended brake fluid to the proper level.

Refer to "CHECKING THE BRAKE FLUID LEVEL" in chapter 3.

- 7. Check:
- brake pedal operation
 Soft or spongy feeling → Bleed the brake system.

Refer to "BLEEDING THE HYDRAULIC BRAKE SYSTEM" in chapter 3.



EAS00584

FRONT BRAKE MASTER CYLINDER



Order	Job/Part	Q'ty	Remarks
	Removing the front brake master		Remove the parts in the order listed.
	cylinder		
	Brake fluid		Drain.
1	Brake fluid reservoir cap stopper	1	
2	Brake fluid reservoir cap	1	
3	Brake fluid reservoir diaphragm holder	1	
4	Brake fluid reservoir diaphragm	1	
5	Brake fluid reservoir	1	
6	Brake fluid reservoir hose	1	
7	Circlip	1	
8	Hose joint	1	
9	Brake lever	1	
10	Front brake switch connector	2	Disconnect.
11	Union bolt	1	
12	Copper washer	2	





Order	Job/Part	Q'ty	Remarks
13	Brake hose	1	
14	Brake master cylinder bracket	1	
15	Brake master cylinder	1	
16	Front brake switch	1	
			For installation, reverse the removal
			procedure.

EAS00585

FRONT AND REAR BRAKES



Order	Job/Part	Q'ty	Remarks
	Disassembling the front brake master cylinder		Remove the parts in the order listed.
1	Dust boot	1	
2	Circlip	1	
3	Brake master cylinder kit	1	
4	Brake master cylinder	1	
			For assembly, reverse the disassembly
			procedure.



EAS00586

REAR BRAKE MASTER CYLINDER



Order	Job/Part	Q'ty	Remarks
	Removing the rear brake master		Remove the parts in the order listed.
	cylinder		
	Brake fluid		Drain.
1	Brake fluid reservoir cap	1	
2	Brake fluid reservoir diaphragm holder	1	
3	Brake fluid reservoir diaphragm	1	
4	Brake fluid reservoir	1	
5	Brake fluid reservoir hose	1	
6	Hose joint	1	
7	Union bolt	1	
8	Copper washer	2	
9	Brake hose	1	
10	Brake master cylinder	1	
			For installation, reverse the removal
			procedure.

EAS00587



Contraction of the other of the
16 Nm (1.6 m ⋅ kg, 12 ft ⋅ lb)

Order	Job/Part	Q'ty	Remarks
	Disassembling the rear brake		Remove the parts in the order listed.
1	Brake master cylinder kit	1	
2	Brake master cylinder	1	
			For assembly, reverse the disassembly
			procedure.



DISASSEMBLING THE FRONT BRAKE MASTER CYLINDER

NOTE: _

Before disassembling the front brake master cylinder, drain the brake fluid from the entire brake system.



- brake switch coupler ① (from the brake switch)
- 2. Remove:
- union bolt 2
- copper washers ③
- brake hoses ④

NOTE: .

To collect any remaining brake fluid, place a container under the master cylinder and the end of the brake hose.





EAS00589

DISASSEMBLING THE REAR BRAKE MASTER CYLINDER

- 1. Remove:
- union bolt ①
- copper washers (2)
- \bullet brake hose 3

NOTE: .

To collect any remaining brake fluid, place a container under the master cylinder and the end of the brake hose.













CHECKING THE FRONT AND REAR BRAKE MASTER CYLINDERS

The following procedure applies to both of the brake master cylinders.

1. Check:

- brake master cylinder
 Damage/scratches/wear → Replace.
- brake fluid delivery passages (brake master cylinder body)
 Obstruction → Blow out with compressed air.
- A Front
- B Rear

- 2. Check:
- brake master cylinder kit
- Damage/scratches/wear \rightarrow Replace.
- A Front
- B Rear

- 3. Check:
- brake fluid reservoir (1) Cracks/damage \rightarrow Replace.
- brake fluid reservoir diaphragm ② Cracks/damage → Replace.
- A Front
- B Rear4. Check:
- brake hoses
 Cracks/damage/wear → Replace.



ASSEMBLING AND INSTALLING THE FRONT BRAKE MASTER CYLINDER

A WARNING

- Before installation, all internal brake components should be cleaned and lubricated with clean or new brake fluid.
- Never use solvents on internal brake components.

Recommended brake fluid DOT 4



- 1. Install:
- brake master cylinder ①

🔌 9 Nm (0.9 m · kg, 6.5 ft · lb)

NOTE: .

- Install the brake master cylinder holder with the "UP" mark facing up.
- Align the end of the brake master cylinder holder with the punch mark (a) on the right handlebar.
- First, tighten the upper bolt, then the lower bolt.
- 2. Install:
- copper washers New
- brake hose
- union bolt 30 Nm (3.0 m · kg, 22 ft · lb)

A WARNING

Proper brake hose routing is essential to insure safe motorcycle operation. Refer to "CABLE ROUTING" in chapter 2.

NOTE:

- While holding the brake hose, tighten the union bolt as shown.
- Turn the handlebars to the left and right to make sure the brake hose does not touch other parts (e.g., wire harness, cables, leads). Correct if necessary.



- 3. Fill:
- brake fluid reservoir (with the specified amount of the recommended brake fluid)



Recommended brake fluid DOT 4

A WARNING

- Use only the designated brake fluid. Other brake fluids may cause the rubber seals to deteriorate, causing leakage and poor brake performance.
- Refill with the same type of brake fluid that is already in the system. Mixing brake fluids may result in a harmful chemical reaction, leading to poor brake performance.
- When refilling, be careful that water does not enter the brake fluid reservoir. Water will significantly lower the boiling point of the brake fluid and could cause vapor lock.

CAUTION:

Brake fluid may damage painted surfaces and plastic parts. Therefore, always clean up any spilt brake fluid immediately.

- 4. Bleed:
- brake system Refer to "BLEEDING THE HYDRAULIC BRAKE SYSTEM" in chapter 3.
- 5. Check:
- brake fluid level

Below the minimum level mark (a) \rightarrow Add the recommended brake fluid to the proper level.

Refer to "CHECKING THE BRAKE FLUID LEVEL" in chapter 3.

- 6. Check:
- brake lever operation
 Soft or spongy feeling → Bleed the brake system.

Refer to "BLEEDING THE HYDRAULIC BRAKE SYSTEM" in chapter 3.







ASSEMBLING THE REAR BRAKE MASTER CYLINDER

- 1. Install:
- copper washers New
- brake hose
- union bolt 🛛 🔀 30 Nm (3.0 m · kg, 22 ft · lb)

CAUTIONE

When installing the brake hose onto the brake master cylinder, make sure that the brake pipe touches the projection (a) on the brake master cylinder.

A WARNING

Proper brake hose routing is essential to insure safe motorcycle operation. Refer to "CABLE ROUTING" in chapter 2.

- 2. Fill:
- brake fluid reservoir
 - (to the maximum level mark (a))

Recommended brake fluid DOT 4

A WARNING

- Use only the designated brake fluid. Other brake fluids may cause the rubber seals to deteriorate, causing leakage and poor brake performance.
- Refill with the same type of brake fluid that is already in the system. Mixing brake fluids may result in a harmful chemical reaction, leading to poor brake performance.
- When refilling, be careful that water does not enter the brake fluid reservoir. Water will significantly lower the boiling point of the brake fluid and could cause vapor lock.

CAUTION:

Brake fluid may damage painted surfaces and plastic parts. Therefore, always clean up any spilt brake fluid immediately.





- 3. Bleed:
- brake system Refer to "BLEEDING THE HYDRAULIC BRAKE SYSTEM" in chapter 3.



- 4. Check:
- brake fluid level
 - Below the minimum level mark (a) \rightarrow Add the recommended brake fluid to the proper level.

Refer to "CHECKING THE BRAKE FLUID LEVEL" in chapter 3.

- 5. Adjust:
- brake pedal position ⓐ Refer to "ADJUSTING THE REAR BRAKE" in chapter 3.



Brake pedal position (from the top of the brake pedal to the bottom of the rider footrest bracket) 38 ~ 42 mm (1.50 ~ 1.65 in)

- 6. Adjust:
- rear brake light operation timing Refer to "ADJUSTING THE REAR BRAKE LIGHT SWITCH" in chapter 3.



EAS00613

FRONT BRAKE CALIPERS



Order	Job/Part	Q'ty	Remarks
	Removing the front brake calipers		Remove the parts in the order listed.
			The following procedure applies to both of the front brake calipers.
	Brake fluid		Drain.
1	Union bolt	1	
2	Copper washer	2	
3	Brake hose	1	
4	Brake caliper	1	
			For installation, reverse the removal procedure.



EAS00615



Order	Job/Part	Q'ty	Remarks
	Disassembling the front brake		Remove the parts in the order listed.
	calipers		
			The following procedure applies to both
			of the front brake calipers.
1	Brake pad clip	2	
2	Brake pad pin	1	
3	Brake pad spring	1	
4	Brake pad	2	
5	Brake caliper piston	4	
6	Brake caliper piston seal	8	
\overline{O}	Bleed screw	1	
			For assembly, reverse the disassembly
			procedure.



EAS00616

REAR BRAKE CALIPER



Order	Job/Part	Q'ty	Remarks
	Removing the rear brake caliper		Remove the parts in the order listed.
	Brake fluid		Drain.
1	Union bolt	1	
2	Copper washer	2	
3	Brake hose	1	
4	Brake caliper	1	
			For installation, reverse the removal
			procedure.
EAS00617

FRONT AND REAR BRAKES





Order	Job/Part	Q'ty	Remarks
	Disassembling the rear brake caliper		Remove the parts in the order listed.
1	Brake caliper piston	2	
2	Brake caliper piston seal	4	
3	Bleed screw	1	
			For assembly, reverse the disassembly procedure.



EAS00625 DISASSEMBLING THE FRONT BRAKE CALIPERS

The following procedure applies to both of the brake calipers.

NOTE:

Before disassembling the brake caliper, drain the brake fluid from the entire brake system.

- 1. Remove:
- union bolt (1)
- copper washers (2)
- brake hose ③

NOTE: _

Put the end of the brake hose into a container and pump out the brake fluid carefully.

- brake caliper pistons ①
- brake caliper piston seals (2)

2. Remove:

- a. Secure the right side brake caliper pistons with a piece of wood a.
- b. Blow compressed air into the brake hose joint opening (b) to force out the left side pistons from the brake caliper.

WARNING

- · Never try to pry out the brake caliper pistons.
- Do not loosen the bolts (3).
- c. Remove the brake caliper piston seals.
- d. Repeat the previous steps to force out the right side pistons from the brake caliper.

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EAS00627 DISASSEMBLING THE REAR BRAKE CALIPER

NOTE: _

Before disassembling the brake caliper, drain the brake fluid from the entire brake system.

- 1. Remove:
- union bolt (1)
- copper washers (2)
- brake hose

NOTE: _

Put the end of the brake hose into a container and pump out the brake fluid carefully.

- 2. Remove:
- brake caliper pistons ①
- brake caliper piston seals (2)

a. Blow compressed air into the brake hose joint opening (a) to force out the pistons from the brake caliper.

A WARNING

- Cover the brake caliper piston with a rag. Be careful not to get injured when the pistons are expelled from the brake caliper.
- Never try to pry out the brake caliper pistons.











CHECKING THE FRONT AND REAR BRAKE CALIPERS

Recommended brake component replacement schedule		
Brake pads	If necessary	
Piston seals	Every two years	
Brake hoses	Every four years	
Brake fluid	Every two years and whenever the brake is disassem- bled	







- 1. Check:
- brake caliper pistons ①
 Rust/scratches/wear → Replace the brake caliper pistons.
- brake caliper cylinders ②
 Scratches/wear → Replace the brake caliper assembly.
- brake caliper body ③ Cracks/damage → Replace the brake caliper assembly.
- brake fluid delivery passages (brake caliper body)
 Obstruction → Blow out with compressed air.

A WARNING

Whenever a brake caliper is disassembled, replace the brake caliper piston seals.

- A Front
- B Rear
- 2. Check:
- brake caliper brackets ①
 Cracks/damage → Replace.



ASSEMBLING AND INSTALLING THE FRONT BRAKE CALIPERS

The following procedure applies to both of the brake calipers.

A WARNING

- Before installation, all internal brake components should be cleaned and lubricated with clean or new brake fluid.
- Never use solvents on internal brake components as they will cause the piston seals to swell and distort.
- Whenever a brake caliper is disassembled, replace the brake caliper piston seals.



Recommended brake fluid DOT 4

- 1. Install:
- brake caliper ① (temporarily)
- copper washers
 New
- brake hose ②
- union bolt ③ 🛛 🔀 30 Nm (3.0 m · kg, 22 ft · lb)

A WARNING

Proper brake hose routing is essential to insure safe motorcycle operation. Refer to "CABLE ROUTING" in chapter 2.

CAUTION:

When installing the brake hose onto the brake caliper, make sure the brake pipe (a) touches the projection (b) on the brake caliper.

- 2. Remove:
- brake caliper
- 3. Install:
- brake pads
- brake pad spring
- brake caliper 🛛 🔀 40 Nm (4.0 m · kg, 29 ft · lb)
- brake hose holder

🔌 6 Nm (0.6 m ⋅ kg, 4.3 ft ⋅ lb)





FRONT AND REAR BRAKES



- 4. Fill:
- brake fluid reservoir (with the specified amount of the recommended brake fluid)



Recommended brake fluid DOT 4

A WARNING

- Use only the designated brake fluid. Other brake fluids may cause the rubber seals to deteriorate, causing leakage and poor brake performance.
- Refill with the same type of brake fluid that is already in the system. Mixing brake fluids may result in a harmful chemical reaction, leading to poor brake performance.
- When refilling, be careful that water does not enter the brake fluid reservoir. Water will significantly lower the boiling point of the brake fluid and could cause vapor lock.

CAUTION:

Brake fluid may damage painted surfaces and plastic parts. Therefore, always clean up any spilt brake fluid immediately.

- 5. Bleed:
- brake system Refer to "BLEEDING THE HYDRAULIC BRAKE SYSTEM" in chapter 3.
- 6. Check:
- brake fluid level

Below the minimum level mark (a) \rightarrow Add the recommended brake fluid to the proper level.

Refer to "CHECKING THE BRAKE FLUID LEVEL" in chapter 3.

7. Check:

brake lever operation
 Soft or spongy feeling → Bleed the brake system.

Refer to "BLEEDING THE HYDRAULIC BRAKE SYSTEM" in chapter 3.





ASSEMBLING AND INSTALLING THE REAR BRAKE CALIPER

A WARNING

- Before installation, all internal brake components should be cleaned and lubricated with clean or new brake fluid.
- Never use solvents on internal brake components as they will cause the piston seals to swell and distort.
- Whenever a brake caliper is disassembled, replace the brake caliper piston seals.

Recommended brake fluid DOT 4

- 1. Install:
- brake caliper ① (temporarily)
- copper washers New
- brake hose ②
- union bolt ③ 🛛 🙀 30 Nm (3.0 m · kg, 22 ft · lb)

Proper brake hose routing is essential to insure safe motorcycle operation. Refer to "CABLE ROUTING" in chapter 2.

CAUTION:

When installing the brake hose onto the brake caliper, make sure that the brake pipe (a) touches the projection (b) on the brake caliper.

- 2. Remove:
- brake caliper
- 3. Install:
- brake pads
- brake pad springs
- brake caliper 37 Nm (2.7 m · kg, 20 ft · lb)
- brake hose holder

🔌 7 Nm (0.7 m · kg, 5.1 ft · lb)

Refer to "REPLACING THE REAR BRAKE PADS".





FRONT AND REAR BRAKES



- 4. Fill:
- brake fluid reservoir (with the specified amount of the recommended brake fluid)



Recommended brake fluid DOT 4

A WARNING

- Use only the designated brake fluid. Other brake fluids may cause the rubber seals to deteriorate, causing leakage and poor brake performance.
- Refill with the same type of brake fluid that is already in the system. Mixing brake fluids may result in a harmful chemical reaction, leading to poor brake performance.
- When refilling, be careful that water does not enter the brake fluid reservoir. Water will significantly lower the boiling point of the brake fluid and could cause vapor lock.

CAUTION:

Brake fluid may damage painted surfaces and plastic parts. Therefore, always clean up any spilt brake fluid immediately.

- 5. Bleed:
- brake system Refer to "BLEEDING THE HYDRAULIC BRAKE SYSTEM" in chapter 3.
- 6. Check:
- brake fluid level

Below the minimum level mark (a) \rightarrow Add the recommended brake fluid to the proper level.

Refer to "CHECKING THE BRAKE FLUID LEVEL" in chapter 3.

- 7. Check:
- brake pedal operation
 Soft or spongy feeling → Bleed the brake system.

Refer to "BLEEDING THE HYDRAULIC BRAKE SYSTEM" in chapter 3.



FRONT FORK



FRONT FORK



Order	Job/Part	Q'ty	Remarks
	Removing the front fork legs		Remove the parts in the order listed.
	Front wheel		Refer to "FRONT WHEEL AND BRAKE
			DISCS".
	Front cowling inner panels		Refer to "COWLINGS" in chapter 3.
1	Front fender	1	
2	Upper bracket pinch bolt	1	Loosen.
3	Cap bolt	1	Loosen.
4	Handlebar pinch bolt	2	Loosen.
5	Lower bracket pinch bolt	2	Loosen.
6	Front fork leg	1	
			For installation, reverse the removal
			procedure.

EAS00648

FRONT FORK





Order	Job/Part	Q'ty	Remarks
	Disassembling the front fork legs		Remove the parts in the order listed.
1	Cap bolt	1	
2	O-ring	1	
3	Spacer	1	
4	Nut	1	
5	Spring seat	1	
6	Fork spring	1	
\overline{O}	Damper adjusting rod	1	
8	Outer tube	1	
9	Dust seal	1	
10	Oil seal clip	1	
1	Oil seal	1	
12	Washer	1	

FRONT FORK





Order	Job/Part	Q'ty	Remarks
(13)	Damper rod assembly bolt	1	
(14)	Copper washer	1	
15	Damper rod assembly	1	
16	Inner tube	1	
			For assembly, reverse the disassembly
			procedure.



REMOVING THE FRONT FORK LEGS

The following procedure applies to both of the front fork legs.

1. Stand the motorcycle on a level surface.

Securely support the motorcycle so that there is no danger of it falling over.

NOTE: _____

Place the motorcycle on a suitable stand so that the front wheel is elevated.



- 2. Loosen:
- upper bracket pinch bolt ①
- cap bolt 2
- handlebar boss pinch bolt ③
- lower bracket pinch bolt

A WARNING

Before loosening the upper and lower bracket pinch bolts, support the front fork leg.

- 3. Remove:
- front fork leg



DISASSEMBLING THE FRONT FORK LEGS

The following procedure applies to both of the front fork legs.

- 1. Remove:
- cap bolt ① (from the damper adjusting rod)
- spacer ②
- nut ③

- a. Press down on the spacer with the fork spring compressor ④.
- b. Install the rod holder (5) between the nut (3) and the spacer (2).

FRONT FORK





Fork spring compressor YM-01441 Rod holder YM-01434

NOTE: _

Use the side of the rod holder that is marked "B".

- c. Loosen the nut.
- d. Remove the cap bolt.
- e. Remove the rod holder and fork spring compressor.

A WARNING

The fork spring is compressed.

f. Remove the spacer and nut.

- 2. Remove:
- dust seal
- oil seal clip ①
- oil seal
- washer (with a flat-head screwdriver)
- CAUTION:

Do not scratch the inner tube.

- 3. Remove:
- damper rod assembly bolt

NOTE:

While holding the damper rod assembly with the damper rod holder ①, loosen the damper rod assembly bolt.



Damper rod holder YM-1423











EAS00656 CHECKING THE FRONT FORK LEGS

FRONT FORK

The following procedure applies to both of the front fork legs.

CHAS &

- 1. Check:
- inner tube ①
- outer tube ②
 Bends/damage/scratches → Replace.

Do not attempt to straighten a bent inner tube as this may dangerously weaken it.

- 2. Measure:
- spring free length ⓐ
 Out of specification → Replace.

Spring free length 246 mm (9.69 in)

- 3. Check:
- damper rod ①
 Damage/wear → Replace.
- obstruction → Blow out all of the oil passages with compressed air.

CAUTION:

- The front fork leg has a built-in damper adjusting rod and a very sophisticated internal construction, which are particularly sensitive to foreign material.
- When disassembling and assembling the front fork leg, do not allow any foreign material to enter the front fork.



- 4. Check:
- cap bolt O-ring Damage/wear → Replace.



ASSEMBLING THE FRONT FORK LEGS

The following procedure applies to both of the front fork legs.

A WARNING

- Make sure the oil levels in both front fork legs are equal.
- Uneven oil levels can result in poor handling and a loss of stability.

NOTE: _

- When assembling the front fork leg, be sure to replace the following parts:
 - oil seal
 - dust seal
- Before assembling the front fork leg, make sure all of the components are clean.
- 1. Install:
- damper rod assembly ①

CAUTION:

Allow the damper rod assembly to slide slowly down the inner tube ② until it protrudes from the bottom of the inner tube. Be careful not to damage the inner tube.

- 2. Lubricate:
- inner tube's outer surface



- 3. Tighten:
 - damper rod assembly bolt (1)



NOTE:

While holding the damper rod assembly with the damper rod holder ②, tighten the damper rod assembly bolt.

















- 4. Install:
- dust seal ①
- oil seal clip ②
- oil seal ③
- washer ④

CAUTION:

Make sure the numbered side of the oil seal faces out side.

NOTE: ____

- Before installing the oil seal, lubricate its lips with lithium-soap-based grease.
- Lubricate the outer surface of the inner tube with fork oil.
- Before installing the oil seal, cover the top of the front fork leg with a plastic bag to protect the oil seal during installation.
- 5. Install:
- oil seal ①
 (with the fork seal driver ②)

Fork seal driver YM-01442

- 6. Install:
- oil seal clip ①

NOTE: _

Adjust the oil seal clip so that it fits into the outer tube's groove.

- 7. Install:
- dust seal ①
 (with the fork seal driver ②)

Fork seal driver YM-01442





8. Install:

• rod puller ① (onto the damper rod 2)



Rod puller YM-01437

- 9. Fill:
- front fork leg

(with the specified amount of the recommended fork oil)



Quantity (each front fork leg) 0.543 L (0.478 Imp qt, 0.574 US qt) **Recommended oil** Suspension oil "01" or equivalent

Front fork leg oil level (from the top of the inner tube, with the inner tube fully compressed and without the fork spring) 88 mm (3.46 in)

NOTE: .

- While filling the front fork leg, keep it upright.
- After filling, slowly pump the front fork leg up and down to distribute the fork oil.

10.Install:

- nut (1)
- fork spring ②
- spring seat ③
- spacer ④
- damper adjusting rod (5)
- cap bolt (6)

- a. Remove the rod puller and adapter.
- b. Install the nut.
- c. Install the fork spring, spring seat, and spacer.

NOTE:

Install the spring with the smaller pitch (a) facing up \triangle .







FRONT FORK









- d. Press down on the spacer with the fork spring compressor ①.
- e. Pull up the rod puller and install the rod holder ② between the nut ③ and the spacer ④.

NOTE: _

Use the side of the rod holder that is marked "B".



- f. Remove the rod puller and adapter.
- g. Install the nut ① and position it as specified ⑤.

Distance (b) 11 mm (0.43 in)

h. Set the cap bolt distance © to specification.



- i. Install the damper adjusting rod and cap bolt, and then finger tighten the cap bolt.
- j. Hold the cap bolt and tighten the nut to specification.



Nut 15 Nm (1.5 m · kg, 11 ft · lb)

k. Remove the rod holder and fork spring compressor.

A WARNING

- The fork spring is compressed.
- Always use a new cap bolt O-ring.



EAS00662 INSTALLING THE FRONT FORK LEGS

The following procedure applies to both of the front fork legs.

- 1. Install:
- front fork leg

Temporarily tighten the upper and lower bracket pinch bolts.

NOTE: _

Make sure the inner fork tube is flush with the top of the handlebar holder.



- 2. Tighten:
- lower bracket pinch bolt
 - 🔀 23 Nm (2.3 m · kg, 17 ft · lb)
- cap bolt 1 🛛 🔀 23 Nm (2.3 m · kg, 17 ft · lb)
- handlebar boss pinch bolt ②

🎉 13 Nm (1.3 m · kg, 9.4 ft · lb)

• upper bracket pinch bolt ③

🔌 26 Nm (2.6 m · kg, 19 ft · lb)

A WARNING

Make sure the brake hoses are routed properly.

- 3. Adjust:
- spring preload
- · rebound damping
- compression damping Refer to "ADJUSTING THE FRONT FORK LEGS" in chapter 3.

HANDLEBARS



EAS00665 HANDLEBARS



Order	Job/Part	Q'ty	Remarks
	Removing the handlebars		Remove the parts in the order listed.
1	Left grip end	1	
2	Handlebar grip	1	
3	Clutch switch connector	2	Disconnect.
4	Left handlebar switch	1	
5	Clutch cable	1	
6	Clutch lever	1	Disconnect.
7	Right grip end	1	
8	Throttle cable housing	1	
9	Throttle cable	2	
10	Throttle grip	1	







Order	Job/Part	Q'ty	Remarks
11	Front brake switch connector	2	Disconnect.
12	Right handlebar switch	1	
13	Brake master cylinder bracket	1	
14	Brake master cylinder	1	
15	Handlebar pinch bolt	4	
16	Upper bracket bolt	2	
17	Upper bracket pinch bolt	2	
18	Steering stem nut	1	
19	Upper bracket	1	
20	Left handlebar	1	
21	Right handlebar	1	
			For installation, reverse the removal
			procedure.

EAS00667 REMOVING THE HANDLEBARS

HANDLEBARS

1. Stand the motorcycle on a level surface.

A WARNING

Securely support the motorcycle so that there is no danger of it falling over.

- 2. Remove:
 - handlebar grip

NOTE:

Blow compressed air between the left handlebar and the handlebar grip, and gradually push the grip off the handlebar.

- 3. Remove:
- throttle cable housing ①
- throttle grip ②

NOTE: _

While removing the throttle cable housing, pull back the rubber cover ③.

EAS00669

CHECKING THE HANDLEBARS

- 1. Check:
- left handlebar (1)
- right handlebar ②
 Bends/cracks/damage → Replace.

A WARNING

Do not attempt to straighten bent handlebars as this may dangerously weaken them.

EAS00674

INSTALLING THE HANDLEBARS

1. Stand the motorcycle on a level surface.

A WARNING

Securely support the motorcycle so that there is no danger of it falling over.













- 2. Install:
- right handlebar switch 1

HANDLEBARS

NOTE: _

Align the projection (a) on the right handlebar switch with the hole (b) in the right handlebar.

- 3. Install:
- brake master cylinder holder (1)

CAUTION:

- Install the brake master cylinder holder with the "UP" mark facing up.
- First, tighten the upper bolt, then the lower bolt.

NOTE: ____

- Align the mating surfaces of the brake master cylinder holder with the punch mark (a) in the right handlebar.
- There should be 2 mm of clearance between the right handlebar switch and the brake master cylinder holder.



- throttle grip
- throttle cable housing
- throttle cables

NOTE: _

Align the projection (a) on the throttle cable housing with the hole (b) in the right handlebar.

- 5. Install:
- clutch lever holder ①

NOTE: .

Align the slit in the clutch lever holder with the punch mark (a) in the left handlebar.









- 6. Install:
- left handlebar switch ①

HANDLEBARS

NOTE:

Align the projection (a) on the left handlebar switch with the hole (b) in the left handlebar.

- 7. Install:
- handlebar grip

- a. Apply a thin coat of rubber adhesive onto the end of the left handlebar.
- b. Slide the handlebar grip over the end of the left handlebar.
- c. Wipe off any excess rubber adhesive with a clean rag.

A WARNING

Do not touch the handlebar grip until the rubber adhesive has fully dried.

- 8. Adjust:
- clutch cable free play Refer to "ADJUSTING THE CLUTCH CABLE FREE PLAY" in chapter 3.



Clutch cable free play (at the end of the clutch lever) 10 ~ 15 mm (0.39 ~ 0.59 in)

9. Adjust:

• throttle cable free play Refer to "ADJUSTING THE THROTTLE CABLE FREE PLAY" in chapter 3.



Throttle cable free play (at the flange of the throttle grip) 3 ~ 5 mm (0.12 ~ 0.20 in)



EAS00676 STEERING HEAD



Order	Job/Part	Q'ty	Remarks
	Removing the lower bracket		Remove the parts in the order listed.
	Front wheel		Refer to "FRONT WHEEL AND BRAKE
			DISCS".
	Front fork legs		Refer to "FRONT FORK".
1	Main switch coupler	2	Disconnect.
2	Upper bracket bolt	2	
3	Left handlebar assembly	1	
4	Right handlebar assembly	1	
5	Steering stem nut	1	
6	Upper bracket	1	
7	Lower bracket panel	1	
8	Brake hose holder bolt	1	
9	Lock washer	1	
10	Upper ring nut	1	
11	Rubber washer	1	

CHAS



Order	Job/Part	Q'ty	Remarks
12	Lower ring nut	1	
13	Lower bracket	1	
14	Bearing cover	1	
15	Bearing inner race	2	
16	Upper bearing	1	
17	Lower bearing	1	
18	Dust seal	1	
19	Bearing outer race	2	
			For installation, reverse the removal procedure.



EAS00677 REMOVING THE LOWER BRACKET

1. Stand the motorcycle on a level surface.

A WARNING

Securely support the motorcycle so that there is no danger of it falling over.



- 2. Remove:
 - ring nut ①
 - (with the steering nut wrench 2)

Steering nut wrench YU-33975

A WARNING

Securely support the lower bracket so that there is no danger of it falling.

EAS00681

CHECKING THE STEERING HEAD

- 1. Wash:
- bearings
- bearing races







- 2. Check:
 - bearings (1)
 - bearing races ②
 Damage/pitting → Replace.

- 3. Replace:
- bearings
- bearing races

a. Remove the bearing races ① from the steering head pipe with a long rod ② and hammer.





- b. Remove the bearing race ③ from the lower bracket with a floor chisel ④ and hammer.
- c. Install a new rubber seal and new bearing races.

CAUTION:

If the bearing race is not installed properly, the steering head pipe could be damaged.

NOTE: _

- Always replace the bearings and bearing races as a set.
- Whenever the steering head is disassembled, replace the rubber seal.

- 4. Check:
- upper bracket
- lower bracket
 - (along with the steering stem) Bends/cracks/damage \rightarrow Replace.

EAS00683

INSTALLING THE STEERING HEAD

- 1. Lubricate:
- upper bearing
- lower bearing
- bearing races



- _____
- 2. Install:
- lower ring nut ①
- rubber washer 2
- upper ring nut ③
- lock washer ④
 Refer to "CHECKING AND ADJUSTING THE STEERING HEAD" in chapter 3.

Recommended lubricant Lithium-soap-based grease

- 3. Install:
- upper bracket
- steering stem nut

NOTE:

Temporarily tighten the steering stem nut.

- 4. Install:
- front fork legs Refer to "INSTALLING THE FRONT FORK LEGS".

NOTE: _

Temporarily tighten the upper and lower bracket pinch bolts.



REAR SHOCK ABSORBER ASSEMBLY



Order	Job/Part	Q'ty	Remarks
	Removing the rear shock absorber		Remove the parts in the order listed.
	assembly		
1	Self-locking nut/bolt	1/1	
2	Self-locking nut/bolt	1/1	
3	Self-locking nut/bolt/spacer	1/1/1	
4	Rear shock absorber assembly	1	
5	Collar/oil seal/bearing	1/2/1	
6	Self-locking nut/bolt	1/1	
7	Relay arm	1	
8	Collar/oil seal/bearing	1/2/2	
9	Self-locking nut/bolt/collar	1/1/1	
10	Connecting arm	1	
11	Collar/oil seal/bearing	2/4/2	
			For installation, reverse the removal procedure.



HANDLING THE REAR SHOCK ABSORBER AND GAS CYLINDER

A WARNING

This rear shock absorber and gas cylinder contain highly compressed nitrogen gas. Before handling the rear shock absorber or gas cylinder, read and make sure you understand the following information. The manufacturer cannot be held responsible for property damage or personal injury that may result from improper handling of the rear shock absorber and gas cylinder.

- Do not tamper or attempt to open the rear shock absorber or gas cylinder.
- Do not subject the rear shock absorber or gas cylinder to an open flame or any other source of high heat. High heat can cause an explosion due to excessive gas pressure.
- Do not deform or damage the rear shock absorber or gas cylinder in any way. If the rear shock absorber, gas cylinder or both are damaged, damping performance will suffer.



EAS00689

DISPOSING OF A REAR SHOCK ABSORBER AND GAS CYLINDER

Gas pressure must be released before disposing of a rear shock absorber and gas cylinder. To release the gas pressure, drill a 2 \sim 3 mm (0.08 \sim 0.12 in) hole through the gas cylinder at a point 15 \sim 20 mm (0.59 \sim 0.79 in) from its end as shown.

A WARNING

Wear eye protection to prevent eye damage from released gas or metal chips.



REMOVING THE REAR SHOCK ABSORBER ASSEMBLY

1. Stand the motorcycle on a level surface.

A WARNING

Becurely support the motorcycle so that there is no danger of it falling over.

NOTE: ____

Place the motorcycle on a suitable stand so that the rear wheel is elevated.





- 2. Remove:
- rear shock absorber assembly lower bolt (1)
- relay arm-to-swingarm bolt 2

NOTE: _

While removing the rear shock absorber assembly lower bolt, hold the swingarm so that it does not drop down.

- 3. Remove:
- rear shock absorber assembly upper bolt ①
- rear shock absorber assembly

NOTE:

Raise the swingarm and then remove the rear shock absorber assembly from between the swingarm.





CHECKING THE REAR SHOCK ABSORBER ASSEMBLY

- 1. Check:
- rear shock absorber rod Bends/damage → Replace the rear shock absorber assembly.
- rear shock absorber Gas leaks/oil leaks → Replace the rear shock absorber assembly.
- spring Damage/wear → Replace the rear shock absorber assembly.
- bushings
 Damage/wear → Replace.
- dust seals Damage/wear \rightarrow Replace.
- bolts Bends/damage/wear \rightarrow Replace.

EAS00698

INSTALLING THE REAR SHOCK ABSORBER ASSEMBLY

- 1. Lubricate:
- spacers
- bearings

Recommended lubricant Lithium-soap base grease

- 2. Install:
- · rear shock absorber assembly

NOTE: .

- When installing the rear shock absorber assembly, lift up the swingarm.
- Install the connecting arm front bolt from the right.
- 3. Tighten:
- rear shock absorber assembly upper nut



rear shock absorber assembly lower nut

🔀 45 Nm (4.5 m · kg, 33 ft · lb)

relay arm-to swingarm nut

🎉 45 Nm (4.5 m · kg, 33 ft · lb)



SWINGARM AND DRIVE CHAIN



Order	Job/Part	Q'ty	Remarks
	Removing the swingarm and drive		Remove the parts in the order listed.
	chain		
	Rear wheel		Refer to "REAR WHEEL AND BRAKE DISC".
	Rear shock absorber		Refer to "REAR SHOCK ABSORBER ASSEMBLY".
	Drive sprocket		Refer to "ENGINE" in chapter 5.
1	Adjusting bolt/locknut	2/2	
2	Drive chain guard	1	
3	Rear fender	1	
4	Brake hose holder	1	
5	Pivot shaft nut/washer	1/1	
6	Pivot shaft	1	
7	Swingarm	1	

CHAS



Order	Job/Part	Q'ty	Remarks
8	Drive chain	1	
9	Dust cover	2	
10	Drive chain guide	1	
11	Spacer	1	
12	Bearing	2	
13	Pivot shaft adjust bolt	1	
			For installation, reverse the removal
			procedure.



EAS00703 REMOVING THE SWINGARM

1. Stand the motorcycle on a level surface.

A WARNING

Securely support the motorcycle so that there is no danger of it falling over.

NOTE:

Place the motorcycle on a suitable stand so that the rear wheel is elevated.

- 2. Remove:
- relay arm-to-swingarm bolt (1)
- connecting arm bolt ②
- \bullet rear shock absorber assembly lower bolt 3

NOTE:

When removing the rear shock absorber assembly lower bolt, hold the swingarm so that it does not drop down.

- 3. Measure:
- swingarm side play
- swingarm vertical movement

a. Measure the tightening torque of the pivot shaft nut.

Pivo 105

Pivot shaft nut 105 Nm (10.5 m · kg, 76 ft · lb)

- b. Measure the swingarm side play A by moving the swingarm from side to side.
- c. If the swingarm side play is out of specification, check the spacers, bearings, washers, and dust covers.



ers.

Swingarm side play (at the end of the swingarm) 1.0 mm (0.039 in)

d. Check the swingarm vertical movement B
 by moving the swingarm up and down.
 If swingarm vertical movement is not
 smooth or if there is binding, check the
 spacers, bearings, washers, and dust cov-







EAS00704 REMOVING THE DRIVE CHAIN

1. Stand the motorcycle on a level surface.

A WARNING

Securely support the motorcycle so that there is no danger of it falling over.

NOTE: _

Place the motorcycle on a suitable stand so that the rear wheel is elevated.

- 2. Remove:
- drive chain (with the drive chain cutter)

NOTE: _

Only cut the drive chain if it or the swingarm is to be replaced.





EAS00707

CHECKING THE SWINGARM

- 1. Check:
- swingarm Bends/cracks/damage \rightarrow Replace.
- 2. Check:
- pivot shaft
 Roll the pivot shaft on a flat surface.
 Bends → Replace.

A WARNING

Do not attempt to straighten a bent pivot shaft.
SWINGARM AND DRIVE CHAIN



- 3. Wash:
- pivot shaft
- dust covers
- spacer
- washers
- bearings



- 4. Check:
- dust covers ①
- spacer ② Damage/wear → Replace.
- bearings (3) Damage/pitting \rightarrow Replace.
- 5. Check:
- connecting arms ①
- relay arm ②
 Damage/wear → Replace.
- 6. Check:
 - bearings ③
- oil seals (4)
 - Damage/pitting \rightarrow Replace.
- 7. Check:
- collars (5)

Damage/scratches \rightarrow Replace.

EAS00709 CHECKING THE DRIVE CHAIN

- 1. Measure:
- ten-link section ⓐ of the drive chain Out of specification → Replace the drive chain.



Ten-link drive chain section limit (maximum) 150.1 mm (5.91 in)

NOTE: _

- While measuring the ten-link section, push down on the drive chain to increase its tension.
- Measure the length between drive chain roller (1) and (1) as shown.
- Perform this measurement at two or three different places.







SWINGARM AND DRIVE CHAIN











- 2. Check:
- drive chain Stiffness \rightarrow Clean and lubricate or replace.
- 3. Clean:
- drive chain

- a. Wipe the drive chain with a clean cloth.
- b. Put the drive chain in kerosene and remove any remaining dirt.
- c. Remove the drive chain from the kerosene and completely dry it.

CAUTION:

This motorcycle has a drive chain with small rubber O-rings ① between the drive chain side plates. Never use high-pressure water or air, steam, gasoline, certain solvents (e.g., benzine), or a coarse brush to clean the drive chain. High-pressure methods could force dirt or water into the drive chain's internals, and solvents will deteriorate the O-rings. A coarse brush can also damage the O-rings. Therefore, use only kerosene to clean the drive chain. Don't soak drive chain in kerosine more them ten minutes. O-ring is damage by kerosine.

- 4. Check:
- O-rings ①
- Damage → Replace the drive chain.
 drive chain rollers ②
- Damage/wear \rightarrow Replace the drive chain.
- drive chain side plates ③
 Damage/wear → Replace the drive chain.
 Cracks → Replace the drive chain and make sure the battery breather hose is properly routed away from the drive chain and below the swingarm.
- 5. Lubricate:
- drive chain

Recommended lubricant Engine oil or chain lubricant suitable for O-ring chains

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- 6. Check:
- drive sprocket
- rear wheel sprocket More than 1/4 tooth ⓐ wear → Replace the drive chain sprockets as a set.

Bent teeth \rightarrow Replace the drive chain sprockets as a set.

- (b) Correct
- ① Drive chain roller
- ② Drive chain sprocket

EAS00711

INSTALLING THE SWINGARM

- 1. Lubricate:
- bearings
- spacers
- dust covers
- pivot shaft adjust bolt ①
- pivot shaft

NOTE:

Use the pivot shaft wrench ② to tighten the pivot adjust bolt to specification torque.



Pivot shaft wrench YM-01471

Pivot shaft adjusting bolt 5 Nm (0.5 m · kg, 3.6 ft · lb)

2. Install:

- relay arm 🛛 🔀 45 Nm (4.5 m · kg, 33 ft · lb)
- connecting arms

🔌 45 Nm (4.5 m · kg, 33 ft · lb)

NOTE:

Install the connecting arm front bolt from the left.

- 3. Install:
- rear shock absorber assembly
- rear wheel

Refer to "INSTALLING THE REAR SHOCK ABSORBER ASSEMBLY" and "INSTALL-ING THE REAR WHEEL".

- 4. Adjust:
- drive chain slack Refer to "ADJUSTING THE DRIVE CHAIN SLACK" in chapter 3.



Drive chain slack 40 ~ 50 mm (1.57 ~ 1.97 in)