



YAMAHA

2015

ASSEMBLY MANUAL

YZFR1F

YZFR1FC

YZFR1MF

YZFR1MFC

R1

R1M

LIT-11666-28-52

2CR-28107-10

FOREWORD

This Assembly Manual contains the information required for the correct assembly of this Yamaha vehicle prior to delivery to the customer. Since some external parts of the vehicle 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 assembled vehicle should be thoroughly cleaned, inspected, and adjusted prior to delivery to the customer.

IMPORTANT

The service specifications given in this assembly manual are based on the model as manufactured. Yamaha Motor Company, Ltd. is continually striving to improve all of its models. Modifications and significant changes in specifications or procedures will be forwarded to all authorized Yamaha dealers and will appear in future editions of this manual where applicable. 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 vehicle and/or rider.

CONCERNING CRATE DAMAGE:

Follow the instructions in the Dealer Warranty Handbook, Procedure Section.

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

	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
 WARNING	A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.
NOTICE	A NOTICE indicates special precautions that must be taken to avoid damage to the vehicle or other property.
TIP	A TIP provides key information to make procedures easier or clearer.

YZFR1F/YZFR1FC/YZFR1MF/YZFR1MFC ASSEMBLY MANUAL

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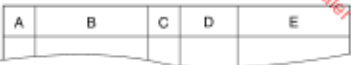
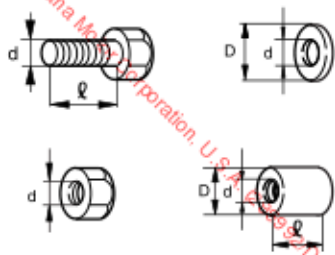
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P/N LIT-11666-28-52

SYMBOLS USED IN THE ASSEMBLY MANUAL

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

SYMBOL	DEFINITION	SYMBOL	DEFINITION
	Filling fluid		Lubricant
	Lubricant		Tighten to 10 Nm. (10 Nm = 1.0 m·kgf, 7.2 ft·lbf)
	Special tool		Towards the front of the vehicle
	Tightening torque		Clearance required
	Wear limit, clearance		Install so that the arrow mark faces upward.
	Engine speed		Apply motor oil.
	Electrical data		Made of rubber or plastics
  A: Ref. No. (indicating the order of operations.) B: Part name C: Quantity of parts per vehicle D: Place where parts are held (1): Refer to "PARTS LOCATION". V: Stored in plastic 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 Example: (1)-V (1) signifies the location of the parts, and V signifies that the part is stored in a plastic bag. E: Size or material of parts d/D: Diameter of part l: Length of part e.g., 5 (0.20) = 5 mm (0.20 in)			

PREPARATION

To assemble the vehicle correctly, supplies (e.g. oils, greases, and shop rags) and sufficient working space are required.

Workshop

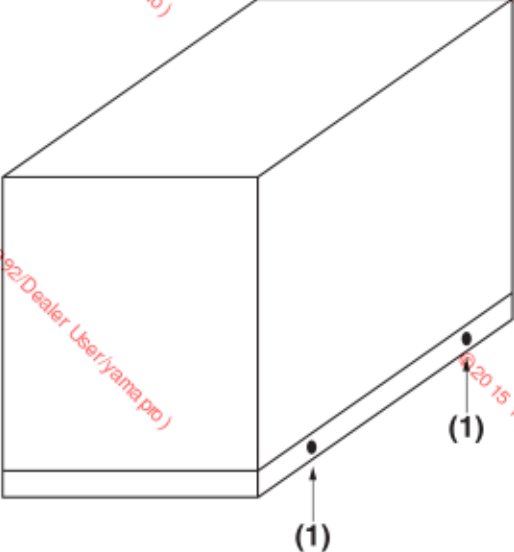
The workshop where the vehicle is assembled should be clean, spacious, and have a level floor.

Self-protection

Protect your eyes with suitable safety glasses or 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 and shoes.

SYMBOLS USED ON CRATE CARTON

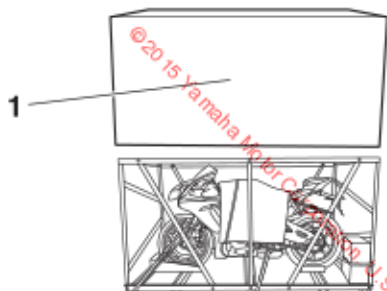
	Contents of the transport package are fragile, therefore the package must be handled with care.		Insertion of the forklift arms from this side can cause damage.
	Indicates correct upright position of the transport package.		Do not step anywhere on the transport package.
	Transport package must be kept away from rain.		Up to 6 of the transport packages can be piled up.
		Yellow labels (1) Lift arm insertion positions If the forklift arms cannot be inserted under the transport package in alignment with the two yellow labels, adjust the arms so that they are positioned evenly in relation to these marks while taking care not to damage the package contents.	

UNPACKING

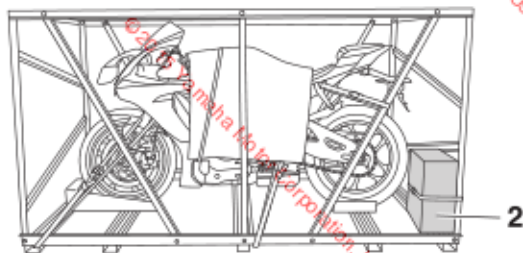
1. Remove the frame cover (1).

TIP

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



2. Remove the carton box (2).



3. Remove the belts (3).

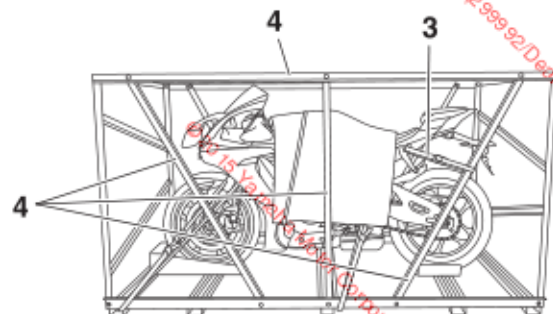
NOTICE

Securely support the vehicle when removing the belts.

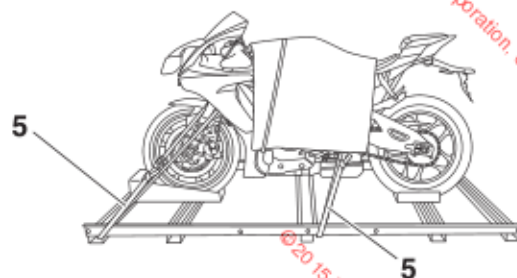
4. Remove the packing frames (4). (Lift up and then move to the side.)

TIP

Remove the bolts while holding the frame.



5. Remove the belts (5).



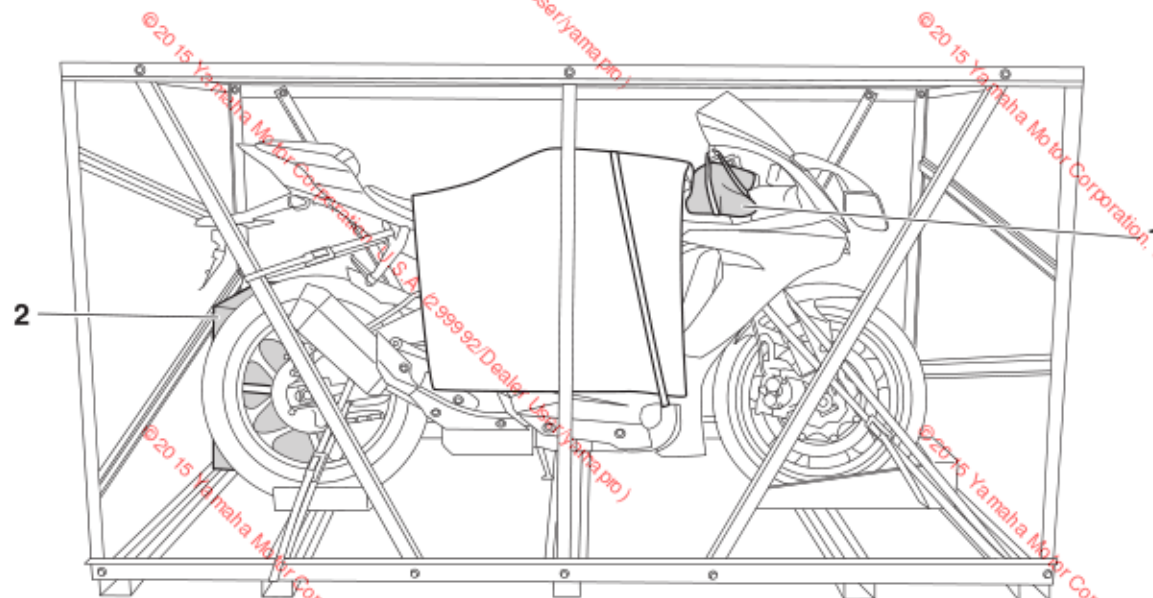
TIP

Before starting the assembly, check for damaged or missing parts. Check both the parts contained in the carton box and on the vehicle for damage, scratches, and other defects.

PARTS LOCATION

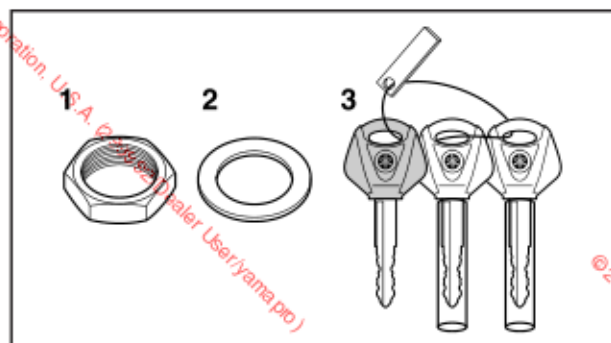
NOTICE

- Do not use a cutter, scissors, or other sharp object to open the carton box; otherwise, the included parts could be damaged.
- Wear suitable protective gear such as gloves when handling and opening the carton box.



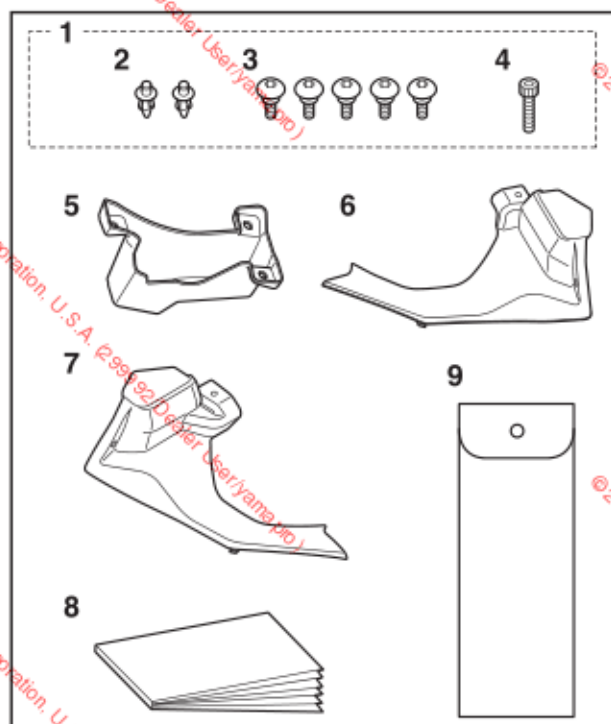
1. Bubble wrap pack
2. Carton box

(1) Bubble wrap pack



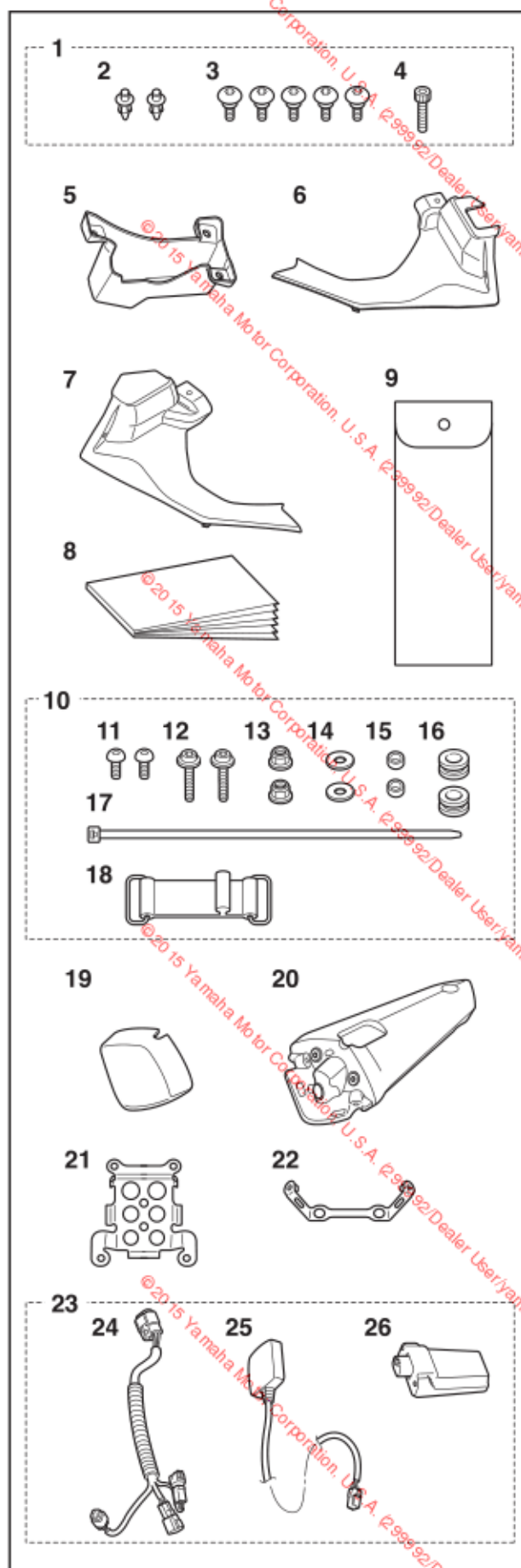
1. Steering stem nut
[d = 28 (1.10)]
2. Washer
[d = 28.3 (1.11), D = 42 (1.65)]
3. Keys

(2) Carton box (YZFR1F/YZFR1FC)



1. Plastic bag
2. Quick fasteners (document box and panel)
3. Hexagon socket bolts (document box and panel)
[d = 5 (0.20), ℓ = 12 (0.47)]
4. Hexagon socket bolt (rider seat)
[d = 6 (0.24), ℓ = 23 (0.91)]
5. Document box
6. Panel (right)
7. Panel (left)
8. Owner's manual
9. Owner's tool kit

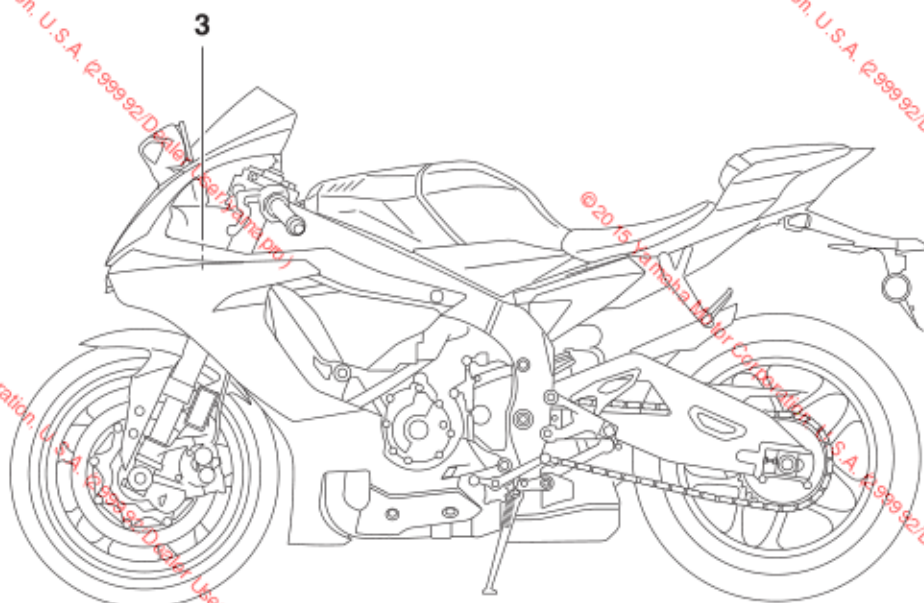
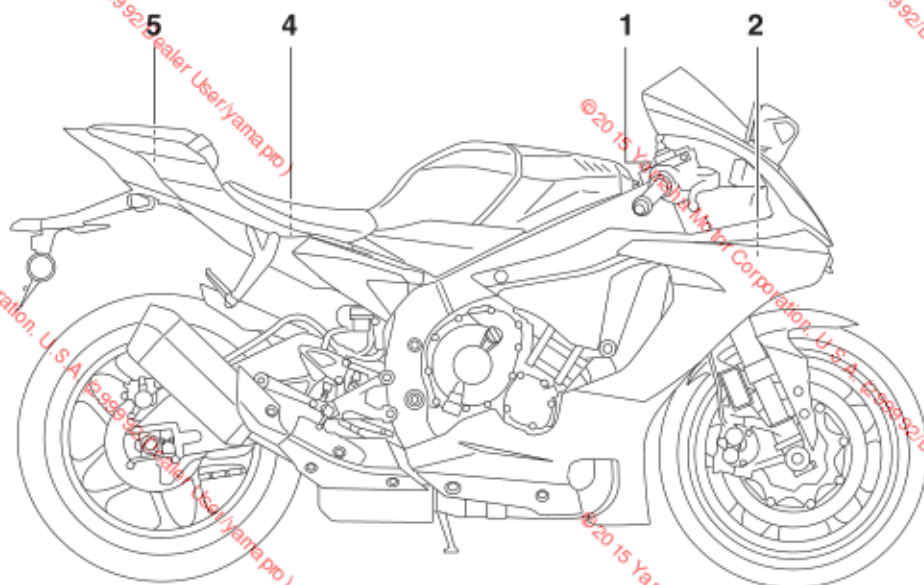
(2) Carton box (YZFR1MF/YZFR1MFC)



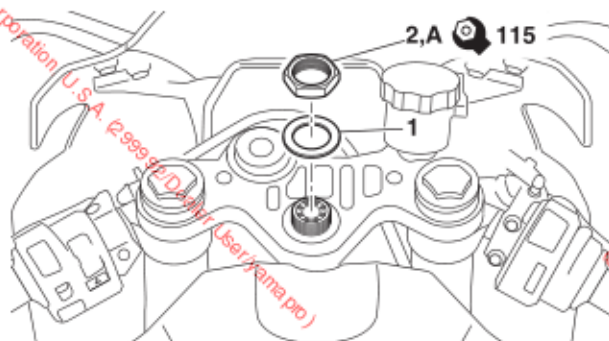
1. Plastic bag
2. Quick fasteners (document box and panel)
3. Hexagon socket bolts (document box and panel)
[d = 5 (0.20), l = 12 (0.47)]
4. Hexagon socket bolt (rider seat)
[d = 6 (0.24), l = 23 (0.91)]
5. Document box
6. Panel (right)
7. Panel (left)
8. Owner's manual
9. Owner's tool kit
10. Plastic bag
11. Torx head bolts (CCU bracket)
[d = 6 (0.24), l = 10 (0.39)]
12. Hexagon socket bolts (CCU bracket)
[d = 6 (0.24), l = 20 (0.79)]
13. Self-locking nuts (rear cover)
[d = 6 (0.24)]
14. Washers (rear cover)
[d = 6.5 (0.26), D = 14.5 (0.57)]
15. Collars (CCU bracket)
[d = 6.5 (0.26), D = 6 (0.24)]
16. Grommets (CCU bracket)
[d = 12 (0.47), D = 16 (0.63), l = 6 (0.24)]
17. Plastic locking tie (CCU)
18. Band (CCU)
19. Rear cover
20. Passenger seat cover
21. CCU bracket
22. CCU bracket
23. Carton box
24. Sub-wire harness
25. GPS unit
26. CCU (Communication Control Unit)

SETUP PROCEDURES

Perform the setup procedures in the order indicated by the numbers. Always follow the order as shown.



1. STEERING STEM NUT

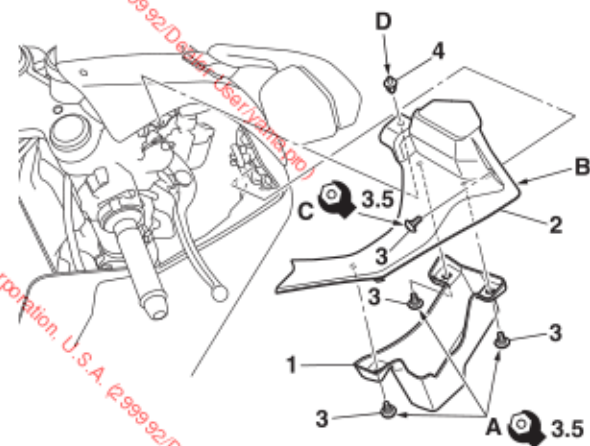
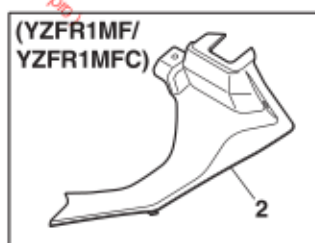


1	Washer	1	(1)-V	d = 28.3 (1.11), D = 42 (1.65)
2	Steering stem nut	1	(1)-V	d = 28 (1.10)

A: Tighten the steering stem nut to specification.

Steering stem nut
115 Nm (11.5 m·kgf, 83 ft·lbf)

2. DOCUMENT BOX



1	Document box	1	(2)-C	
2	Panel (right)	1	(2)-C	
3	Hexagon socket bolt	2	(2)-V	d = 5 (0.20), ℓ = 12 (0.47)
4	Quick fastener	1	(2)-V	

A: Tighten the hexagon socket bolts to specification.

Hexagon socket bolt
3.5 Nm (0.35 m·kgf, 2.5 ft·lbf)

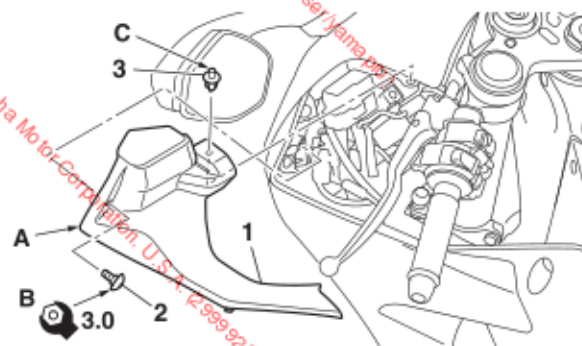
B: Install the document box.

C: Tighten the hexagon socket bolt to specification.

Hexagon socket bolt
3.5 Nm (0.35 m·kgf, 2.5 ft·lbf)

D: Install the quick fastener.

3. PANEL



1	Panel (left)	1	(2)-C	
2	Hexagon socket bolt	1	(2)-V	d = 5 (0.20), ℓ = 12 (0.47)
3	Quick fastener	1	(2)-V	

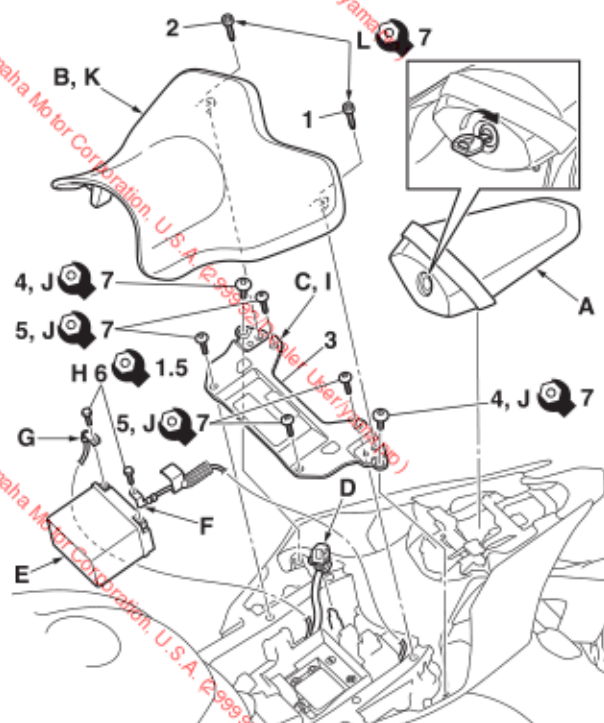
A: Install the panel.

B: Tighten the hexagon socket bolt to specification.

Hexagon socket bolt
3.0 Nm (0.30 m·kgf, 2.2 ft·lbf)

C: Install the quick fastener.

4. YAMAHA DIAGNOSTIC TOOL COUPLER AND BATTERY



1	Hexagon socket bolt	1	★	d = 6 (0.24), ℓ = 23 (0.91)
2	Hexagon socket bolt	1	(2)-V	d = 6 (0.24), ℓ = 23 (0.91)
3	Battery cover	1	★	
4	Hexagon socket bolt	2	★	d = 6 (0.24), ℓ = 23 (0.91)
5	Hexagon socket bolt	4	★	d = 6 (0.24), ℓ = 20 (0.79)
6	Battery bolt	2	★	

- A: Remove the passenger seat.
 B: Remove the rider seat.
 C: Remove the battery cover.
 D: Install the protective cap on the Yamaha diagnostic tool coupler onto the projection on the battery box.
 E: Before installing the battery, charge the battery.

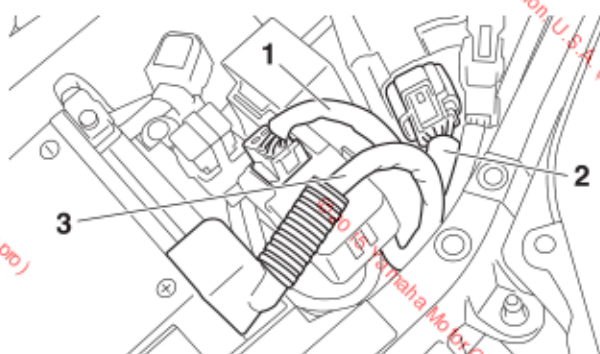
TIP

Refer to "ADJUSTMENTS AND PREDELIVERY SERVICE".

- F: First, connect the positive battery lead (red lead) to the positive terminal.

NOTICE

Route the positive battery lead to the outside of the EXUP servo motor lead and starter relay lead.



1. Starter relay lead
2. EXUP servo motor lead
3. Positive battery lead

- G: Second, connect the negative battery lead (black lead) to the negative terminal.
 H: Tighten the battery bolt to specification.

Battery bolt
 1.5 Nm (0.15 m·kgf, 1.1 ft·lbf)

TIP

Refer to "CABLE ROUTING".

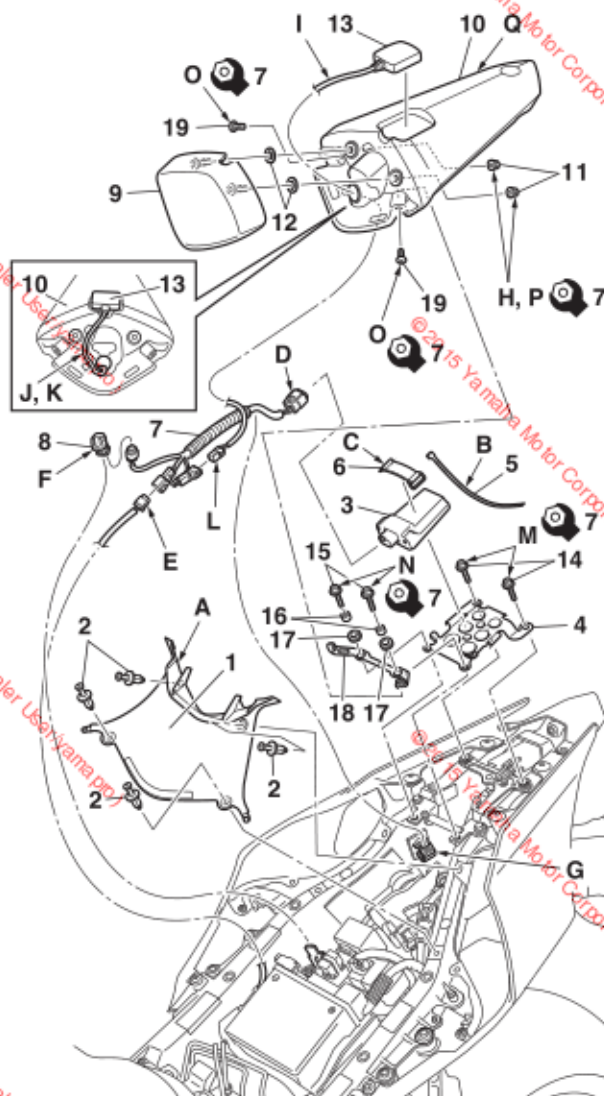
- I: Place the battery cover to the original position.
 J: Tighten the hexagon socket bolts to specification.

Hexagon socket bolt
 7 Nm (0.7 m·kgf, 5.1 ft·lbf)

- K: Place the rider seat to the original position.
 L: Tighten the hexagon socket bolts to specification.

Hexagon socket bolt
 7 Nm (0.7 m·kgf, 5.1 ft·lbf)

5. CCU (Communication Control Unit) (YZFR1MF/YZFR1MFC)



1	Panel	1	★	
2	Quick fastener screw	4	★	
3	CCU (Communication Control Unit)	1	(2)-C	
4	CCU bracket	1	(2)-C	
5	Plastic locking tie	1	(2)-V	
6	Band	1	(2)-V	
7	Sub-wire harness	1	(2)-C	
8	Protective cap	1	★	
9	Rear cover	1	(2)-C	
10	Passenger seat cover	1	(2)-C	
11	Self-locking nut	2	(2)-V d = 6 (0.24)	
12	Washer	2	(2)-V d = 6.5 (0.26), D = 14.5 (0.57)	
13	GPS unit	1	(2)-C	
14	Hexagon socket bolt	2	★ d = 6 (0.24), ℓ = 20 (0.79)	
15	Hexagon socket bolt	2	(2)-V d = 6 (0.24), ℓ = 20 (0.79)	
16	Collar	2	(2)-V d = 6.5 (0.26), D = 6 (0.24)	
17	Grommet	2	(2)-V d = 12 (0.47), D = 16 (0.63), ℓ = 6 (0.24)	
18	CCU bracket	1	(2)-C	
19	Torx head bolt	2	(2)-V d = 6 (0.24), ℓ = 10 (0.39)	

TIP

Before installing the CCU, check with the vehicle's owner if they wish to install it.

- A: Remove the panel.
- B: Fasten the CCU and CCU bracket with the plastic locking tie.
- C: Fasten the CCU and CCU bracket with the band.
- D: Connect the CCU coupler (sub-wire harness) to the CCU.
- E: Remove the protective cap from Yamaha diagnostic tool coupler on the wire harness, and then connect the Yamaha diagnostic tool coupler to the sub-wire harness.
- F: Fit the removed protective cap to the Yamaha diagnostic tool coupler on the sub-wire harness, and then insert the protective cap until it contacts the battery box.
- G: Fasten the sub-wire harness to the rear frame with the clamp.
- H: Remove the rear cover from the passenger seat cover.
- I: Route the GPS unit lead between the passenger seat cover and the rear cover.
- J: Route the GPS unit lead as shown in the illustration.
- K: Route the GPS unit lead to the inside of the vehicle through the hole in the passenger seat cover.
- L: Connect the GPS unit coupler to the sub-wire harness.

M: Tighten the hexagon socket bolts to specification.



Hexagon socket bolt
7 Nm (0.7 m·kgf, 5.1 ft·lbf)

N: Tighten the hexagon socket bolts to specification.



Hexagon socket bolt
7 Nm (0.7 m·kgf, 5.1 ft·lbf)

O: Tighten the torx head bolts to specification.



Torx head bolt
7 Nm (0.7 m·kgf, 5.1 ft·lbf)

P: Tighten the self-locking nuts to specification.



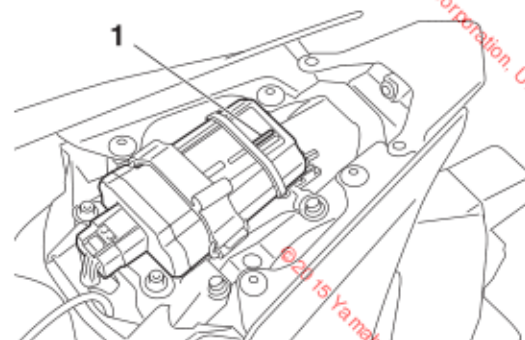
Self-locking nut
7 Nm (0.7 m·kgf, 5.1 ft·lbf)

Q: Install the passenger seat cover.

TIP

Refer to "CABLE ROUTING".

R: Note the CCU serial number.



1. CCU serial number

S: Turn the main switch to "ON" and approach the vehicle with a wireless capable smart-phone, tablet or laptop computer.

T: Connect to the Yamaha wireless network by inputting the CCU serial number as the SSID password.

TIP

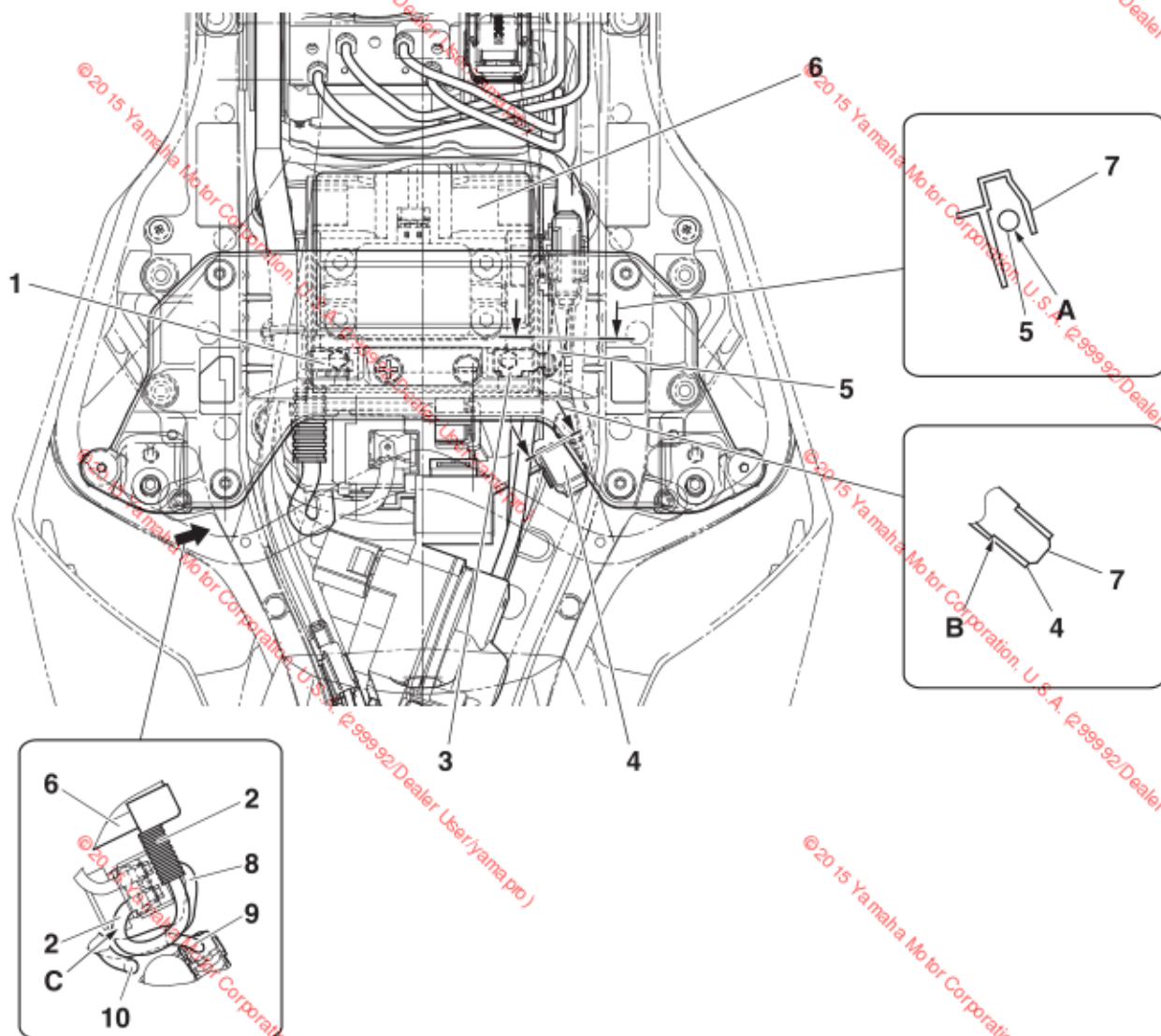
Since all CCU-equipped models put out a similarly named wireless network, have only one vehicle turned on at a time to avoid confusion.

U: For instructions on how to use the logging function download the "Y-TRAC" application (available at Google® application store), and to remotely adjust the YRC settings, download the "YRC Setting" application.

CABLE ROUTING

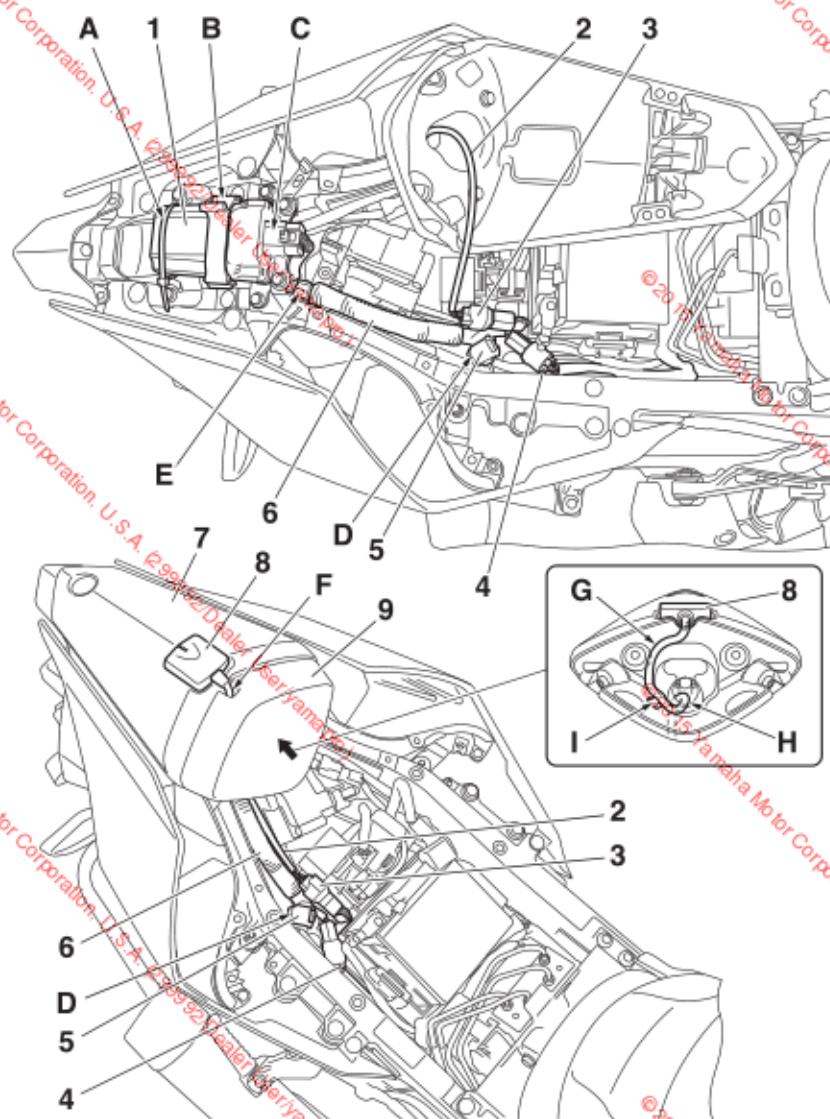
WARNING

Proper cable and lead routing are essential to insure safe vehicle operation.



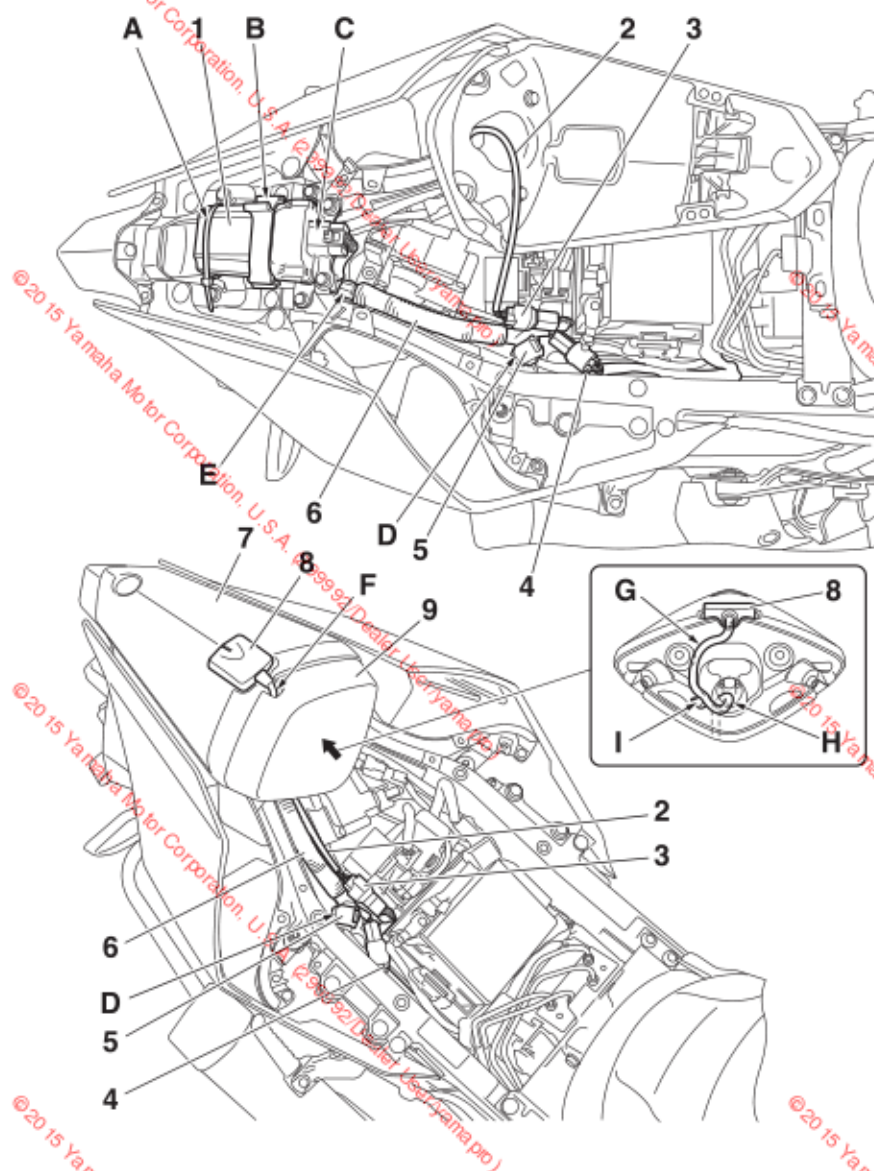
1. Positive terminal
2. Positive battery lead
3. Negative terminal
4. Yamaha diagnostic tool coupler
5. Negative battery lead
6. Battery
7. Battery box
8. Starter relay lead
9. EXUP servo motor lead
10. Relay assembly lead

- A. Route the negative battery lead through the inside of the rib.
- B. Insert Yamaha diagnostic tool coupler until it contacts the battery box as shown in the illustration.
- C. Route the positive battery lead to the outside of the EXUP servo motor lead and starter relay lead.



1. CCU (Communication Control Unit)
2. GPS unit lead
3. GPS unit coupler
4. Yamaha diagnostic tool coupler (wire harness)
5. Yamaha diagnostic tool coupler (sub-wire harness)
6. Sub-wire harness
7. Passenger seat cover
8. GPS unit
9. Rear cover

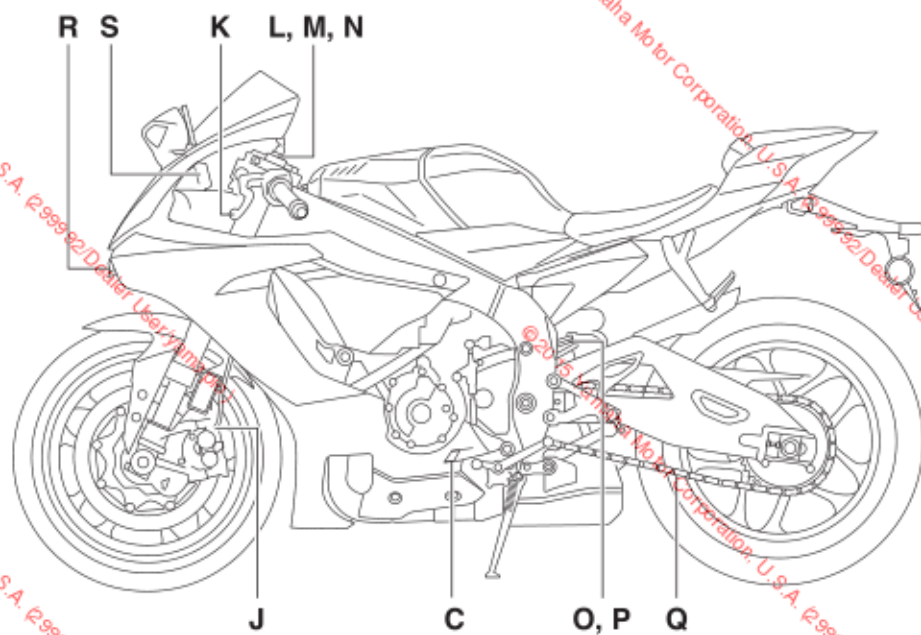
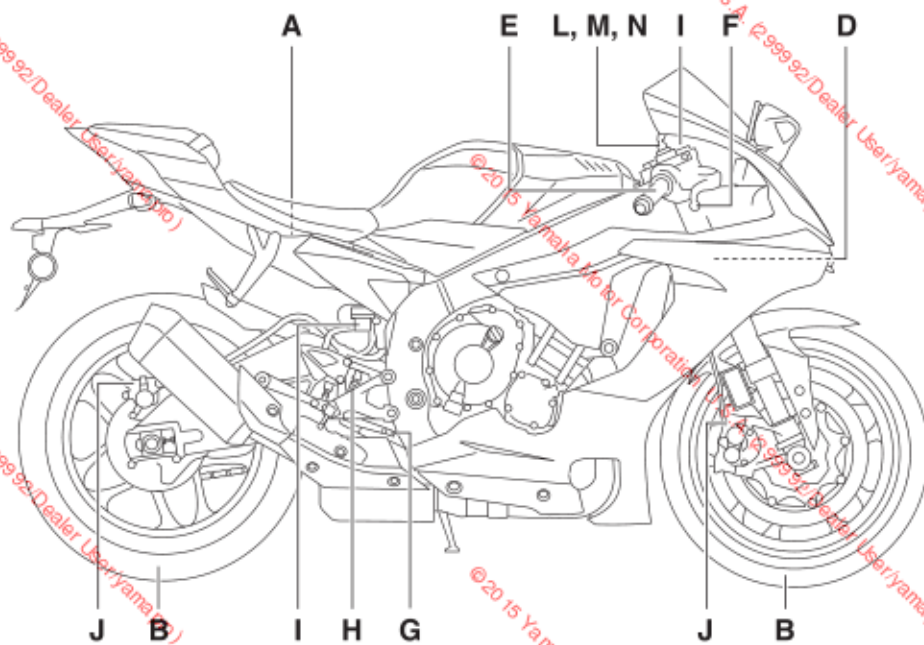
- A. Fasten the CCU and CCU bracket with the plastic locking tie.
- B. Fasten the CCU and CCU bracket with the band.
- C. Connect the CCU coupler (sub-wire harness) to the CCU.
- D. Insert the Yamaha diagnostic tool coupler until it contacts the battery box.
- E. Fasten the sub-wire harness to the rear frame with the clamp.
- F. Route the GPS unit lead between the passenger seat cover and the rear cover.
- G. Route the GPS unit lead as shown in the illustration.



- H. Route the GPS unit lead to the inside of the vehicle through the hole in the passenger seat cover.
- I. Fasten the GPS unit lead with the clamp on the passenger seat cover.

ADJUSTMENTS AND PREDELIVERY SERVICE

Perform the predelivery service in the order indicated by the letters.
Always follow the order as shown.



A. CHECKING AND CHARGING THE BATTERY

TIP

The battery used in this vehicle is a VRLA (Valve Regulated Lead Acid) battery, it has been pre-filled with electrolyte at the factory so there is no need to add fluid at any time.

1. Check:

Using a digital volt meter, the state of a discharged VRLA (Valve Regulated Lead Acid) battery can be checked by measuring open-circuit voltage (the voltage measured with the positive and negative terminals being disconnected).



Open-circuit voltage
12.8 V or higher

Charging time
Charging is not necessary



WARNING

- Do not attempt boost charging under any circumstances.
- Battery electrolyte is poisonous and dangerous, causing severe burns, etc. It contains sulfuric acid. Avoid contact with skin, eyes or clothing.

Antidote: External-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 THE REACH OF CHILDREN.

NOTICE

- 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. Refer to the service manual for battery charging instructions.
- Never remove the strip of caps, nor add any water or electrolyte.

B. MEASURING THE TIRE PRESSURE

1. Measure:

- Tire pressure
Out of specification → Adjust.



WARNING

- The tire pressure should only be checked and regulated when the tire temperature equals the ambient air temperature.
- The tire pressure and the suspension must be adjusted according to the total weight (including cargo, rider, passenger, and accessories) and the anticipated riding speed.
- Operation of an overloaded vehicle could cause tire damage, an accident, or an injury.
NEVER OVERLOAD THE VEHICLE.

Weight

Curb weight

YZFR1F

199 kg (439 lb)

YZFR1FC

200 kg (441 lb)

YZFR1MF/YZFR1MFC

201 kg (443 lb)

Maximum load*

188 kg (414 lb)

Cold tire pressure

Up to 90 kg (198 lb) load

Front

250 kPa (2.50 kgf/cm², 36 psi)

Rear

290 kPa (2.90 kgf/cm², 42 psi)

90 kg (198 lb) load—Maximum load*

Front

250 kPa (2.50 kgf/cm², 36 psi)

Rear

290 kPa (2.90 kgf/cm², 42 psi)

High-speed riding

Front

250 kPa (2.50 kgf/cm², 36 psi)

Rear

290 kPa (2.90 kgf/cm², 42 psi)

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

C. CHECKING THE ENGINE OIL LEVEL

1. Stand the vehicle on a level surface.

TIP

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

2. Let the engine idle for a few minutes, and then turn it off.

3. Check:

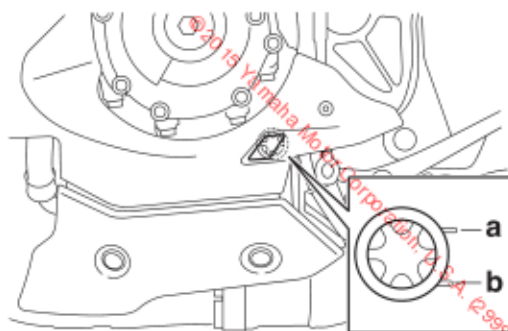
- Engine oil level

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

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

TIP

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



Recommended brand

YAMALUBE

Type

Full synthetic SAE 10W-40 or 15W-50

Recommended engine oil grade

API service SG type or higher, JASO standard MA

Oil quantity

Without oil filter cartridge replacement

3.90 L (4.12 US qt, 3.43 Imp.qt)

NOTICE

- Engine oil also lubricates the clutch and the wrong oil types or additives could cause clutch slippage. Therefore, do not add any chemical additives or use engine oils with a grade of CD or higher and do not use oils labeled "ENERGY CONSERVING II".
- 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.

TIP

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

D. CHECKING THE COOLANT LEVEL

1. Stand the vehicle on a level surface.

TIP

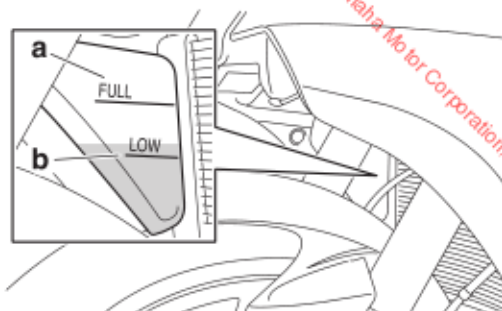
- Place the vehicle on a suitable stand.
- Make sure that the vehicle is upright.

2. Check:

- Coolant level

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

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



NOTICE

- 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

TIP

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

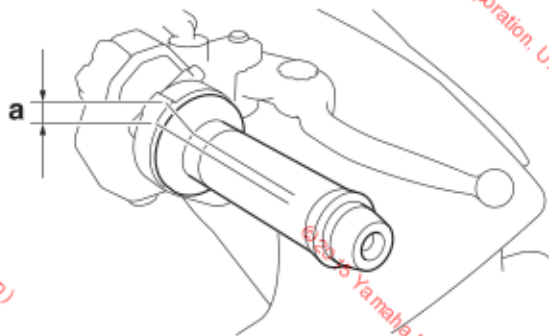
E. ADJUSTING THE THROTTLE GRIP FREE PLAY

TIP

Prior to adjusting throttle grip free play, the engine idling speed should be adjusted.

1. Measure:

- Throttle grip free play (a)
Out of specification → Adjust.



2. Adjust:

- Throttle grip free play

- Slide back the rubber cover (1).
- Loosen the locknut (2).
- Turn the adjusting nut (3) in direction (a) or (b) until the specified throttle grip free play is obtained.

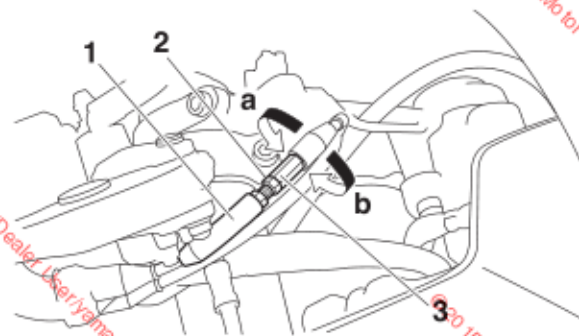
Direction (a)	Throttle grip free play is increased.
Direction (b)	Throttle grip free play is decreased.

- Tighten the locknut.

WARNING

After adjusting the throttle grip free play, turn the handlebar to the right and to the left to ensure that this does not cause the engine idling speed to change.

- Slide the rubber cover to its original position.



F. ADJUSTING THE FRONT BRAKE

1. Adjust:

- Brake lever position
(distance (a) from the throttle grip to the brake lever)

- While pushing the brake lever forward, turn the adjusting dial (1) until the brake lever is in the desired position.

TIP

Be sure to align the setting on the adjusting dial with the arrow mark (2) on the brake lever holder.

Position #1	Distance (a) is the largest.
Position #6	Distance (a) is the smallest.

WARNING

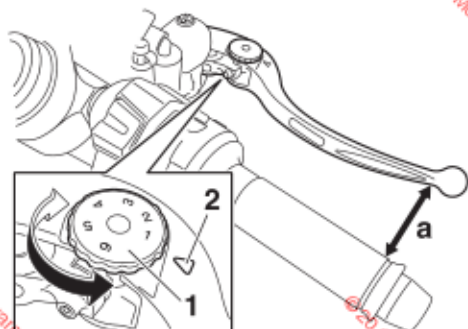
After adjusting the brake lever position, make sure that the pin on the brake lever holder is firmly inserted in the hole in the adjusting dial.

NOTICE

After adjusting the brake lever position, make sure that there is no brake drag.

WARNING

A soft or spongy feeling in the brake lever can indicate the presence of air in the brake system. Before the vehicle is operated, the air must be removed by bleeding the brake system. Air in the brake system will considerably reduce braking performance and could result in loss of control and possibly an accident. Therefore, check the brake system and bleed if necessary.



G. ADJUSTING THE REAR BRAKE

1. Adjust:

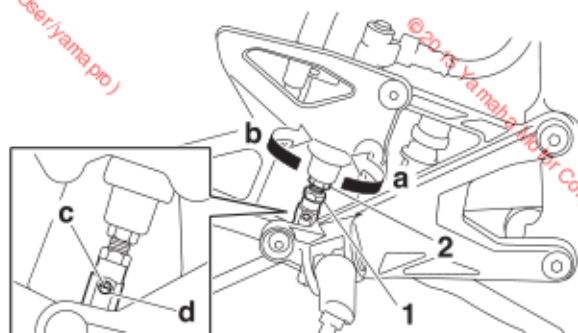
- Brake pedal position

- Loosen the locknut (1).
- Turn the adjusting bolt (2) in direction (a) or (b) until the specified brake pedal position is obtained.

Direction (a)	Brake pedal is raised.
Direction (b)	Brake pedal is lowered.

WARNING

After adjusting the brake pedal position, make sure that the end of the adjusting bolt (c) is visible through the hole (d).



- Tighten the locknut (1) to specification.

Rear brake master cylinder locknut
18 Nm (1.8 m·kgf, 13 ft·lbf)

WARNING

A soft or spongy feeling in the brake pedal can indicate the presence of air in the brake system. Before the vehicle is operated, the air must be removed by bleeding the brake system. Air in the brake system will considerably reduce braking perform-

ance and could result in loss of control and possibly an accident. Therefore, check the brake system and bleed if necessary.

NOTICE

After adjusting the brake pedal position, make sure that there is no brake drag.

H. ADJUSTING THE REAR BRAKE LIGHT SWITCH

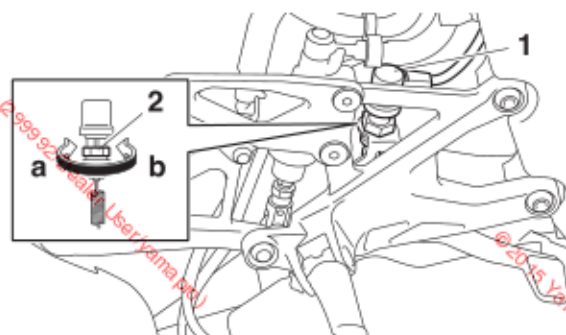
TIP

- The rear brake light switch is operated by the movement of the brake pedal.
- The rear brake light switch is properly adjusted when the brake light comes on just before the braking effect starts.

- Check:
 - Rear brake light operation timing
Incorrect → Adjust.
- Adjust:
 - Rear brake light operation timing

- Hold the main body (1) of the rear brake light switch so that it does not rotate and turn the adjusting nut (2) in direction (a) or (b) until the rear brake light comes on at the proper time.

Direction (a)	Rear brake light comes on sooner.
Direction (b)	Rear brake light comes on later.



I. CHECKING THE BRAKE FLUID LEVEL

1. Stand the vehicle on a level surface.

TIP

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

2. Check:

- Brake fluid level
Below the minimum level mark (a) → Add the specified brake fluid to the proper level.



**Specified brake fluid
DOT 4**



WARNING

- Use only 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 reservoir. Water will significantly lower the boiling point of the brake fluid and could cause vapor lock.

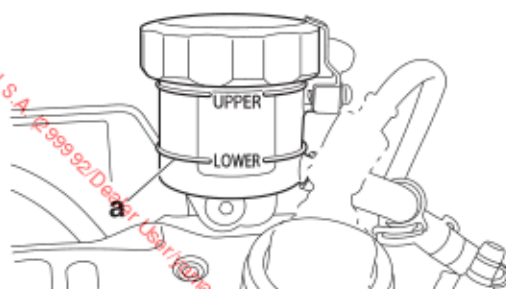
NOTICE

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

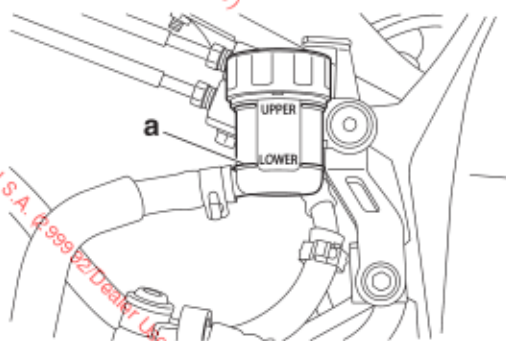
TIP

In order to ensure a correct reading of the brake fluid level, make sure that the top of the reservoir is level.

A



B



A. Front brake

B. Rear brake

J. BLEEDING THE HYDRAULIC BRAKE SYSTEM (ABS)



WARNING

Always bleed the brake system when the brake related parts are removed.

NOTICE

- Bleed the brake system in the following order.
- 1st step: Front brake master cylinder
- 2nd step: Front brake calipers
- 3rd step: Rear brake master cylinder
- 4th step: Rear brake caliper



WARNING

Bleed the ABS whenever:

- the system is disassembled.
- a brake hose is loosened, disconnected or replaced.
- the brake fluid level is very low.
- brake operation is faulty.

TIP

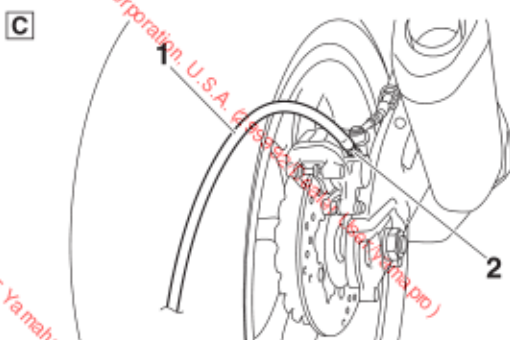
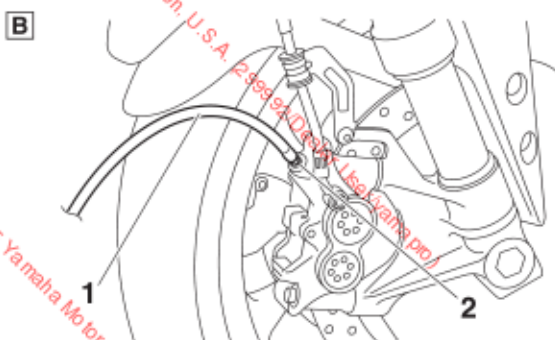
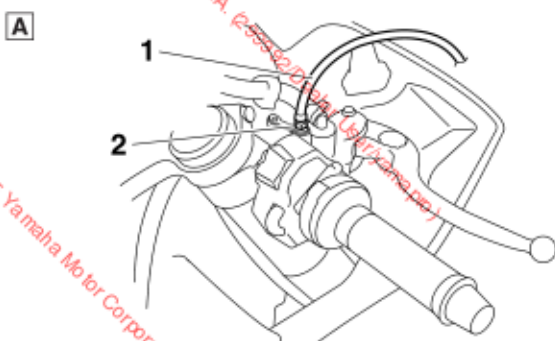
- Be careful not to spill any brake fluid or allow the brake fluid reservoir to overflow.
- When bleeding the ABS, make sure that there is always enough brake fluid before

applying the brake. Ignoring this precaution could allow air to enter the ABS, considerably lengthening the bleeding procedure.

- If bleeding is difficult, it may be necessary to let the brake fluid settle for a few hours.
- Repeat the bleeding procedure when the tiny bubbles in the hose have disappeared.

1. Bleed:
 - ABS

- a. Fill the brake fluid reservoir to the proper level with the specified brake fluid.
- b. Install the diaphragm (brake fluid reservoir).
- c. Connect a clear plastic hose (1) tightly to the bleed screw (2).



- A. Front brake master cylinder
 - B. Front brake caliper (left/right)
 - C. Rear brake caliper
- d. Place the other end of the hose into a container.

- e. Slowly apply the brake several times.
- f. Fully squeeze the brake lever or fully depress the brake pedal and hold it in position.
- g. Loosen the bleed screw.

TIP

Loosening the bleed screw will release the pressure and cause the brake lever to contact the throttle grip or the brake pedal to fully extend.

- h. Tighten the bleed screw and then release the brake lever or brake pedal.
- i. Repeat steps (e) to (h) until all of the air bubbles have disappeared from the brake fluid in the plastic hose.
- j. Check the operation of the hydraulic unit.

NOTICE

Make sure that the main switch is set to "OFF" before checking the operation of the hydraulic unit.

- k. After operating the ABS, repeat steps (e) to (i), and then fill the brake fluid reservoir to the proper level with the specified brake fluid.
- l. Tighten the bleed screw to specification.

	Front brake master cylinder bleed screw
	5 Nm (0.5 m·kgf, 3.6 ft·lbf)
	Brake caliper bleed screw
	5 Nm (0.5 m·kgf, 3.6 ft·lbf)

- m. Fill the brake fluid reservoir to the proper level with the specified brake fluid.
Refer to "CHECKING THE BRAKE FLUID LEVEL".

⚠ WARNING

After bleeding the hydraulic brake system, check the brake operation.

K. ADJUSTING THE CLUTCH LEVER FREE PLAY

1. Measure:
 - Clutch lever free play (a)
Out of specification → Adjust.

	Clutch lever free play (at the end of the clutch lever)
	10.0–15.0 mm (0.39–0.59 in)

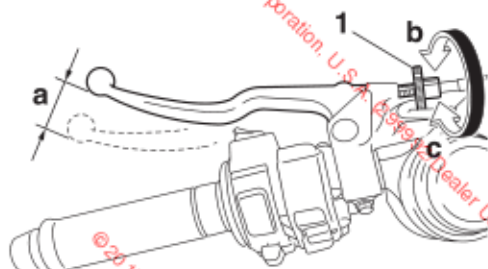
2. Adjust:

- Clutch lever free play

Handlebar side

- a. Turn the adjusting bolt (1) in direction (b) or (c) until the specified clutch lever free play is obtained.

Direction (b)	Clutch lever free play is increased.
Direction (c)	Clutch lever free play is decreased.



L. ADJUSTING THE FRONT FORK LEGS (for YZFR1F/YZFR1FC)

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

⚠ WARNING

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

Spring preload

⚠ WARNING

- Always adjust both front fork legs evenly.
- Uneven adjustment can result in poor handling and loss of stability.

NOTICE

Never go beyond the maximum or minimum adjustment positions.

1. Adjust:

- Spring preload

- a. Turn the adjusting nut (1) in direction (a) or (b).

Direction (a)	Spring preload is increased (suspension is harder).
Direction (b)	Spring preload is decreased (suspension is softer).



Spring preload adjusting positions

Minimum (soft)

0 turn(s) in direction (a)*

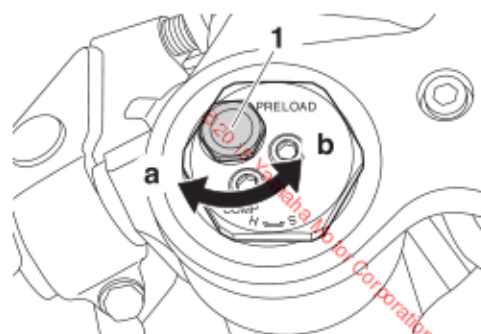
Standard

9 turn(s) in direction (a)*

Maximum (hard)

15 turn(s) in direction (a)*

*With the adjusting nut fully turned in direction (b)



Rebound damping

NOTICE

Never go beyond the maximum or minimum adjustment positions.

1. Adjust:

- Rebound damping

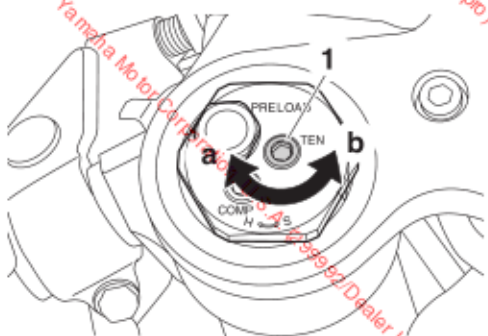
- a. Turn the adjusting bolt (1) in direction (a) or (b).

Direction (a)	Rebound damping is increased (suspension is harder).
Direction (b)	Rebound damping is decreased (suspension is softer).

	Rebound damping adjusting positions
	Minimum (soft) 14 click(s) in direction (b)*
	Standard 7 click(s) in direction (b)*
	Maximum (hard) 0 click(s) in direction (b)*
	*With the adjusting bolt fully turned in direction (a)

TIP

Although the total number of clicks of a damping force adjusting mechanism may not exactly match the above specifications due to small differences in production, the actual number of clicks always represents the entire adjusting range. To obtain a precise adjustment, it would be advisable to check the number of clicks of each damping force adjusting mechanism and to modify the specifications as necessary.



Compression damping

NOTICE

Never go beyond the maximum or minimum adjustment positions.

1. Adjust:

- Compression damping

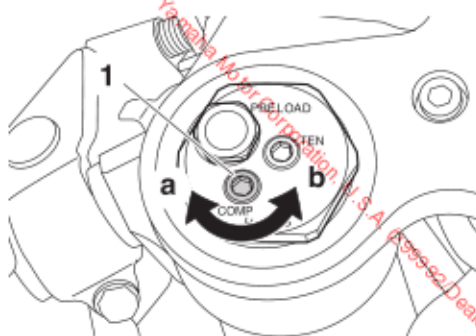
a. Turn the adjusting bolt (1) in direction (a) or (b).

Direction (a)	Compression damping is increased (suspension is harder).
Direction (b)	Compression damping is decreased (suspension is softer).

	Compression damping adjusting positions
	Minimum (soft) 23 click(s) in direction (b)*
	Standard 17 click(s) in direction (b)*
	Maximum (hard) 0 click(s) in direction (b)*
	*With the adjusting bolt fully turned in direction (a)

TIP

Although the total number of clicks of a damping force adjusting mechanism may not exactly match the above specifications due to small differences in production, the actual number of clicks always represents the entire adjusting range. To obtain a precise adjustment, it would be advisable to check the number of clicks of each damping force adjusting mechanism and to modify the specifications as necessary.



M. ADJUSTING THE PRELOAD OF THE FRONT FORK LEGS (for YZFR1MF/ YZFR1MFC)

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

⚠ WARNING

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

Spring preload

⚠ WARNING

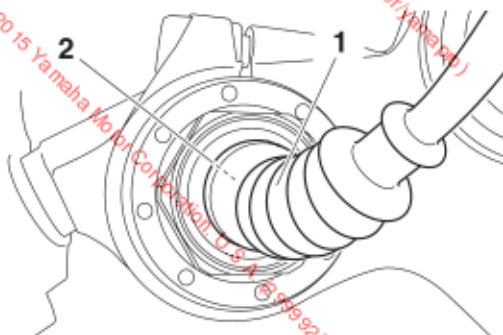
- Always adjust both front fork legs evenly.
- Uneven adjustment can result in poor handling and loss of stability.

NOTICE

Never go beyond the maximum or minimum adjustment positions.

1. Adjust:
 - Spring preload

- a. Turn the main switch to "OFF".
- b. Slide the rubber cover (1) back at each coupler.
- c. Disconnect the coupler (2) on each front fork.



- d. Turn the adjusting bolt (3) in direction (a) or (b).

Direction (a)	Spring preload is increased (suspension is harder).
Direction (b)	Spring preload is decreased (suspension is softer).

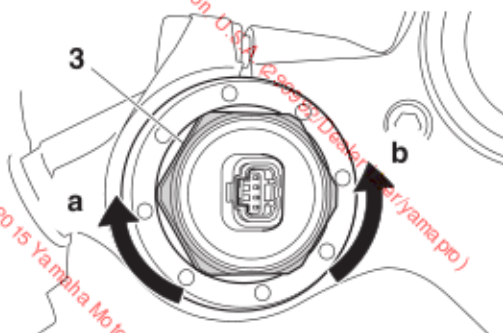
Spring preload adjusting positions

Minimum (soft)
0 turn(s) in direction (a)*

Standard
5 turn(s) in direction (a)*

Maximum (hard)
15 turn(s) in direction (a)*

*With the adjusting bolt fully turned in direction (b)



- e. Connect the coupler on each front fork.
- f. Slide the rubber cover to the original position.

N. ADJUSTING THE DAMPING FORCE OF THE FRONT FORK LEGS AND REAR SHOCK ABSORBER ASSEMBLY (for YZFR1MF/YZFR1MFC)

There are three automatic setting modes; A-1, A-2, and A-3. A-3 is fixed and cannot be adjusted.

A-1 and A-2 can be adjusted to within a -5 to +5 offset of their factory preset settings.

There are three manual setting modes; M-1, M-2, and M-3. When a manual mode is selected, the SCU does not actively adjust the suspension compression and rebound damping forces.

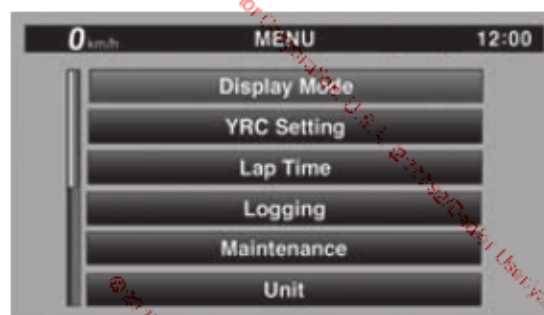
Manual mode suspension settings are adjustable to 32 levels.

TIP

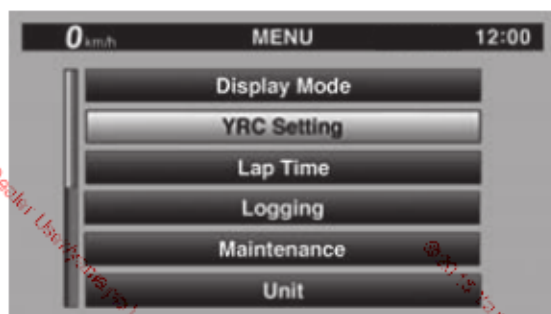
- A-1 and M-1 are preset for track use with racing slick tires.
- A-2 and M-2 are preset for track use with street tires.
- A-3 and M-3 are preset for street use with street tires.
- Spring preload is manually adjusted. Refer to "ADJUSTING THE PRELOAD OF THE FRONT FORK LEGS" and "ADJUSTING THE PRELOAD OF THE REAR SHOCK ABSORBER ASSEMBLY".

1. Adjust:
 - Damping force

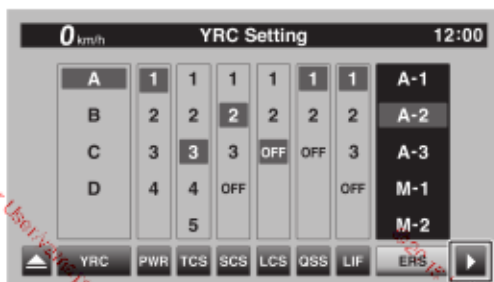
- a. Turn the main switch to "ON".
- b. Long push the wheel switch to enter the "MENU" screen.



- c. Select "YRC Setting".

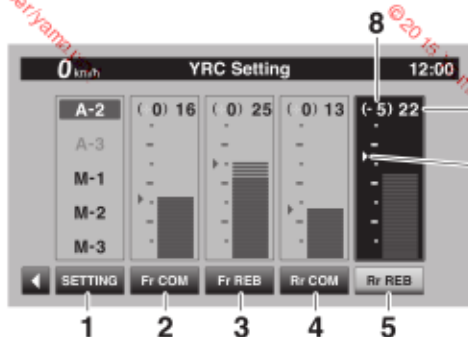


- d. Select the "►" mark located to the right of ERS.



1. To "ERS" menu

- e. The display will change to the front and rear suspension setting screen and the ERS mode selection box "SETTING" is highlighted. Short push the wheel switch to enter the box and select the ERS mode A-1, A-2, M-1, M-2, M-3 that you want to adjust.

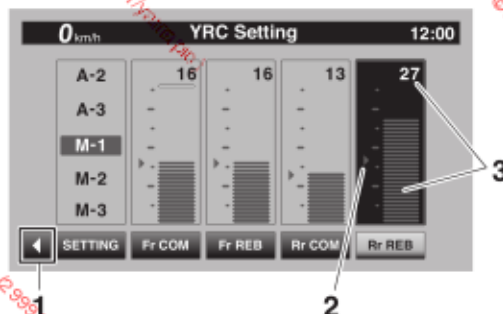


1. ERS mode selection box "SETTING"
 2. Front compression damping force
 3. Front rebound damping force
 4. Rear compression damping force
 5. Rear rebound damping force
 6. Factory preset level
 7. Current level setting
 8. Offset level
 f. Select the suspension item, "Fr COM", "Fr REB", "Rr COM", "Rr REB", that you want to adjust.

TIP

- To decrease the damping force and soften the suspension, increase the setting level.
- To increase the damping force and harden the suspension, decrease the setting level.
- For A-1 and A-2, a number indicated in () means how many levels are changed from its factory preset level.
- When a suspension setting item in A-1 or A-2 is offset, the same suspension item will be similarly offset in the other automatic mode (offset values for the same item are automatically linked).
- M-1, M-2, M-3 are not linked and can be independently set.

- g. To adjust other ERS mode suspension settings, repeat from step (e). When finished, select the "◀" mark located on the left to return to the main "YRC Setting" menu.



1. To "YRC Setting" menu
 2. Factory preset level
 3. Current level setting

O. ADJUSTING THE REAR SHOCK ABSORBER ASSEMBLY (for YZFR1F/ YZFR1FC)

⚠ WARNING

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

Spring preload

NOTICE

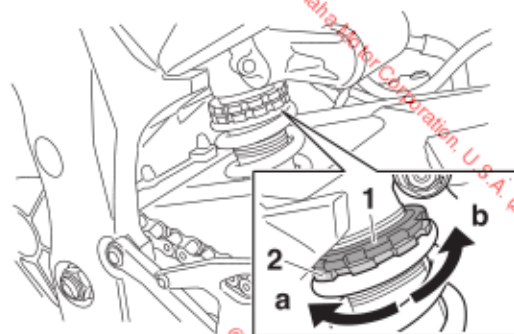
Never go beyond the maximum or minimum adjustment positions.

1. Adjust:
 • Spring preload

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

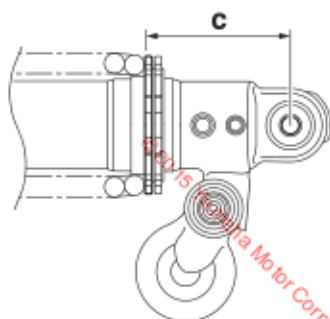
- b. Loosen the locknut (1).
- c. Turn the adjusting ring (2) in direction (a) or (b).

Direction (a)	Spring preload is increased (suspension is harder).
Direction (b)	Spring preload is decreased (suspension is softer).



TIP

The spring preload setting is determined by measuring distance (c). The longer distance (c) is, the higher the spring preload; the shorter distance (c) is, the lower the spring preload.



	Spring preload adjusting positions
	Minimum
	77.5 mm (3.05 in)
	Standard
	79.0 mm (3.11 in)
	Maximum
	85.5 mm (3.37 in)

- d. Tighten the locknut to specification.

	Locknut
	25 Nm (2.5 m·kgf, 18 ft·lbf)

Rebound damping

NOTICE

Never go beyond the maximum or minimum adjustment positions.

1. Adjust:
 - Rebound damping

- a. Turn the adjusting screw (1) in direction (a) or (b).

Direction (a)	Rebound damping is increased (suspension is harder).
Direction (b)	Rebound damping is decreased (suspension is softer).



Rebound damping adjusting positions

Minimum (soft)

23 click(s) in direction (b)*

Standard

12 click(s) in direction (b)*

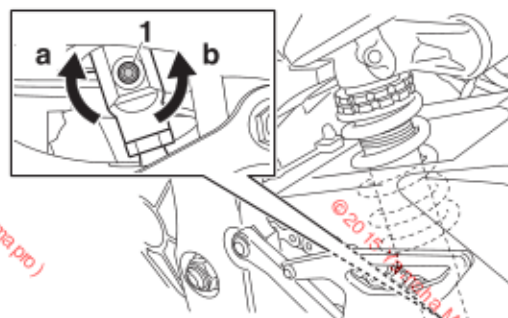
Maximum (hard)

0 click(s) in direction (b)*

* With the adjusting screw fully turned in direction (a)

TIP

To obtain a precise adjustment, it is advisable to check the actual total number of clicks of the damping force adjusting mechanism. This adjustment range may not exactly match the specifications listed due to small differences in production.



NOTICE

1. Adjust:

- a. Turn the adjusting bolt (1) in direction (a) or (b).

Minimum (soft)

Standard

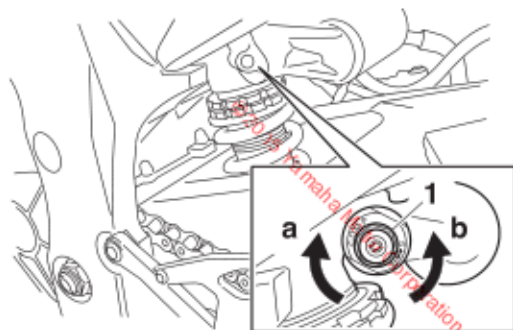
Maximum (hard)

* With the adjusting bolt full

in direction (a)

TIP

To obtain a precise adjustment, it is advisable to check the actual total number of turns of the damping force adjusting mechanism. This adjustment range may not exactly match the specifications listed due to small differences in production.



NOTICE

1. Adjust:

- a. Turn the adjusting screw (1) in direction (a) or (b).

Minimum (soft)

Standard

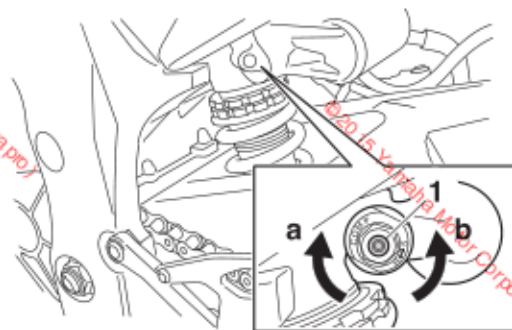
Maximum (hard)

* With the adjusting screw fully

turned in direction (a)

TIP

To obtain a precise adjustment, it is advisable to check the actual total number of clicks of the damping force adjusting mechanism. This adjustment range may not exactly match the specifications listed due to small differences in production.



P. ADJUSTING THE PRELOAD OF THE REAR SHOCK ABSORBER ASSEMBLY (for YZFR1MF/YZFR1MFC)

⚠ WARNING

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

Spring preload

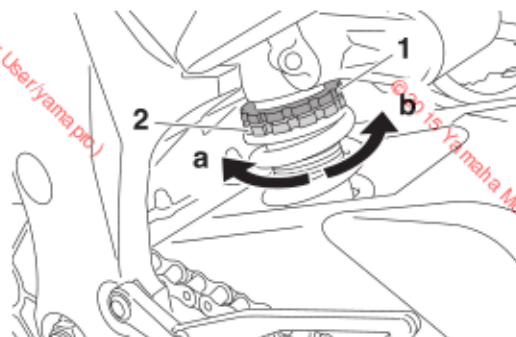
NOTICE

Never go beyond the maximum or minimum adjustment positions.

1. Adjust:
 - Spring preload

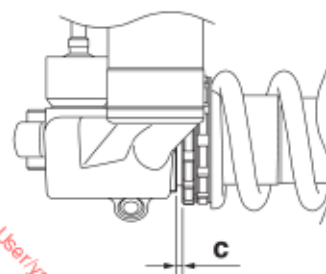
- a. Adjust the spring preload with the special wrench included in the owner's tool kit.
- b. Loosen the locknut (1).
- c. Turn the adjusting ring (2) in direction (a) or (b).

Direction (a)	Spring preload is increased (suspension is harder).
Direction (b)	Spring preload is decreased (suspension is softer).



TIP

The spring preload setting is determined by measuring distance (c). The longer distance (c) is, the higher the spring preload; the shorter distance (c) is, the lower the spring preload.



Spring preload adjusting positions

Minimum
0 mm (0.00 in)
Standard
4 mm (0.16 in)
Maximum
9 mm (0.35 in)

- d. Tighten the locknut to specification.



Locknut

25 Nm (2.5 m·kgf, 18 ft·lbf)

Q. ADJUSTING THE DRIVE CHAIN SLACK

NOTICE

A drive chain that is too tight will overload the engine and other vital parts, and one that is too loose can skip and damage the swingarm or cause an accident. Therefore, keep the drive chain slack within the specified limits.

1. Stand the vehicle on the sidestand.

⚠ WARNING

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

TIP

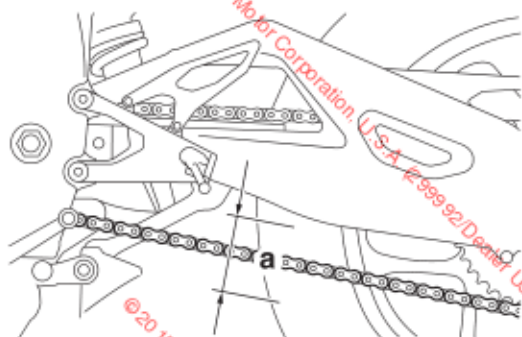
Both wheels should be on the ground without a rider on the vehicle.

2. Shift the transmission into the neutral position.
3. Measure:
 - Drive chain slack (a)
 Out of specification → Adjust.



Drive chain slack

25.0–35.0 mm (0.98–1.38 in)



NOTICE

Improper drive chain slack will overload the engine as well as other vital parts of the motorcycle and can lead to chain slippage or breakage. To prevent this from occurring, keep the drive chain slack within the specified limits.

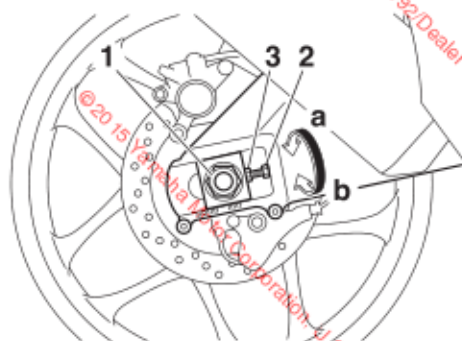
4. Loosen:
 - Rear wheel axle nut (1)
5. Adjust:
 - Drive chain slack

- a. Loosen both locknuts (2).
- b. Turn both adjusting bolts (3) in direction (a) or (b) until the specified drive chain slack is obtained.

Direction (a)	Drive chain is tightened.
Direction (b)	Drive chain is loosened.

TIP

- To maintain the proper wheel alignment, adjust both sides evenly.
- Push the rear wheel forward to make sure that there is no clearance between the adjusting block and the ends of the swingarm.



- c. Tighten the rear wheel axle nut to specification.



Rear wheel axle nut
190 Nm (19 m·kgf, 137 ft·lbf)

- d. Tighten the locknuts to specification.



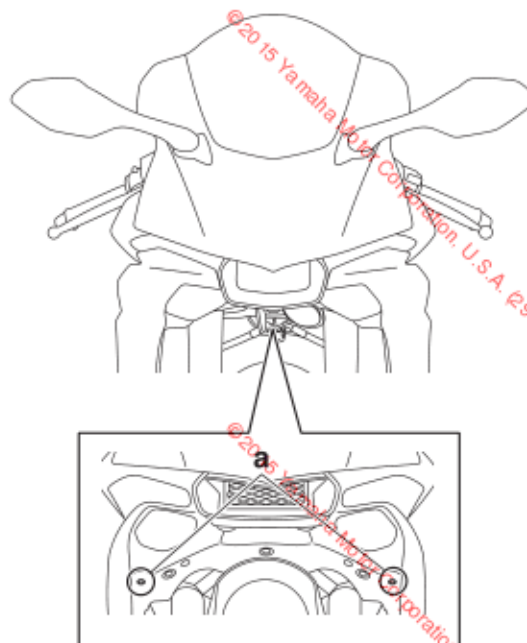
Chain puller adjusting bolt locknut
16 Nm (1.6 m·kgf, 12 ft·lbf)

R. ADJUSTING THE HEADLIGHT BEAMS

1. Adjust:
 - Headlight beam (vertically)

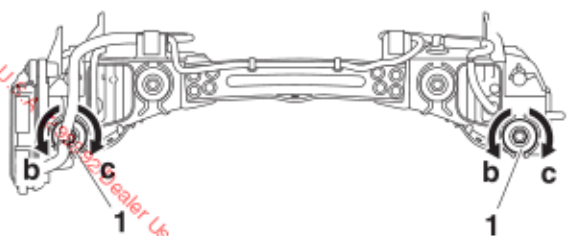
TIP

To adjust the headlight beam (vertically), insert a crosshead screwdriver into holes (a) in the headlight cover and turn the adjusting screw.



- a. Turn the adjusting screws (1) in direction (b) or (c).

Direction (b)	Headlight beam is raised.
Direction (c)	Headlight beam is lowered.



Right headlight

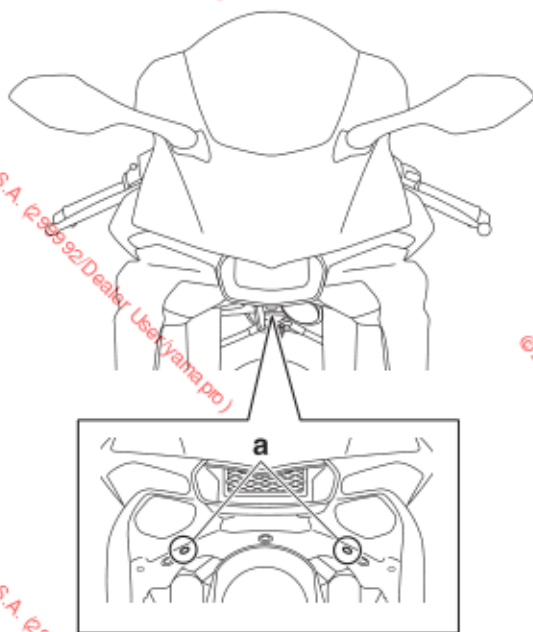
Direction (b)	Headlight beam moves to the left.
Direction (c)	Headlight beam moves to the right.

2. Adjust:

- Headlight beam (horizontally)

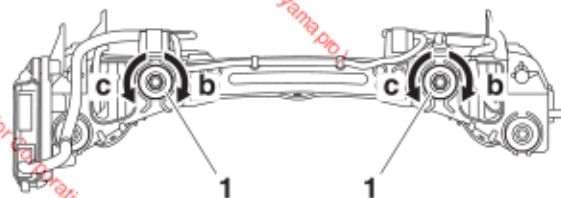
TIP

To adjust the headlight beam (horizontally), insert a crosshead screwdriver into holes (a) in the headlight cover and turn the adjusting screw.



- a. Turn the adjusting screws (1) in direction (b) or (c).
Left headlight

Direction (b)	Headlight beam moves to the right.
Direction (c)	Headlight beam moves to the left.



S. ADJUSTING THE DIGITAL CLOCK

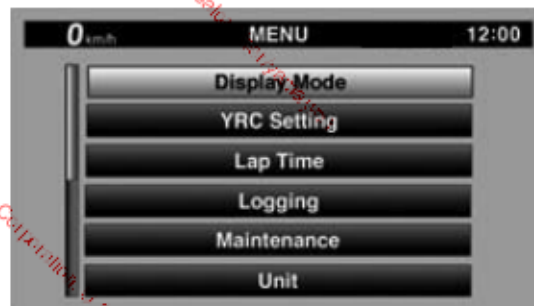
TIP

This digital clock constantly displays the time.

Adjust:

- Digital clock

- Turn the main switch to "ON".
- Press the wheel switch for one second to open the "MENU" screen.



- Rotate the wheel switch downward to and select the "Clock".



- d. Press the wheel switch briefly. The hours figure will be highlighted.
- e. Set the hour by rotating and short pushing the wheel switch.



- f. The minutes figure will become highlighted.
- g. Set the minutes figure by rotating and short pushing the wheel switch.



- h. Press the wheel switch again for one second to exit and go back to "MENU" screen.
- i. Turn the main switch to "OFF".



APPENDICES

SERVICE DATA

Engine idling speed	1200–1400 r/min
Spark plug	
Type	L MAR9E-J (NGK)
Gap	0.6–0.7 mm (0.024–0.028 in)
Fuel	
Recommended fuel	Premium unleaded gasoline (Gasohol (E10) acceptable)
Fuel tank capacity	
Total	17.0 L (4.49 US gal, 3.74 Imp. gal)
Valve clearance (cold)	
Intake	0.09–0.17 mm (0.0035–0.0067 in)
Exhaust	0.18–0.23 mm (0.0071–0.0091 in)
Maximum load*	188 kg (414 lb)
Tire pressure	
Up to 90 kg (198 lb) load	
Front	250 kPa (2.50 kgf/cm ² , 36 psi)
Rear	290 kPa (2.90 kgf/cm ² , 42 psi)
90 kg (198 lb) load–Maximum load*	
Front	250 kPa (2.50 kgf/cm ² , 36 psi)
Rear	290 kPa (2.90 kgf/cm ² , 42 psi)
High-speed riding	
Front	250 kPa (2.50 kgf/cm ² , 36 psi)
Rear	290 kPa (2.90 kgf/cm ² , 42 psi)

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

STANDARD EQUIPMENT

1. Owner's manual	1 pc.
2. Owner's tool kit	1 pc.
3. Hexagon wrench (4)	1 pc.
4. Hexagon wrench (6)	1 pc.

OWNER'S TOOL KIT

1. Owner's tool bag	1 pc.
2. Wrench (12-14)	1 pc.
3. Special wrench	2 pcs.
4. Screwdriver grip	1 pc.
5. Screwdriver bit (Phillips-slotted)	1 pc.

TIGHTENING TORQUES

Part to be tightened	Thread size	Tightening torque		
		Nm	m-kgf	ft-lbf
Engine:				
Spark plug (new)	M12	18	1.8	13
Spark plug (after checking)	M12	13	1.3	9.4
Engine oil drain bolt	M14	23	2.3	17
Chassis:				
Engine mounting bolt (front left side)	M12	70	7.0	51
Engine mounting bolt (front right side)	M12	70	7.0	51
Engine mounting nut (rear upper side)	M10	56	5.6	41
Engine mounting nut (rear lower side)	M12	56	5.6	41
Engine mount adjusting bolt	M18	8	0.8	5.8
Clutch lever holder bolt	M6	11	1.1	8.0
Main frame and rear frame bolt	M10	37	3.7	27
Swingarm pivot shaft	M30	7	0.7	5.1
Swingarm pivot shaft ring nut	M30	65	6.5	47
Swingarm pivot shaft nut	M20	105	10.5	76
Relay arm and connecting arm nut	M10	40	4.0	29
Connecting arm and swingarm nut	M10	40	4.0	29
Rear shock absorber assembly lower nut	M10	40	4.0	29
Rear shock absorber assembly upper nut	M10	40	4.0	29
Drive chain case bolt	M6	7	0.7	5.1
Drive chain guard bolt	M6	7	0.7	5.1
Locknut (chain puller adjusting bolt)	M8	16	1.6	12
Upper bracket pinch bolt	M8	26	2.6	19
Steering stem nut	M28	115	11.5	83
Handlebar pinch bolt	M8	32	3.2	23
Handlebar bolt	M6	7	0.7	5.1
Lower bracket ring nut	M30	See TIP.		
Lower bracket pinch bolt	M8	23	2.3	17
Damper rod assembly	M34	40	4.0	29
Front fork cap bolt (YZFR1F/YZFR1FC)	M46	23	2.3	17
Front fork cap bolt (YZFR1MF/YZFR1MFC)	M47	20	2.0	14
Brake master cylinder reservoir cap stopper screw	M4	1.2	0.12	0.87
Front brake hose union bolt	M10	32	3.2	23
Front brake hose holder bolt	M6	6	0.6	4.3
Front brake master cylinder holder bolt	M6	16	1.6	12
Front fender bolt	M6	6	0.6	4.3
Handlebar end grip bolt	M6	3.8	0.38	2.8
Front brake hose joint bracket bolt	M6	7	0.7	5.1
Coolant reservoir bolt	M6	7	0.7	5.1

Part to be tightened	Thread size	Tightening torque		
		Nm	m·kgf	ft·lbf
Windshield assembly bolt	M5	4.0	0.40	2.9
Rearview mirror nut	M6	7	0.7	5.1
Front upper body bolt	M5	4.0	0.40	2.9
Front panel bolt (left)	M5	3.0	0.30	2.2
Front panel bolt (right)	M5	3.5	0.35	2.5
Side cover bracket bolt (left, long)	M6	7	0.7	5.1
Side cover bracket bolt (left, short)	M6	7	0.7	5.1
Side cover bracket bolt (right, long)	M6	7	0.7	5.1
Side cover bracket bolt (right, short)	M6	7	0.7	5.1
Side cover bolt (left)	M6	7	0.7	5.1
Side cover bolt (right)	M6	7	0.7	5.1
ECU cover bolt	M5	3.8	0.38	2.8
Front muffler protector bolt (left)	M6	7	0.7	5.1
Front muffler protector stay bolt (left)	M6	7	0.7	5.1
Front muffler protector bolt (right)	M6	7	0.7	5.1
Front muffler protector stay bolt (right)	M6	7	0.7	5.1
Document box bolt	M5	3.5	0.35	2.5
Front side cowling bracket (left)	M6	9	0.9	6.5
Front side cowling bracket (right)	M6	9	0.9	6.5
Bottom cowling bolt (YZFR1F/YZFR1FC)	M6	9	0.9	6.5
Front side cowling bolt (YZFR1MF/YZFR1MFC)	M6	9	0.9	6.5
Inertial measurement unit bolt	M4	2.0	0.20	1.4
Rider seat bolt	M6	7	0.7	5.1
Battery cover bolt	M6	7	0.7	5.1
Fuel tank cover bolt (left)	M5	5	0.5	3.6
Fuel tank cover bolt (right)	M5	5	0.5	3.6
Fuel tank front cover bolt	M5	4.0	0.40	2.9
Fuel tank front cover side bolt (left)	M5	0.4	0.04	0.29
Fuel tank front cover side bolt (right)	M5	0.4	0.04	0.29
Rear side cover bolt (left)	M6	9	0.9	6.5
Rear side cover bolt (right)	M6	9	0.9	6.5
Tail light bracket bolt	M6	7	0.7	5.1
Rear mudguard bolt	M6	7	0.7	5.1
Water stay set screw	M5	1.5	0.15	1.1
Fuel pump bracket bolt	M5	4.0	0.40	2.9
Brake pipe joint bolt (ABS)	M6	7	0.7	5.1
Fuel tank mounting bolt (left/right)	M6	6	0.6	4.3
Fuel tank and rear fuel tank bracket bolt	M6	7	0.7	5.1
Fuel tank upper cover and fuel tank nut (rear)	M6	4.0	0.40	2.9
Fuel tank upper cover and fuel tank bolt (front)	M6	4.0	0.40	2.9

Part to be tightened	Thread size	Tightening torque		
		Nm	m·kgf	ft·lbf
Seat lock bracket bolt	M6	7	0.7	5.1
Front wheel axle nut	M24	115	11.5	83
Rear wheel axle nut	M24	190	19	137
Front brake caliper bolt	M10	35	3.5	25
Rear brake caliper bolt (front side)	M12	27	2.7	20
Rear brake caliper pin bolt (rear side)	M8	12	1.2	8.7
Front brake disc bolt	M6	17	1.7	12
Rear brake disc bolt	M8	30	3.0	22
Front speed sensor bolt	M5	8	0.8	5.8
Rear wheel sprocket self-locking nut	M10	100	10	72
Bleed screw (caliper) front	M8	5	0.5	3.6
Front wheel axle pinch bolt	M8	21	2.1	15
Rider footrest bolt (right)	M8	30	3.0	22
Passenger footrest bolt	M8	28	2.8	20
Rear brake master cylinder bolt	M6	13	1.3	9.4
Rear brake hose union bolt	M10	32	3.2	23
Rear brake hose holder bolt	M6	7	0.7	5.1
Sidestand bracket bolt	M10	63	6.3	46
Battery box bolt	M6	7	0.7	5.1
Rear mudguard bolt	M5	3.8	0.38	2.8

TIP

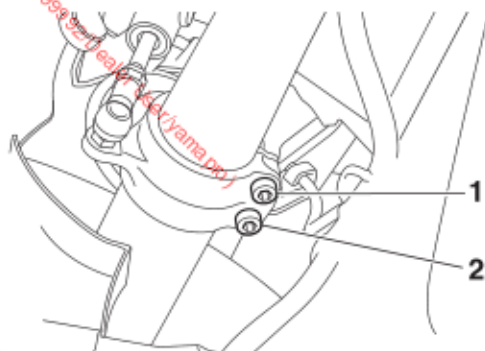
Lower bracket ring nut

1. First, tighten the lower bracket ring nut to approximately 52 Nm (5.2 m·kgf, 38 ft·lbf) by using the torque wrench, then loosen the ring nut completely.
2. Retighten the lower bracket ring nut 14 Nm (1.4 m·kgf, 10 ft·lbf).

TIP

Lower bracket pinch bolt

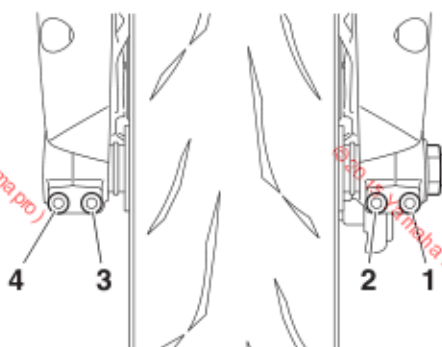
Tighten each bolt to 23 Nm (2.3 m·kgf, 17 ft·lbf) in the order pinch bolt (1) → pinch bolt (2) → pinch bolt (1) → pinch bolt (2).



TIP

Front wheel axle pinch bolt

1. Insert the front wheel axle from the right side and tighten it with the flange bolt from the left side to 115 Nm (11.5 m·kgf, 83 ft·lbf).
2. In the order from the pinch bolt (2) → pinch bolt (1) → pinch bolt (2), tighten each bolt to 21 Nm (2.1 m·kgf, 15 ft·lbf) without performing temporary tightening.
3. Check that the end face of the axle head and the end face of the fork side are flush-mounted. If they are out of alignment, make sure to fit them by adding the external force by hand or with a plastic hammer, etc.
If the end face of the axle is not parallel to the end face of the fork, align them so that one point of the axle circumference is positioned on the end face of the fork.
At this stage, it can be accepted if the end face of the axle becomes partially concave to the end face of the fork.
4. In the order from the pinch bolt (4) → pinch bolt (3) → pinch bolt (4), tighten each bolt to 21 Nm (2.1 m·kgf, 15 ft·lbf) without performing temporary tightening.



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