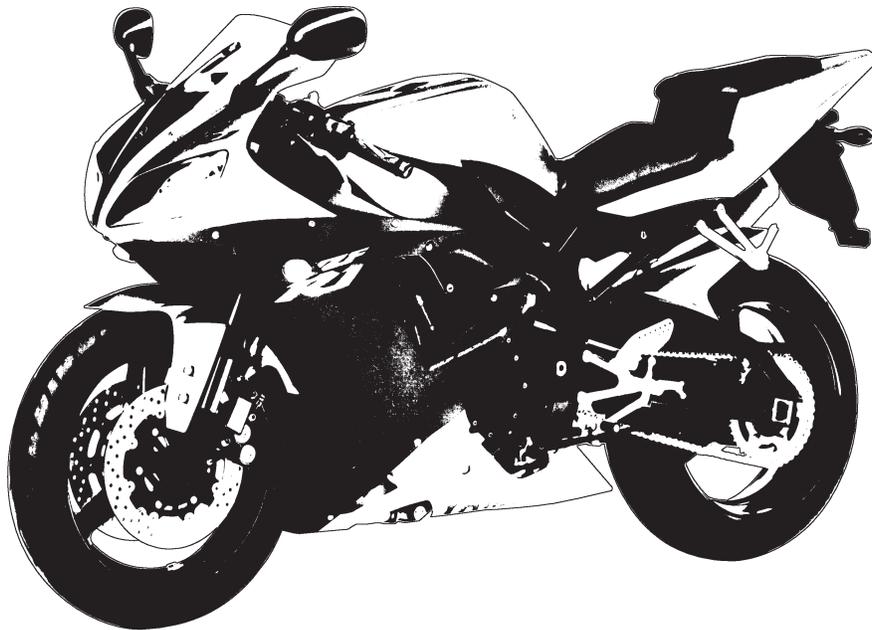




YAMAHA

**YZF-R1P
YZF-R1PC**

ASSEMBLY MANUAL



FOREWORD

This Assembly Manual contains the information required for the correct reassembly of this Yamaha motorcycle prior to delivery to the customer. Since some external parts of the motorcycle have been removed at the Yamaha factory for the convenience of packing, assembly by the Yamaha dealer is required. It should be noted that the reassembled motorcycle should be thoroughly cleaned, inspected, and adjusted prior to delivery to the customer.

NOTICE

The service specifications given in this assembly manual are based on the model as manufactured. Modifications and significant changes in specifications and/or procedures will be forwarded to Authorized Yamaha Dealers. The procedures below are described in the order that the procedures are carried out correctly and completely. Failure to do so can result in poor performance and possible harm to the motorcycle and/or rider.

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

CONCERNING CARTE DAMAGE:

Follow the instructions in the Dealer warranty handbook, procedure section.



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

WARNING

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

CAUTION:

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

NOTE:

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

SYMBOLS USED IN ASSEMBLY MANUAL

In order to simplify descriptions in assembly manuals, the following symbols are used:

 : Coat with lithium soap base grease.

 10 : Tighten to 10 Nm.
(10 Nm = 1.0 m • kg, 7.2 ft • lb)

 : Front ward of the motorcycle.

 : Provide a clearance.

 : Install so that the arrow mark faces upward.

 : Apply a motor oil.

 : Made of rubber or plastics.

A	B	C	D	E
---	---	---	---	---

A: Ref No. (indicating the order or operations.)

B: Part name

C: Quantity of parts per motorcycle.

D: Place where parts are held.

V: Stored in vinyl bag.

C: Stored in carton box.

S: Fixed inside the steel frame and/or contained in the styrofoam tray (upper or lower).

★: Temporarily installed or secured.

E: Size or material of parts.

d/D: Diameter of part.

ℓ: Length of part.



ex, 5 = 5 mm (0.2 in)

YZF-R1P/YZF-R1PC
ASSEMBLY MANUAL
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 unauthorized use without the written
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 P/N LIT-11666-15-47

PREPARATION

To assemble the motorcycle correctly, supplies and working space are required.
Supplies oils, greases, shop rags.

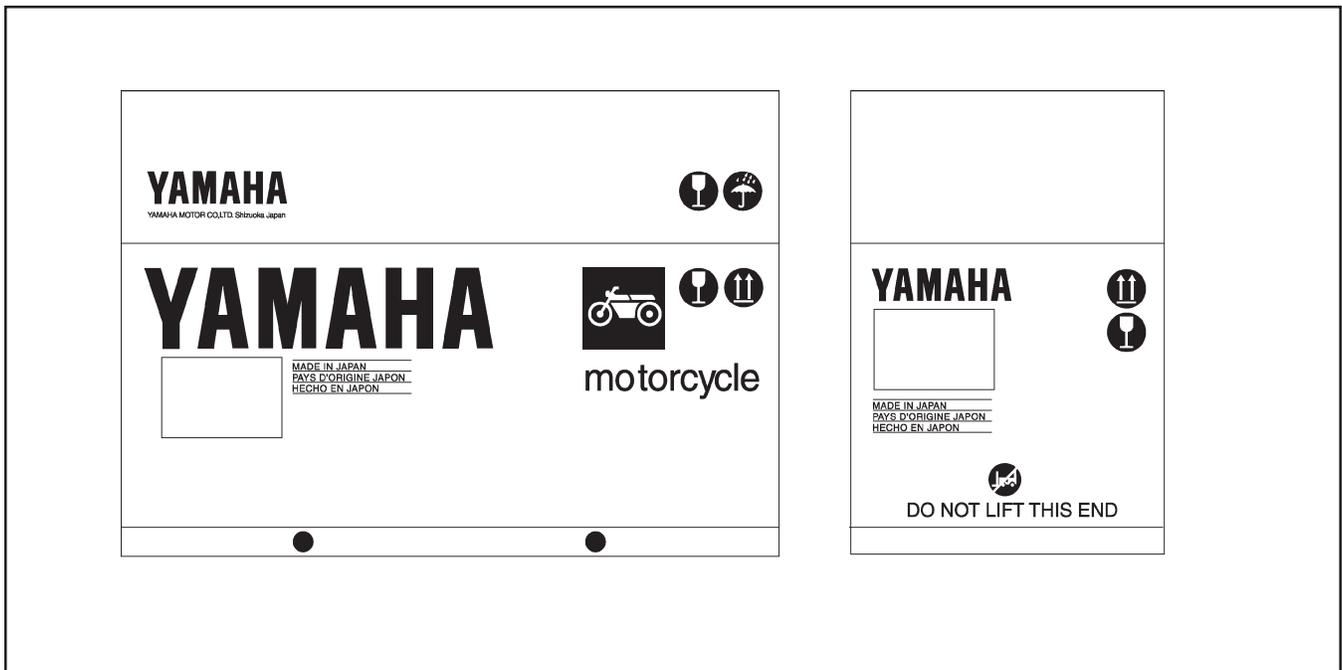
Workshop

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

Self-protection

Protect your eyes with suitable safety spectacles or safety goggles when using compressed air, when grinding or when doing any operation which may cause particles to fly off.
Protect hands and feet by wearing safety gloves or doing.

SYMBOLS USED ON CRATE CARTON



Contents of the transport package are fragile therefore it shall be handled with care.



Indicates correct upright position of the transport package.



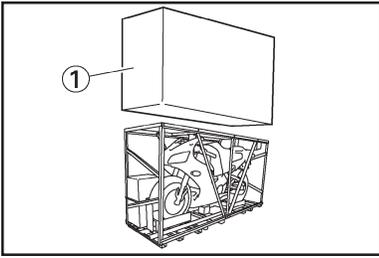
Transport package shall be kept away from rain.



Insertion of the lift arm from this side is prohibited.



Lift arm inserting position.

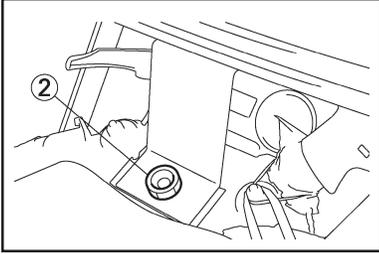


UNPACKING

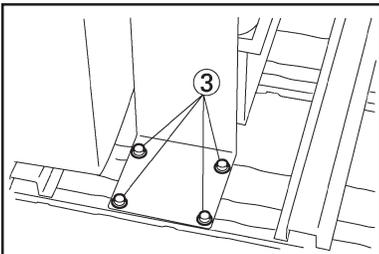
1. Remove the frame cover ①.

NOTE:

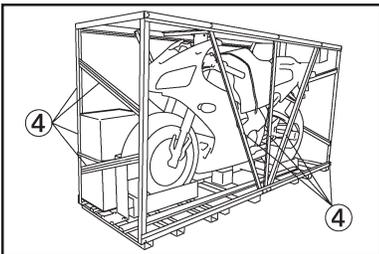
To remove the frame cover, cut the vinyl bands around the cover using a cutter or scissors.



2. Remove the bolts ② (upper bracket).



3. Remove the bolt ③ (front tire).



4. Remove the packing frames ④ (upward and sideways).

NOTE:

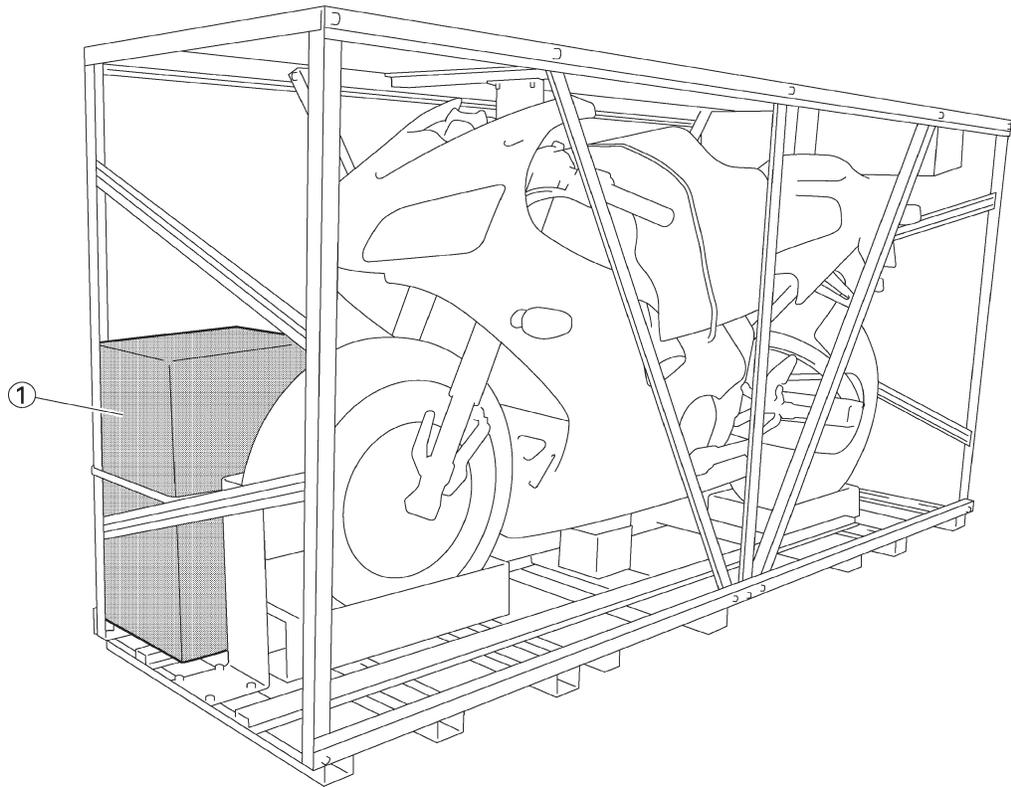
Remove the bolts while holding frame.

NOTE:

Before starting the assembly, check for damaged or missing parts. The parts are contained in the cartan and the motorcycle for damage, scratches and other defects.

PARTS LOCATION

- ① Carton box



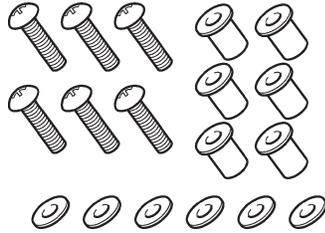
① Carton box

Vinyl bag 1

Plugs
(handle crown)



Screw, washer and special nuts
(windscreen)



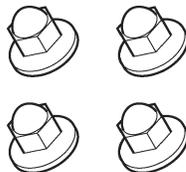
Bolt
(front master cylinder)



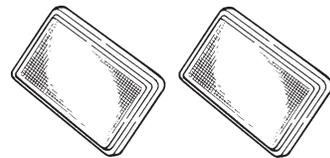
Bolt
(handle crown and handlebar)



Nut
(rear view mirror)



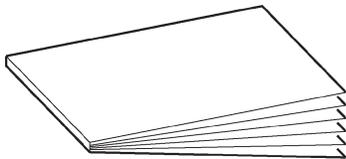
Front reflector



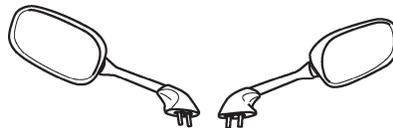
Nut
(front reflector)



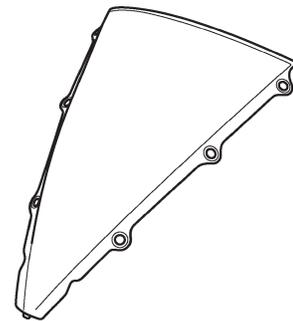
Owner's manual



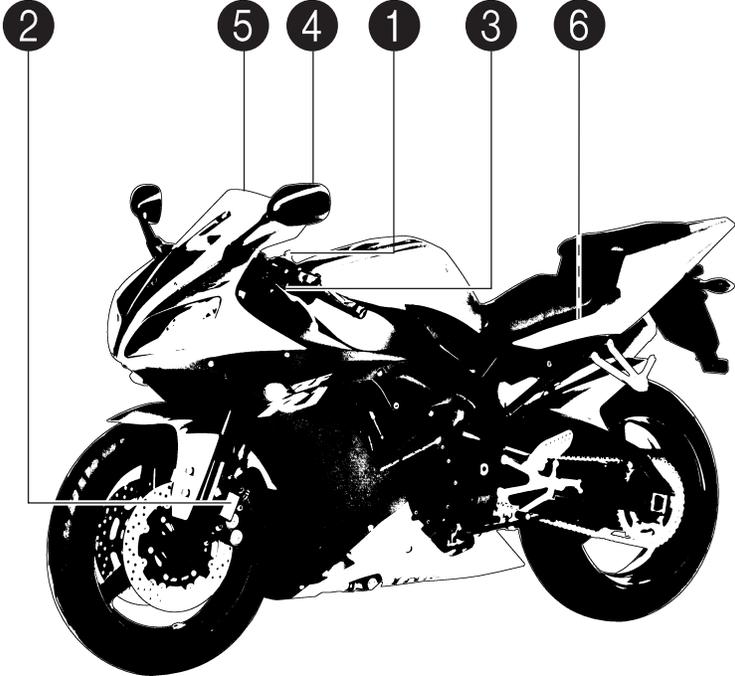
Rear view mirrors



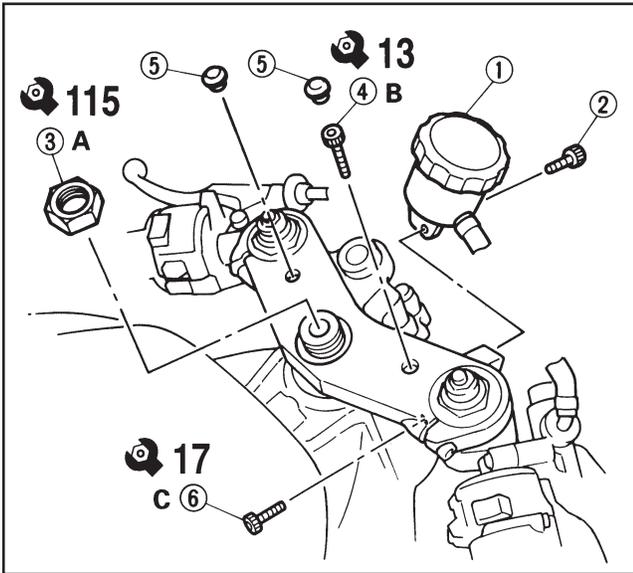
Windscreen



SETUP PROCEDURES



1. Handlebar



1	Reservoir tank (brake)	1	★	
2	Hexagon socket bolt	1	V	d = 6 (0.24), ℓ = 12 (0.47)
3	Crown nut	1	★	
4	Hexagon socket bolt	1	V	d = 6 (0.24), ℓ = 25 (0.98)
5	Cap	2	V	
6	Hexagon socket bolt	1	★	d = 8 (0.31), ℓ = 30 (1.18)

A: Tighten the crown nut to specified torque.

C: Tighten the bolt to specified torque.

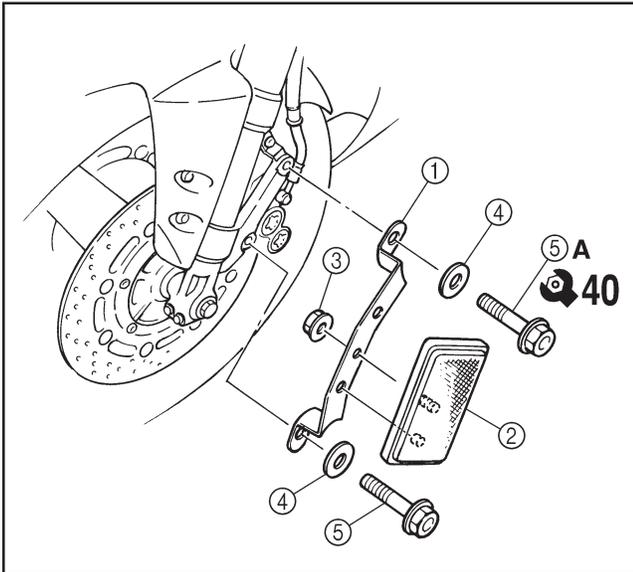
Tightening torque:
115 Nm (11.5 m • kg, 85.0 ft • lb)

Tightening torque:
13 Nm (1.3 m • kg, 4.4 ft • lb)

B: Tighten the bolt to specified torque.

Tightening torque:
13 Nm (1.3 m • kg, 9.4 ft • lb)

2. Front reflector

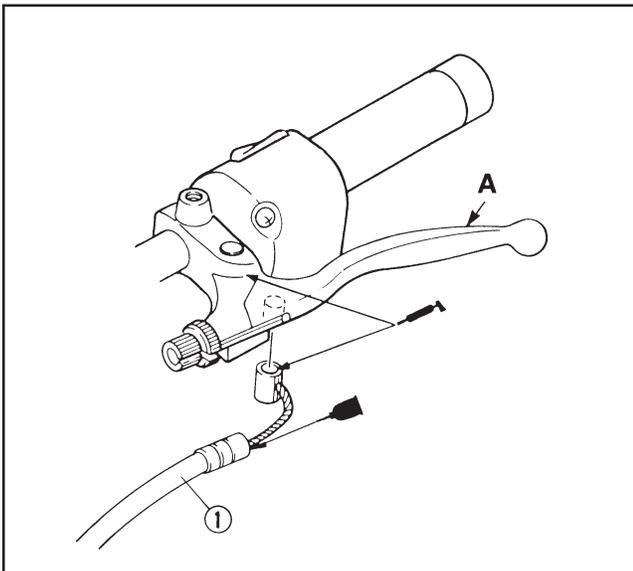


1	Reflector bracket	2	★	
2	Reflector	2	V	
3	Nut	2	V	d = 5 (0.20)
4	Washer	4	★	d = 10 (0.39)
5	Caliper bolt	4	★	d = 10 (0.39), ℓ = 30 (1.18)

A: Tighten the screws to specified torque.

Tightening torque:
40 Nm (4.0 m • kg, 29 ft • lb)

3. Clutch cable



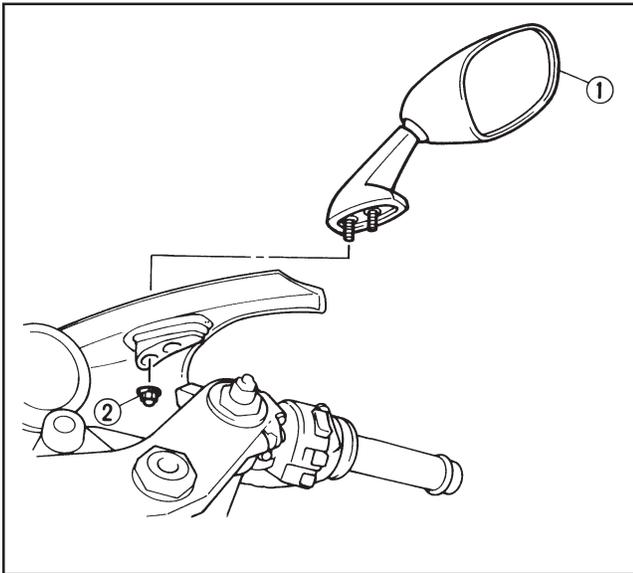
1	Clutch cable	1	★	
---	--------------	---	---	--

A: Check the clutch lever for smooth action.

CAUTION:

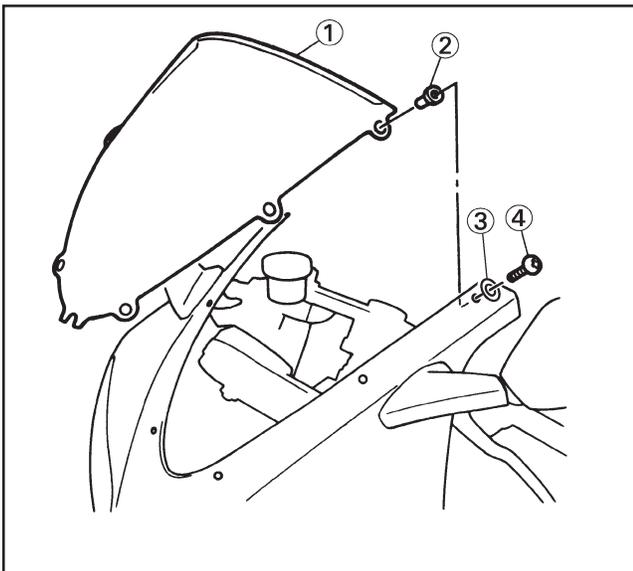
Proper cable routing is essential to assure safe motorcycle operation. Refer to "CABLE ROUTING".

4. Rear view mirror



1	Rear view mirror (left and right)	2	C	
2	Cap nut	4	V	d = 6 (0.24)

5. Windscreen

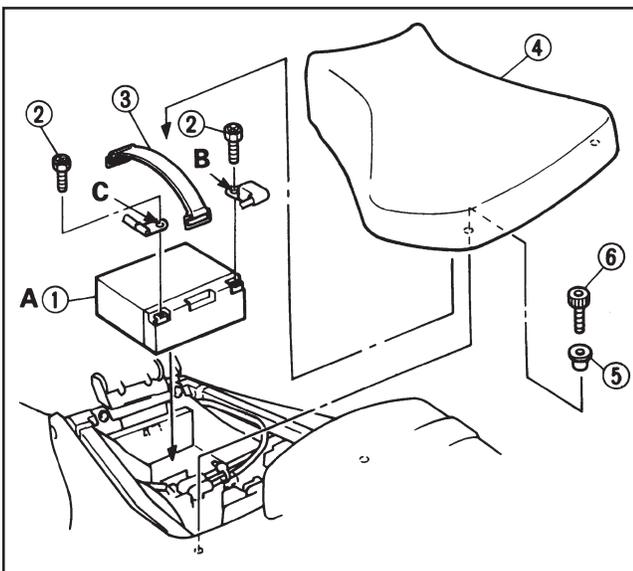


1	Windscreen	1	C	
2	Special nut	6	V	d = 5 (0.20)
3	Washer	6	V	d = 5.5 (0.22)
4	Screw	6	V	d = 5 (0.20), ℓ = 15 (0.59)

CAUTION:

The windscreen is made of an acrylate resin. Take care so that it is not scratched.

6. Battery



1	Battery	1	*	
2	Bolt	2	*	d = 6 (0.24), ℓ = 12 (0.47)
3	Band	1	*	
4	Front seat	1	*	
5	Collar	2	*	d = 6 (0.24)
6	Bolt	2	*	d = 6 (0.24), ℓ = 23 (0.91)

A: Before installing the battery, charge the battery.

NOTE: Refer to "CABLE ROUTING".

NOTE: Refer to "ADJUSTMENTS AND PREDELIVERY SERVICE".

B: First, connect the ⊕ lead (Red color lead) to the ⊕ terminal.

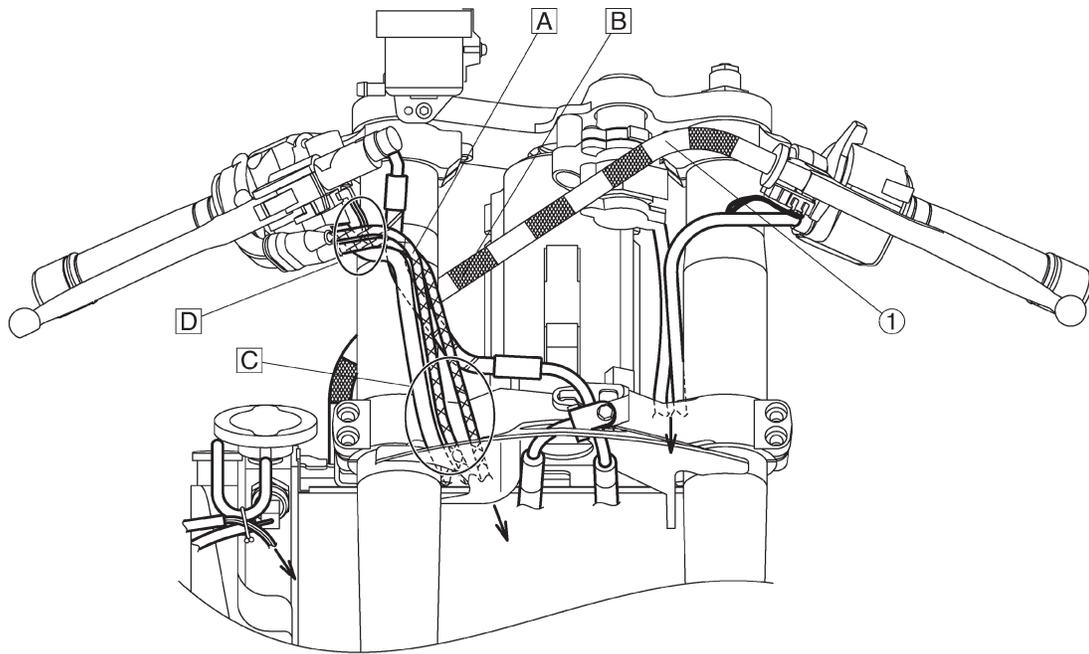
C: Connect the ⊖ lead (Black color lead) to the ⊖ terminal.

CABLE ROUTING

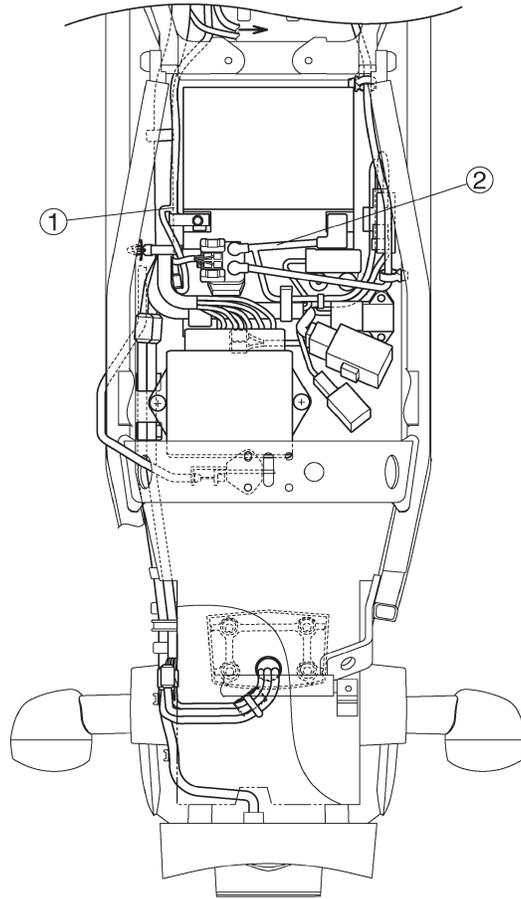
CAUTION:

Proper cable and lead routing is essential to insure safe machine operation.

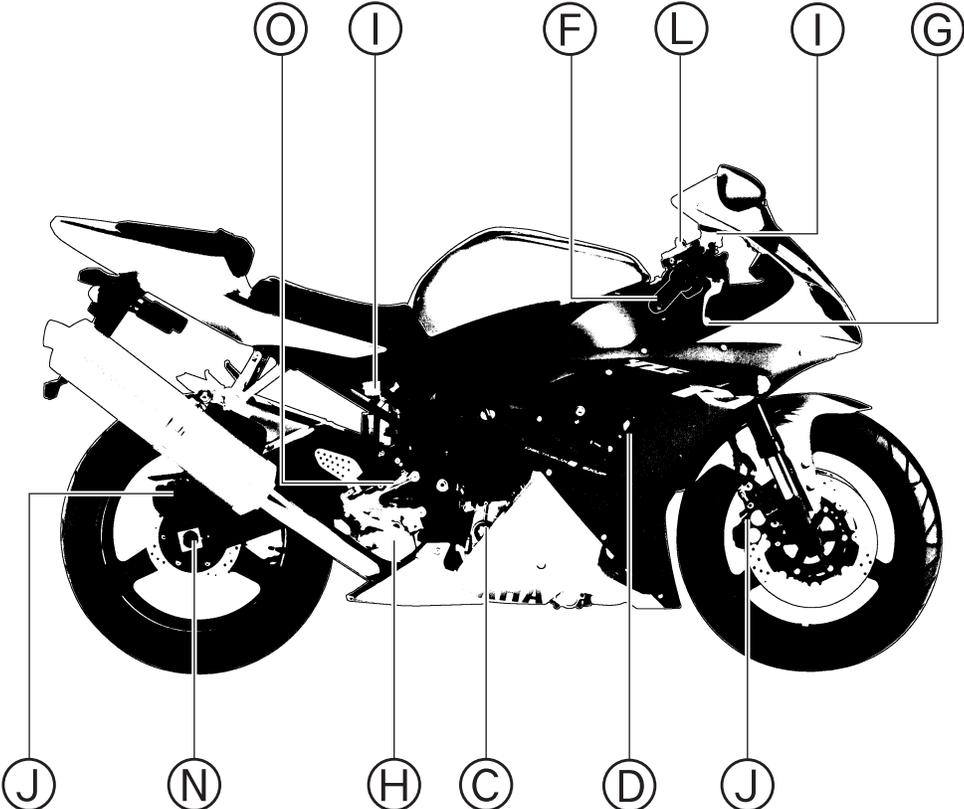
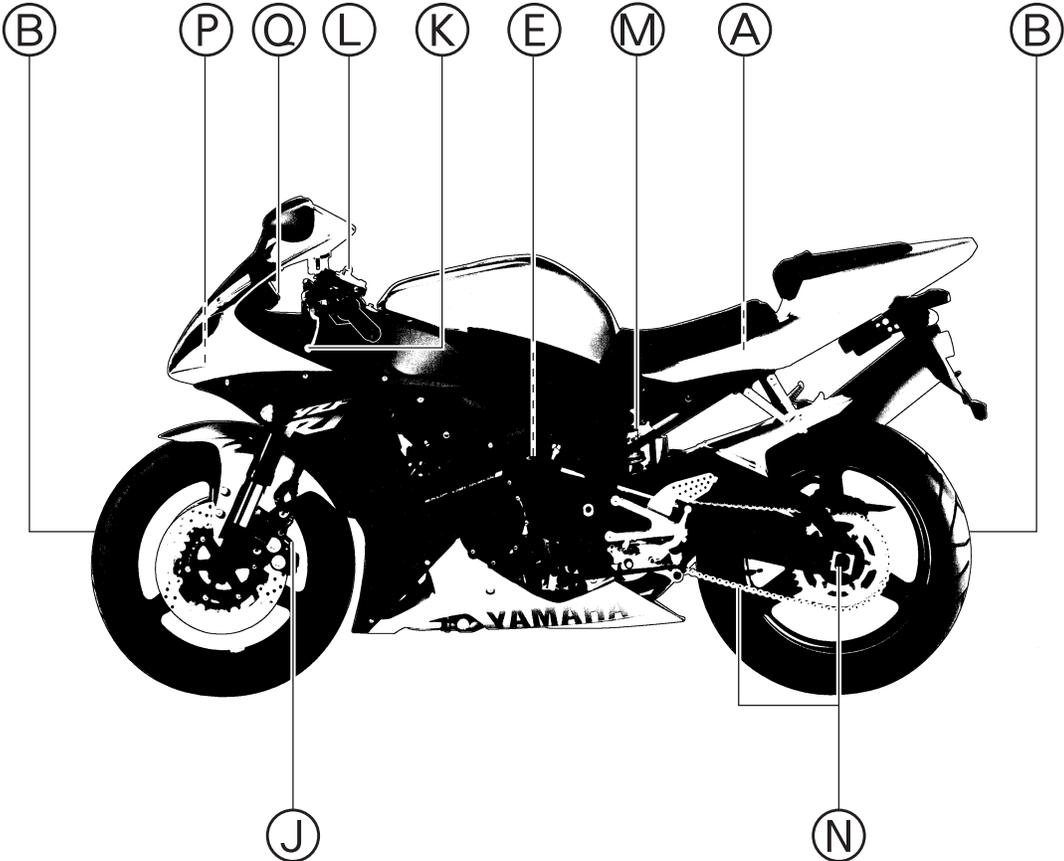
- ① Clutch cable
- A Pass the throttle cable in front of the brake hose.
- B Pass the clutch cable behind the front fork.
- C In this area, the handlebar switch lead (right side) should not be in front of the throttle cable. It should not cross the throttle cable around the guide-air.
- D In this area, pass the handlebar switch right side lead behind of the throttle cable.



- ① (-) lead
- ② (+) lead



ADJUSTMENTS AND PREDELIVERY SERVICE



A. CHECKING AND CHARGING THE BATTERY

NOTE: _____

The battery used in this motorcycles is a new version maintenance free "Valve Regulated Lead Acid Battery", it has been pre-filled with electrolyte at the factory so there is no need for you to add any fluid at any time.

1. Check:

Using a digital voltmeter, the state of a discharged MF battery can be checked by measuring open-circuit voltage (the voltage measured with the positive and negative terminals being disconnected).

Open-circuit voltage	Charging time
12.8 V or higher	Charging is not necessary

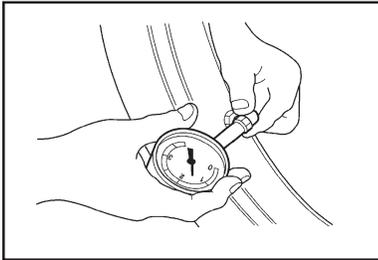
⚠ WARNING _____

- Do not attempt boost charging under any circumstances.
- Battery electrolyte is poisonous and dangerous, causing severe burns, etc. Contains sulfuric acid. Avoid contact with skin, eyes or clothing. Antidote: Eternal-Flush with water. Internal-Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call physician immediately.
- Eyes: Flush with water for 15 minutes and get prompt medical attention. Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc., away. Ventilate when charging or using in enclosed space. Always shield eyes when working near batteries.

KEEP OUT OF REACH OF CHILDREN.

CAUTION: _____

- If the voltage is lower than 12.8 V the battery must be charged. If this is not done, the life of the battery will be shortened drastically. Since the procedure for charging the battery is not explained in the assembly manual, refer to the service manual for more details.
- Never remove the strip of caps, nor add any water or electrolyte.



EAA00128

B. CHECKING THE TIRE PRESSURE

1. Measure:

- tire pressure
- Out of specification → Adjust.

⚠ WARNING _____

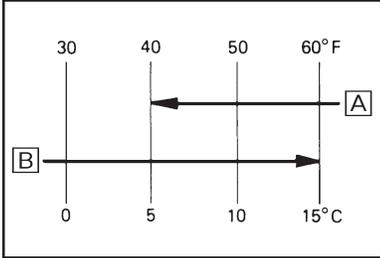
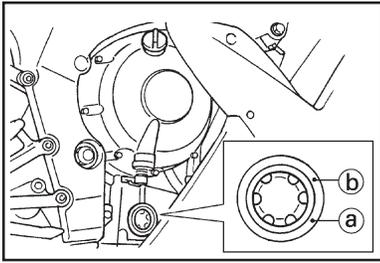
- Tire inflation pressure should be checked and adjusted when the temperature of the tire equals the ambient air temperature. Tire inflation pressure must be adjusted according to total weight of cargo, rider, and accessories (fairing, saddlebags, etc. if approved for this model), and vehicle speed.
- Proper loading of your motorcycle is important for the handling, braking and other performance and safety characteristics of your motorcycle. Do not carry loosely packed items that can shift. Securely pack your heaviest items close to the center of the motorcycle, and distribute the weight evenly from side to side. Properly adjust the suspension for your load, and check the condition and pressure of your tires.

NEVER OVERLOAD YOUR MOTORCYCLE.

Make sure the total weight of the cargo, rider, and accessories (fairing, saddlebags, etc. if approved for this model) does not exceed the maximum load of the motorcycle. Operation of an overload motorcycle could cause tire damage, an accident, or even injury.

Basic weight with oil and a full fuel tank	for USA 193 kg (426 lb) for California 194 kg (428 lb)	
Maximum load	for USA 202 kg (445 lb) for California 201 kg (443 lb)	
Cold tire pressure	Front	Rear
Up to 90 kg (198 lb) load*	250 kPa (2.5 kgf/cm ² , 36 psi)	250 kPa (2.5 kgf/cm ² , 36 psi)
90 kg (198 lb) maximum load*	250 kPa (2.5 kgf/cm ² , 36 psi)	290 kPa (2.9 kgf/cm ² , 42 psi)
High speed riding	250 kPa (2.5 kgf/cm ² , 36 psi)	250 kPa (2.5 kgf/cm ² , 36 psi)

*: total of cargo, rider, passenger and accessories



EAA00129

C. CHECKING THE ENGINE OIL LEVEL

1. Stand the motorcycle on a level surface.

NOTE: _____

- Place the motorcycle on a suitable stand.
- Make sure that the motorcycle is upright.

2. Let the engine idle for a few minutes.

3. Check:

- engine oil level

The engine oil level should be between the minimum level marks (a) and maximum level marks (b).

Below the minimum level mark → Add the recommended engine oil to the proper level.

Recommended engine oil

At 5 °C (40 °F) or higher (A):

Yamalube 4(20W40) or SAE20W40 motor oil (NON-FRICTION MODIFIED)

At 15 °C (60 °F) or below (B):

Yamalube 4(10W30) or SAE10W30 motor oil (NON-FRICTION MODIFIED)

Quantity

Without oil filter cartridge replacement
2.9 L (2.6 Imp qt, 3.1 US qt)

NOTE: _____

Recommended oil classification: API Service "SE", "SF" and "SG" type or equivalent (e.g. "SF-SE", "SF-SE-CC", "SF-SE-SD" etc.).

CAUTION: _____

- Do not add any chemical additives. Engine oil also lubricates the clutch and additives could cause clutch slippage.

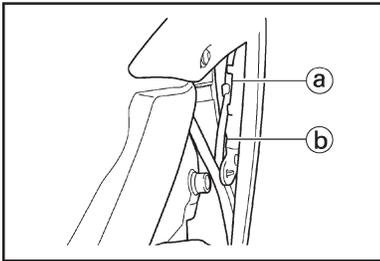
- Do not allow foreign material to enter the crankcase.

4. Start the engine, warm it up for several minutes, and then turn it off.

5. Check the engine oil level again.

NOTE: _____

Before checking the engine oil level, wait a few minutes until the oil has settled.



EAA00136

D. CHECKING THE COOLANT LEVEL

1. Stand the motorcycle on a level surface.

NOTE: _____

- Place the motorcycle on a suitable stand.
- Make sure that the motorcycle is upright.

2. Check:

- coolant level

The coolant level should be between the maximum level marks (a) and minimum level marks (b).

Below the minimum level mark → Add the recommended coolant to the proper level.

CAUTION: _____

- Adding water instead of coolant lowers the antifreeze content of the coolant. If water is used instead of coolant, check and correct the antifreeze concentration of the coolant.

- Use only distilled water. Soft water may be used if distilled water is not available.

3. Start the engine, warm it up for several minutes, and then turn it off.

4. Check:

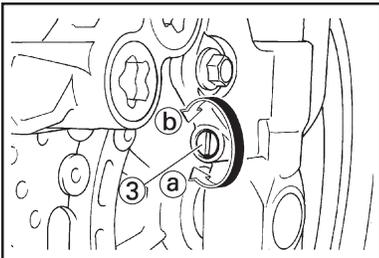
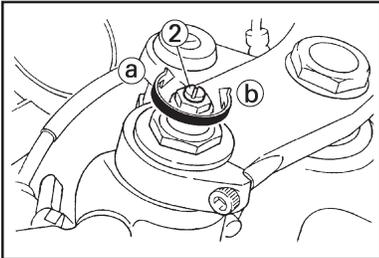
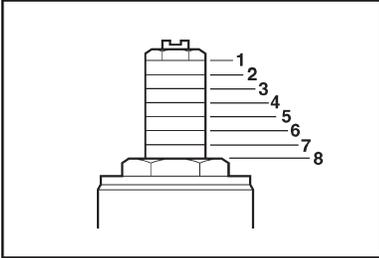
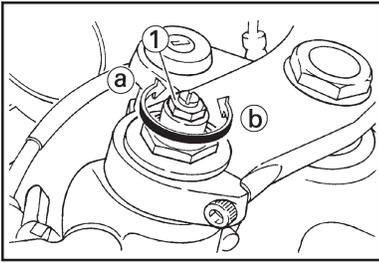
- coolant level

NOTE: _____

Before checking the coolant level, wait a few minutes until it settled.

L. ADJUSTING THE FRONT FORK LEGS

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



⚠ WARNING

- Always adjust both front fork legs evenly. Uneven adjustment can result in poor handling and loss of stability.
- Securely support the motorcycle so that there is no danger of it falling over.

Spring preload

CAUTION:

- Grooves are provided to indicate the adjustment position.
- Never go beyond the maximum or minimum adjustment positions.

- Adjust:
 - spring preload

a. Turn the adjusting bolt ① in direction ③ or ④.

Direction ③	Spring pre-load is increased (suspension is harder).
Direction ④	Spring pre-load is decreased (suspension is softer).

Adjuster position:	
Standard:	6
Minimum:	8
Maximum:	1

Rebound damping

CAUTION:

Never go beyond the maximum or minimum adjustment positions.

- Adjust:
 - rebound damping

a. Turn the adjusting screw ② in direction ⑤ or ⑥.

Direction ⑤	Rebound damping is increased (suspension is harder).
Direction ⑥	Rebound damping is decreased (suspension is softer).

Adjuster position:

Standard:	13 clicks out*
Minimum:	26 clicks out*
Maximum:	1 click out*

*: from the fully turned-in position

Compression damping

CAUTION:

Never go beyond the maximum or minimum adjustment positions.

- Adjust:
 - compression damping

a. Turn the adjusting screw ③ in direction ⑦ or ⑧.

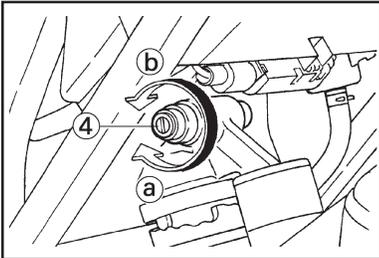
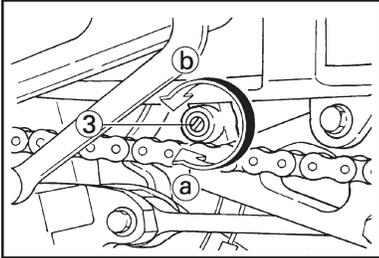
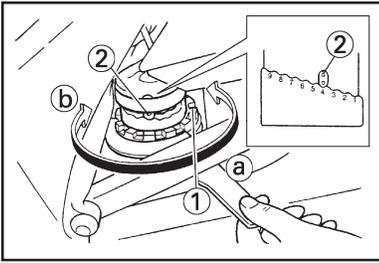
Direction ⑦	Compression damping is increased (suspension is harder).
Direction ⑧	Compression damping is decreased (suspension is softer).

Adjuster position:

Standard:	13 clicks out*
Minimum:	20 clicks out*
Maximum:	1 click out*

*: from the fully turned-in position

M. ADJUSTING THE REAR SHOCK ABSORBER ASSEMBLY



⚠ WARNING

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

Spring preload

CAUTION:

Never go beyond the maximum or minimum adjustment positions.

- Adjust:
 - spring preload

NOTE:

Adjust the spring preload with the special wrench included in the owner's tool kit.

- Turn the adjusting ring ① in direction ② or ③.
- Align the desired position on the adjusting ring with the stopper ④.

Direction ②	Spring preload is increased (suspension is harder).
Direction ③	Spring preload is decreased (suspension is softer).

Adjuster position:	
Standard:	4
Minimum:	1
Maximum:	9

Rebound damping

CAUTION:

Never go beyond the maximum or minimum adjustment positions.

- Adjust:
 - rebound damping

- Turn the adjusting screw ③ in direction ④ or ⑤.

Direction ④	Rebound damping is increased (suspension is harder).
Direction ⑤	Rebound damping is decreased (suspension is softer).

Adjuster position:	
Standard:	15 clicks out*
Minimum:	20 clicks out*
Maximum:	1 click out*

*: from the fully turned-in position

Compression damping

CAUTION:

Never go beyond the maximum or minimum adjustment positions.

- Adjust:
 - compression damping

- Turn the adjusting screw ④ in direction ⑥ or ⑦.

Direction ⑥	Compression damping is increased (suspension is harder).
Direction ⑦	Compression damping is decreased (suspension is softer).

Adjuster position:	
Standard:	15 clicks out*
Minimum:	20 clicks out*
Maximum:	1 click out*

*: from the fully turned-in position

APPENDICES

SERVICE DATA

YZF-R1P/YZF-R1PC			
Engine idling speed:		1,000 ~ 1,100 r/min	
Spark plug: Type Gap		CR9EIA 9 (NGK), IU27D (DENSO) 0.8 ~ 0.9 mm (0.031 ~ 0.035 in)	
Fuel: Recommended fuel Fuel tank capacity Total:		Premium unleaded gasoline only 17 L (3.74 Imp gal, 4.49 US gal)	
Valve clearance (cold):		IN	0.11 ~ 0.20 mm (0.0043 ~ 0.0079 in)
		EX	0.21 ~ 0.27 mm (0.0083 ~ 0.0106 in)
Maximum load *		202 kg (445 lb) for USA 201 kg (443 lb) for California	
Tire pressure	Up to 90 kg (198 lb) load *	Front	Rear
		250 kPa (2.5 kgf/cm ² , 36 psi)	250 kPa (2.5 kgf/cm ² , 36 psi)
		250 kPa (2.5 kgf/cm ² , 36 psi)	290 kPa (2.9 kgf/cm ² , 42 psi)
		250 kPa (2.5 kgf/cm ² , 36 psi)	250 kPa (2.5 kgf/cm ² , 36 psi)
	90 kg (198 lb) ~ Maximum load *		
	High speed riding		

* Load is the total weight of cargo, rider, passenger, and accessories.

STANDARD EQUIPMENT

No.	Part name	Q'ty
1	Owner's manual	1
2	Owner's tool kit	1

OWNER'S TOOL KIT

No.	Part name	Q'ty
1	Owner's tool bag	1
2	Pliers	1
3	Wrench (8 - 10)	1
4	Wrench (10 - 12)	1
5	Wrench (12 - 14)	1
6	Wrench (32)	1
7	Special wrench	1
8	Extension bar	1
9	Spark plug wrench	1
10	Screwdriver grip	1
11	Screwdriver bit (phillips-slotted)	1
12	Screwdriver bit (phillips)	1
13	Hexagon wrench (4)	1
14	Hexagon wrench (5)	1

TIGHTENING TORQUE

Part to be tightened	Thread size	Tightening torque		
		Nm	m • kg	ft • lb
Engine:				
Spark plugs	M10	13	1.3	9.4
Engine oil drain bolt	M14	43	4.3	31
Chassis:				
Upper bracket and front fork	M8	26	2.6	19
Steering stem nut	M28	115	11.5	83
Handlebar and front fork	M6	13	1.3	9.4
Handlebar and upper bracket	M6	13	1.3	9.4
Lower ring nut	M30	See NOTE		
Lower bracket pinch bolts	M8	23	2.3	17
Main switch and handle crown	M8	26	2.6	19
Brake fluid reservoir cap stopper	M4	1.2	0.12	0.9
Front brake hose union bolts	M10	30	3.0	22
Front brake master cylinder and bracket	M6	9	0.9	6.5
Meter and cowling stay	M5	1	0.1	0.7
Headlight and cowling stay	M5	1	0.1	0.7
Upper cowling and headlight	M5	1	0.1	0.7
Side, bottom cowling and frame, engine	M6	5	0.5	3.6
Wind screen and upper cowling	M5	0.4	0.04	0.3
Side cowling and console panel	M5	1	0.1	0.7
Side cowling and inner panel	M5	1	0.1	0.7
Grip end and handlebar	M6	4	0.4	2.9
Brake hose holder and under bracket	M6	7	0.7	5.1
Engine mounting				
Front mounting bolts	M10	45	4.5	33
Rear mounting bolts (upper and lower)	M10	50	5.0	36
Pinch bolts (front)	M8	24	2.4	17
Engine mount adjust bolt (rear)	M16	7	0.7	5.1
Exhaust pipe bracket and frame	M8	34	3.4	25
Clutch cable adjuster locknut (engine side)	M8	7	0.7	5.1
Main frame and rear frame	M10	40	4.0	29
Throttle cable adjuster locknut (engine side)	M6	5	0.5	3.6
Pivot shaft nut	M18	105	10.5	76
Pivot shaft adjust bolt	M25	5	0.5	3.6
Connecting arm and frame	M10	45	4.5	33
Relay arm and connecting rod	M10	45	4.5	33
Relay arm and swingarm	M10	45	4.5	33
Rear shock absorber and relay arm	M10	45	4.5	33
Rear shock absorber and frame	M10	45	4.5	33
Drive chain guard	M6	7	0.7	5.1
Fuel tank and fuel pump	M5	4	0.4	2.9
Fuel tank stay and fram (front)	M6	7	0.7	5.1
Fuel tank and stay (rear)	M6	10	1.0	7.2
Fuel tank and fuel tank side cover	M5	4	0.4	2.9
Rider seat and frame	M6	7	0.7	5.1
Coolant reservoir and radiator	M6	5	0.5	3.6
Tail cowling and frame	M5	4	0.4	2.9
Battery box and frame	M6	7	0.7	5.1
Taillight and battery box	M5	3	0.3	2.2
ECU and battery box	M6	1	0.1	0.7
Passenger seat lock and battery box	M6	3	0.3	2.2
Atmospheric pressure sensor and battery box	M5	0.7	0.07	0.5

Part to be tightened	Thread size	Tightening torque		
		Nm	m • kg	ft • lb
Lean angle cut-off switch sensor and battery box	M4	2	0.2	1.4
Rider footrest bracket and frame	M8	28	2.8	20
Passenger footrest bracket and frame	M8	28	2.8	20
Rear master cylinder	M6	18	1.8	13
Rear brake hose union bolts	M10	30	3.0	22
Sidestand	M10	63	6.3	46
Front wheel axle and bolt	M14	90	9.0	65
Rear wheel axle nut	M24	150	15.0	108
Front brake caliper and front fork	M10	40	4.0	29
Brake disc and wheel	M6	18	1.8	13
Rear wheel sprocket and rear wheel drive hub	M10	100	10	72
Brake caliper and bleed screw	M8	6	0.6	4.3
Pinch bolt (front wheel axle)	M8	18	1.8	13

NOTE: _____

1. First, tighten the ring nut to approximately 50 Nm (5.0 m • kg, 36 ft • lb) with a torque wrench, then loosen the ring nut completely.
 2. Retighten the ring nut 9 Nm (0.9 m • kg, 6.5 ft • lb).
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