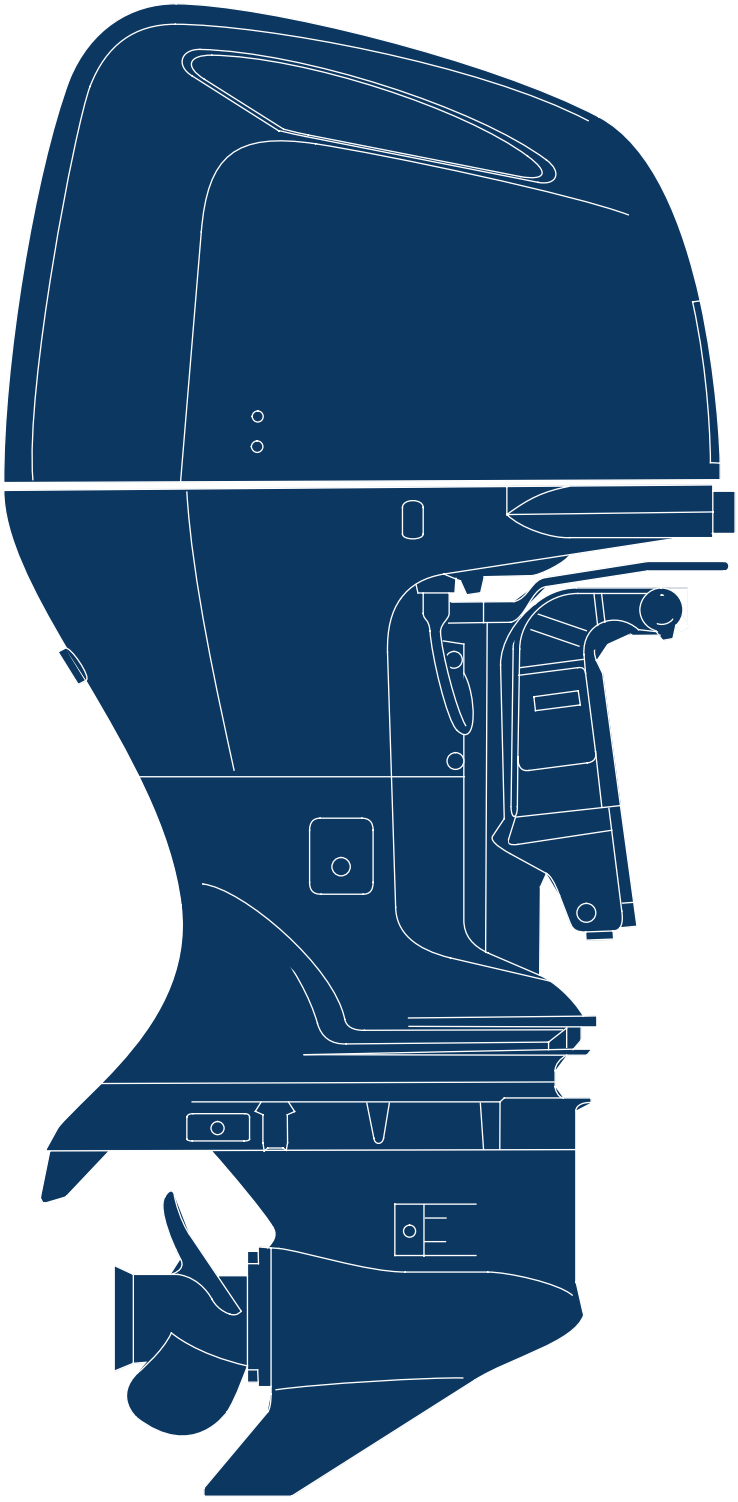
RIGGING MANUAL



TOHATSU Outboards

4 Stroke
BFT 200A
BFT 225A
BFT 250A
Models

OB No.92ZY311
14-01 NB

Introduction

Before reading this manual

This rigging manual provides information that is needed for initial set-up and rigging of applicable outboard motors. For our customers' safe and comfortable use of the products for long term, it is essential to maintain the performance and quality of the outboard motors. To ensure this, service have to be done properly by service technicians with fundamental knowledge and skills. This manual is utilized so that our customers can always use their outboard motor with full satisfaction.

As this document contains information from the Honda Motor's Set-up Instructions, the document contains information about models that are not sold by our company. Additionally, the model names are used by Honda Motor Co., Ltd. Please alter the model names as follows.

Change model names with "BF" to "BFT".

Example: BF* -> BFT***

INTRODUCTION 2

THE IMPORTANCE OF PROPER SERVICING 3

IMPORTANT SAFETY PRECAUTIONS 3

SERVICE RULES 4

SYMBOLS 4

TORQUE VALUES 5

DIMENSIONAL DRAWINGS 6

UNPACKING 7

PARTS PACKAGE INSPECTION 10

MOTOR INSTALLATION 12

CABLE/ELECTRICAL CONNECTIONS (motor side) 18

BATTERY (not included) 28

PROPELLER 29

ADJUSTMENT AFTER INSTALLATION 34

BREAK-IN PROCEDURE 35

WHEN RADIO STATION/GPS MOUNTED ON THE BOAT 36

PRE-DELIVERY SERVICE CHECK LIST 37

OPERATION CHECK LIST 38

WIRING DIAGRAMS 39

INTRODUCTION

This instruction covers set-up, installation and pre-delivery service for the Honda BF175AK3/BF200AK3/BF225AK3/ BF250A Outboard Motors.

Set-up, installation and pre-delivery service must be performed by authorized Honda Marine Dealer.
These instructions are provided for dealer use only.

Proper set-up, installation and pre-delivery service are essential for safe, reliable operation. Your customer expects the Outboard Motor to be correctly set up, installed, adjusted, and ready for use; test the outboard motor to be sure that it functions properly.

All information, illustrations, directions and specifications included in this publication are based on the latest product information available at the time of approval for printing. Honda Motor Co., Ltd. reserves the right to make changes without incurring any obligations whatever.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form, by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission of the publisher. This includes text, figures, and tables.

As you read this instruction, you will find information that is preceded by a NOTICE symbol. The purpose of this message is to help prevent damage to the outboard motor, other property, or the environment.

SAFETY MESSAGES

Your safety, and the safety of others, are very important. To help you make informed decisions, we have provided safety messages and other safety information throughout this manual. Of course, it is not practical or possible to warn you about all the hazards associated with servicing these outboard motors. You must use your own good judgement.

You will find important safety information in a variety of forms, including:

- Safety Labels – on the engine cover.
- Safety Messages – preceded by a safety alert symbol ⚠ and one of three signal words, DANGER, WARNING, or CAUTION. These signal words mean:

⚠DANGER You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.

⚠WARNING You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.

⚠CAUTION You CAN be HURT if you don't follow instructions.

- Instructions – how to service these outboard motors correctly and safely.

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Service publication office

THE IMPORTANCE OF PROPER SERVICING

The service information contained in this manual is intended for use by qualified, professional technicians. Attempting service without the proper training, tools, and equipment could cause injury to you and/or others. It could also damage the Outboard Motor or create an unsafe condition.

This manual describes the proper methods and procedures for performing service. Any person who intends to use service procedure, or a tool that is not recommended by Honda, must determine the risks to their personal safety and the safe operation of the Outboard Motor.

For Your Customer's Safety

Proper service is essential to the customer's safety and the reliability of the outboard motor. Any error or oversight while servicing an Outboard Motor can result in faulty operation, damage to the outboard motor, or injury to others.

⚠WARNING

Improper service can create an unsafe condition that can cause your customer or others to be seriously hurt or killed.

Follow the procedures and precautions in this manual and other service materials carefully.

For Your Safety

Because this manual is intended for the professional service technician, we do not provide warnings about many basic shop safety practices (e.g., Sharp edges-wear gloves). If you have not received shop safety training or do not feel confident about your knowledge of safe servicing practice, we recommend that you do not attempt to perform the procedures described in this manual.

Some of the most important general service safety precautions are given below. However, we cannot warn you of every conceivable hazard that can arise in performing service procedures. Only you can decide whether or not you should perform a given task.

⚠WARNING

Failure to properly follow instructions and precautions can cause you to be seriously hurt or killed.

Follow the procedures and precautions in this manual carefully.

IMPORTANT SAFETY PRECAUTIONS

Make sure you have a clear understanding of all basic shop safety practices and that you are wearing appropriate clothing and using safety equipment. When performing any service task, be especially careful of the following:

- Read all of the instructions before you begin, and make sure you have the tools and the skills required to perform the tasks safely and completely.
- Protect your eyes by using proper safety glasses, goggles, or face shields anytime you hammer, drill, grind, or work around pressurized air or liquids, and springs or other stored-energy components. If there is any doubt, put on eye protection.
- Use other protective wear when necessary, for example gloves or safety shoes. Handling hot or sharp parts can cause severe burns or cuts. Before you grab something that looks like it can hurt you, stop and put on gloves.
- Protect yourself and others whenever you have engine-power equipment up in the air.

Make sure the engine is off before you begin any servicing procedures, unless the instruction tells you to do otherwise. This will help eliminate several potential hazards:

- Carbon monoxide poisoning from engine exhaust. Be sure there is adequate ventilation whenever you run the engine.
- Burns from hot parts. Let the engine and exhaust system cool before working in those areas.
- Injury from moving parts. If the instruction tells you to run the engine, be sure your hands, fingers and clothing are out of the way.

Gasoline vapors and hydrogen gasses from battery are explosive. To reduce the possibility of a fire or explosion, be careful when working around gasoline or batteries.

- Use only a nonflammable solvent, not gasoline, to clean parts.
- Never drain or store gasoline in an open container.
- Keep all cigarettes, sparks, and flames away from the battery and all fuel-related parts.

SERVICE RULES

- Use Honda-recommended lubricants or their equivalents.
- When torquing bolts or nuts, begin with larger-diameter or inner bolts first and tighten to the specified torque diagonally, unless a particular sequence it specified.
- Lubricate any sliding surfaces before reassembly.
- After reassemble, check all parts for proper installation and operation.
- Metric bolts, nuts and screws are not interchangeable with non-metric fasteners. The use of incorrect tools and fasteners will damage the unit.
- Hold the connector body to disconnect the connector. Do not disconnect by pulling the wire harness. To disconnect the locking connector, be sure to unlock first, then disconnect.
- Check the connector terminals for bend, excessive extrusion, missing terminal, or other abnormalities before connecting the connector.
- To connect, insert the connector as far as it goes. If the connector is a locking type, be sure that it is locked securely.
- Check the connector cover for breakage and check whether the connector female terminal is not open excessively. Then, connect the connector securely. Check the connector terminal for rust. Remove the rust using an emery paper or equivalent material before connecting the connector.
- Set the harness clips in the specified places securely, and secure the wire harness.
- Clamp the cables securely.
- Clamp the wire harnesses securely sot that they do not interfere with the rotating parts, moving parts and the hot parts.
- Route and connect the wire harnesses properly. Be sure that the harnesses are not slack, twisted or pulled taut.
- Route the wire harnesses properly sot that they do not contact with the sharp edges and corners, and the end of the bolts and screws on the body.
- If a wire harness contacts the end of the bolts/screws or sharp edges and corners, protect the contact part of the wire harness with a tube or by winding with electrical insulating tape. If the wire harness has a grommet, set the grommet securely.

SYMBOLS

The symbols used throughout this manual show specific service procedures. If supplementary information is required pertaining to these symbols, it would be explained specifically in the text without the use of the symbols.

	Use marine grease (water resistant urea based grease).
○ x ○ (○)	Indicates the diameter, length, and quantity of bolts used.
page 1	Indicates the reference page.

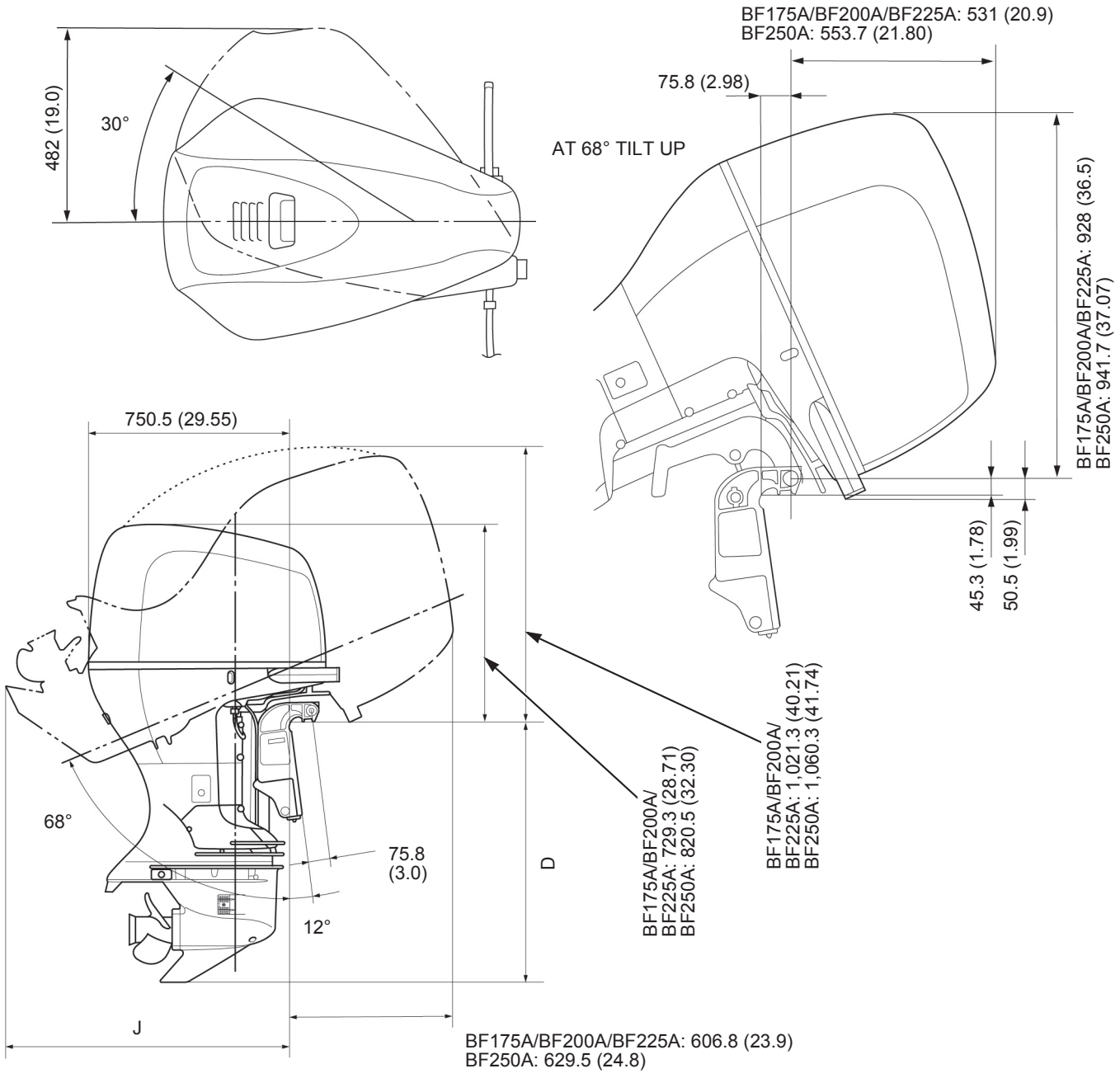
TORQUE VALUES

FASTENER APPLICATIONS	DESCRIPTION	TORQUE VALUES		
		N•m	kgf•m	lbf•ft
Propeller lock nut (18 mm castle nut)	Minimum torque	1	0.1	0.7
	Maximum torque	44.1	4.5	32
Front separate cover bolt	6 x 17 mm, 6 x 35 mm special bolt	12	1.2	9
	6 x 25 mm hex bolt	10	1.0	7
Steering link arm bolt	3/8-24 UNF	22	2.2	16
Steering link arm lock nut	3/8-24 UNF	18	1.8	13
Steering plate nut	10 mm	34	3.5	25
Stern bracket mount bolt	12 x 119 mm (XC, XXC, XCC, types only)	54	5.5	40
	12 x 130 mm (Except XC, XXC, XCC, types)			
Standard hardware	5 mm screw	4.2	0.4	3.1
	6 mm screw	9	0.9	6.6
	5 mm bolt, nut	5.2	0.5	3.8
	6 mm bolt, nut	10	1.0	7
	6 mm flange bolt, nut	12	1.2	9
	8 mm bolt, nut	21.5	2.2	16
	8 mm flange bolt, nut	26.5	2.7	20
	10 mm bolt, nut	34	3.5	25
	12 mm bolt, nut	54	5.5	40
	10 mm flange bolt, nut	39	4.0	29

Torque values for special hardware will be called out during procedure.

DIMENSIONAL DRAWINGS

Unit: mm (in)

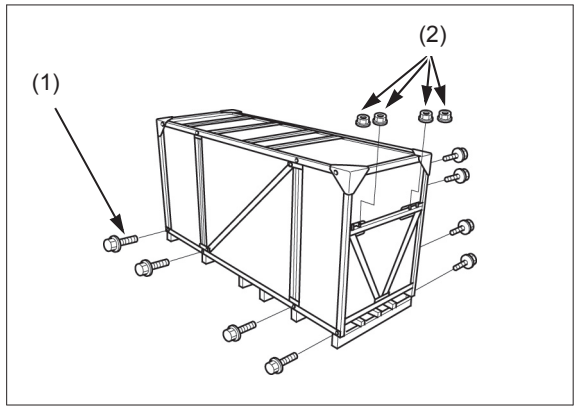


Transom	D	J
LD and LU types	939.5 mm (36.99 in)	1,062 mm (41.8 in)
XD, XU, XC, XCD, XCU and XCC types	1,066.5 mm (41.99 in)	1,173.5 mm (46.20 in)
XXD, XXU, XXC, XXCD and XXCU types	1,193.5 mm (46.99 in)	1,287.5 mm (50.69 in)

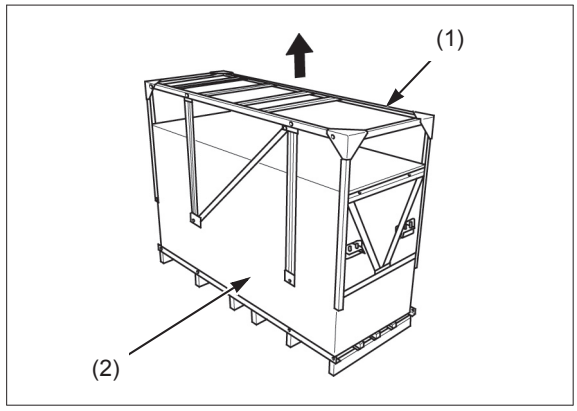
UNPACKING

- Wear the heavy gloves during unpacking to protect your hands from the sharp edges and burrs on the steel crate frame.

Remove the eight bolts (1) attaching the upper frame and the four nuts (2) attaching the engine hanger bracket.



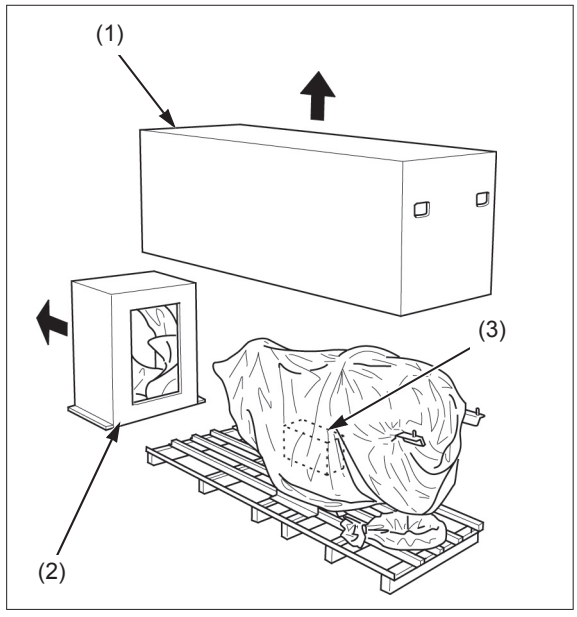
Slowly lift up the upper frame (1) with care not to strike on the outboard motor. (Get an assistant to help remove the crate frame.) Then remove the corrugate card board cover (2).



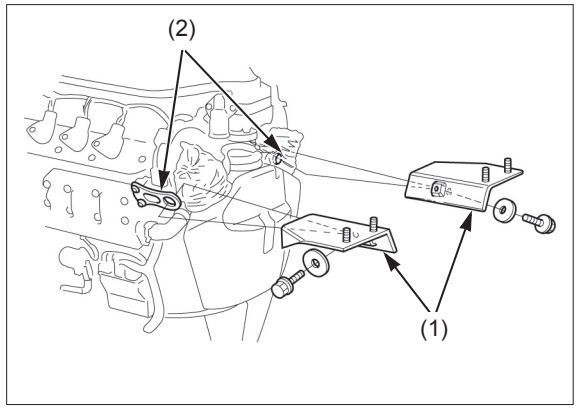
Lift up and remove the corrugated cardboard protector that contains the engine (1), then slide and remove the corrugated cardboard protector that contains the engine cover (2).

Cut the tie and remove the parts carton (3) from the crate. Compare the parts to the parts list on page 10.

After comparing the parts, go to next step.



Remove the engine hanger brackets (1) that secures the engine hangers (2).

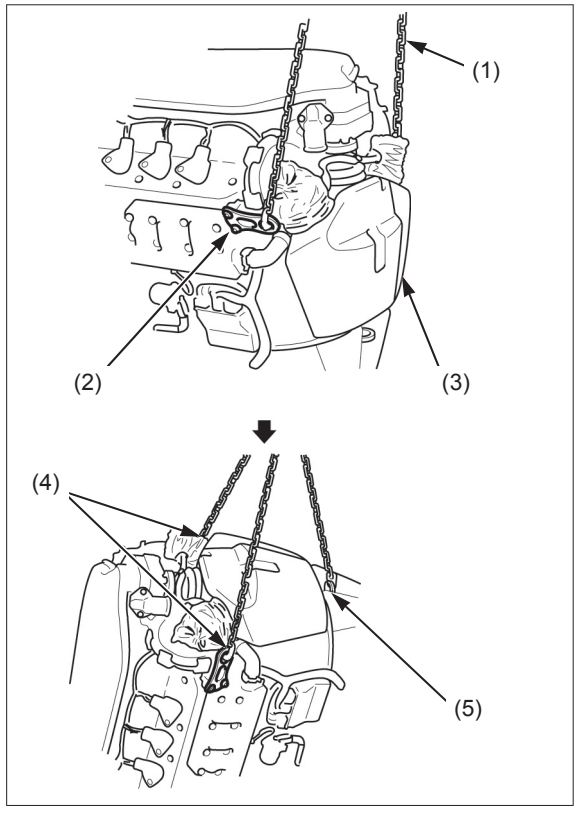


Connect engine lifting sling chains (1) to the engine hangers (2), and lift up the outboard motor with a hoist.

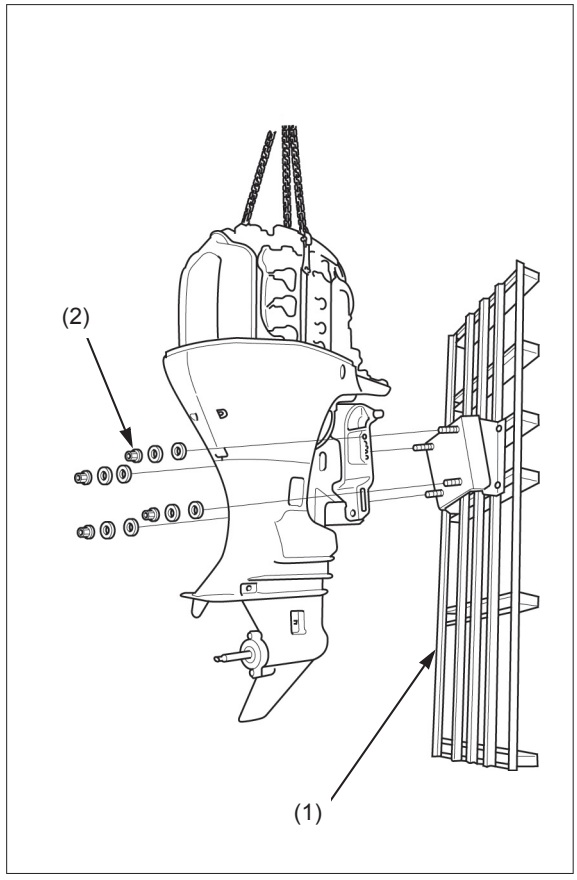
- To prevent damage the silencer case (3), first connect the chains to the two engine hangers of the cylinder head side (4), then connect other chain to the other engine hanger located above the alternator (5).

NOTICE

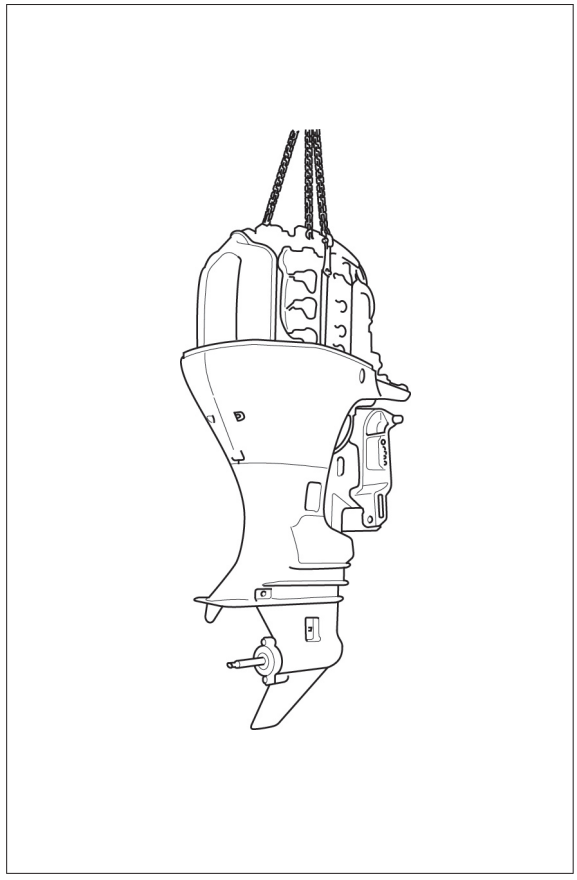
- *Use a suitable hoist with a capacity rating of 500 kg (1,100 lbs) or more. This outboard motor total height with the lower crate frame is over 2 m (79 in).*
- *Get an assistant to help to lift up the outboard motor.*



With the lower crate frame set on the floor, remove the lower crate frame (1) from the outboard motor by removing the four flange nuts (2).

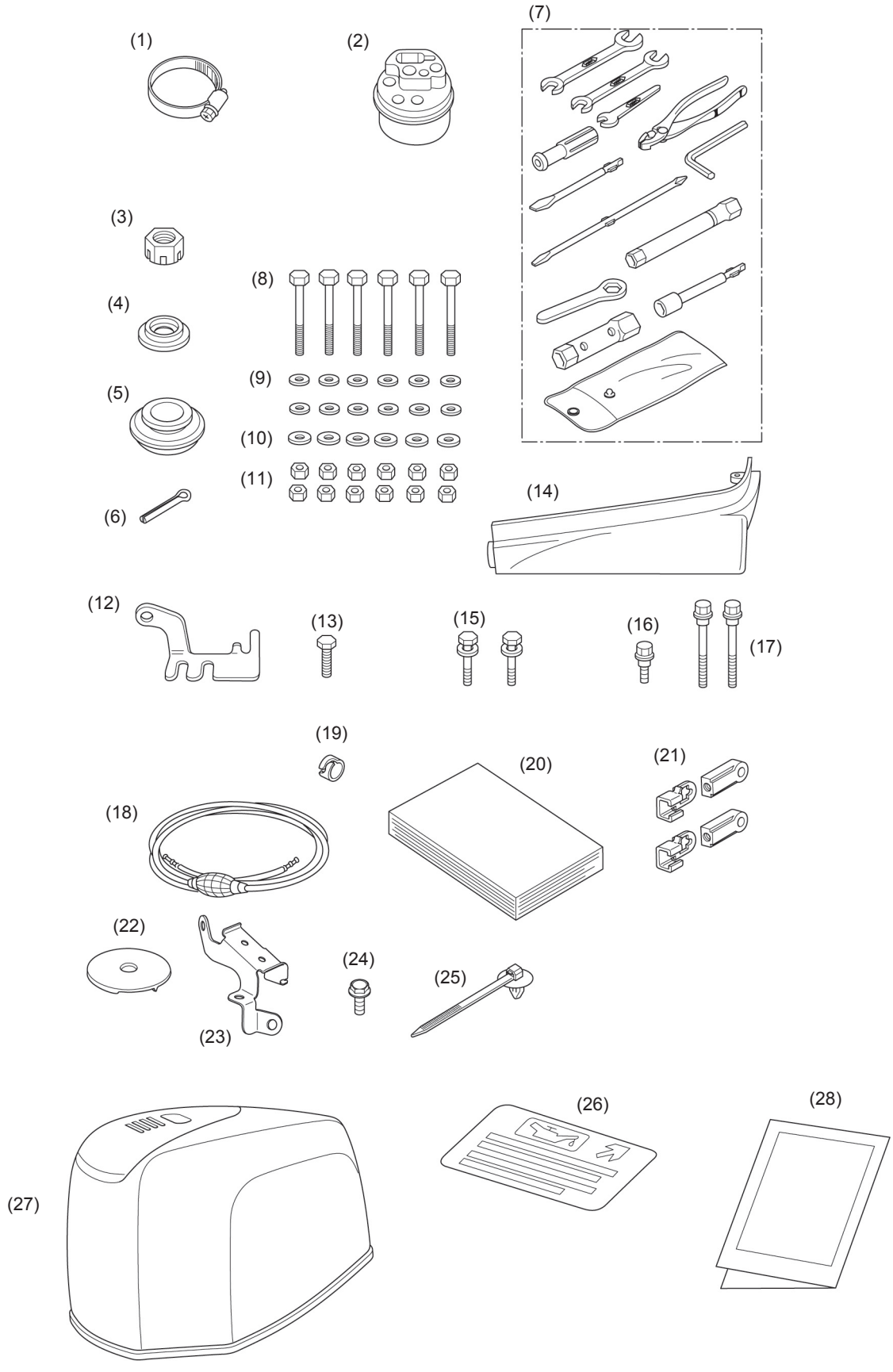


Install the outboard motor on the boat while holding it vertically as shown.



PARTS PACKAGE INSPECTION

No.	Part name	BF175AK3/BF200AK3/BF225AK3/BF250A													Remarks
		LD	XD/ XT	XXD/ XXT	XCD/ XCT	XXCD/ XXCT	XC	XXC	XCC	LU	XU	XXU	XCU	XXCU	
1	Under case grommet band	1	1	1	1	1	1	1	1	1	1	1	1	1	
2	Under case grommet A	1	1	1	1	1	1	1	1	1	1	1	1	1	
3	Castle nut (18 mm)	1	1	1	1	1	1	1	1	1	1	1	1	1	Use for propeller installation
4	Propeller thrust washer	1	1	1	1	1	1	1	1	1	1	1	1	1	
5	Propeller washer	1	1	1	1	1	1	1	1	1	1	1	1	1	
6	Split pin (4.0 mm)	1	1	1	1	1	1	1	1	1	1	1	1	1	
7	Tool kit	1	1	1			1	1		1	1	1			
8	Hex bolt (12 x 119 mm)	–	–	–	–	–	6	6	6	–	–	–	–	–	Use for outboard motor installation
	Hex bolt (12 x 130 mm)	6	6	6	6	6	–	–	–	6	6	6	6	6	
9	Plain washer (12 mm) (O.D. 22 mm)	12	12	12	12	12	12	12	12	12	12	12	12	12	
10	Plain washer (12 mm) (O.D. 33 mm)	6	6	6	6	6	6	6	6	6	6	6	6	6	
11	Hex nut (12 mm)	12	12	12	12	12	12	12	12	12	12	12	12	12	
12	Remote control cable plate	1	1	1	1	1	1	1	1	1	1	1	1	1	
13	Hex bolt (6 x 16 mm)	1	1	1	1	1	1	1	1	1	1	1	1	1	
14	Front separate cover	1	1	1	1	1	1	1	1	1	1	1	1	1	
15	Bolt-washer (6 x 25 mm)	2	2	2	2	2	2	2	2	2	2	2	2	2	Use with Ref. No. 14
16	Special bolt (6 x 17 mm)	1	1	1	1	1	1	1	1	1	1	1	1	1	
17	Special bolt (6 x 37 mm)	2	2	2	2	2	2	2	2	2	2	2	2	2	
18	Fuel tube assembly	1	1	1	1	1	1	1	1	1	1	1	1	1	
19	Band tube clip (12.5 mm)	1	1	1	1	1	1	1	1	1	1	1	1	1	
20	O/M	1	1	1	1	1	1	1	1	1	1	1	1	1	
21	Shift pivot	2	2	2	2	2	2	2	2	2	2	2	2	2	
22	Gear case cover	–	–	–	1	1	–	–	1	–	–	–	1	1	
23	Cable bracket	1	1	1	1	1	1	1	1	1	1	1	1	1	
24	Flange bolt (6 x 14 mm)	1	1	1	1	1	1	1	1	1	1	1	1	1	Use with Ref. No. 23
25	Harness band clip	1	1	1	1	1	1	1	1	1	1	1	1	1	
26	Oil caution tag	1	1	1	1	1	1	1	1	1	1	1	1	1	
27	Engine cover	1	1	1	1	1	1	1	1	1	1	1	1	1	
28	Declaration EC/RCD (BF)	–	–	–	–	–	–	–	–	1	1	1	1	1	


(1)
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MOTOR INSTALLATION

MOTOR SELECTION

Secure and correct installation is essential for safe boating and good performance. Follow the installation instructions provided in this manual.

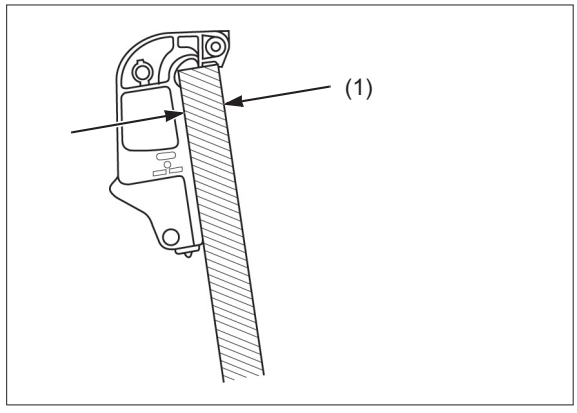
⚠WARNING

Improper set-up or pre-deliver service can cause an unsafe condition that can cause your customer to be seriously hurt or killed. Follow the procedures and precautions in this manual and shop manual carefully.

Before installation, check to be sure that the outboard motor does not exceed the recommended maximum horsepower for the boat on which it is to be installed.
Refer to the boat's certification plate for recommended maximum horsepower. For most applications, the outboard motor should provide 80% of the recommended maximum horsepower for the boat. If the certification plate information is not available, contact the boat dealer or manufacturer.

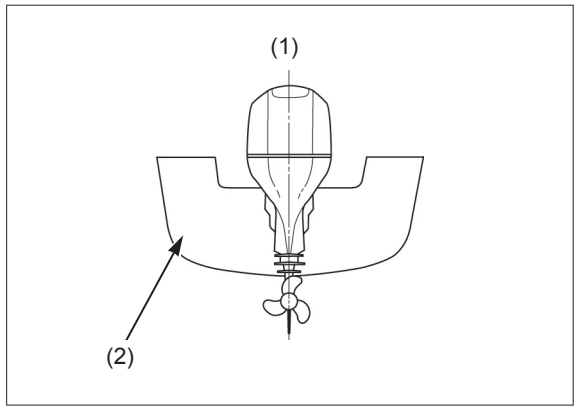
Refer to the following dimensional drawings to be sure there is nothing on the boat that will interfere with outboard motor tilt up and steering.
The BF175A, BF200A, BF225A and BF250A outboard motors are designed to be installed on boat transom with the following transom board thickness.

Boat transom board thickness (1):
50 – 70 mm (2-2-3/4 in)



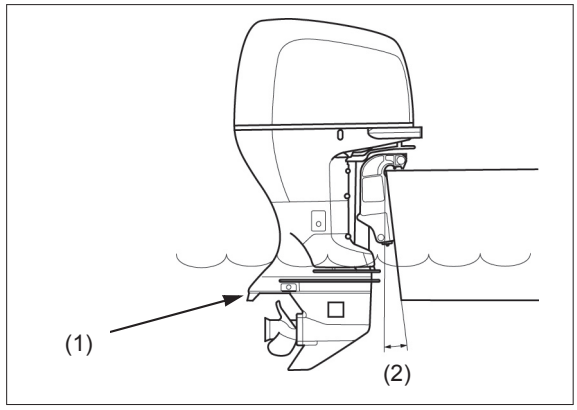
General Guidelines

Install the outboard motor on the center (1) of the boat transom (2) securely and be sure that the boat is will-balanced.

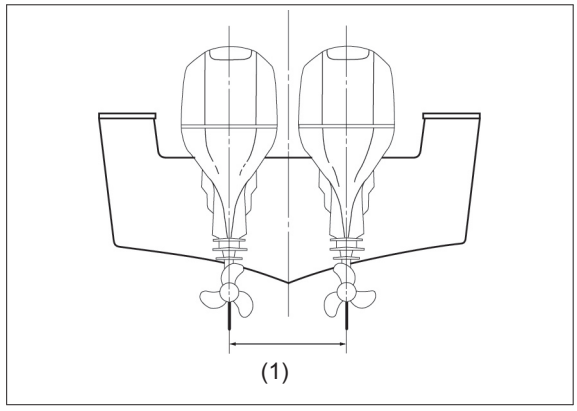


As a general rule, the outboard should be installed so the anti-ventilation plate (1) is parallel to the boat bottom.

If the board transom angle (2) is less than 8°, the BF175A, BF200A, BF225A and BF250A anti-ventilation plate will not be parallel to the boat bottom when trimmed to the lowest hole.



Dual outboard motors must be installed so that the outboard motor center-to-center distance is a minimum of 660 mm (26 in) (1).

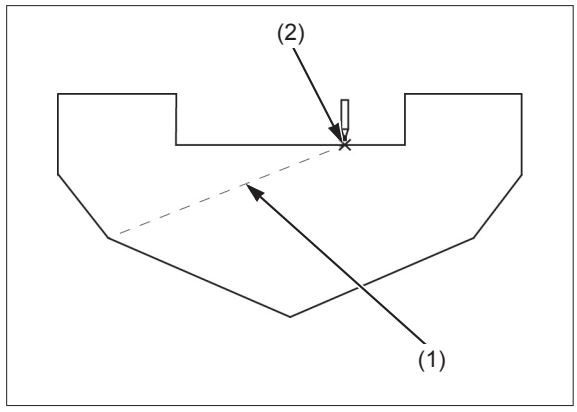


BOAT TRANSOM CENTER LINE

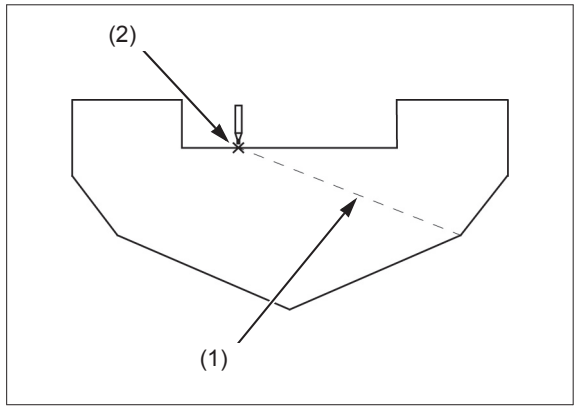
Measure across the transom to determine the transom center line and draw a vertical line. On a "V" bottom boat, the vertical line should pass through the keel.

Use a pencil and tape (1) measure to locate center line.

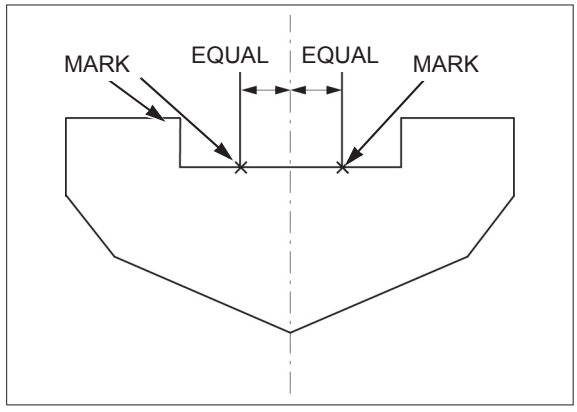
Put one end of the tape measure on a chine and place the other end on the upper edge of the transom, somewhere past the "visual" center. Place a mark (2) on the transom and record the distance measured.



Use a pencil and tape (1) measure the same distance from the opposite chine and make a mark (2).

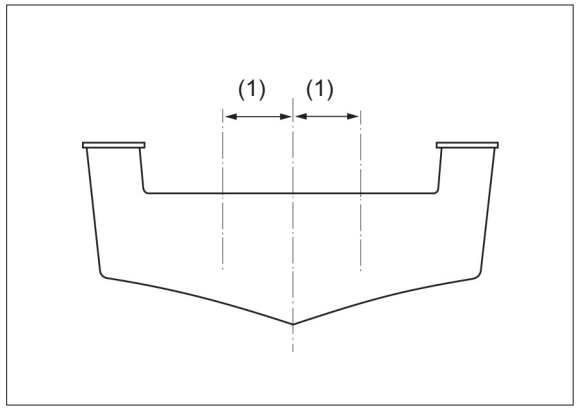


Measure the distance between the two marks and place a third mark halfway between them. The line connecting the third mark with the keel is the center line.



If dual outboard motors are to be installed, mark transom at a minimum of 330 mm (13 in) from center line (1).

Before drilling the holes for installation of the outboard motors, set the outboard motors on the respective center lines and check whether the boat is well-balanced. If a boat is out of balance, adjust by sliding the outboard motor to the adequate position.



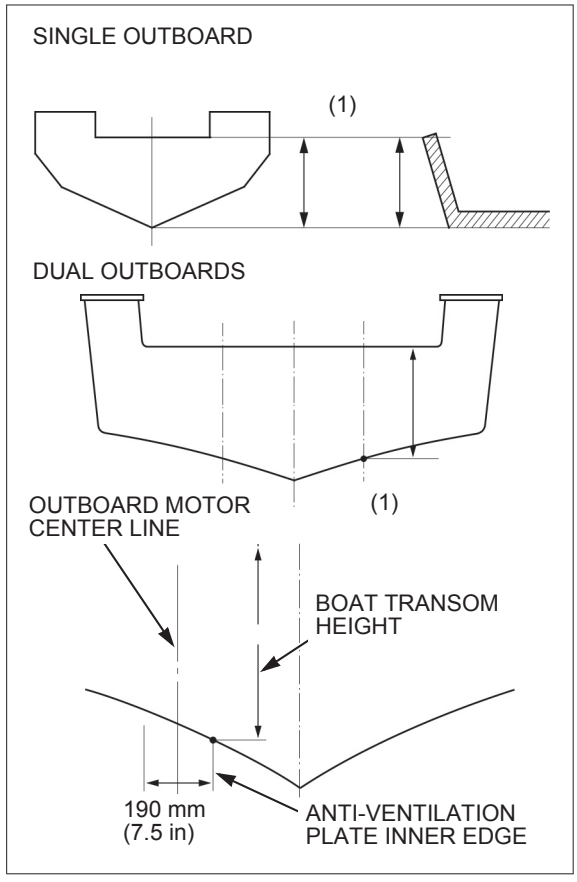
INSTALLATION HEIGHT CHECK

Optimum outboard motor installation height varies with boat type and bottom shape. Contact the boat manufacture for any special recommendations that are unique to a specific model of boat.

- If the outboard motor is installed too low
  – The boat will squat and be hard to plane.
  – The boat high-speed stability will be reduced.
  – The boat will tend to porpoise.
- If the outboard motor is installed too high
  – Cavitation may occur when making a turn, which prevents the boat from smooth cruising.

Measure the boat transom height (1).

On "V" bottom boats, measure the transom height which is the distance from the top edge of the boat transom to the point at which the vertical line passing the inner edge of the anti-ventilation plate intersects with the boat bottom.



Calculate the outboard shaft length requirement. Match the appropriate outboard shaft length to your boat transom height.

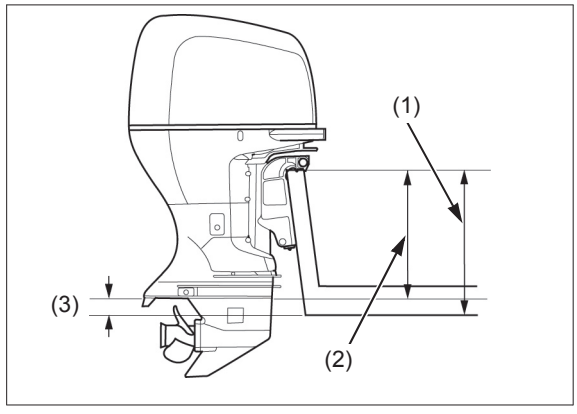
Outboard Motor Transom Height (1)

Long:	**508 mm (20 in)**
Extra long:	**635 mm (25 in)**
Extra-extra long:	**762 mm (30 in)**

Workable Boat Transom Height (2)

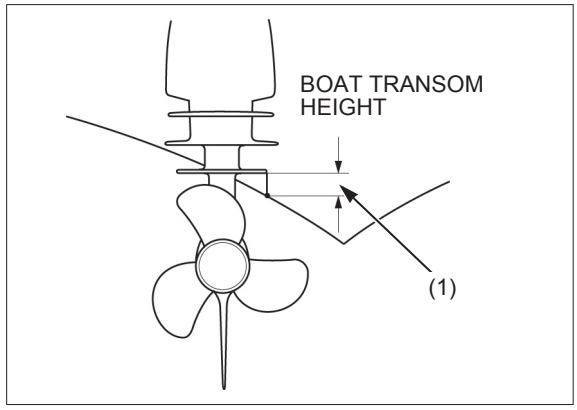
Long:	**483 – 508 mm (19 – 20 in)**
Extra long:	**610 – 635 mm (24 – 25 in)**
Extra-extra long:	**737 – 762 mm (29 – 30 in)**

To determine outboard shaft length requirement, subtract the motor transom height and the boat transom height/ the difference should be approximately 0 – 25 mm (0 – 1 in) which is the installation height range (3).



When mounting dual outboard motors on "V" bottom boats, the outboard installation height range is 0 – 25 mm (0 – 1 in (1)).

If the outboard installation height cannot be achieved, adjust boat transom height.



BOAT TRANSOM HEIGHT ADJUSTMENT

If the installation height is too low, or needs to be modified to a accommodate the width of the outboard motor(s), contact the boat's manufacturer and follow their recommendations for corrective action.
If mounting two outboard motors, be sure the installation height is identical for both.
Some boat manufacturer's may require different mounting height. Consult your boat manufacturer for specifics on your boat.

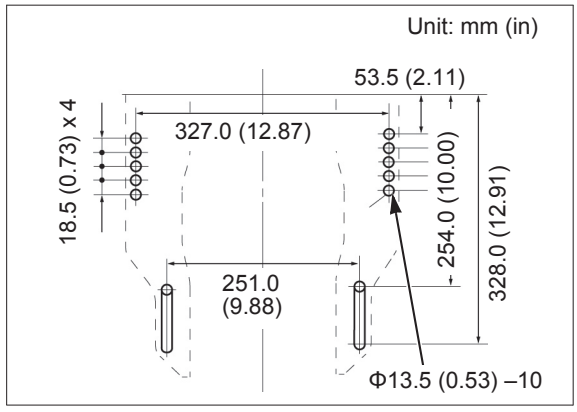
TRANSOM DRILLING

Verify no damage will occur when the motor mounting holes are drilled. Lock for any structural impediments such as bulkheads, braces, fuel cells, bilge pumps, or floor sections before drilling.

Ensure there is adequate space for the bolt, washer, and transom support plate (if applicable), to bear on a flat surface.

Wear safety glasses and drill four 1/2-inch holes in the transom.
Drill upper holes at least 25 mm (1 in) below transom top edge.
Drill the lower holes in the positions where the top edge of the long hole in the stern bracket comes in contact with the bolt.

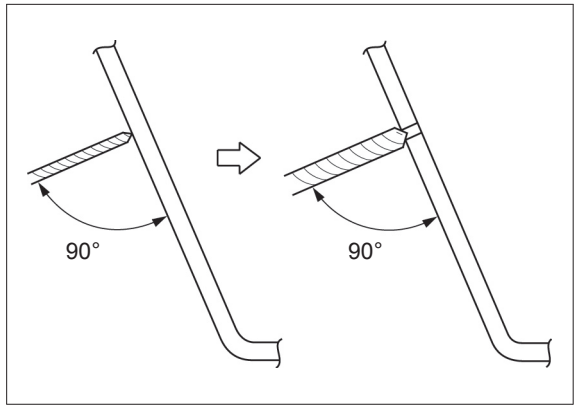
Mark the center point of the 10 drilling holes (i.e. 5 holes at the right and left sides of the transom respectively that are in the symmetrical position with regard to the center line of the outboard installation line).



Using a 3 – 5 mm (0.1 – 0.2 in) diameter drill, drill the pilot holes at the marked points at right angles with the boat transom surface. Then, drill the holes using the 13.5 mm (0.53 in) diameter drill.

With the outboard motor resting on the boat transom, verify the correct motor height. The outboard motor can be raised by using a lower set of mounting holes.

Use vacuum cleaner to clean up after drilling.

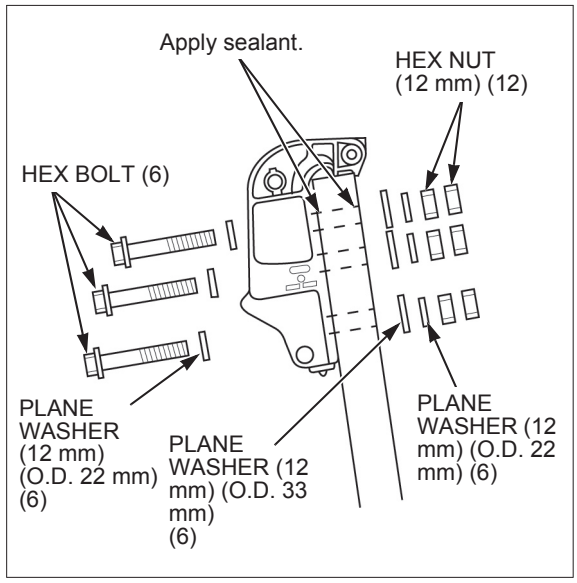


BOLTING MOTOR TO TRANSOM

With motor resting on the boat transom, verify correct motor height. Motor can be raised by using a lower set of mounting holes.

Apply silicone sealant or equivalent to the mounting bolt holes from both side as shown. Secure the motor by installing the bolts from the motor side. Tighten the HEX nuts. The bolts must have the sufficient thread length to tighten down and have at least two or three threads past the end of the HEX nut.

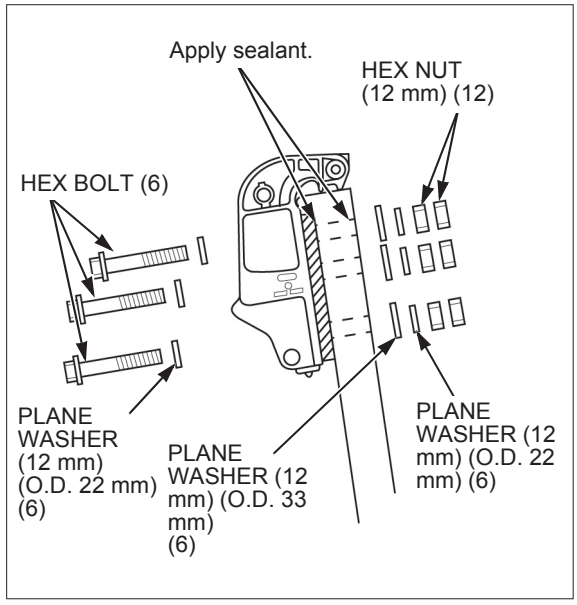
TORQUE: 54 N•m (5.5 kgf•m, 40 lbf•ft)



If the molding of the transom upper edge interferes with the outboard stern bracket, add the plate or reconditioning the bump and install the outboard stern bracket to the boat transom securely.

NOTICE

Using an air impact tool to tighten or loosen the transom bolts can generate enough heat to damage the bolt threads. The air impact tool can also produce enough tightening torque to damage the boat transom.

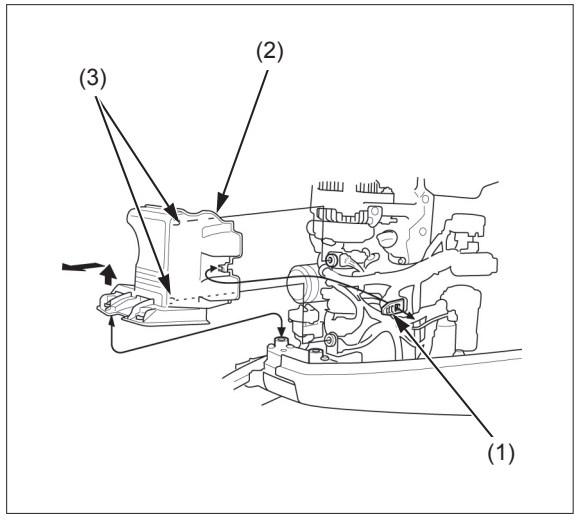


CABLE/ELECTRICAL CONNECTIONS (motor side)

ELECTRIC PARTS COVER REMOVAL (BF175A/ BF200A/BF225A)

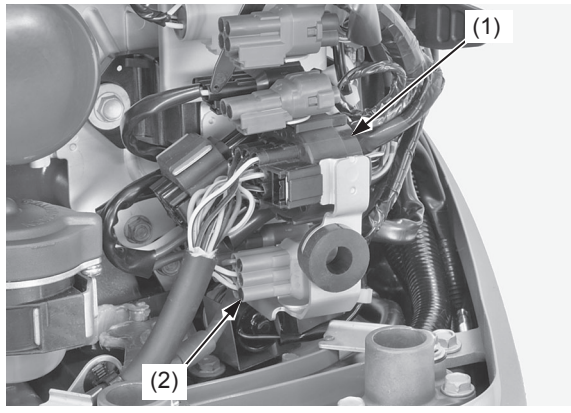
Remove the rubber band (1) from the electric parts cover (2).

Pull the upper section of the electric parts cover toward you lightly, then lift up the lower section of the electric parts cover lightly and pull the cover horizontally. Take care not to break the plastic knobs (3) on the cover.



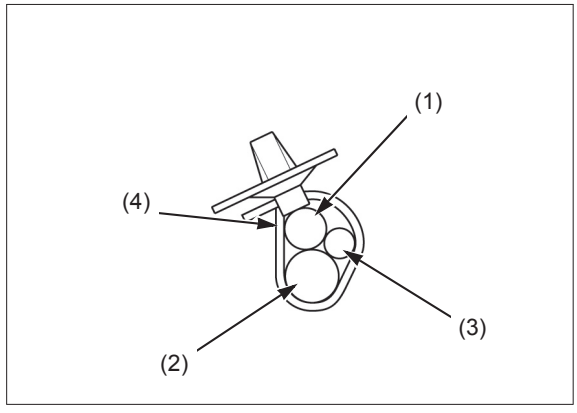
CABLE/WIRE ROUTING (BF175A/BF200A/BF225A)

Connect the main wire harness 14P connector (1) to the switch panel wire harness connector and the 6P connector (2) to the indicator panel wire harness connector, and then attach them to the connectors holder.

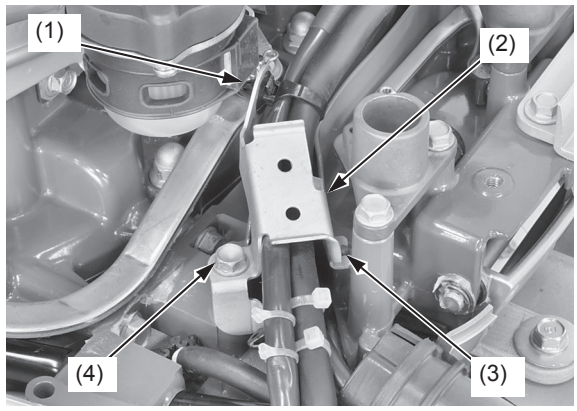


Set the switch panel wire harness to the crankcase groove.

Secure the indicator panel wire harness (1), switch panel wire harness (2) and interface cable (Optional equipment) (3) to the wire harness band (4).

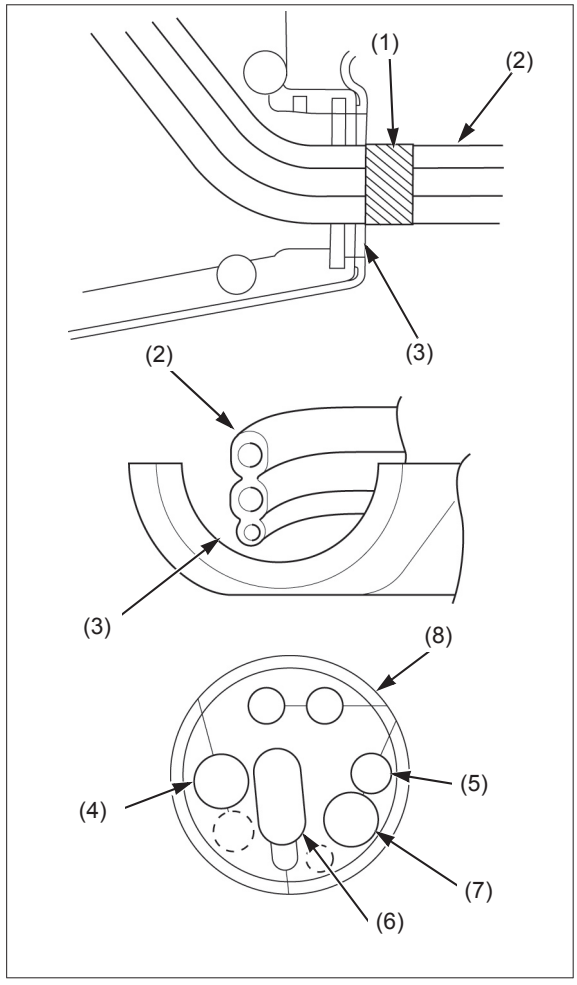


Set the wire harness clip (1) to the harness bracket (2).
Install the harness bracket by aligning its cutout (3) with the crankcase boss.
Install and tighten the bolt (4).

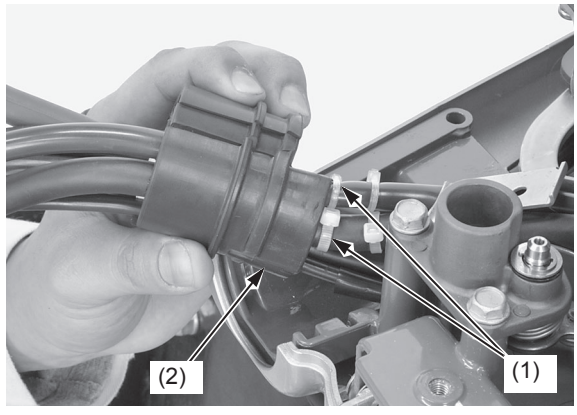


Make sure the white mark (1) on the starter cable (2) aligns with the edge of the front cover bracket (3).

Pass the fuel tube (4), indicator panel wire harness (5), starter cables (6), switch panel wire harness (7) through the under case grommet A (8).

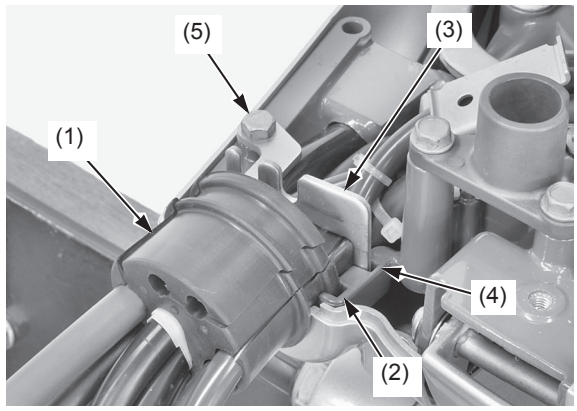


Position tie-wrap bands (1) on the switch panel wire harness and indicator wire harness at the inside of the under case grommet A (2).

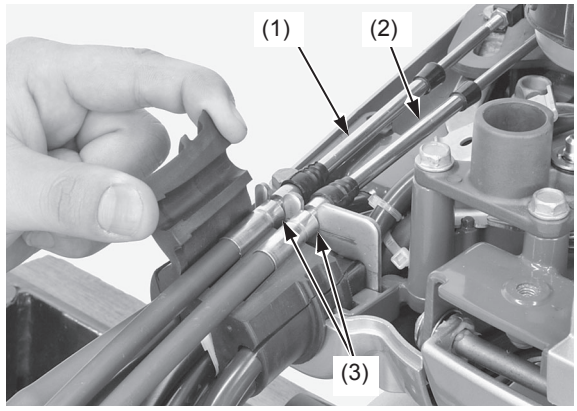


Install under case grommet A (1) to the groove (2) of the front cover bracket as shown.

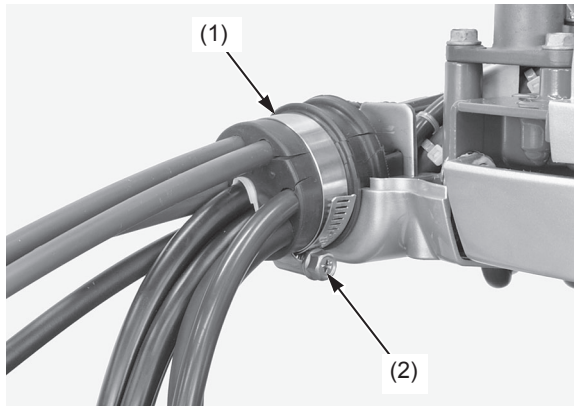
Install the remote control cable plate (3) to the groove (4) of the front cover bracket and tighten the bolt (5).



Install the shift control cable (1) and throttle control cable (2) by aligning their grooves (3) with the grooves in the cable plate.
Put the remote control cables in under case grommet A.



Set the grommet band (1) and tighten the screw (2). Make sure the fuel tube is not pinched by the grommet.

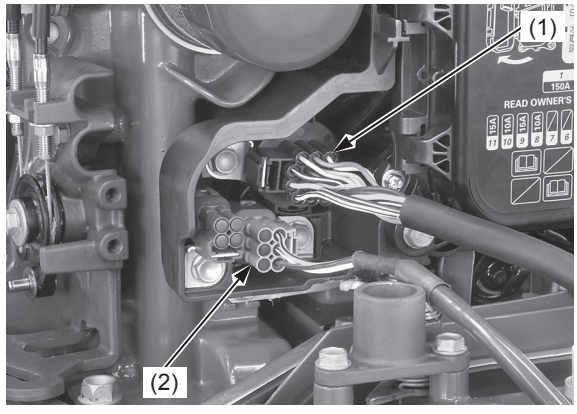


CABLE/WIRE ROUTING (BF250A)

NOTE:

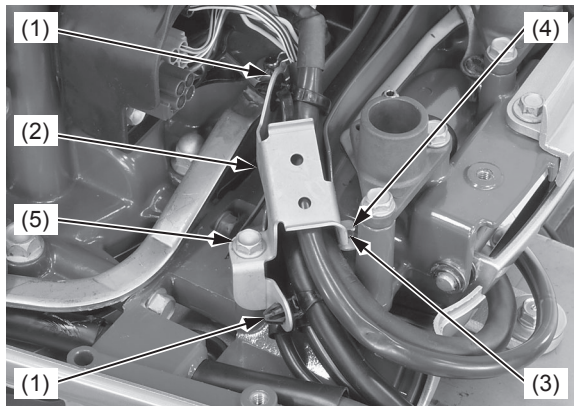
- Be careful not to press the fuel tube A with the under case grommet A.

Connect the switch panel wire harness connector 14P connector (1) and indicator panel wire harness 6P connector (2), and then attach them to the connector holders.



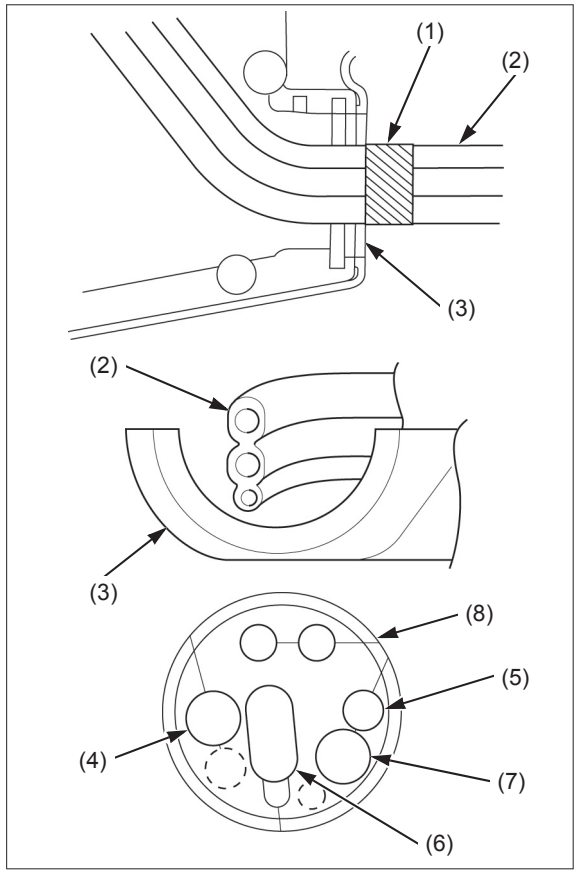
Set the switch panel wire harness into the crankcase groove.

Set the two wire harness clips (1) to the harness bracket (2).
Install the harness bracket by aligning its cutout (3) with the crankcase boss (4).
Install and tighten the bolt (6 x 14 mm) (5).



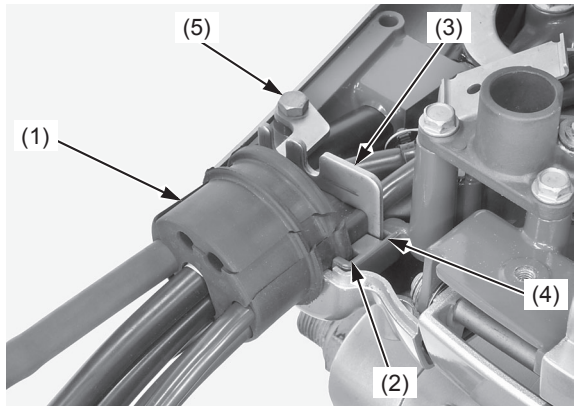
Make sure the white mark (1) on the starter cable (2) aligns with the edge of the front cover bracket (3).

Pass the fuel tube A (4), indicator panel wire harness (5), starter cables (6) and switch panel wire harness (7) through the under case grommet A (8).

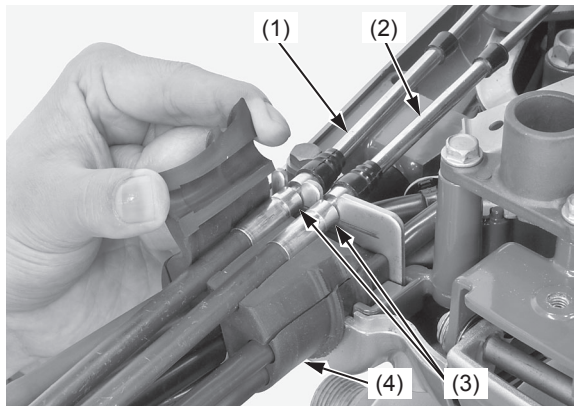


Install the under case grommet A (1) to the groove (2) of the front cover bracket as shown.

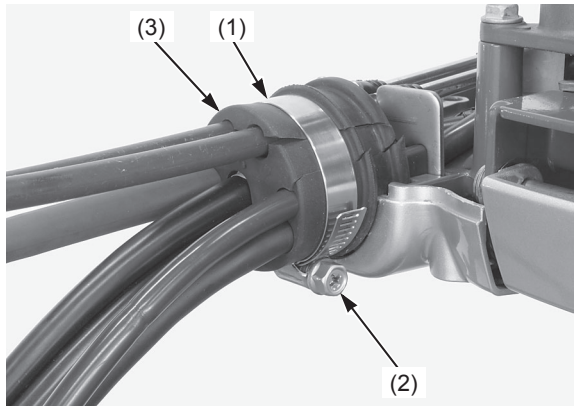
Install the remote control cable plate (3) to the groove (4) of the front cover bracket and tighten the bolt (6 x 16 mm) (5).



Install the shift control cable (1) and throttle control cable (2) by aligning their grooves (3) with the grooves in the cable plate.
Put the remote control cables in under case grommet A (4).



Set the grommet band (1) and tighten the screw (2). Make sure the fuel tube A is not pinched by the under case grommet A (3).



SHIFT CABLE CONNECTION

- Before connecting the shift control cable, check that the cable is connected to the remote control box side properly.

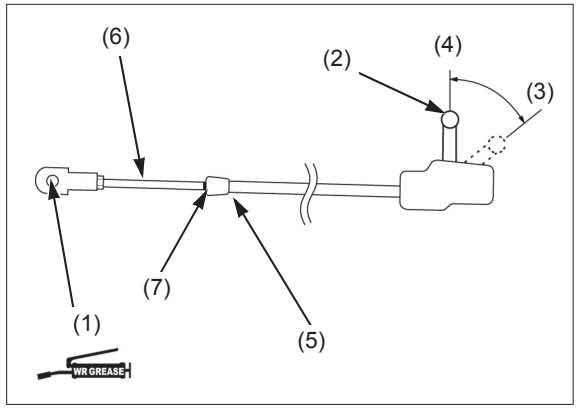
1. Install the shift pivot (1) to the shift control cable.

   Apply marine grease to the mating surface of the shift pivot.

2. Move the remote control lever (2) fully to the "F" (Forward) side (3).

   Return the lever to the "N" (Neutral) position (4) slowly.

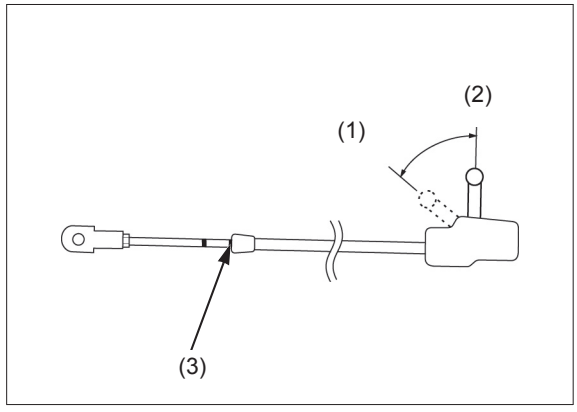
3. With the lever returned to the "N" (Neutral) position, make a mark at the cable outer seal end (5) on the inner cable (6) [Mark (A) (7)].



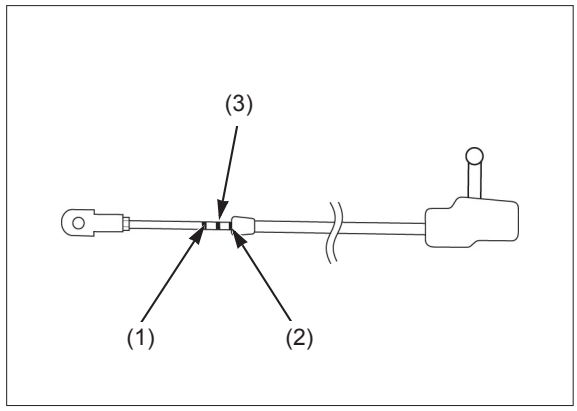
4. Move the remote control lever fully to the "R" (Reverse) side (1).

   Return the lever to the "N" (Neutral) position (2) slowly.

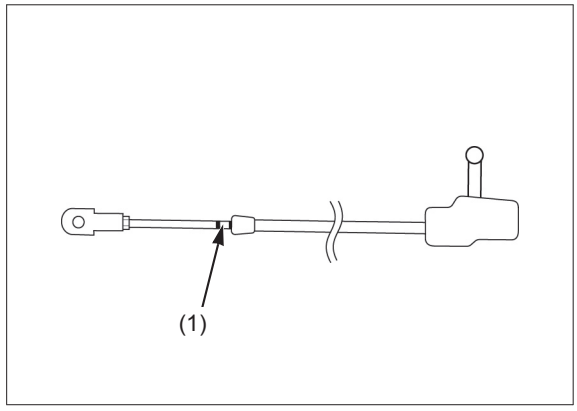
5. With the lever returned to the "N" (Neutral) position, make a mark on the cable outer seal end of the inner cable [Mark (B) (3)].



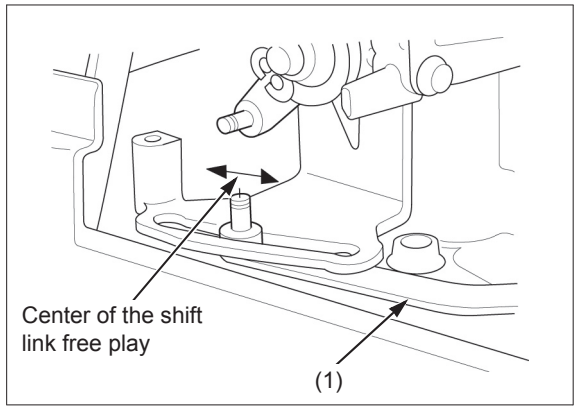
6. Make a mark at the mid point between the mark (A) (1) and mark (B) (2) on the inner cable [Mark (C) (3)].



7. Align mark (C) (1) with the cable outer seal end.



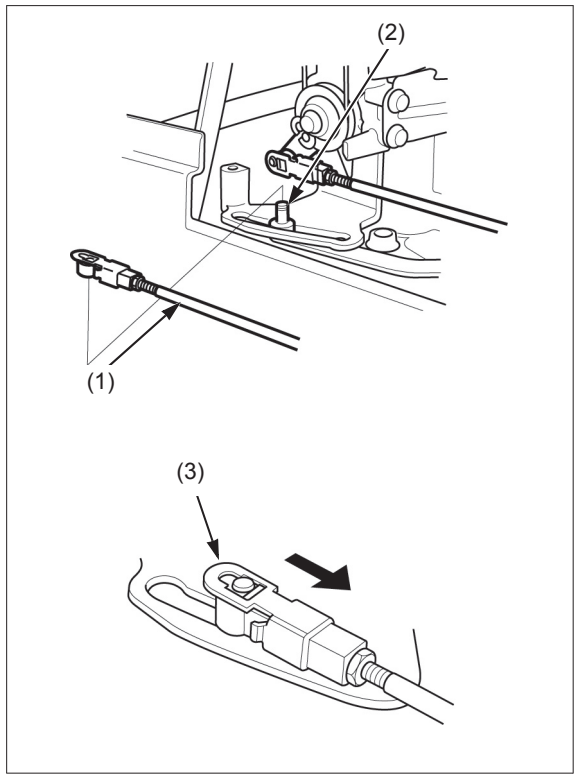
8. Push on the shift link end lightly and check for play. If there is play in the shift link, set the link at the center of the play.



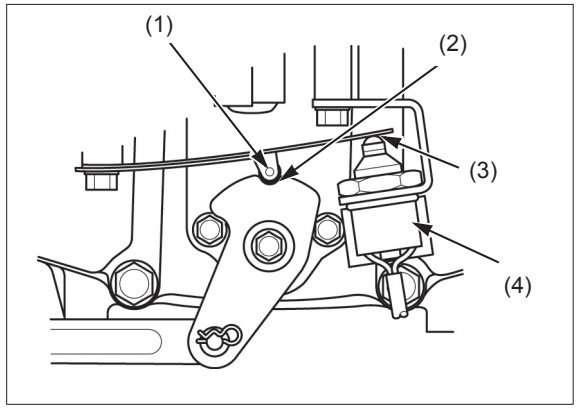
9. With the shift side cable in the condition described in step 7, connect the shift control cable (1) to the shift link (2) while turning the shift pivot so the shift pivot sets on the shift link smoothly.

   Take care not to move mark (C) and outer seal end out of alignment. Hold the shift link at the center of the play.

   Lock the lock plate (3) by sliding it to the groove of the shift link.

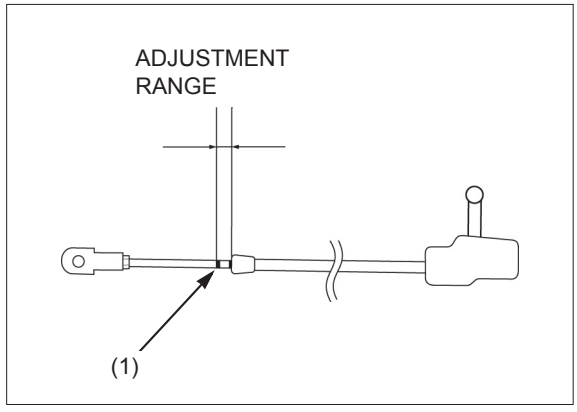


10. Make sure the detent roller (1) is in the shift arm groove (2) and detent spring tip (3) to the neutral switch (4) pushed at shift to the neutral position.



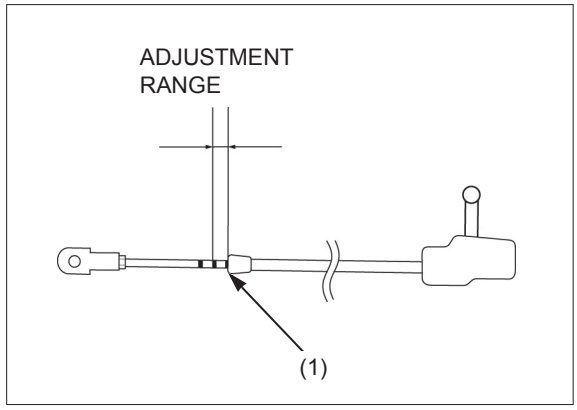
11. After connecting the cable, move the remote control lever back and forth and check for proper shifting.
    If it is hard to put the remote control lever in the "F" (Forward) or "R" (Reverse) position with the engine stopped, shift the gear while turning the propeller or propeller shaft. Do not shift the gear with force, or damage to the shift system can result.

12. If the gear is not in neutral by moving the remote control lever from the "F" (Forward) to the "N" (Neutral) position, remove the shift side cable and move the inner cable toward the mark (A) (1). Repeat the procedure from the step 8.



13.If the gear is not in neutral by moving the remote control lever from the "R" (Reverse) to the "N" (Neutral) position, remove the shift side cable and move the inner cable toward the mark (B) (1). Repeat the procedure from the step 8.

14.After adjustment, check operation of each lever. If the gear is not in neutral securely, perform steps 12 or 13 again.



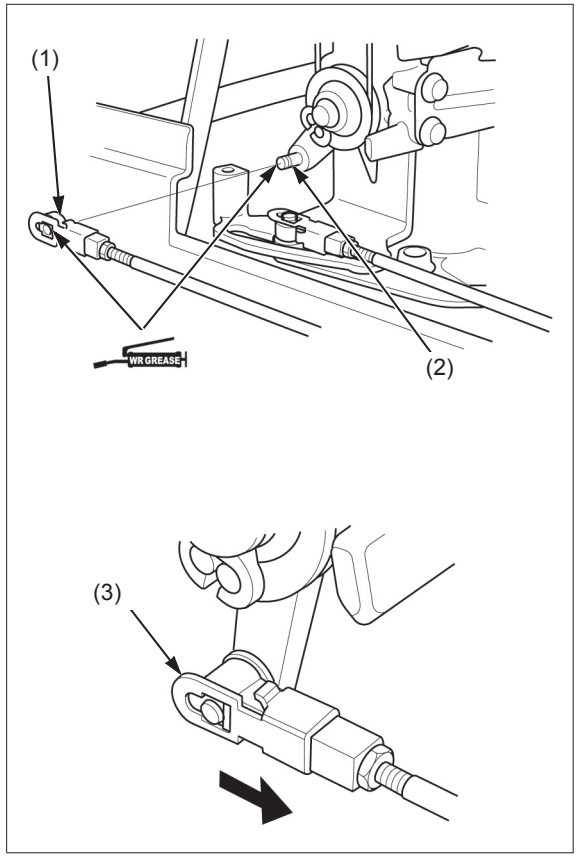
THROTTLE CABLE CONNECTION

- Before connecting the throttle control cable, check that the cable is connected to the remote control box side properly.

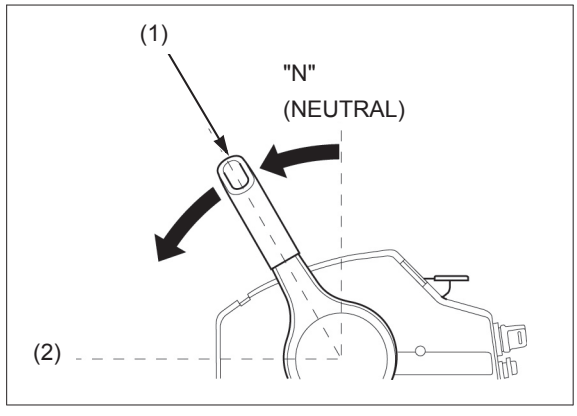
1. Install the throttle pivot (1) to the shift control cable.

   Apply marine grease to the mating surface of the throttle arm pivot.

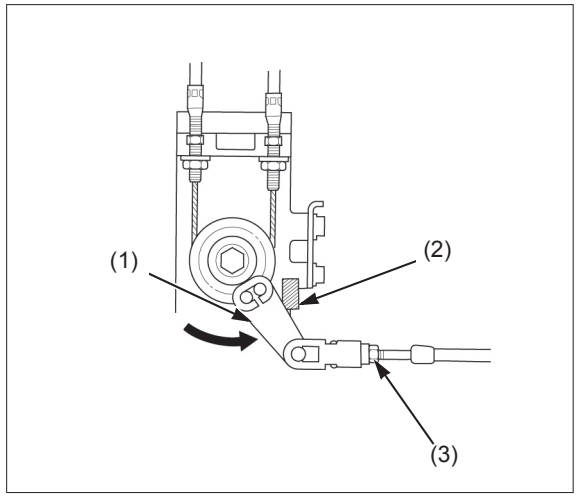
   Install the throttle control cable pivot to the throttle arm (2).
   Lock the lock plate (3) by sliding it to the groove of the shift link.



2. Move the remote control lever (1) to the full throttle position (2).



3. Make sure that the throttle arm (1) contacts the throttle arm stopper (2).
   Adjust by turning the shift pivot if necessary.
4. After adjustment, recheck and tighten the lock nut (3).



FRONT SEPARATOR COVER

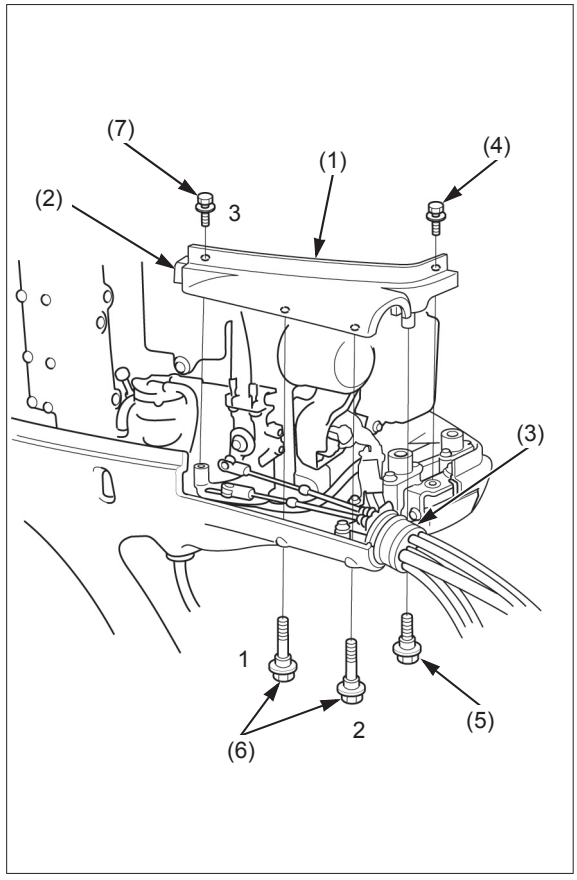
Install the front separate cover (1) by sliding the tab (2) into the engine under cover.
Make sure that under case grommet A (3) is positioned in the grooves of the engine under cover and front separate cover.

Install the bolt/washers (4) on the front side and loosely tighten it.
Install and loosely tighten the special bolt (5) until the shoulder of the bolt is in the hole of the engine under cover.

Install and tighten the special bolts (6) and bolt/washer (7) in the numbered order.

- Keep the remote control cable level.

Tighten the bolt/washer (4) and special bolt (5).



ELECTRIC PARTS COVER INSTALLATION (BF175A/ BF200A/BF225A)

Spray the round rubber grommets (1) with silicone spray so the plastic knobs (2) will easily align with the rubber grommets.

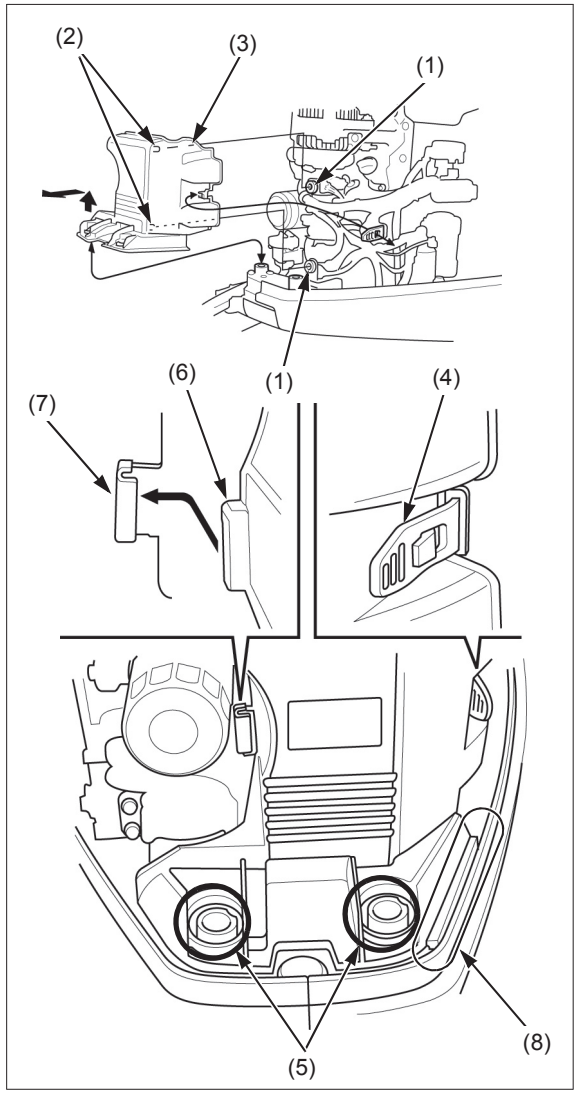
Install the electric parts cover (3) and secure with the rubber band (4). Make sure the electric parts cover is properly aligned with the engine cover mounting bosses (5).

- Push on the left side of the cover lightly and hang the tab (6) of the cover on the hook (7) of the left side.
- Install the right lower section of the electric parts cover into the inner side of the engine under cover (8).
- To install the cover securely, make sure the remote control cable, switch panel wire harness, and the indicator wire harness are installed securely.

NOTICE

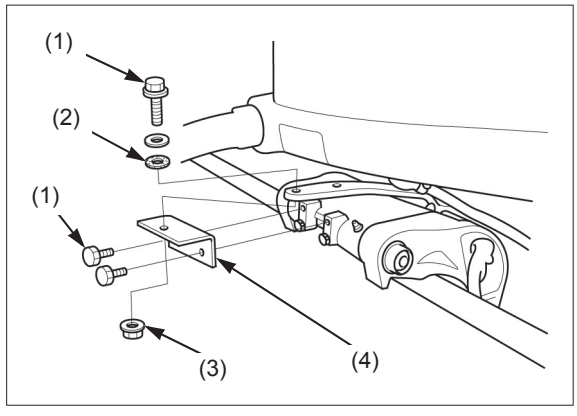
- *If the electric parts cover is pushed hard and the plastic knobs are not aligned with the grommets, the plastic knobs may break.*
- *The electric parts cover must be installed correctly to allow the engine cover to be inserted into the engine cover mounting bosses.*

Install the engine cover.



BRACKET REMOVAL

After installing the cables and wire harnesses to the motor, remove the bolts (1), washer (2), nut (3) and the bracket (4) from the steering arm.



BATTERY (not included)

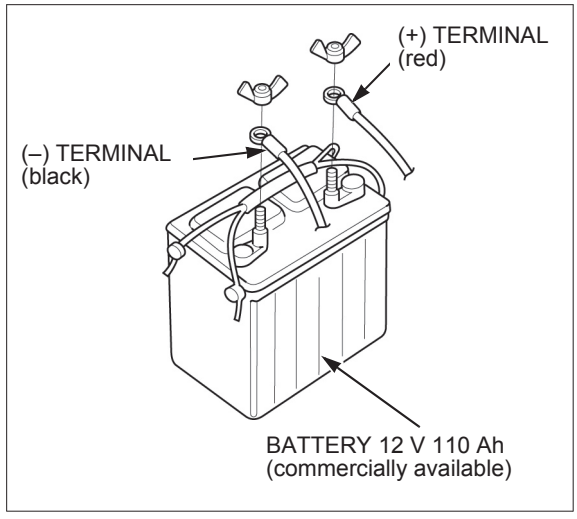
Minimum requirements:

12 V – 110 Ah marine cranking battery

If boat is equipped with dual outboard motors, two batteries must be installed, one for each motor.

In the event that a battery failure makes it necessary to temporarily use one battery for two motors, disconnect the engine ground wire from between the two switch panel.

- Install the battery in the correct size corrosion-resistant battery box, in a dry, well-ventilated location protected from water and direct sunlight.
- Connect the positive (+) battery cable first, then connect the negative (-) battery cable. Tighten cable nuts securely.
- Coat the battery terminal ends with the non-conductive grease. Cover the battery positive (+) terminal.
- Secure the corrosion-resistant battery box properly to the boat. To keep potential sparks away from the fuel tank, do not secure or place battery near the fuel tank.



PROPELLER

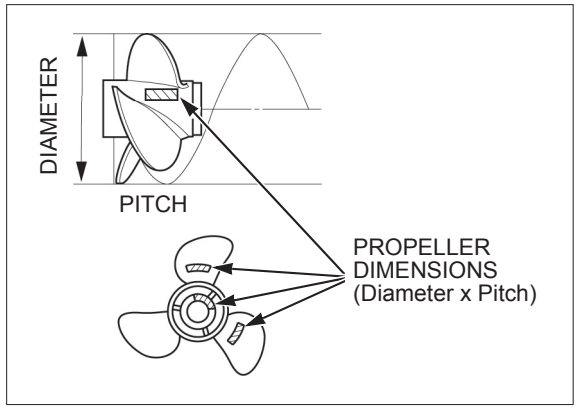
Propeller Selection

Pitch **Advanced Distance During One Turn (Apparent Advanced Distance)**

Pitch Ratio **P/D**
P: Pitch (mm)
D: Outer Diameter of Propeller

Slip Ratio **(A - B) x 100 / A**
A: Visual Advanced Distance
B: Measured Distance

During running; the actually advanced distance is reduced by about 10 – 15% due to propeller display pitch.



Recommended full throttle engine speed range:

BF175A: 5,000 - 6,000 rpm
BF200A: 5,000 - 6,000 rpm
BF225A: 5,000 - 6,000 rpm
BF250A: 5,300 - 6,300 rpm

Engine speed varies with propeller size and boat condition.
A propeller must be selected to adjust maximum engine speed to the recommended engine speed range.
Using the wrong propeller can cause motor damage.
The proper propeller will assure powerful acceleration, top speed, good fuel economy, cruising comfort, and engine service life.

Propeller Selection Precaution

- Outboard motor must be installed vertically in relation to boat bottom. Set moderate trim angle, and adjust power trim angle to lowest setting.
- Set trim tab, so boat will run in a straight line.
- Protect propeller from foreign objects, check regularly for damage, and/or deformation, and aquatic plants wrapped around propeller hub.
- Keep bottom clean of shells, algae froth and dirt.
  These will cause a significant drop in top speed.
- When doing propeller checks, select a calm day with little waves action.
- Avoid strong winds. Wind speed should be less than 15 km/h (10 miles/h).
- The boat should carry its average load (crew, load arrangement, ballast).

Select the correct propeller so that full throttle engine speed is within the recommended range.

- If the engine rpm is under the recommended rpm range, lower the propeller pitch by one size (1 to 2 inches) or more as needed.
- If the engine rpm is over the recommended rpm range, select a propeller with a pitch one size larger or as needed.
- If the following conditions exist, acceleration will improve and outboard motor service life will increase by lowering the propeller pitch.
  – Heavy loads such as crew, load, equipment, water skiing, etc;
  – High temperatures and high humidity conditions;
  – When operating at high altitude;
  – When boat bottom needs cleaning;
  – When area around gear case is obstructed;

To increase motor service life and ensure safe navigation, do not use full throttle for extended periods, but run the motor at 70 to 80% of full throttle.

- If full throttle engine rpm exceeds the recommended range, it can cause increased vibration, noise, reduced boat performance, and possible engine wear damage.
- If full throttle engine rpm is below the recommended range, it indicates that the engine is being overloaded.

Propeller Selection Chart

BF175A

Propeller Type	Propeller Size Dia. x pitch (in)	Speed [km/h]		Speed within recommended engine speed (km/h)
		5,000 rpm	6,000 rpm	30 40 50 60 70 80 90 100 110 120
AL	15 - 1/2 x 13	37	62	
	15 - 1/4 x 15	43	69	
	15 x 17	46	75	
	14 - 3/4 x 19	47	80	
	14 - 1/2 x 21	59	94	
	14 - 1/4 x 23	66	98	
SUS	14 - 1/2 x 15	38	66	
	14 - 1/4 x 17	46	76	
	14 x 19	53	85	
	14 x 21	65	96	
	14 - 1/2 x 23	71	102	
	14 x 25	81	114	

AL: Aluminum SUS: Stainless Steel

BF200A

Propeller Type	Propeller Size Dia. x pitch (in)	Speed [km/h]		Speed within recommended engine speed (km/h)
		5,000 rpm	6,000 rpm	30 40 50 60 70 80 90 100 110 120
AL	15 - 1/2 x 13	37	62	
	15 - 1/4 x 15	43	69	
	15 x 17	46	75	
	14 - 3/4 x 19	47	80	
	14 - 1/2 x 21	59	94	
	14 - 1/4 x 23	66	98	
SUS	14 - 1/2 x 15	38	66	
	14 - 1/4 x 17	46	76	
	14 x 19	53	85	
	14 x 21	65	96	
	14 - 1/2 x 23	71	102	
	14 x 25	81	114	

AL: Aluminum SUS: Stainless Steel

BF225A

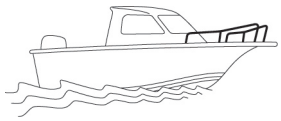
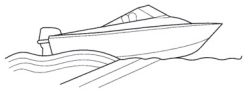
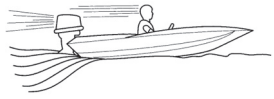
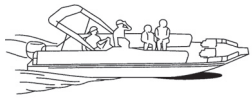
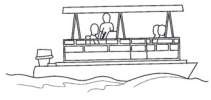
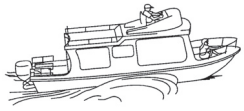
Propeller Type	Propeller Size Dia. x pitch (in)	Speed [km/h]		Speed within recommended engine speed (km/h)
		5,000 rpm	6,000 rpm	30 40 50 60 70 80 90 100 110 120
AL	15 - 1/2 x 13	37	59	
	15 - 1/4 x 15	42	66	
	15 x 17	45	71	
	14 - 3/4 x 19	46	76	
	14 - 1/2 x 21	59	89	
	14 - 1/4 x 23	65	95	
SUS	14 - 1/2 x 15	38	62	
	14 - 1/4 x 17	45	72	
	14 x 19	52	81	
	14 x 21	64	93	
	14 - 1/2 x 23	70	99	
	14 x 25	80	110	

AL: Aluminum SUS: Stainless Steel

BF250A (Propeller Type: Stainless Steel only)

Propeller Size Dia. x pitch (in)	Speed [km/h]		Speed within recommended engine speed (km/h)
	5,300 rpm	6,300 rpm	30 40 50 60 70 80 90 100 110 120 130 140
15 - 3/4 x 15	41	65	
15 - 1/2 x 17	56	79	
15 - 1/4 x 19	68	92	
15 x 21	79	104	
14 - 3/4 x 23	89	116	
14 - 1/2 x 25	99	127	
14 - 1/2 x 27	109	139	

Boat Type and Applicable Size (Length and Weight)

Boat Type	Hull Shape (Example)	Overall length (ft)	Weight (kg) [lbs]	Example						
				Outboard motor	Overall length [ft]	Weight [kg]	Recommended full throttle speed [km/h]			
							175 A	200 A	225 A	250 A
Fishing boat (off shore)		17 – 35	545 – 4,765 [1,202 – 10,505]	Single	23	1,170	60	60	64	66
					23	1,405	65	65	68	71
					26	1,200	72	72	76	79
					26	2,540	57	57	60	62
				Dual	28	1,950	87	87	92	96
					31	2,450	85	85	90	103
Bass boat		17 – 21	365 – 955 [805 – 2,105]	Single	20	800	96	96	101	106
					20	450	103	103	108	113
					20	545	100	100	105	110
Center console		22 – 26	545 – 3,720 [1,202 – 8,201]	Single	23	1,125	69	69	73	76
					22	785	73	73	78	81
					24	1,200	69	69	73	76
				Dual	25	2,050	81	81	86	89
					27	1,680	89	89	95	98
Runabout		20 – 24	410 – 1,860 [904 – 4,101]	Single	22	910	71	71	75	78
					23	1,860	59	59	63	65
					–	–	–	–	–	–
Water Ski		18 – 20	500 – 1,360 [1,102 – 2,998]	Single	20	545	75	75	80	83
					20	815	69	69	73	76
					–	–	–	–	–	–
Deck boat		21 – 25	635 – 1,765 [1,400 – 3,891]	Single	21	1,110	59	59	62	65
					22	815	65	65	69	72
					–	–	–	–	–	–
Pontoon boat		18 – 30	815 – 1,180 [1,797 – 2,601]	Single	30	1,180	49	49	52	54
					26	1,180	45	45	48	50
					–	–	–	–	–	–
House boat		23 – 65	1,680 – 14,500 [3,704 – 31,967]	Single	23	1,680	39	39	41	43
					50	8,300	31	31	32	34
					–	–	–	–	–	–

Propeller type (STD: STANDARD, CR: COUNTER ROTATION)

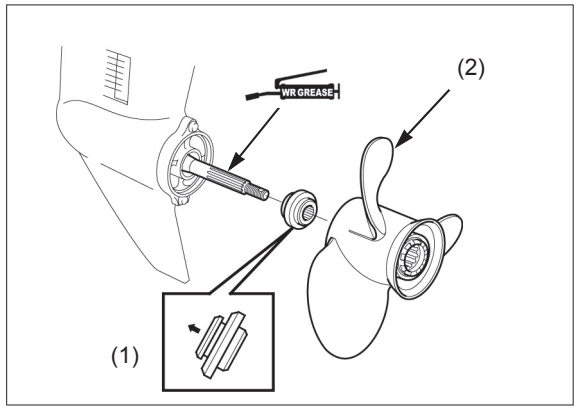
BF175A/BF200A/BF225A						BF250A		
Aluminum propeller			Stainless steel propeller			Stainless steel propeller		
Propeller size Dia. x pitch (in)	Material	Rotation	Propeller sizeDia. x pitch (in)	Material	Rotation	Propeller sizeDia. x pitch (in)	Material	Rotation
15 – 1/2 x 13	AL	STD	14 – 1/2 x 15	SUS	STD&CR	15 – 3/4 x 15	SUS	STD&CR
15 – 1/4 x 15	AL	STD	14 – 1/4 x 17	SUS	STD&CR	15 – 1/2 x 17	SUS	STD&CR
15 x 17	AL	STD	14 x 19	SUS	STD&CR	15 – 1/4 x 19	SUS	STD&CR
14 – 3/4 x 19	AL	STD	14 x 21	SUS	STD&CR	15 x 21	SUS	STD&CR
14 – 1/2 x 21	AL	STD	14 – 1/2 x 23	SUS	STD&CR	14 – 3/4 x 23	SUS	STD&CR
14 – 1/4 x 23	AL	STD	14 x 25	SUS	STD only	14 – 1/2 x 25	SUS	STD&CR
						14 – 1/2 x 27	SUS	STD&CR

Propeller Installation

- Disconnect the battery cable terminal to prevent the engine from starting accidentally.
- Wear heavy gloves to protect your hands from sharp or nicked propeller blades.

Apply marine grease to the propeller shaft.

Install the thrust washer (1) and the propeller (Not included) (2) on the propeller shaft.



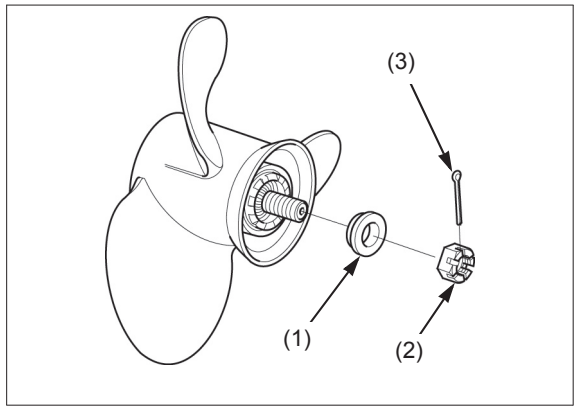
Install the propeller washer (1) and castle nut (18 mm) (2).

Tighten the castle nut (18 mm) and secure with the split pin (3).

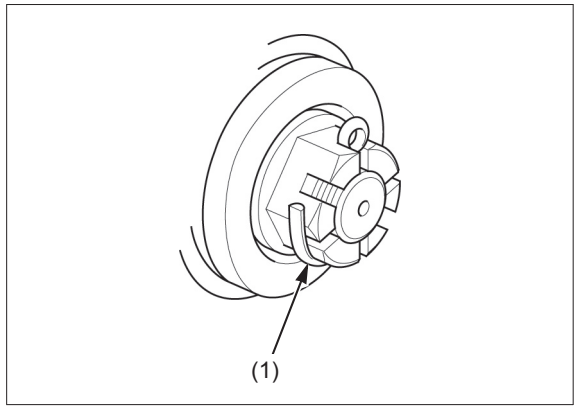
TORQUE: 1 N•m (0.1 kgf•m, 0.7 lbf•ft)

If the split pin does not align with the hole in the propeller shaft, adjust by turning the nut in the tightening direction. Do not exceed the maximum torque.

Maximum tightening torque:
44.1 N•m (4.5 kgf•m, 32 lbf•ft)



After installation, bend the split pin (1) ends as shown to secure.
If the commercially available parts are used, select the stainless steel parts.



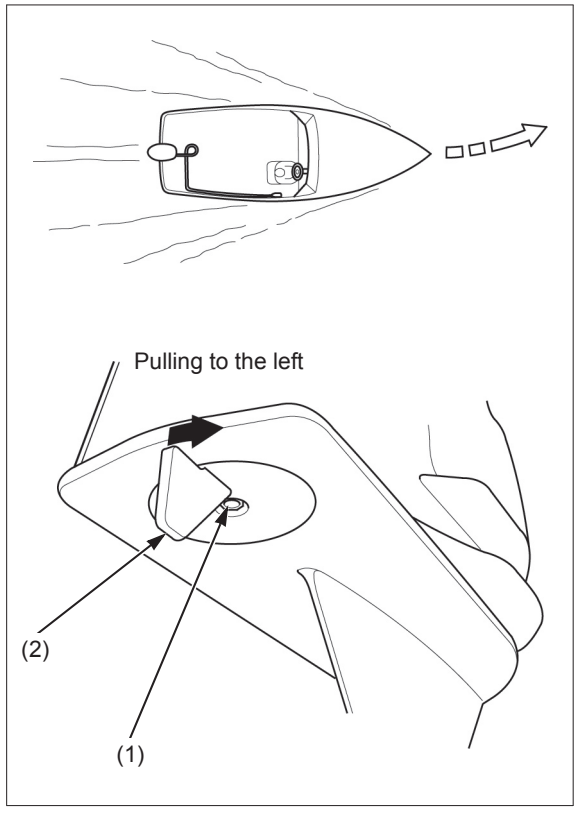
ADJUSTMENT AFTER INSTALLATION

Trim Tab Adjustment

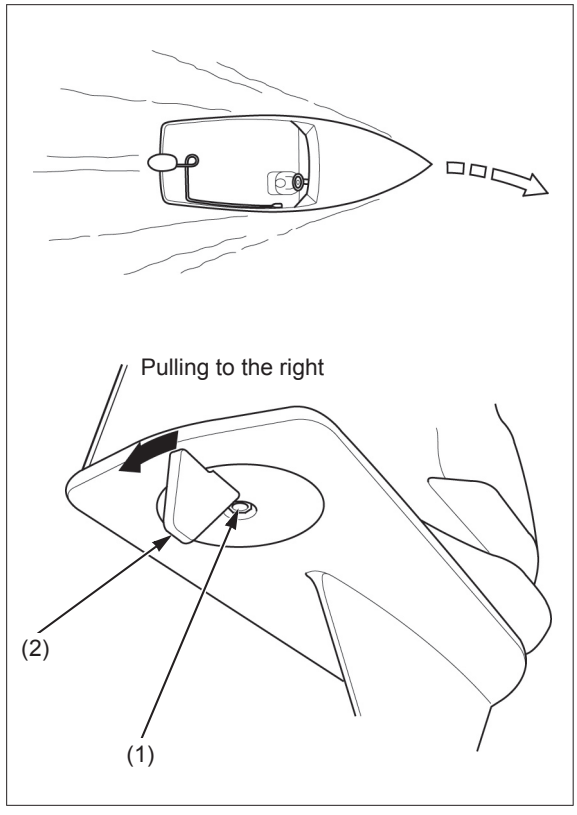
Single Motor

After the engine break-in, run the boat at full speed and check to see if the boat pulls to the left or right. Adjust the trim tab as required to ensure good and straight running characteristics.

- If the boat pulls to the left:
  Loosen the trim tab lock bolt (1), and move the trim tab trailing edge (2) to the left.



- If the boat pulls to the right:
  Loosen the trim tab lock bolt (1), and move the trim tab trailing edge (2) to the right.



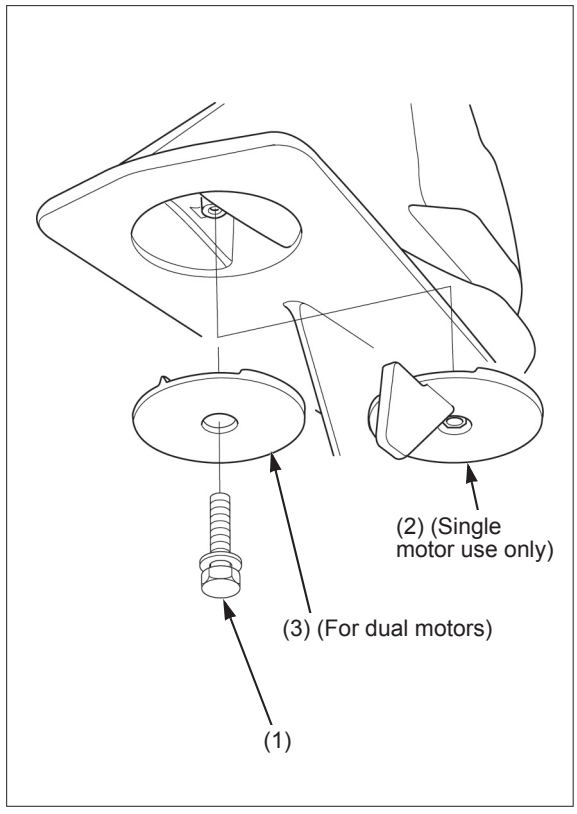
Dual Motors

Remove the trim tab lock bolt/washer (1) and trim tab (2) from the standard rotation outboard motor.

Replace the trim tab to the gear case cover (3) and install it with a trim tab lock bolt (10 x 32 mm hex bolt).

Tighten the bolt to the specified torque.

TORQUE: 34 N•m (3.5 kgf•m, 25 lbf•ft)



BREAK-IN PROCEDURE

Break-in period: 10 hours

Break-in operation allows the moving parts to wear-in evenly and thus ensures proper performance and longer outboard motor service life.

- First 15 minutes:
  Run the outboard motor at trolling speed. Use the minimum amount of throttle opening necessary to operate the boat at a safe trolling speed.
- Next 45 minutes:
  Run the outboard motor up to a maximum of 2,000 to 3,000 rpm or 10% to 30% throttle opening.
- Next 60 minutes:
  Run the outboard motor up to a maximum of 4,000 to 5,000 rpm or 50% to 80% throttle opening. Short bursts of full throttle are acceptable but do not operate the motor continuously at full throttle.
- Next 8 hours:
  Avoid continuous full throttle operation (100% throttle opening). Do not run the outboard motor at full throttle for more than 5 minutes at a time.

For boats that plane easily, bring the boat up on plane then reduce the throttle opening to the specified break-in settings called out above.

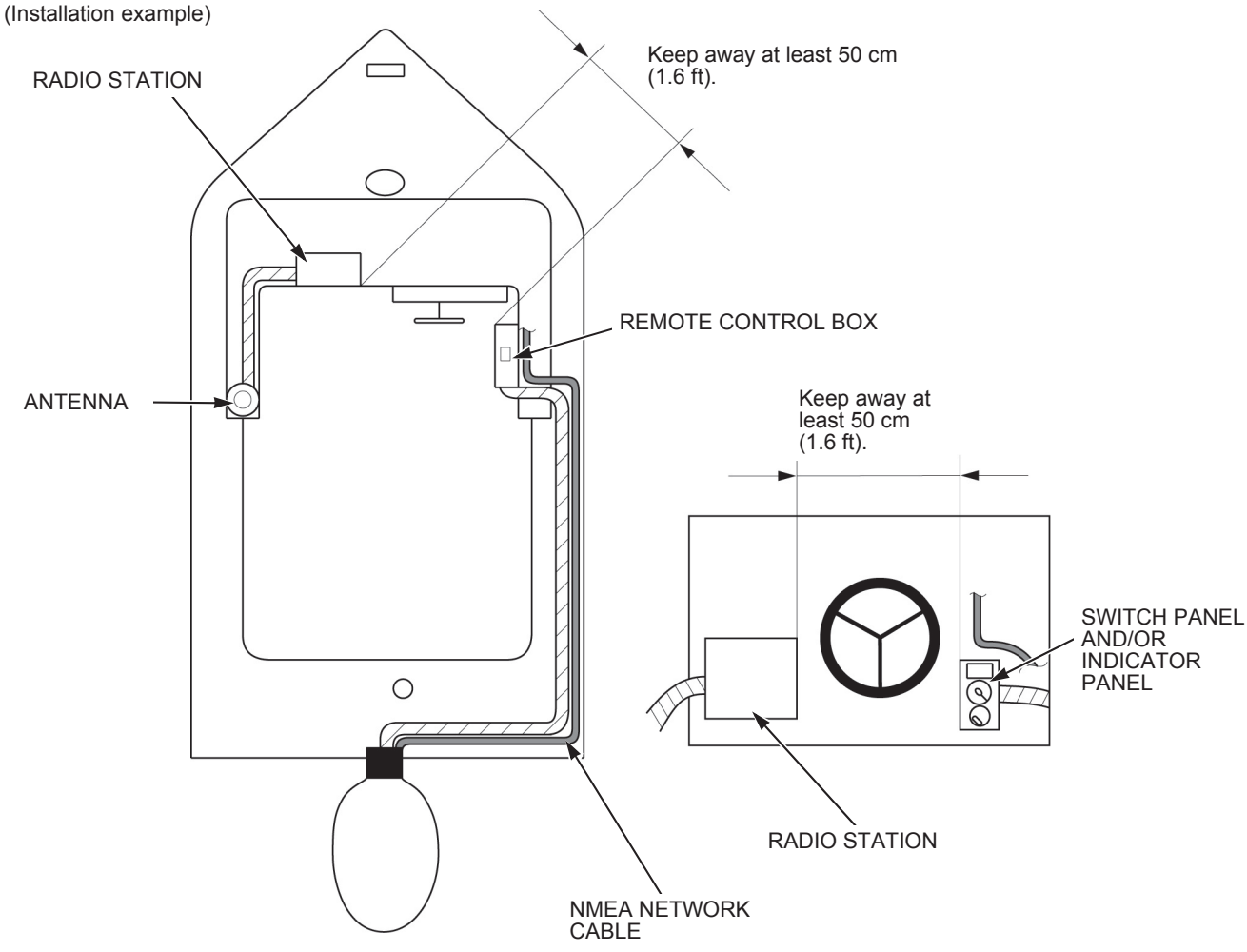
WHEN RADIO STATION/GPS MOUNTED ON THE BOAT

The ECM and its wires are designed so that they are not affected by the external jamming, but the ECM can function erroneously when it receives the extremely strong electric wave. Check the ECM for erroneous operation whenever a radio station or a navigation system is mounted on the boat. Observe the following instructions to prevent erroneous operation.

- Set the antenna and the radio station at least 50 cm (1.6 ft) or more away from the ECM, Remote control cable, remote control box, NMEA Interface cable or network cable.
- Avoid routing the antenna wire lead too long compared to the remote control cable, NMEA Interface cable or network cable.
- Do not install the radio station that does not conform with the laws and regulations concerned (10W or below).
- Set the GPS antenna and navigation unit at least 3 m (4.8 ft) or more away from the ECM.
- Ground the GPS antenna ground securely.

NOTICE

After installing a radio station or GPS, the ECM must be inspected for erroneous operation.



PRE-DELIVERY SERVICE CHECK LIST

Check all items on the following list. Refer to the Owner's Manual or Shop Manual for the specifications and the detailed procedures. Test every unit to be sure it is functioning properly.

On land

EXTERNAL APPEARANCE

☐ Check for paint scratches; touch up if necessary.

INSTALLATION LOCATION

☐ Check for correct installation location.

☐ Check outboard motor for correct installation height.

☐ Make sure the motor mounting bolts are tight.

☐ Check to be sure sealant has been supplied to the transom mounting bolt holes.

GEAR OIL

☐ Check for proper gear oil level. Make sure the oil level and drain plugs are tight.
OIL CAPACITY:
BF175A/BF200A/BF225A: 1.17 ℓ (1.24 US qt, 1.03 lmp qt)
BF250A: 1.47 ℓ (1.55 US qt, 1.29 lmp qt)
Recommended oil: SAE # 90 gear oil
Use gear oil that meets or exceeds the requirement for API Service Classification GL-4 or GL-5.

FUEL SYSTEM

☐ Be sure fuel lines are connected securely.

☐ Make sure the fuel tank is full of fresh gasoline.

☐ Check for fuel leaks. If necessary, repair immediately.

STEERING SYSTEM

☐ Check the steering system for smooth operation.

☐ Make sure the outboard motor does not interfere with the steering cable and/or link arm, control cables, wire harness etc. when the steering wheel is turned full left and full right and with the motor in all tilt positions.

REMOTE CONTROL SYSTEM

☐ Check the remote control for proper operation.

☐ Make sure the control lever selects the forward, neutral, and the reverse gears.

☐ Check for full throttle capability.

☐ Check to be sure the throttle operates smoothly with the remote control lever at full throttle position. On side-surface mount controls, the choke fast idle lever must be in the idle position.

ELECTRICAL SYSTEM

☐ Check the wire harnesses for proper connections.

☐ Check the battery connections for correct polarity and tightness.

☐ Make sure the battery is fully charged and installed securely.

☐ Make sure the meters, indicators and switches are connected correctly.

TILT MECANISM

☐ Push the power trim/tilt switch and make sure the outboard motor tilts up and down smoothly.

☐ Check for the tilt motor noise while tilting up or down.

☐ Tilt down the outboard motor and check to see that the trim meter functions and indicates "DOWN".

☐ Operate the steering with the outboard motor in the tilt-down position, and check to be sure that the cables, harnesses, etc. do not interfere with the outboard motor.

☐ Tilt up the outboard motor to the full tilt-up position and check the power trim/tilt oil level.
Check the manual tilt valve for proper function.

☐ Make sure the tilt stopper sets in the lock position at full tilt-up position.

ENGINE OIL

☐ Check the engine oil level.
Engine oil capacity: 7.6 ℓ (8.0 US qt, 6.7 lmp qt)
Recommended oil: SAE 10W-30
Use 4-stroke motor oil that meets or exceeds the requirement for API Service Classification SG or Higher.
Always check the API SERVICE label on the oil container to be sure it includes the letters SG or Higher.

ALL NUTS, BOLTS & OTHER FASTENERS

☐ Check security and tighten if necessary.

OPERATION CHECK LIST

In the Water

OUTBOARD MOTOR INSTALLATION

- ☐ Check that there are no water leaks from the motor mounting bolt holes.
- ☐ Check for the balanced weight distribution in the boat.

OUTBOARD MOTOR OPERATION

- ☐ Check the neutral switch for proper operation.
- ☐ Turn the combination switch ON and check whether the buzzer sounds twice.
- ☐ Turn the combination switch ON and check whether the MIL, Alternator indicator light, overheat indicator light and oil indicator light come ON.
- ☐ Turn the ignition switch to the START position and check whether the engine starts.
- ☐ Check the outboard motor for any abnormal noise.
- ☐ Check to be sure cooling water flows out of the cooling system indicator.

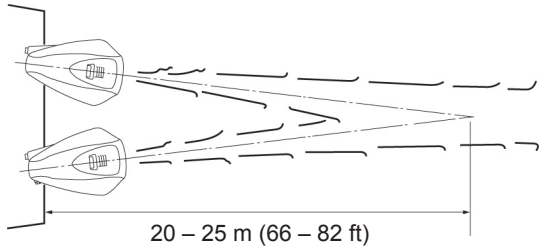
  After the engine warms up:
- ☐ Make sure the motor returns smoothly to idle.
- ☐ Check idle speed.
  IDLE SPEED: 650 ± 50 rpm
- ☐ Snap the throttle and check the engine response.
- ☐ Check to see that the emergency stop switch functions securely.

LEAKS

- ☐ Makes sure that there are no leaks from the fuel lines and/or connections. If necessary, repair immediately.
- ☐ Check the outboard motor for cooling water/oil leaks. Repair if necessary.
- ☐ Check the exhaust system for gas leaks.

During Sea Trials

- ☐ Check the gearshift operation with the remote control lever.
- ☐ Check the motor operation at trolling speed. Use the minimum amount of the throttle opening necessary to operate the boat at a safe trolling speed for 15 minutes.
- ☐ Dual Motors:
  Adjust the tie bar length so that the motors toe-out. Toe-out is when the motors' forward measurement is wider than the motors' after measurement. Motors will toe-out (viewed from the stern) will ensure better boat stability. It is best if the wakes of two motors joint 20 - 25 m (66 - 82 ft) stern.
  Not all boats will follow this specification. Consult your boat manufacturer for toe-in or toe-out recommendation.



PROPELLER SELECTION

- ☐ Check the engine rpm with the boat under way.
  Before engine break-in, avoid continuous full throttle operation (100% throttle opening). Do not run the outboard motor at full throttle for more than 2 minutes at a time.
  MAXIMUM RECOMMENDED ENGINE SPEED:
  BF175A/BF200A/BF225A: 5,000 – 6,000 rpm
  BF250A: 5,300 – 6,300 rpm
- ☐ Make sure that there is no propeller ventilation in a straight line. There is the possibility of some propeller ventilation when turning at full throttle with the motor trimmed out.

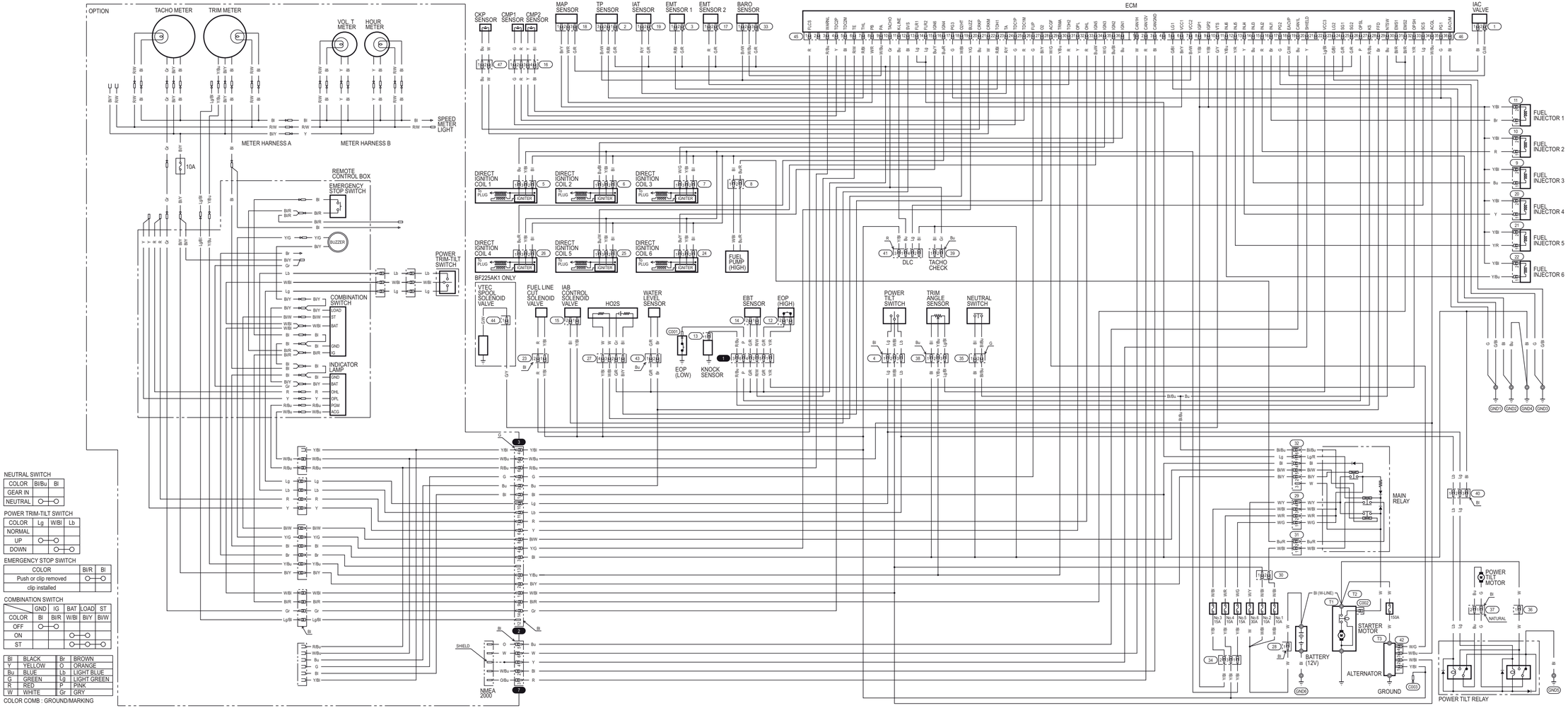
After Sea Trials

CHECK & CLEAN THE OUTBOARD MOTOR

- ☐ Check that there is no water in the gear oil.
- ☐ Check that there are no signs of fuel, oil or water leaks. Repair if necessary.
- ☐ After running in salty or dirty water, use a flushing kit to flush the cooling system with clean water. Run the outboard motor at idle during flushing for approximately 10 minutes.
- ☐ Clean the entire outboard motor thoroughly with a cloth.
- ☐ Check the outboard motor for external damage, defects, or cracks.

WIRING DIAGRAMS

BF175A/BF200A/BF225A



NEUTRAL SWITCH

COLOR	Bl/Bu	Bl
GEAR IN		
NEUTRAL	○	○

POWER TRIM-TILT SWITCH

COLOR	Lg	W/Bl	Lb
NORMAL			
UP	○		○
DOWN		○	○

EMERGENCY STOP SWITCH

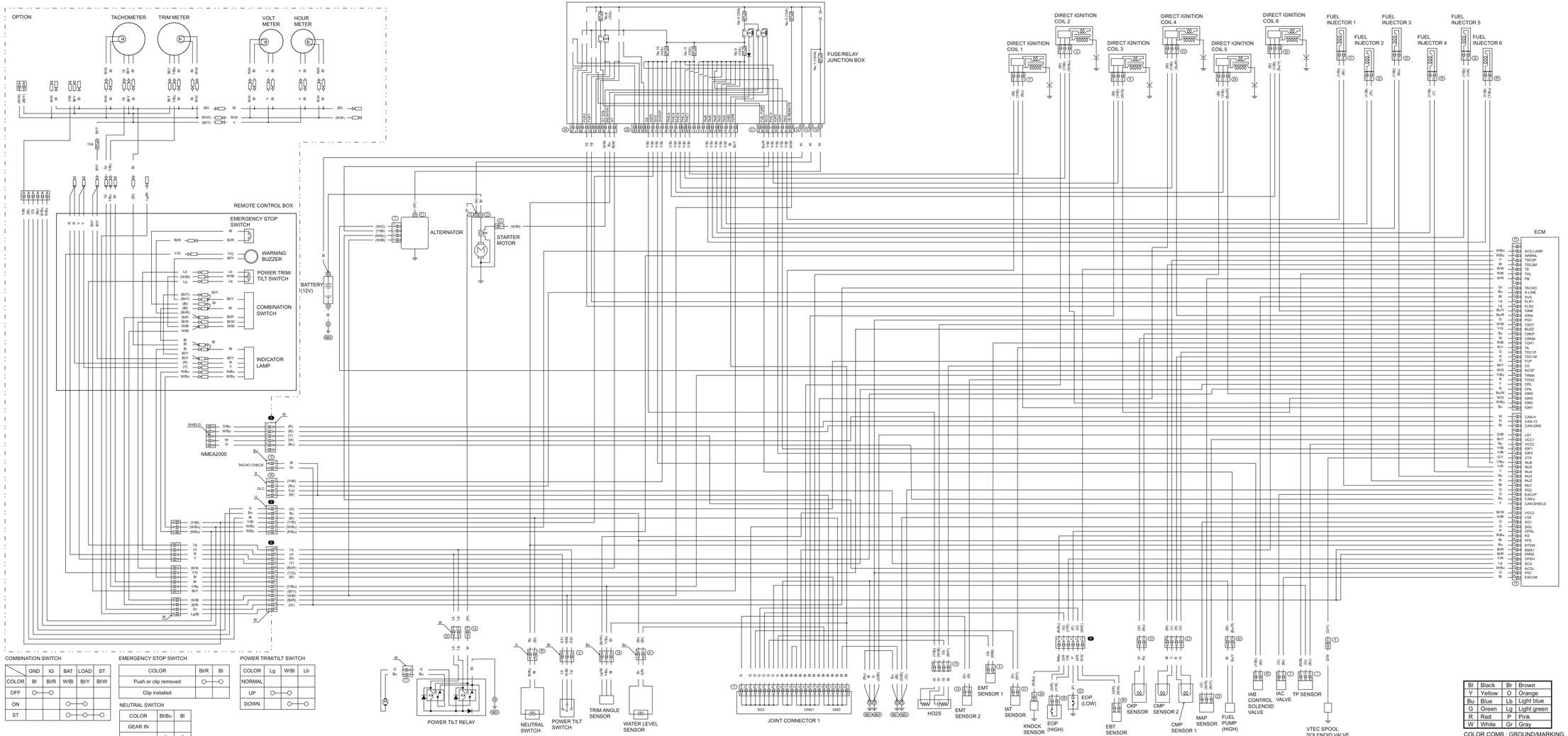
COLOR	Bl/R	Bl
Push or clip removed	○	○
clip installed		

COMBINATION SWITCH

	GND	IG	BAT	LOAD	ST
COLOR	Bl	Bl/R	W/Bl	Bl/Y	Bl/W
OFF	○	○			
ON				○	○
ST				○	○

Bl	BLACK	Br	BROWN
Y	YELLOW	O	ORANGE
Bu	BLUE	Lb	LIGHT BLUE
G	GREEN	Lg	LIGHT GREEN
R	RED	P	PINK
W	WHITE	Gr	GRY

COLOR COMB : GROUND/MARKING



COMBINATION SWITCH

	GND	IG	BAT	LOAD	ST
COLOR	Bl	Bl/R	W/Bl	Bl/Y	Bl/W
OFF	○	○			
ON			○	○	
ST			○		○

EMERGENCY STOP SWITCH

COLOR	Bl/R	Bl
Push or clip removed	○	○
Clip installed		

NEUTRAL SWITCH

COLOR	Bl/Bu	Bl
GEAR IN		
NEUTRAL	○	○

POWER TRIM/TILT SWITCH

COLOR	Lg	W/Bl	Lb
NORMAL			
UP	○		○
DOWN		○	

Bl	Black	Br	Brown
Y	Yellow	O	Orange
Bu	Blue	Lb	Light blue
G	Green	Lg	Light green
R	Red	P	Pink
W	White	Gr	Gray

COLOR COMB : GROUND/MARKING

TOHATSU
Outboards

RIGGING MANUAL
4 Stroke
BFT 200A
BFT 225A
BFT 250A
Models

OB No.92ZY311
14-01 NB
Printed in Japan