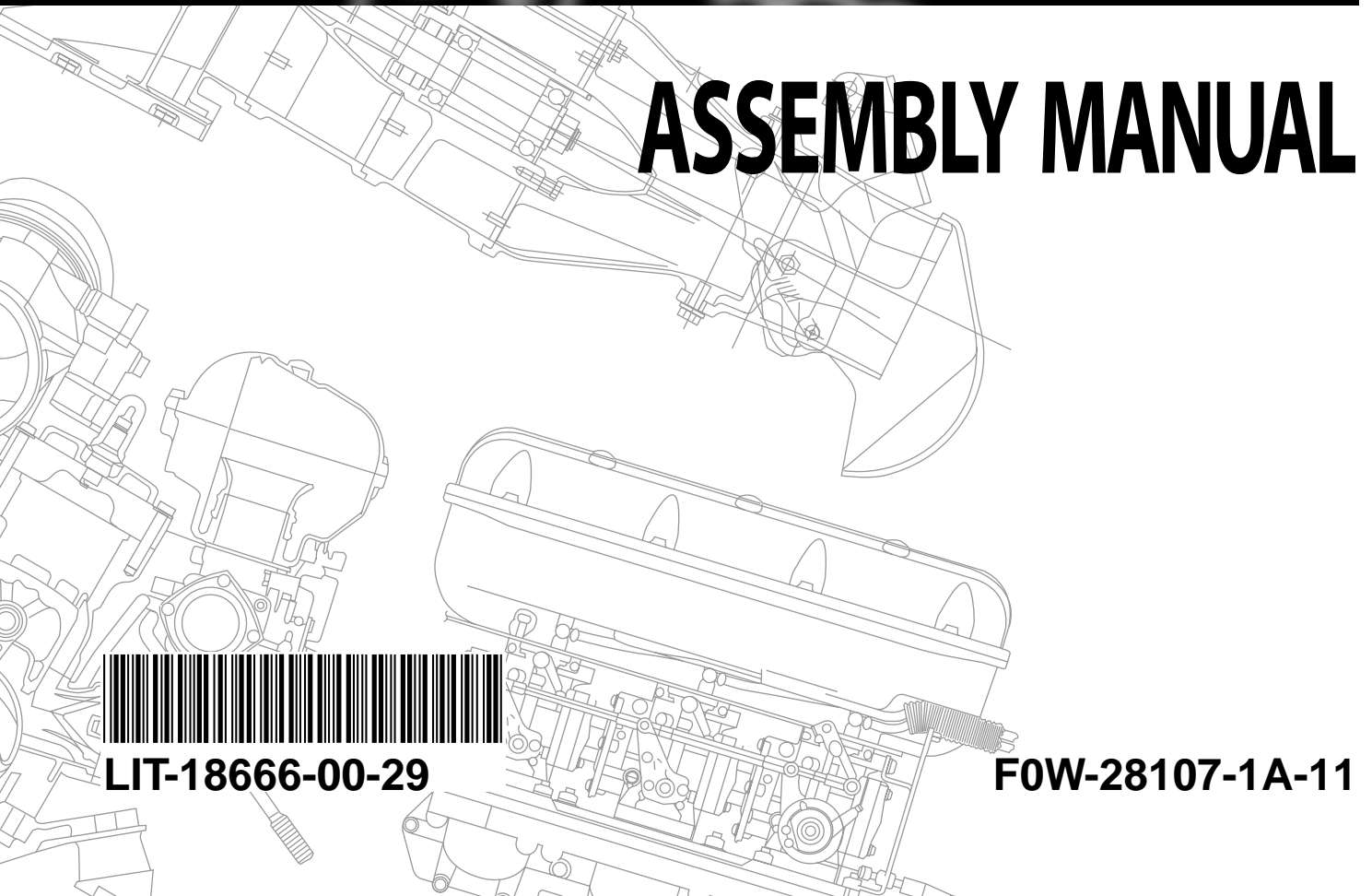




WaveRunner GP800R



ASSEMBLY MANUAL



LIT-18666-00-29

F0W-28107-1A-11

**WaveRunner GP800R
ASSEMBLY MANUAL**
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PREFACE

This Assembly Manual contains the information needed to assemble the Yamaha water vehicle correctly prior to delivery to the customer. Since some external parts of the water vehicle have not been assembled at the Yamaha factory for convenience of packing, assembly by the Yamaha dealer is required. It should be noted that the reassembled water vehicle should be thoroughly cleaned, inspected, and adjusted prior to delivery to the customer.

NOTICE

Because Yamaha constantly strives for product improvement, the service specifications may be subject to change in the future. If any change is introduced into the specifications or assembly procedures, Yamaha dealers will be notified by a technical bulletin.

IMPORTANT MANUAL INFORMATION:

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

 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 machine operator, a bystander, or a person inspecting or repairing the water vehicle.

CAUTION: _____
A CAUTION indicates special precautions that must be taken to avoid damage to the water vehicle.

NOTE: _____
A NOTE provides key information to make procedures easier or cleaner.

SYMBOLS USED IN THIS ASSEMBLY MANUAL

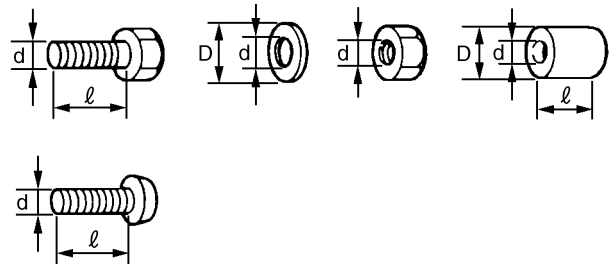
In order to simplify descriptions in assembly manuals, the following symbols are used:

-  : Coat with water resistant grease. (Yamaha grease A, Yamaha marine grease)
-  : Tightening torque.
-  : Provide clearance.
-  : Install so that the arrow mark faces upward.
-  : Frontward of the water vehicle.
-  : Made of rubber or plastics.
-  : Tighten temporarily.
-  : Apply locking agent. LOCTITE®, No.242 (BLUE LOCTITE)

Size:

d/D : Diameter of part.

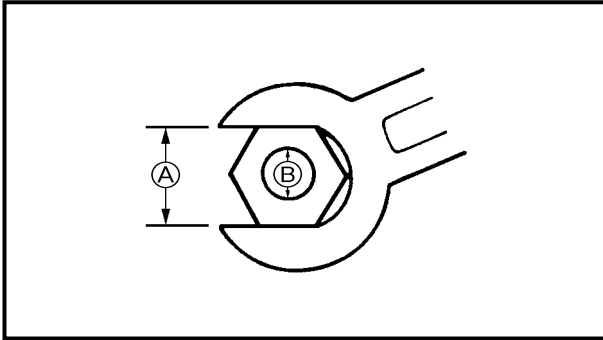
ℓ : Length of part.



Nut (A)	Bolt (B)	General torque specifications		
		N•m	kgf•m	ft•lb
8 mm	M5	5.0	0.5	3.6
10 mm	M6	8.0	0.8	5.8
12 mm	M8	18	1.8	13
14 mm	M10	36	3.6	25
17 mm	M12	43	4.3	31

GENERAL TORQUE SPECIFICATIONS

This chart specifies the torques for tightening standard fasteners with standard clean dry ISO threads at room temperature. Torque specifications for special components or assemblies are given in applicable sections of this manual. To avoid causing warpage, tighten multi-fastener assemblies in a criss-cross fashion, in progressive stages until the specified torque is reached.



UNPACKING AND CHECKING

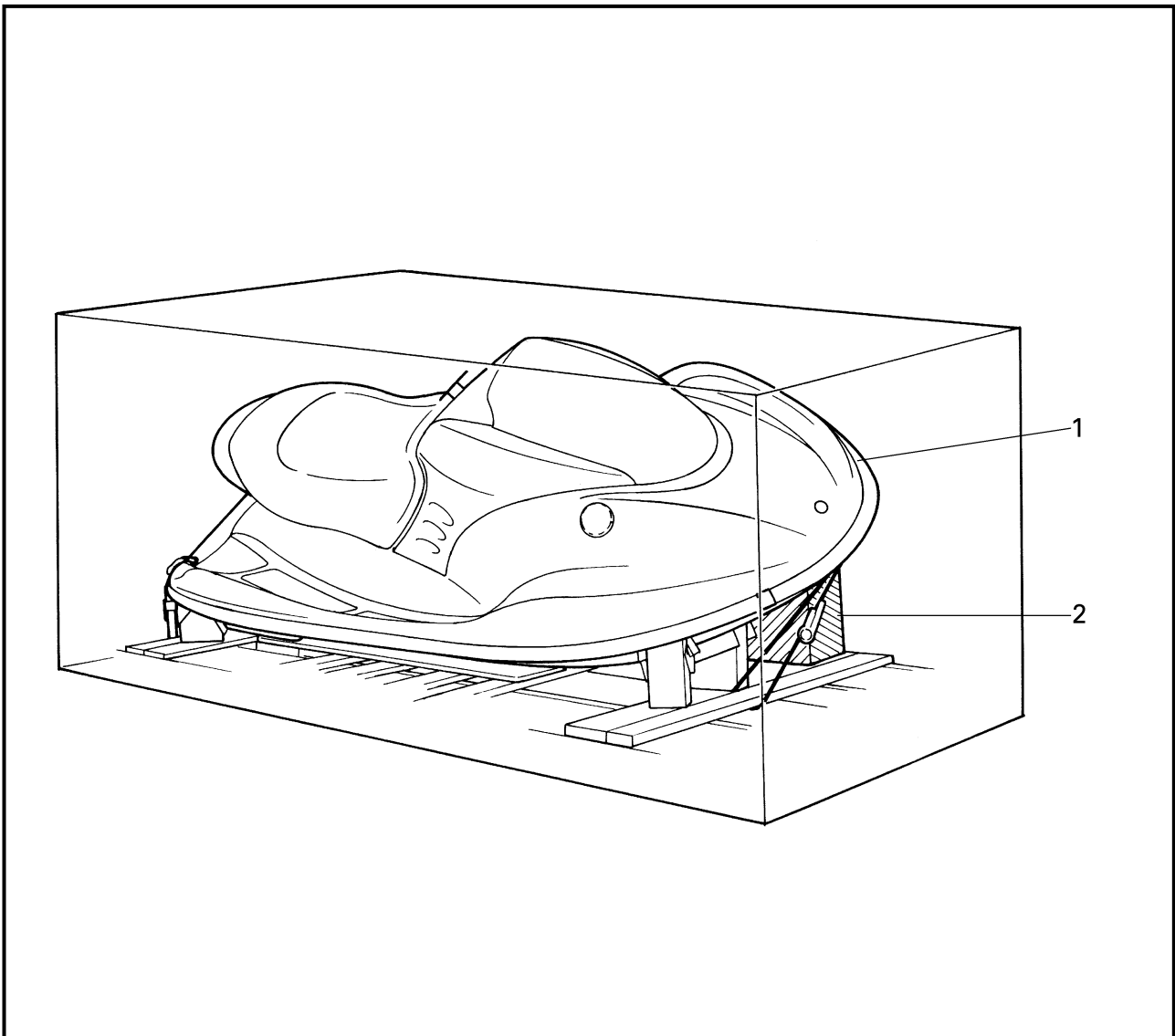
Carefully uncrate unit and inventory any missing or damaged parts.

NOTE: _____

For USA:

If concealed damage is found during uncrating, refer to the Yamaha Warranty Handbook, Chapter 3. Documentation may be required for warranty reimbursement. Do not continue with uncrating or throw the crate away until the requirements in Chapter 3 have been met.

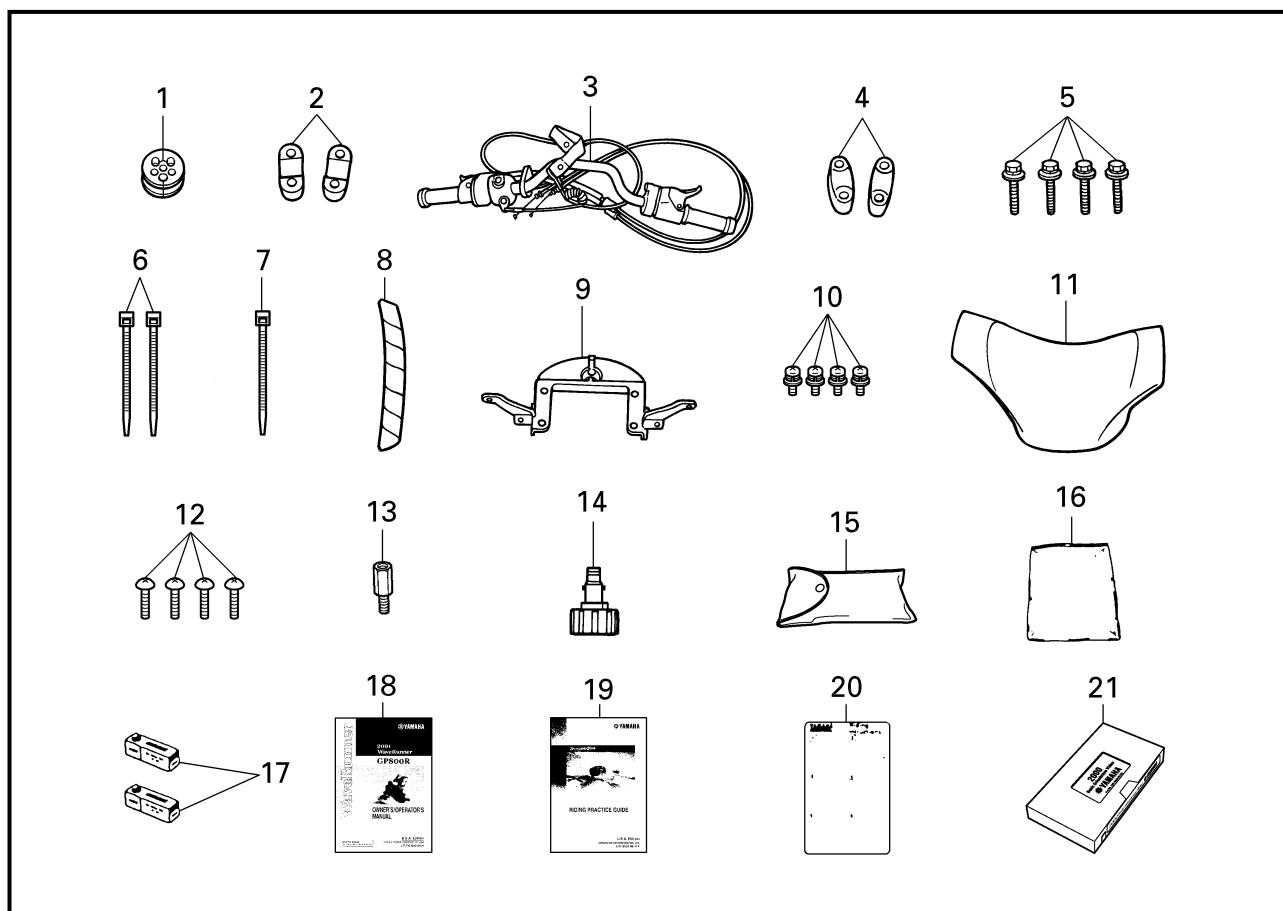
COMPARTMENT DIAGRAM



COMPARTMENT PART CHART

No.	Part name	Q'ty	Remarks
1	Water vehicle body	1	
2	Carton box	1	

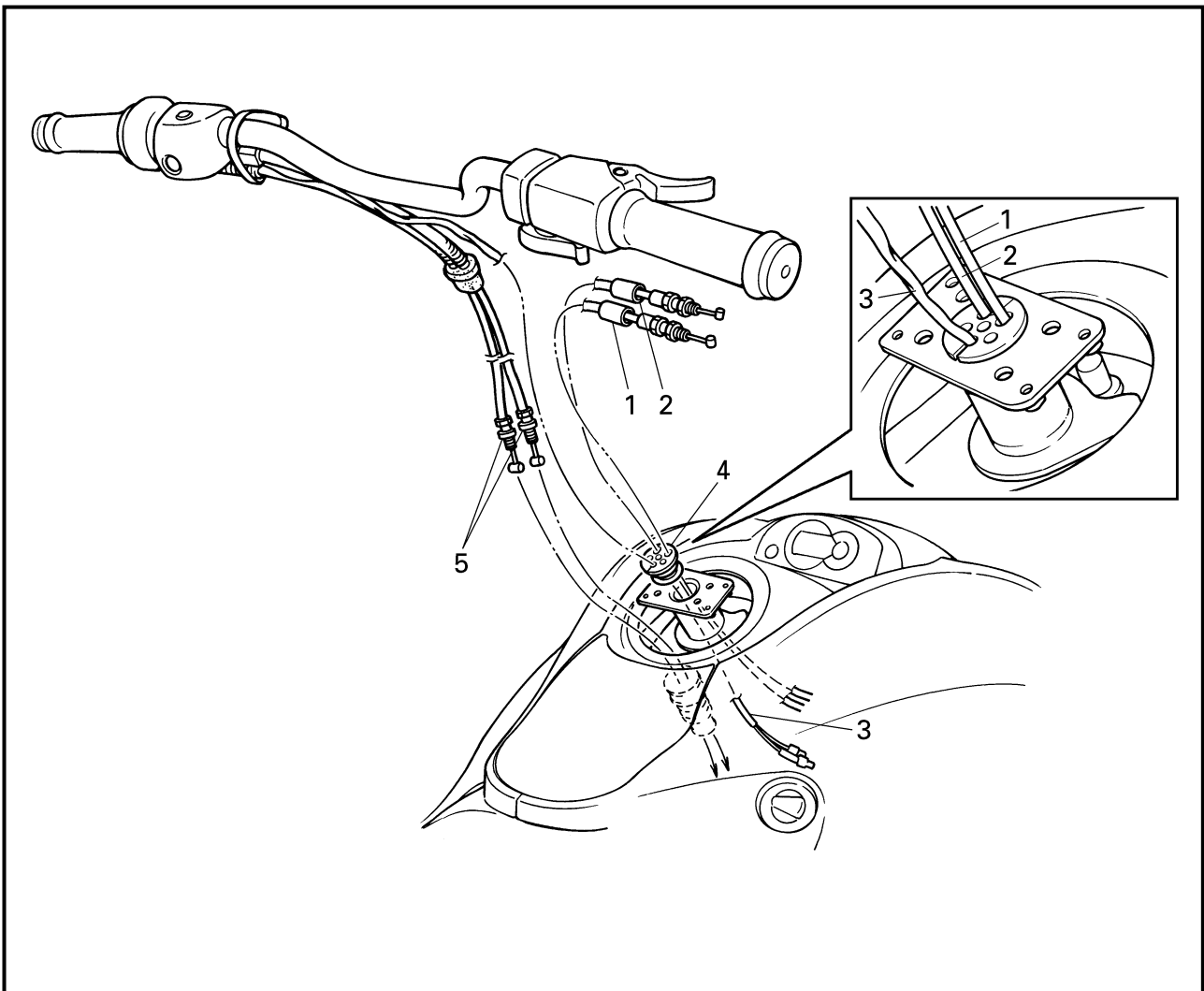
COMPARTMENT DIAGRAM



COMPARTMENT PART CHART

No.	Part name	Q'ty	Part number
1	Grommet	1	F0X-61469-00
2	Lower handlebar holder	2	EU0-23814-01
3	Handlebar assembly	1	F0W-U155A-00
4	Upper handlebar holder	2	EU0-23814-30
5	Bolt 8 × 55 mm (0.31 × 2.17 in)	4	90119-089UM
6	Band	2	90601-200U2
7	Band	1	90464-32801
8	Spiral tube	1	90448-25800
9	Handlebar cover stay	1	GP7-U142K-00
10	Screw 6 × 15 mm (0.24 × 0.59 in)	4	90159-069U1
11	Handlebar cover	1	GP7-U142A-11
12	Screw 6 × 19 mm (0.24 × 0.75 in)	4	90149-069U9
13	Terminal extension	1	F0W-68239-01
14	Flashing conduction fitting	1	67X-12590-00
15	Tool kit	1	EU0-65986-00
16	Vinyl bag	1	EU0-65901-01
17	Spark plug	2	94702-00204
18	Owner's/Operator's manual	1	F0W-F8199-10
19	Riding practice tips	1	F0W-F819T-10
20	Riding instruction card	1	FN8-U595B-02
21	Basic orientation video	1	F0D-U595A-00

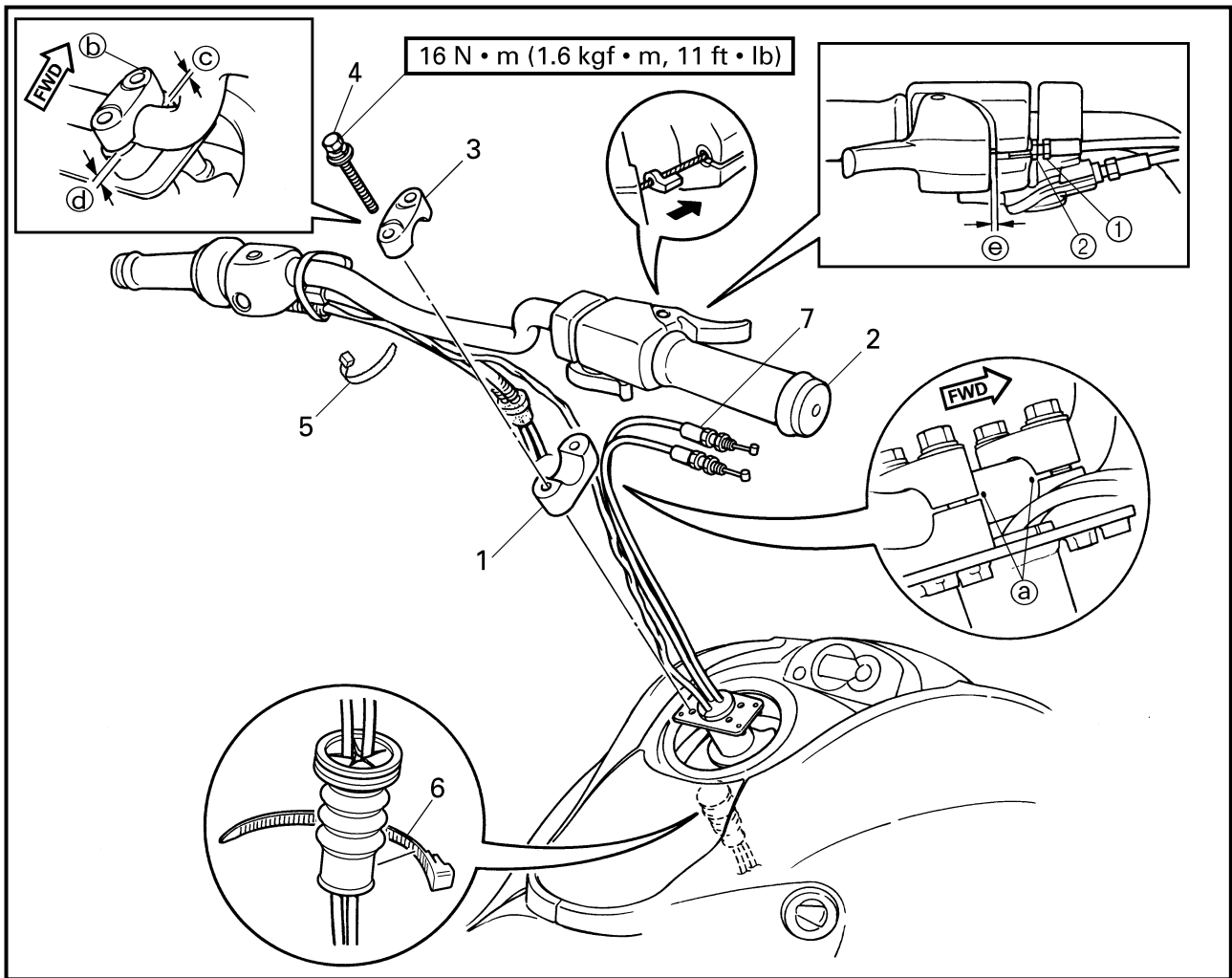
WIRE LEAD AND CABLE ROUTING EXPLODED DIAGRAM



INSTALLATION CHART

Step	Procedure/Part name	Q'ty	Service points
	WIRE LEAD AND CABLE ROUTING		Follow "Step" order for installation. NOTE: _____ Before starting work open the front hood and remove the storage compartment, and remove the seat. _____
1	Choke cable	1	
2	Throttle cable	1	
3	Handlebar switch lead	1	
4	Grommet	1	NOTE: _____ Apply soapy water to the grommet for easier installation. _____
5	QSTS cable	2	

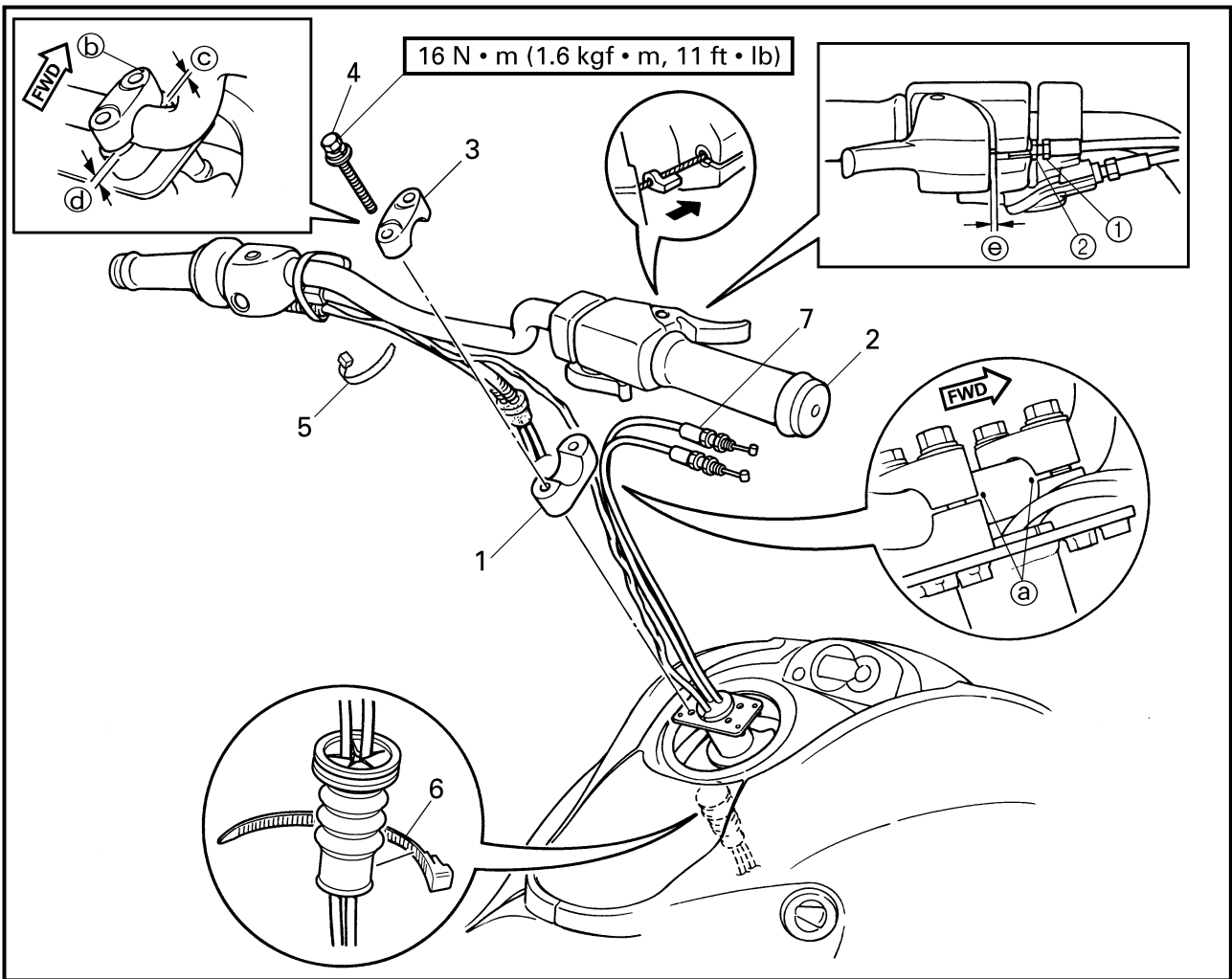
HANDLEBAR AND THROTTLE CABLE INSTALLATION EXPLODED DIAGRAM



INSTALLATION CHART

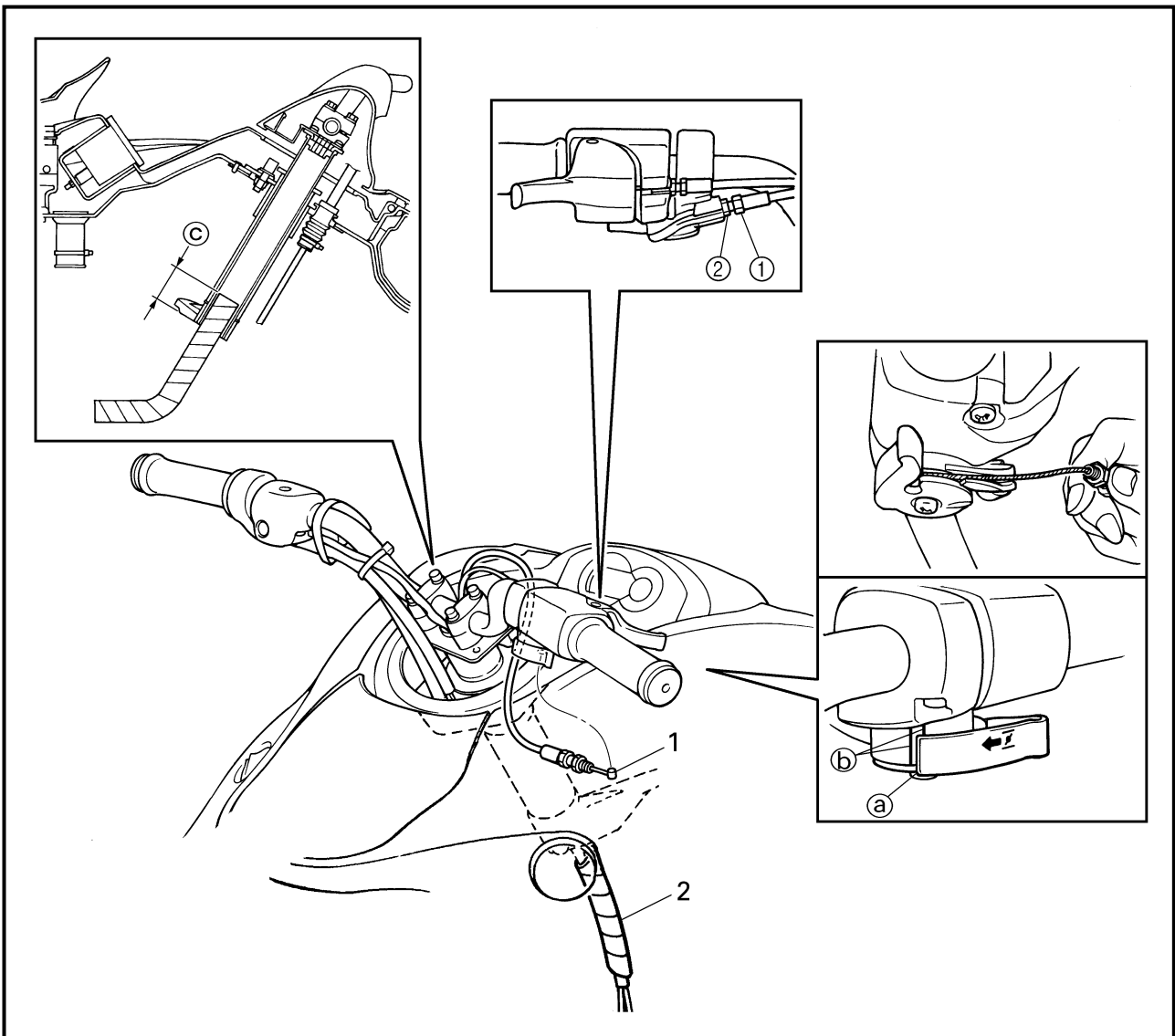
Step	Procedure/Part name	Q'ty	Service points
	HANDLEBAR AND THROTTLE CABLE INSTALLATION		Follow "Step" order for installation.
1	Lower handlebar holder	2	NOTE: _____ ● Align the punched marks (a) on the handlebar with the top surface of the lower handlebar holders. ● The upper handlebar holder should be installed with the punched mark (b) forward.
2	Handlebar assembly	1	
3	Upper handlebar holder	2	
4	Bolt (with washer) 8 × 55 mm (0.31 × 2.17 in)	4	NOTE: _____ Tighten the bolts so that the front clearance (c) of the upper handlebar holder is smaller than the rear clearance (d).

EXPLODED DIAGRAM



Step	Procedure/Part name	Q'ty	Service points				
5	Band	1	<p>Fasten the QSTS cables and handlebar switch lead with band at the handlebar.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Installation steps:</p> <ul style="list-style-type: none"> ● Install the throttle cable end into the throttle lever. ● Fit the seal into the groove in the bracket. ● Turn the adjuster ① in/out until the specified free play is obtained. </div> <div style="border: 1px solid black; padding: 5px;"> <p>Throttle lever free play ②: 4–7 mm (0.16–0.28 in)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Turn in</td> <td style="padding: 2px;">Free play is increased.</td> </tr> <tr> <td style="padding: 2px;">Turn out</td> <td style="padding: 2px;">Free play is decreased.</td> </tr> </table> <ul style="list-style-type: none"> ● Tighten the locknut ②. </div>	Turn in	Free play is increased.	Turn out	Free play is decreased.
Turn in	Free play is increased.						
Turn out	Free play is decreased.						
6	Band	1					
7	Throttle cable	1					

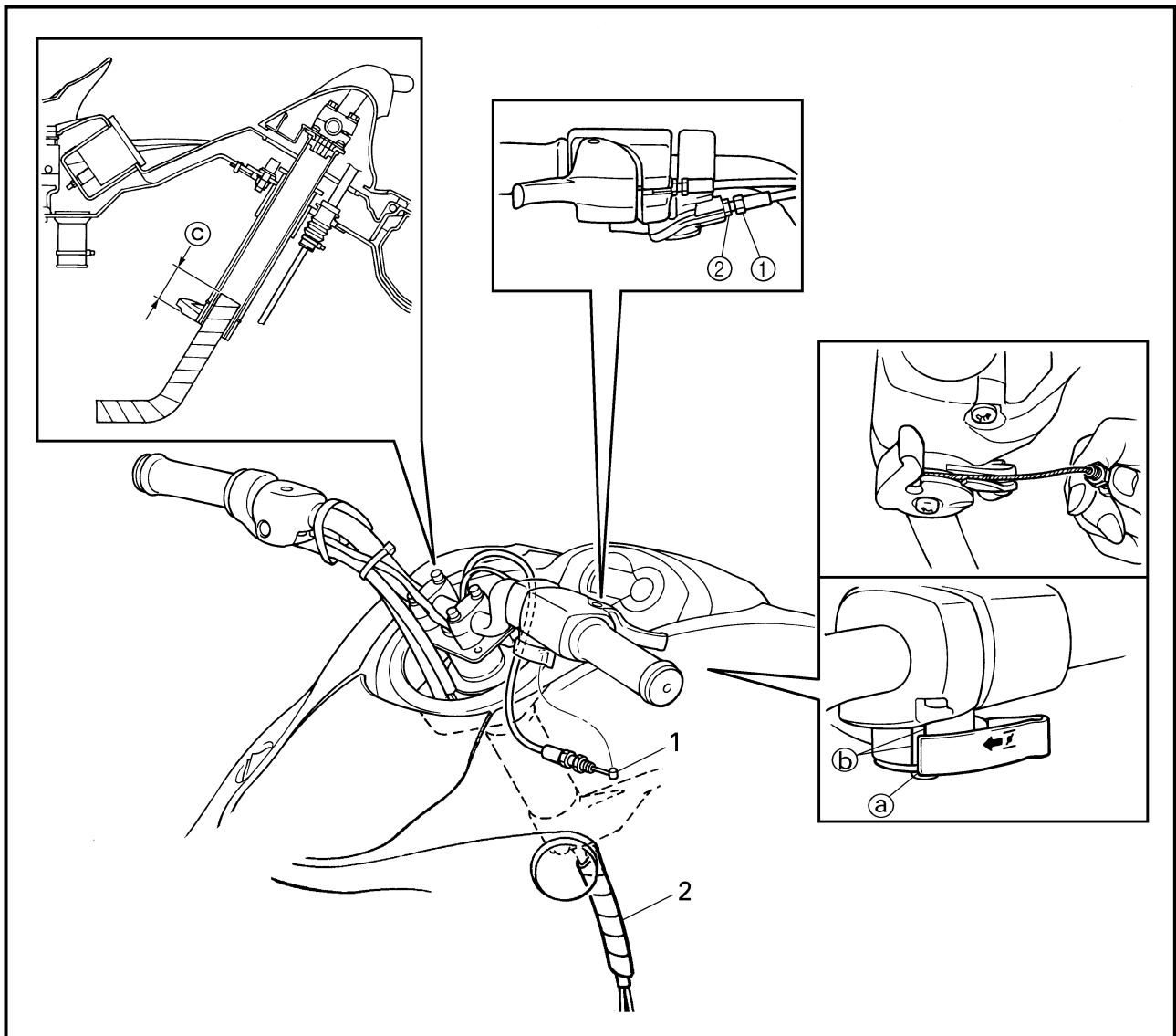
CHOKE CABLE INSTALLATION EXPLODED DIAGRAM



INSTALLATION CHART

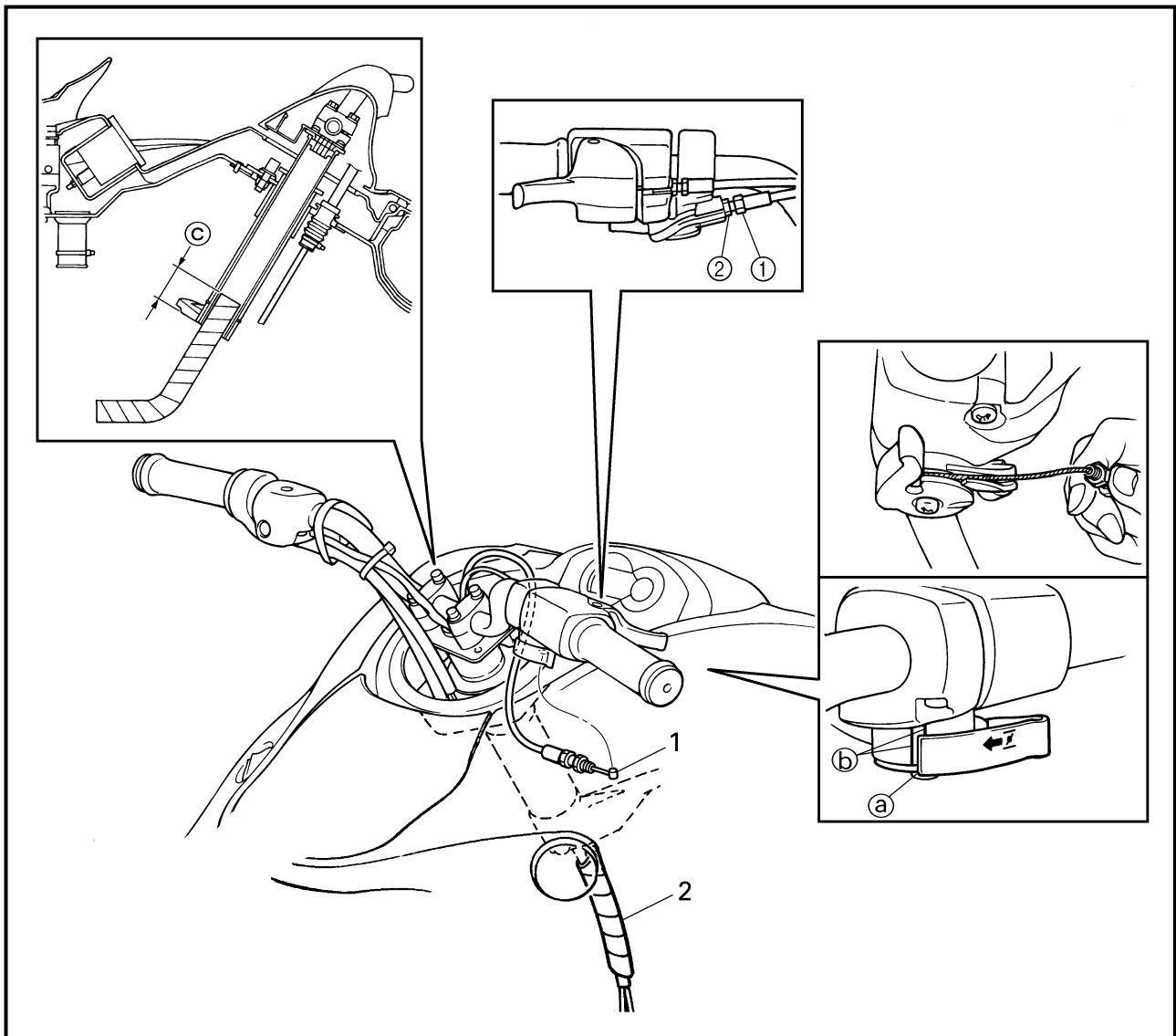
Step	Procedure/Part name	Q'ty	Service points
1	CHOKE CABLE INSTALLATION Choke cable	1	<p>Installation steps:</p> <ul style="list-style-type: none"> ● Install the choke cable end into the choke lever with the choke lever completely closed. ● Route the inner choke cable along the choke lever gutter. ● Install the choke cable and screw the adjuster ① fully into the bracket. ● Align the choke lever end ② within the line marks ③. ● Turn out the adjuster ① until the inner cable is taut.

EXPLODED DIAGRAM



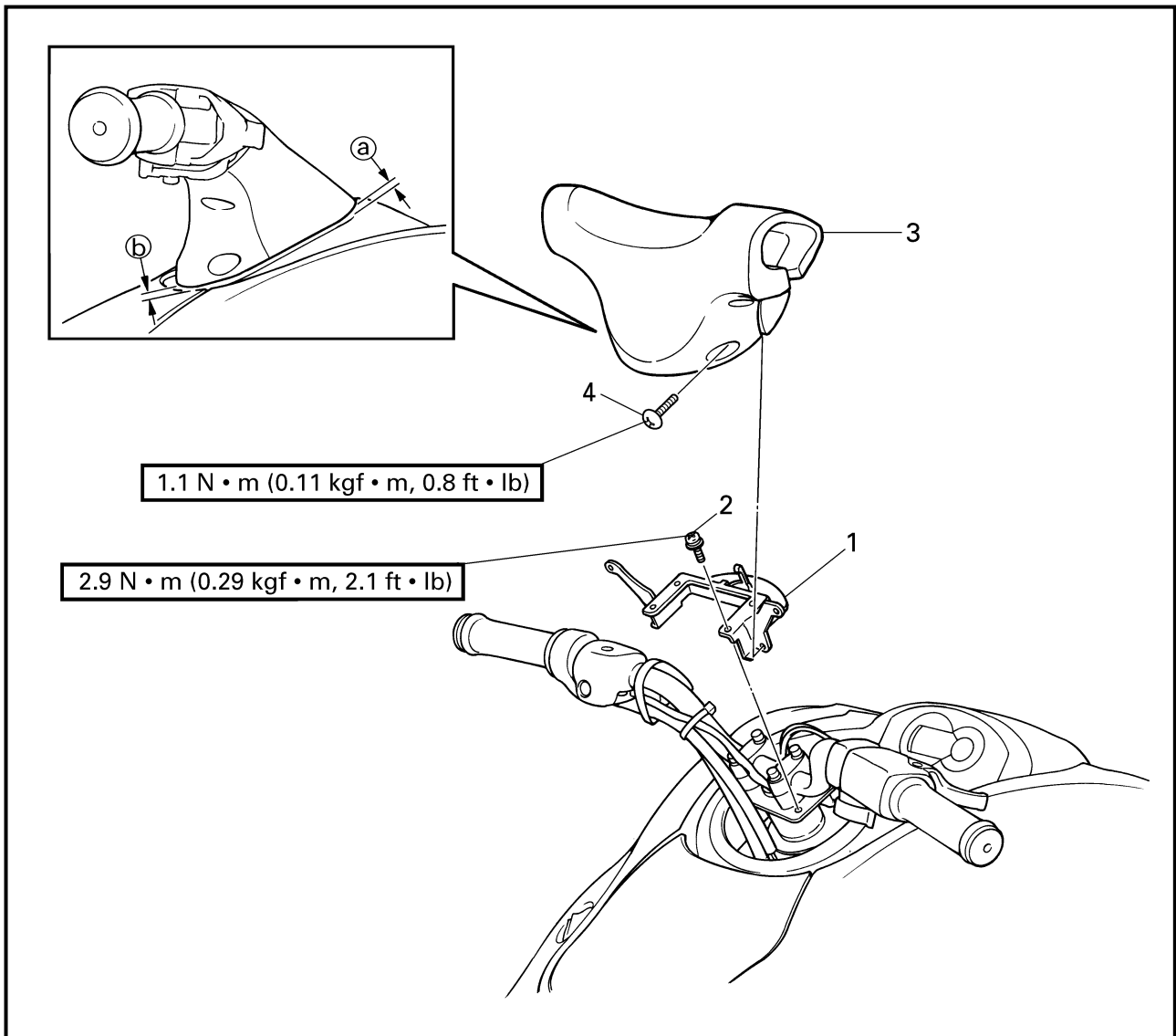
Step	Procedure/Part name	Q'ty	Service points
			<p>NOTE: _____</p> <p>If the inner cable is difficult to make taut using the adjuster ①, adjust the choke lever so that the cable is taut. The cable must be taut when the choke lever end ② is positioned within the line marks ③. Reset the adjuster if necessary.</p> <hr/> <ul style="list-style-type: none"> ● Make sure that the choke lever moves back slightly when it is fully opened.

EXPLODED DIAGRAM



Step	Procedure/Part name	Q'ty	Service points
2	Spiral tube	1	<p>● Make sure that the inner cable has some slack when the choke lever is completely closed.</p> <p>● Tighten the locknut ② to secure the choke cable.</p> <p>NOTE: _____ Be sure to install the spiral tube, containing the throttle cable, choke cable and handlebar switch lead, at least 50 mm (1.97 in) © into the steering column.</p>

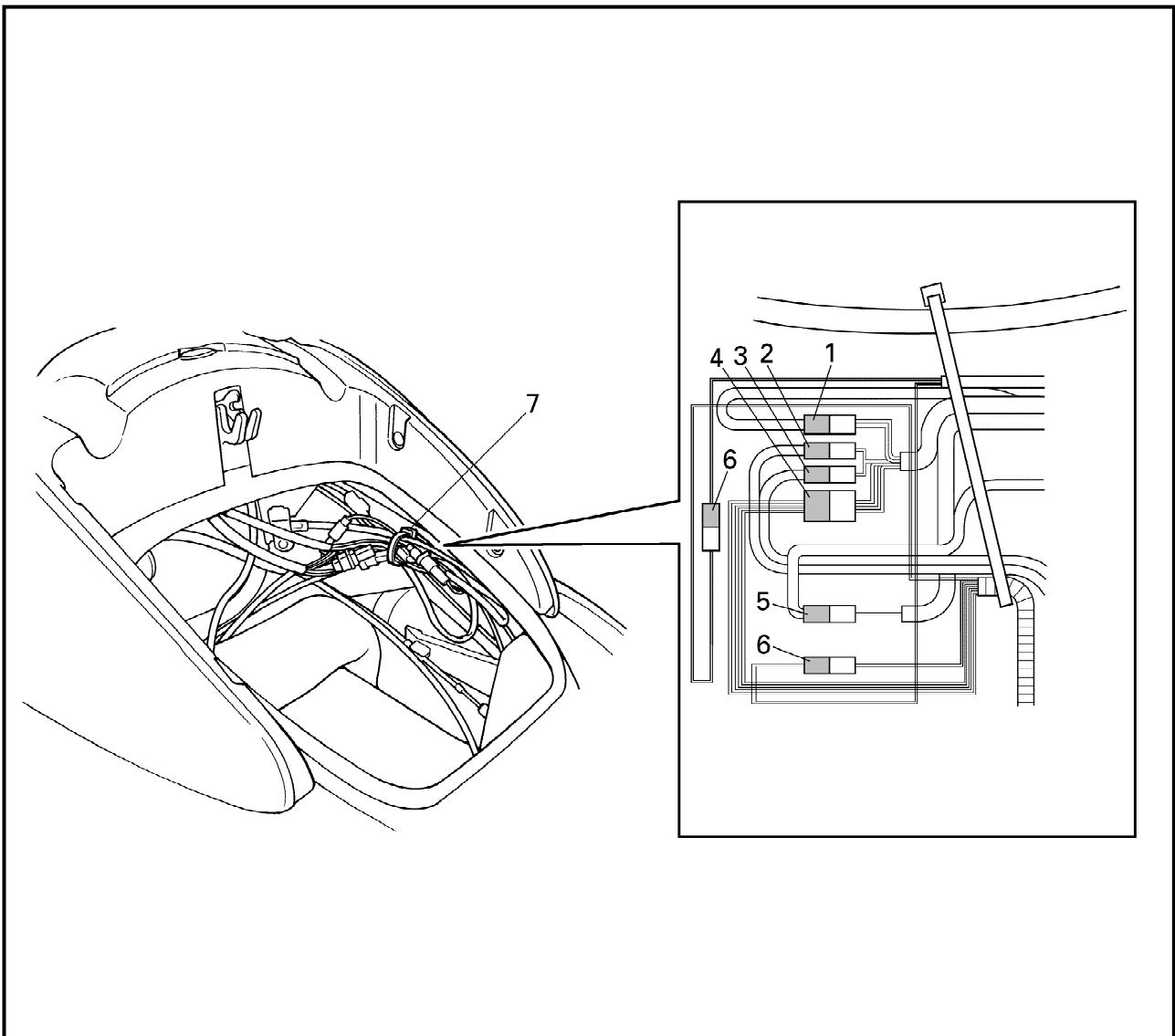
HANDLEBAR COVER INSTALLATION EXPLODED DIAGRAM



INSTALLATION CHART

Step	Procedure/Part name	Q'ty	Service points
	HANDLEBAR COVER INSTALLATION		Follow "Step" order for installation.
1	Handlebar cover stay	1	
2	Screw 6 × 15 mm (0.24 × 0.59 in)	4	
3	Handlebar cover	1	
4	Screw 6 × 19 mm (0.24 × 0.75 in)	4	NOTE: _____ If the handlebar cover is in contact with the steering console cover, adjust the handlebar mount angle so that the clearance (a) and (b) are equal.

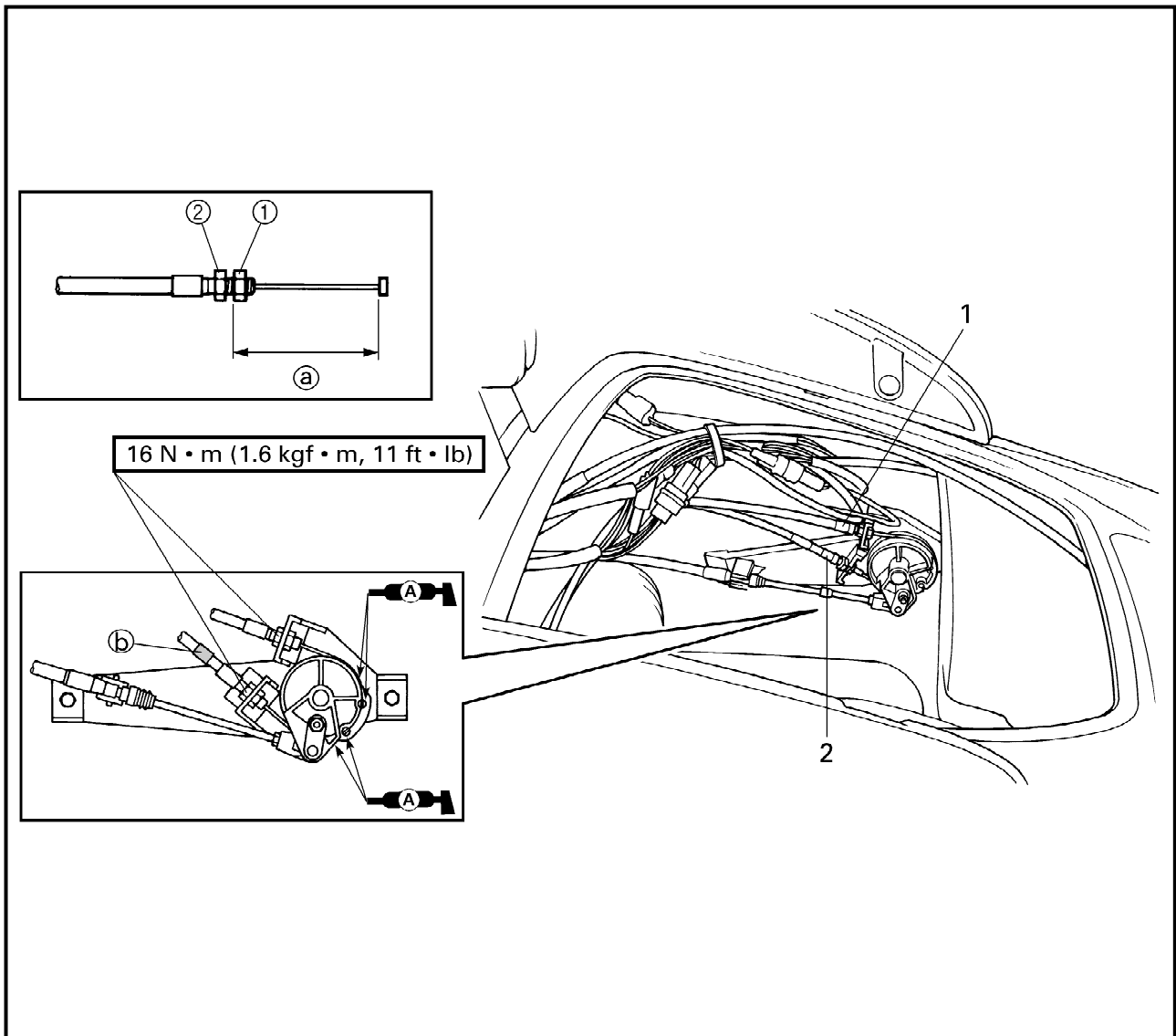
WIRING CONNECTION INSTALLATION EXPLODED DIAGRAM



INSTALLATION CHART

Step	Procedure/Part name	Q'ty	Service points
	WIRING CONNECTION INSTALLATION		Follow "Step" order for installation.
1	Speed sensor coupler	1	White coupler (3 pins)
2	Fuel level sensor coupler	1	Green coupler (2 pins)
3	Oil level sensor coupler	1	White coupler (2 pins)
4	Multifunction meter coupler	1	White coupler (4 pins)
5	Buzzer coupler	1	Black coupler (R – B and L/R – L/B) (2 pins)
6	Handlebar switch coupler	2	Black coupler (2 pins), natural coupler (2 pins)
7	Band	1	

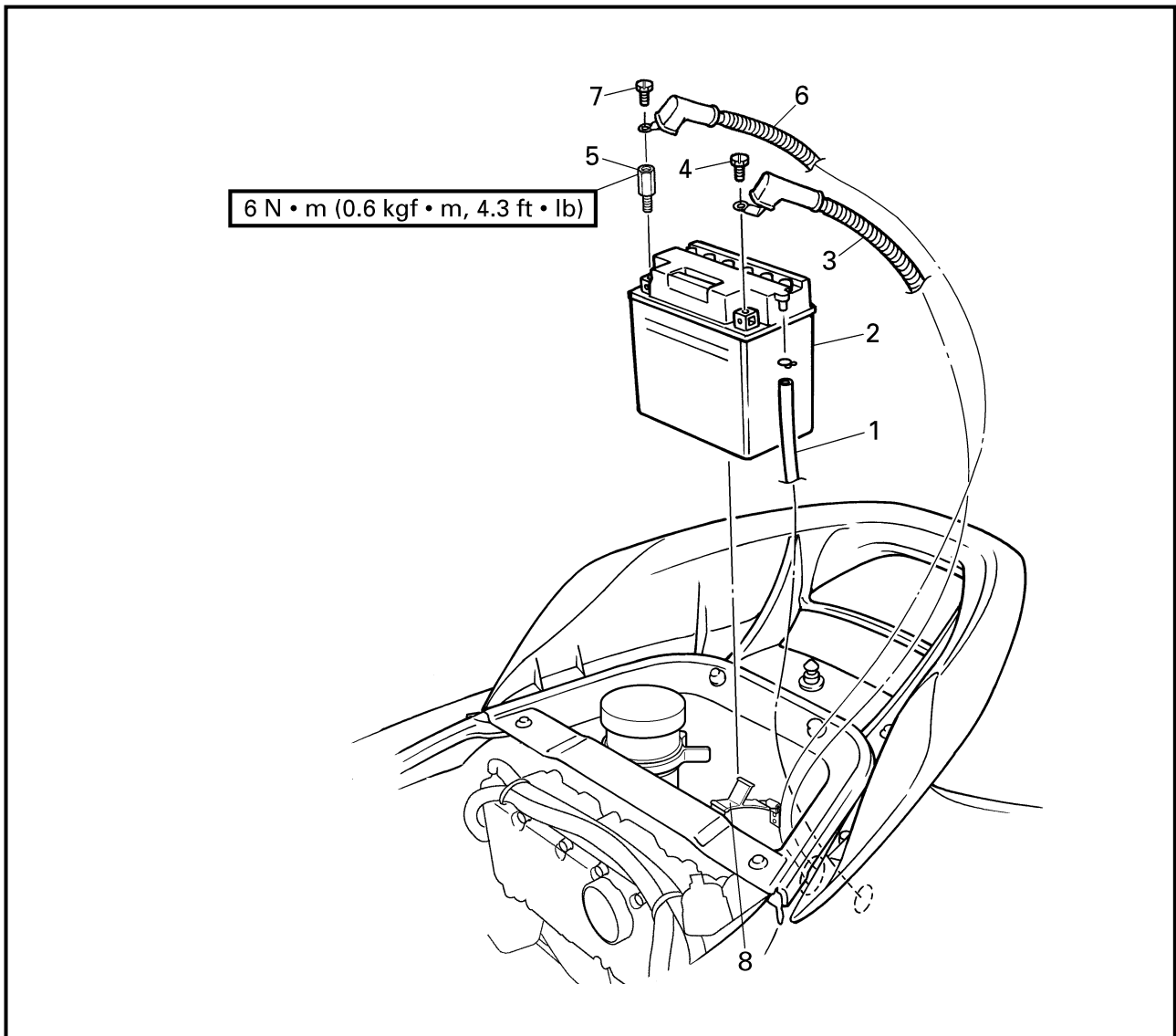
QSTS CABLE INSTALLATION EXPLODED DIAGRAM



INSTALLATION CHART

Step	Procedure/Part name	Q'ty	Service points
	QSTS CABLE INSTALLATION		Follow "Step" order for installation.
1	QSTS cable 1	1	NOTE: _____ ● Set the inner cables length ① to 77 ± 0.5 mm (3.03 ± 0.02 in), using the adjusting nuts ① when the control grip is in neutral before installing the QSTS cables. ● Tighten the locknuts ② to secure the QSTS cables. ● QSTS cable 2 is marked with white tape ③.
2	QSTS cable 2	1	

BATTERY INSTALLATION EXPLODED DIAGRAM



INSTALLATION CHART

Step	Procedure/Part name	Q'ty	Service points
	BATTERY INSTALLATION		Follow "Step" order for installation.
1	Battery breather hose	1	NOTE: _____
2	Battery	1	Charge the battery before installing it. Refer to "PREDELIVERY CHECK".
3	Battery positive lead (red)	1	_____
4	Bolt 6 × 12 mm (0.24 × 0.47 in)	1	
5	Terminal extension	1	
6	Battery negative lead (black)	1	
7	Bolt 6 × 12 mm (0.24 × 0.47 in)	1	
8	Band	1	CAUTION: _____
			Make sure that the battery breather hose is not pinched.

PREDELIVERY CHECK CHECKING CHART

Check elements	Checking points	Reference page
Throttle lever	Free play	5
Battery	Battery condition	13
Oil pump	Air bleed	15
Trolling speed	Trolling speed	16
Steering system	Handlebar and steering nozzle positions	17
QSTS	Trim nozzle position	18

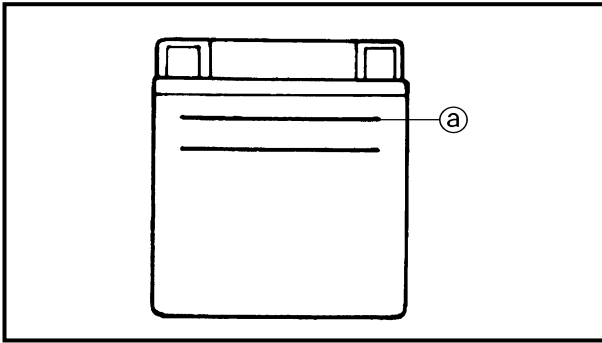
BATTERY

⚠ WARNING

- Battery electrolyte is poisonous and dangerous, causing severe burns, etc. 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 a 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 an enclosed space. Always shield your eyes when working near batteries.
- KEEP OUT OF REACH OF CHILDREN.

CAUTION:

Be careful not to place the battery on its side. Before adding the battery fluid or recharging, be sure to bring it out of the battery compartment. When checking the battery, make sure the breather hose is connected to the battery and is not pinched shut anywhere in the battery compartment.



1. Fill:

- Battery electrolyte

Filling steps:

- Remove all the filler caps using pliers.
- Fill with the specified electrolyte from a jug.
- After the electrolyte is filled up as far as the UPPER LEVEL (a), allow the cell to stand for 20 minutes. If after 20 minutes, the electrolyte level has dropped, add more electrolyte up to the UPPER LEVEL mark once again.

2. Initial battery charging:

- Battery

Charging steps:

- Connect the charging cable (+) and (-) of the battery charger to the battery terminals correctly.
- Charge the battery for 3 to 5 hours with the rate of 1.9 ampere.

⚠ WARNING

Turn the battery charger on after the battery is connected to the charger.

The sparking by connecting the charging cable to the battery terminal can cause an explosion to the explosive gases coming out from the battery cells.

CAUTION:

Always charge the battery when the electrolyte is poured into the battery for the first time. Otherwise, the battery can cause the lowering of performance earlier.

3. Inspect:

- Specific gravity of the electrolyte
Out of specification → Recharge.



Specific gravity at 20°C (68°F):
1.28

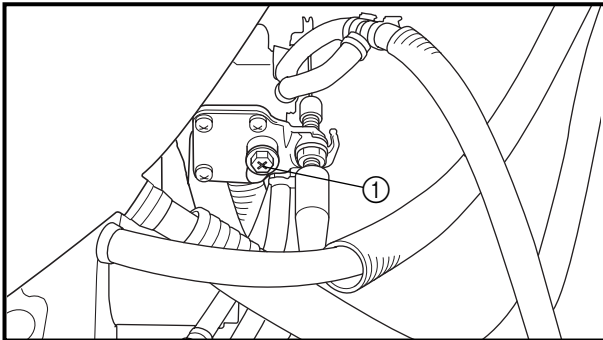
NOTE:

Replace the battery if there are differences of 0.025 or more on the specific gravity of each cell's electrolyte after recharging.

4. Install:
- Filler caps

CAUTION: _____

Rinse off any electrolyte from the battery case and wipe the battery dry prior to installation.



OIL PUMP AIR BLEEDING

1. Bleed:
- Air

Air bleeding steps:

- Place rags around the air bleed screw ① to catch any oil that might spill.
- Fill the oil tank with the recommended engine oil.



Recommended engine oil:
YAMALUBE 2-W or an equivalent TC-W3 certified outboard oil

- Loosen the air bleed screw ① two full turns and make sure that both the oil and air bubbles flow out.
- When there are no air bubbles left, tighten the air bleed screw.
- Wipe up any spilt oil.



Air bleed screw:
5 N · m (0.5 kgf · m, 3.6 ft · lb)

CAUTION: _____


- Do not run the engine if oil does not flow out the air bleed screw. Inspect the oil lines for proper routing and make sure there are no restrictions in the line.
 - Fill the fuel tank with 50:1 premixed fuel using the recommended engine oil during the first full tank of operation.
-

TROLLING SPEED

1. Measure:


- Trolling speed

Out of specification → Adjust.

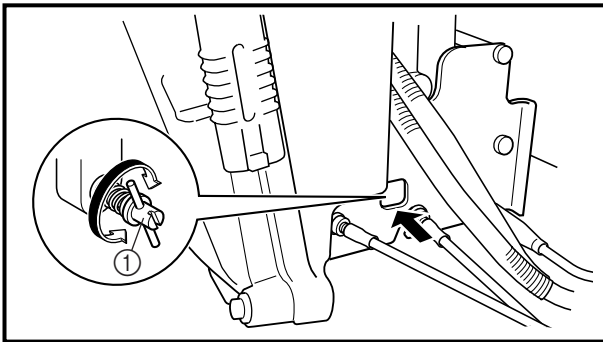
	Trolling speed: 1,300 ± 50 r/min
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Checking steps: (Vehicle on water)

- Start the engine and allow it to warm up for a few minutes.
- Attach an engine tachometer to the spark plug lead.

	Engine tachometer: YU-8036-A/90890-06760
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- Measure the engine trolling speed.



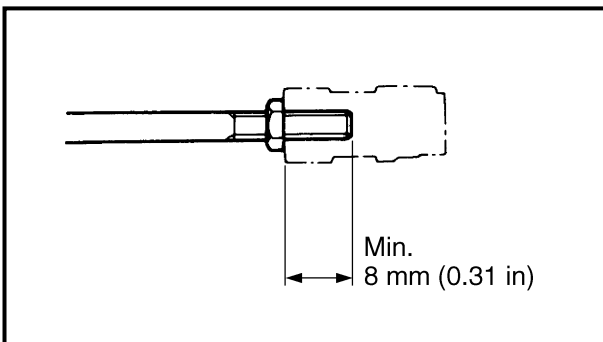
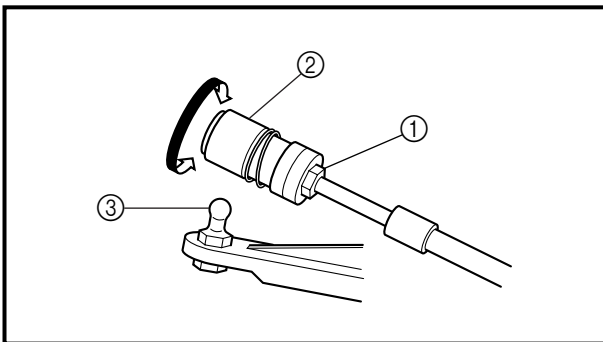
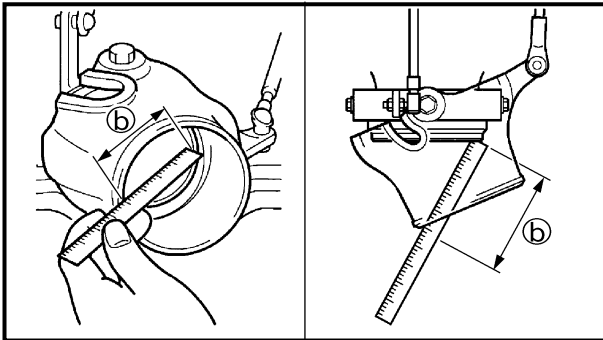
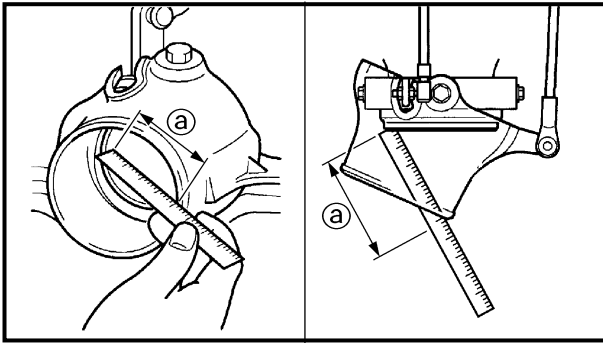
2. Adjust:

- Trolling speed

Adjustment steps:

- Start the engine.
- Turn the throttle stop screw ① in or out until the specified speed is obtained.

Turn in	Increase trolling speed.
Turn out	Decrease trolling speed.



STEERING CABLE

1. Check:

- Distance ①, ② (between the nozzle and nozzle deflector)
Out of specification → Adjust.

**Difference of distances ① and ②:
Maximum 5 mm (0.2 in)**

- Checking steps:**
- Set the control grip in the neutral position.
 - Turn the handlebar lock to lock.
 - Measure the distances ① and ②.
 - If the difference of distances ① and ② is not within specification, adjust the cable joint.

2. Adjust:

- Steering cable joint (handle side)

- Adjustment steps:**
- Loosen the locknut ①.
 - Disconnect the cable joint ② from the ball joint ③.
 - Turn the cable joint in or out for adjusting the distances ① and ②.

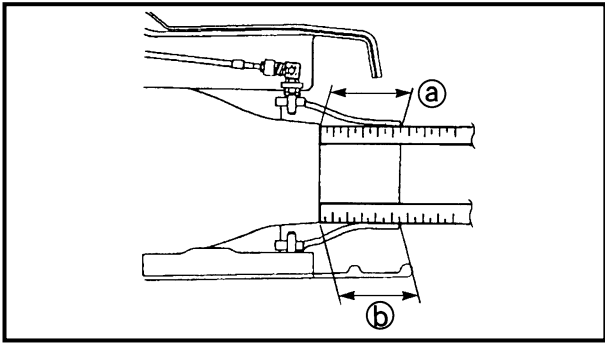
Turn in	Distance ① is increased.
Turn out	Distance ② is increased.

⚠ WARNING

The cable joint must be screwed in more than 8 mm (0.31 in).

- Connect the cable joint and tighten the locknut.

Locknut:
6 N • m (0.6 kgf • m, 4.3 ft • lb)



QSTS CABLE

1. Measure:

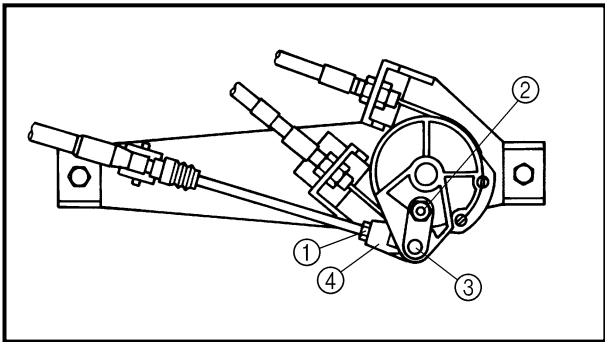
- Nozzle deflector set length ①, ②
- Difference → Adjust.

Measurement steps:

- Set the control grip in the neutral position.
- Set the jet nozzle in the center position.
- Measure the nozzle deflector set length ① and ②.
- If ① and ② length are not even, adjust the cable joint.

2. Adjust:

- QSTS cable




Adjustment steps:

- Set the control grip in the neutral position.
- Loosen the locknut ①.
- Remove the nut ② and pivot pin ③.
- Set the nozzle deflector in the center position.
- Turn the cable joint ④ in or out for adjusting length ① and ②.


Turn in	Length ② is increased.
Turn out	Length ① is increased.

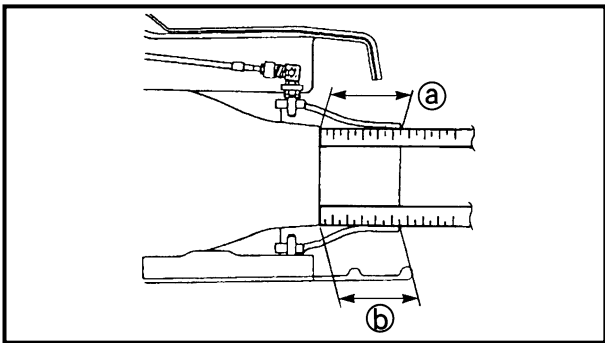
⚠ WARNING
 The cable joint must be screwed in more than 8 mm (0.31 in).

- Connect the cable joint ④ and pivot pin ③ and tighten the nut ②.

 **Nut:**
 4 N · m (0.4 kgf · m, 2.9 ft · lb)

- Tighten the locknut ①.

 **Locknut:**
 4 N · m (0.4 kgf · m, 2.9 ft · lb)



NOTE:

_____ If the QSTS cable cannot be properly adjusted at the QSTS converter side, make sure the QSTS cable at the jet pump side is set to the specified length.

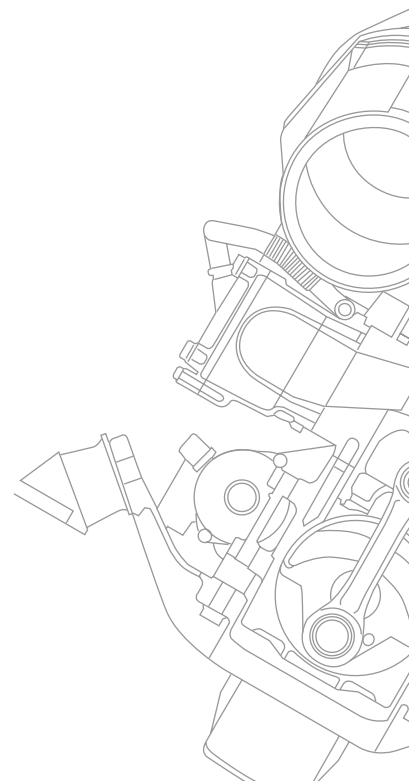
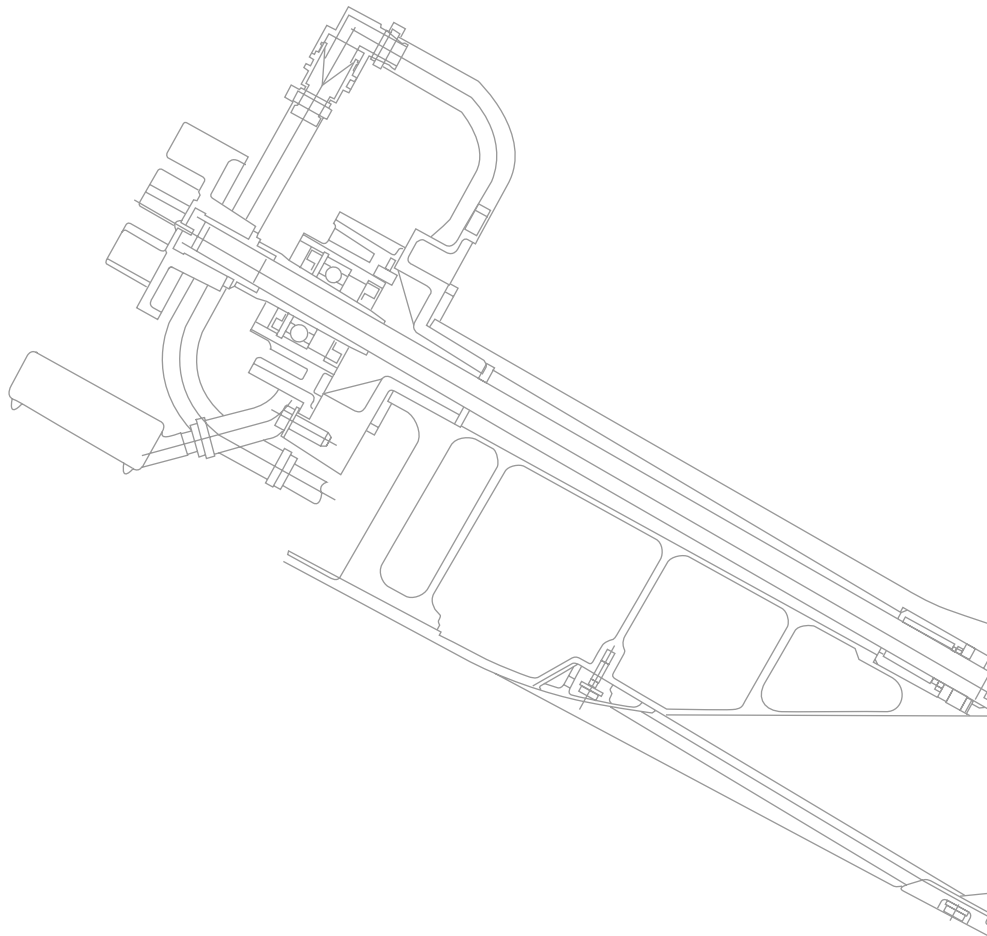
APPENDICES

SERVICE DATA

Item	Unit	GP800R
Trolling speed:	r/min	1,300 ± 50
Spark plug: Type Gap	mm (in)	BR8ES 0.7–0.8 (0.028–0.031)
Fuel and oil: Fuel Engine oil Fuel tank capacity Oil tank capacity	L (US gal, Imp gal) L (US gal, Imp gal)	Regular unleaded gasoline with a minimum octane rating of 86 (PON* ¹) or 90 (RON* ²) YAMALUBE 2-W or an equivalent TC-W3 certified outboard oil 60 (15.9, 13.2) 5.5 (1.45, 1.21)

*1: Pump Octane Number = (Motor Octane Number + Research Octane Number)/2

*2: Research Octane Number



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Oct. 2000 — × 1 CR
F0W-28107-1A-11
(GP800A)

(英)