

**SUZUKI** OUTBOARD MOTOR

**SET-UP MANUAL**

**DF70A/80A/90A**

**For '09 model**



## FOREWORD

This outboard motor has been designed and produced utilizing Suzuki's most modern technology. The finest product, however, cannot perform properly unless it is correctly assembled and serviced. This set-up manual has been produced to aid you in properly assembling and servicing this outboard motor.

- \* This manual has been prepared on the basis of the latest specifications at the time of publication. If modifications have been made since then, differences may exist between the content of this manual and the actual outboard motor.
- \* Illustrations in this manual are used to show the basic principles of operation and work procedures and may not represent the actual outboard motor exactly in detail.
- \* This manual is intended for those who have enough knowledge and skills to service SUZUKI outboard motors. Without such knowledge and skills, you should not attempt servicing by relying on this manual only. Instead, please contact your nearby authorized SUZUKI outboard motor dealer.

### **⚠ WARNING**

**Apprentice mechanics or do-it-yourself mechanics that don't have the proper tools and equipment may not be able to properly perform the services described in this manual. Improper assembly and/or servicing may result in injury to the mechanic and may render the engine unsafe for the boat operator and passengers.**

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## IMPORTANT

### ▲ WARNING/CAUTION/NOTE

Please read this manual and follow its instructions carefully. To emphasize special information, the symbol ▲ and the words WARNING, CAUTION and NOTE have special meanings. Pay special attention to the messages highlighted by these signal words.

#### ▲ WARNING

Indicates a potential hazard that could result in death or injury.

#### CAUTION

Indicates a potential hazard that could result in motor damage.






#### NOTE:

Indicates special information to make maintenance easier or instructions clearer.



Please note, however, that the warnings and cautions contained in this manual cannot possibly cover all potential hazards relating to the servicing, or lack of servicing, of the outboard motor. In addition to the WARNINGS and CAUTIONS stated, you must use good judgement and basic mechanical safety principles.

## SYMBOL

Listed in the table below are symbols indicating special instructions and other important information necessary for proper servicing. Please note the definition for each symbol. You will find these symbols used throughout this manual. Refer back to this table if you are not sure of any symbol(s) meanings.

SYMBOL	DEFINITION	SYMBOL	DEFINITION
	Torque control required. Data beside it indicates specified torque.		Apply THREAD LOCK "1342".
	Apply SUZUKI WATER RESISTANT GREASE.		Use special tool.
	Apply SUZUKI SILICONE SEAL.		

## MATERIALS REQUIRED

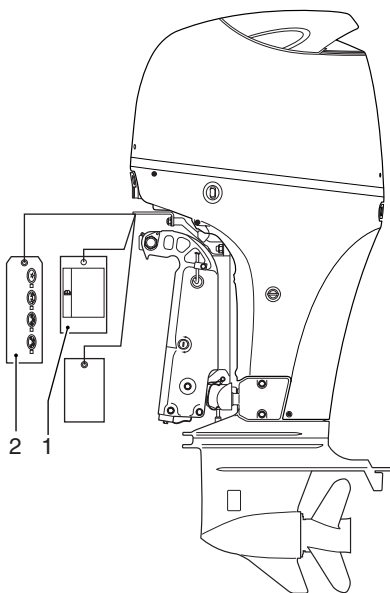
<p><b>WATER RESISTANT GREASE</b></p>  <p><b>99000-25161</b> (250 g/8.8 oz)</p>	<p><b>SUZUKI SILICONE SEAL</b></p>  <p><b>99000-31120</b> (50 g/1.7 oz)</p>
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# HANG TAGS

It is mandatory that every new Suzuki outboard motor be assembled and serviced in accordance with the instructions in the set-up manual.

A critical step in the set-up and pre-delivery process of every outboard motor is to attach the hang tags to the outboard motor. Hang tags are required to remain on the motor until it is delivered to the customer.

Be sure the hang tags are attached to the outboard motor as shown.







## 1. Tag, Important Break-in

注 意	
慣らし運転について • 正しい慣らし運転がその種のエンジンの寿命と性能に影響します。 • 慣らし運転は取扱説明書に従って実施して下さい。	Jan.
CAUTION	
• Break-in is most important. • Engine performance will suffer if correct procedure is not followed. • Follow instructions in owner's manual.	Eng.
ATTENTION	
• Le rodage du moteur est tres important. • Le non respect des procedures peut enraîner des dommages moteur importants. • Respectez les instructions du manuel de l'utilisateur.	Fre.
AVVERTENZA	
• Il rodaggio e' importantissimo. • Il mancato rispetto delle procedure consigliate potranno compromettere le prestazioni del motore. • Attenersi alle istruzioni riportate sul manuale d'uso e manutenzione.	Ita.
ACHTUNG	
• Einfahren des Motors ist sehr wichtig. • Wenn der Motor nicht eingefahren wird, kann die Motorleistung beeinträchtigt werden. • Siehe Betriebsanleitung.	Ger.

販売店様 : この説明書にはお客様にとって重要な情報が載っていますので外さない下さい。  
 DEALER : DO NOT REMOVE THIS TAG  
 The customer needs this important information.  
 AGENTS : NE PAS RETIRER CETTE ÉTIQUETTE  
 Informations tres importantes pour le client.  
 CONCESSIONARIO : NON SI DEVE TOGLIERE QUESTA ETICHETTA, POICHE' LE INFORMAZIONI IVI RIPORTATE SONO IMPORTANTISSIME PER IL CLIENTE.  
 HÄNDLER : DIESEN ANHÄNGER NICHT ENTFERNEN!  
 Die Information ist für den Kunden wichtig.

## 2. Tag, CARB emission

**The Star Label means Cleaner Marine Engines**  
 This engine has been certified as a:

			
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Symbol for Cleaner Marine Engines:  
**Cleaner Air and Water** - for a healthier lifestyle and environment.  
**Better Fuel Economy** - burns up to 30 - 40 percent less gas and oil than conventional carbureted two-stroke engines, saving money and resources.  
**Longer Emissions Warranty** - protects consumer for worry free operation.

# OUTBOARD MOTOR INSTALLATION

## HORSEPOWER SELECTION

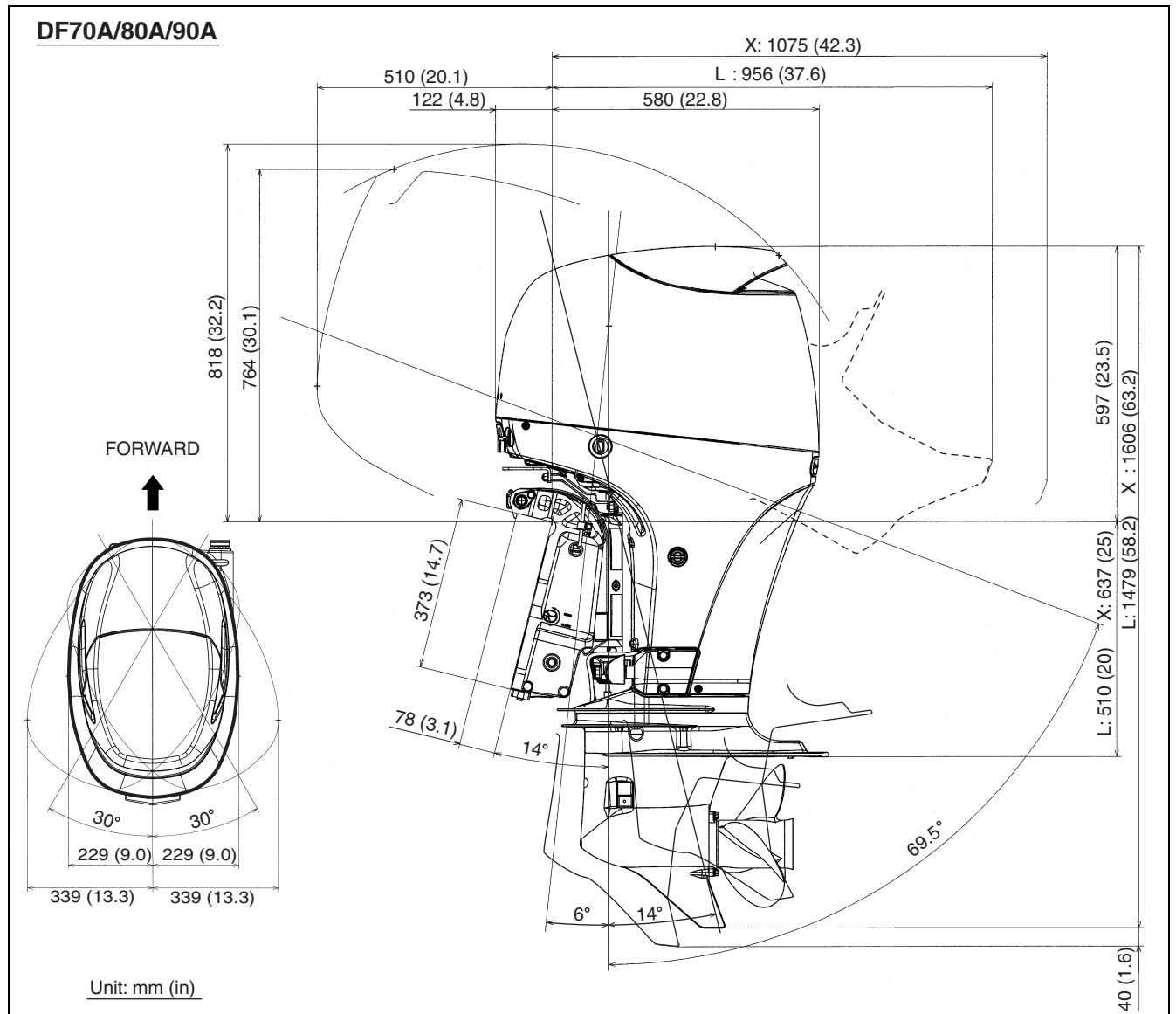
### **▲ WARNING**

Do not overpower your boat. Never install an outboard motor with horsepower exceeding the boat manufacturer's recommended maximum. Excessive horsepower will have an adverse effect on hull safety and may cause operating/handling difficulties.

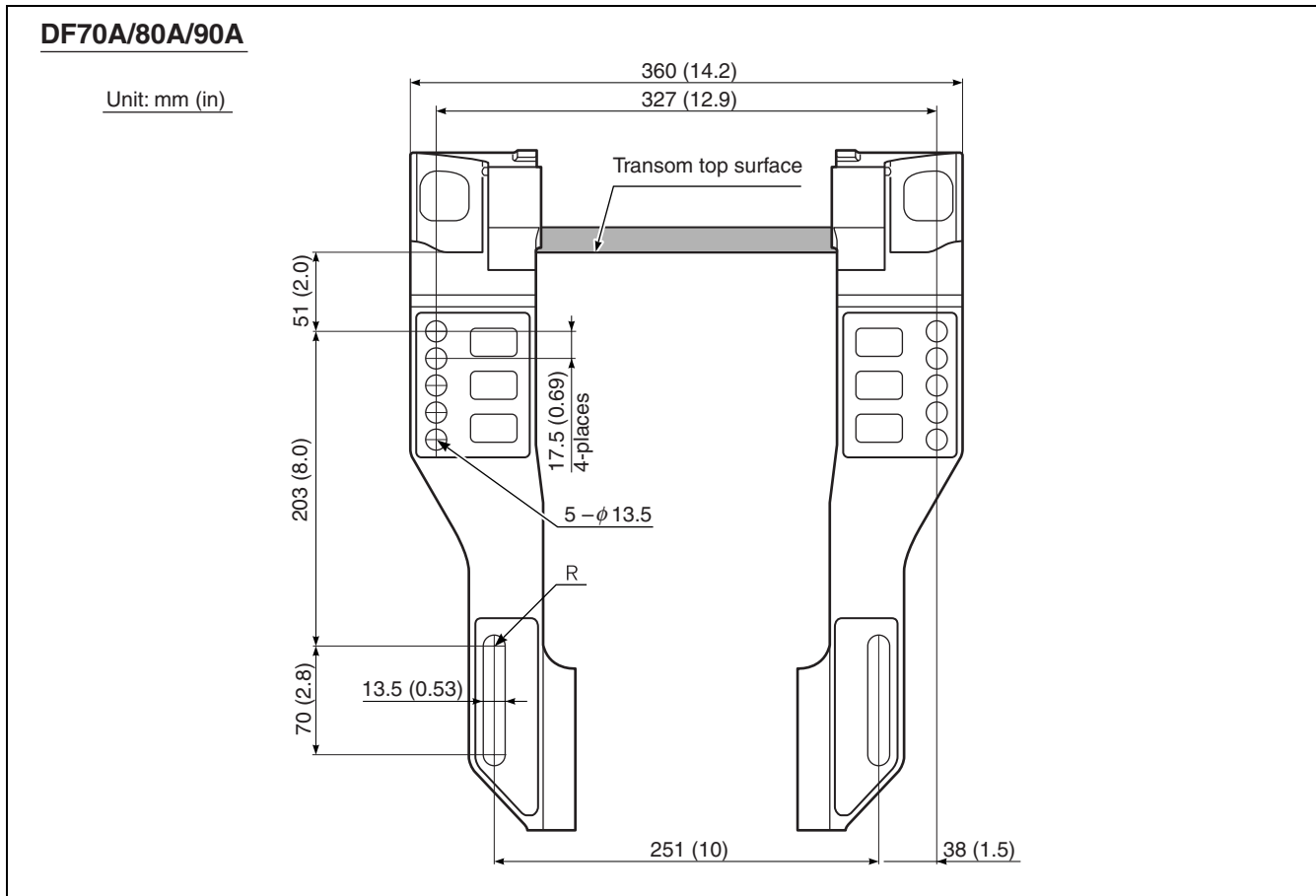
#### NOTE:

- State the maximum horsepower outboard motor that can be safely used on that boat. There is severe product liability potential connected with rigging and selling a boat with an outboard motor exceeding the horsepower capacity limitation.
- The rig should not be underpowered, as this will not allow the performance balance you are trying to achieve. Determine the customer's needs, application and use of the perspective rig to make the best overall horsepower recommendation.

## MOTOR DIMENSIONS



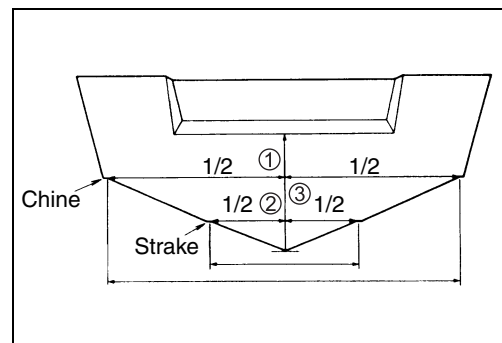
## TRANSOM DIMENSIONS



### ESTABLISHING THE CENTER-LINE

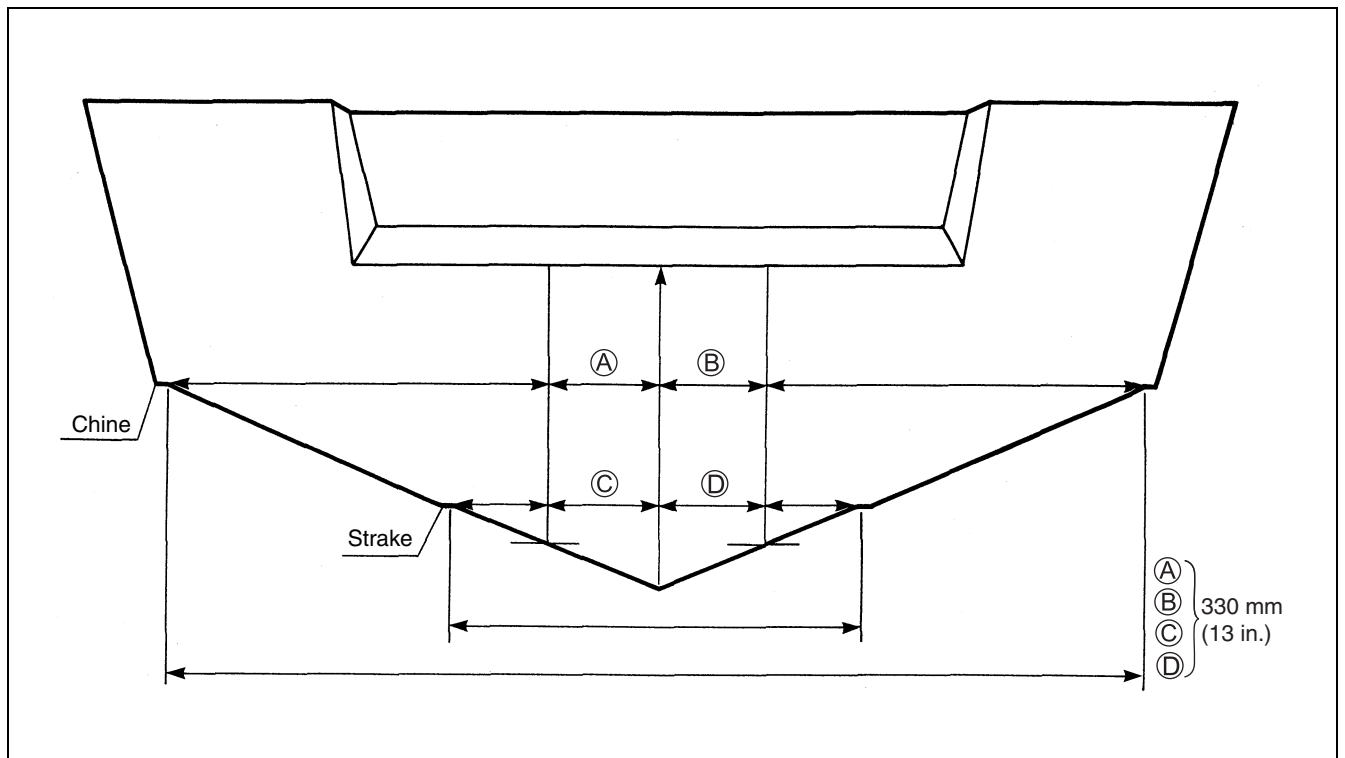
To establish the center of the transom you may use the following procedure:

- (1) Measure across the transom from chine to chine and make a mark on the transom face at  $1/2$  of this measurement.
- (2) Measure across the transom from strake to strake and make a second mark on the transom face at  $1/2$  of this measurement.
- (3) Align a straightedge with the marks on the transom face and draw a line. This is the vertical center-line of the transom for a single engine installation.
- (4) Drill mounting holes as in a single engine installation.



For twin engine installation you may use the following procedure: (Minimum engine center-line distance is 660 mm/26 in.)

- (1) Following the horizontal line from chine to chine, mark the line at 330 mm (13 in.) on both sides of the previously established single engine vertical center-line.
- (2) Following the horizontal line from strake to strake, mark this line also at 330 mm (13 in.) on both sides of the vertical center-line.
- (3) Align a straightedge with these two sets of marks and draw the vertical center-line for a twin engine installation.
- (4) Drill mounting holes as in a twin engine installation.



**NOTE:**

Do not drill engine top mounting bolt holes higher than 25.4 mm (1 in.) below top edge of actual boat transom.



## LIFTING THE MOTOR

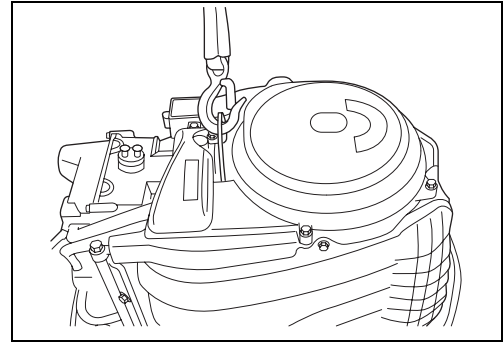
### **⚠ WARNING**

Use a hoist which has a minimum lift capacity of at least 450 kg (1 000 lbs.) when lifting the motor.

### **CAUTION**

Use lifting eye only. Do not lift the motor using a fly-wheel or crankshaft lifting attachment.

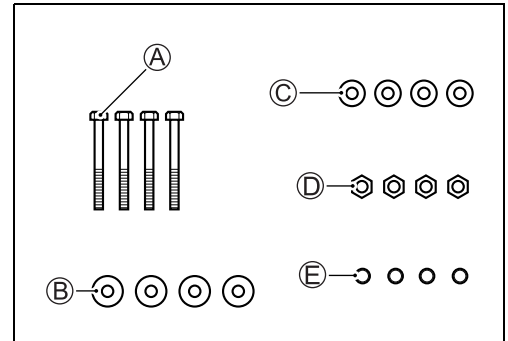
Attach lift to lifting eye on cylinder block.  
Lift engine and align with holes drilled in transom.



## MOUNTING TO THE TRANSOM

### Contained parts

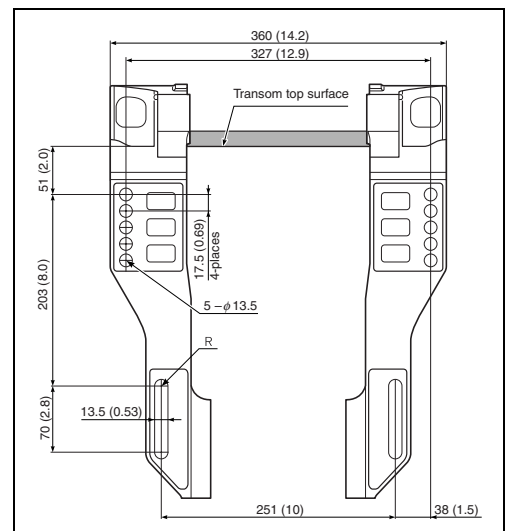
Item	Part name	Part number	Q'ty
Ⓐ	Bolt (M12)	09100-12091	4
Ⓑ	Washer (OD 35 mm)	09160-12044	4
Ⓒ	Washer (OD 22 mm)	09160-12110	4
Ⓓ	Nut (M12)	09159-12014	4
Ⓔ	Cap	41153-94500	4



- Center the motor on the transom.  
Make sure that anti-cavitation plate is located 0 – 25 mm (0 – 1 in.) below the boat bottom.
- Mark four position of motor mounting bolt on the transom board.
- Drill the mounting holes using 12 mm drill bit.

#### NOTE:

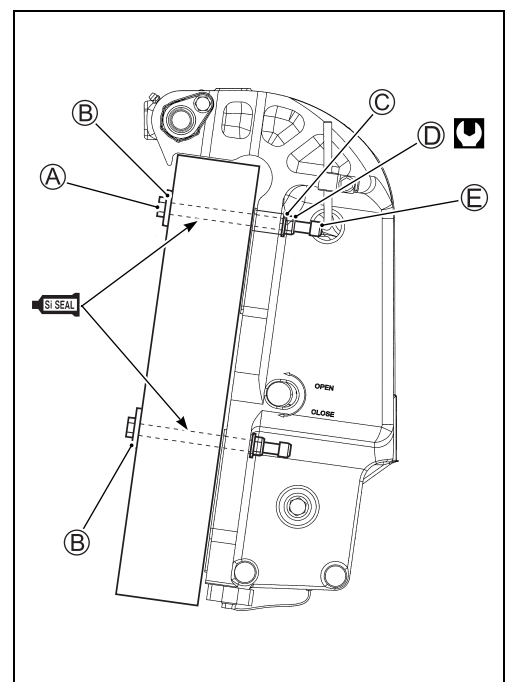
- Drill the mounting holes vertically to transom board.
- Drill the upper holes at least 25 mm (1 in.) down from the transom top surface.



- Install motor mounting bolts Ⓐ with large diameter flat washer Ⓑ from inside of transom and through clamp bracket.
- Install small diameter flat washers Ⓒ and nuts Ⓓ on clamp bracket side.
- Tighten all mounting bolts/ nuts securely.

 **Mounting bolt/nut: 55 N·m (5.5 kgf·m, 40 lb·ft)**

- Install cap Ⓔ to bolts Ⓐ.



**NOTE:**

- To insure water-tightness, sealant (SUZUKI SILICONE SEAL or equivalent) should be applied to all bolt holes. Apply the sealant to the shanks of the bolts, but not the threads.
- Do not use an impact tool to tighten or loosen the transom nuts.
- If the specified tightening torque can not be reached due to weak transom material, it may be necessary to install a reinforcement plate to the transom board. If a reinforcement plate is required, contact the boat manufacturer for recommendations. The transom reinforcement plate should be installed between the transom surface and the washer ②.

**CAUTION**

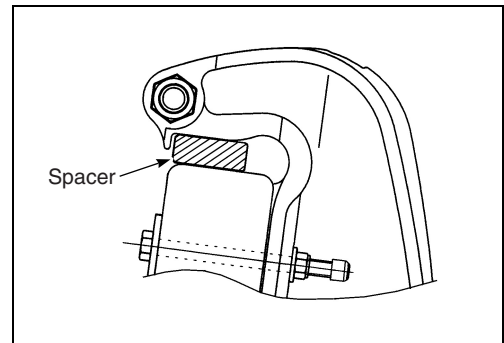
**Never reuse the nut ① after it has been threaded into position and torqued.**

**NOTE:**

If there is a clearance between the clamp bracket and the transom top surface, place a proper spacer on the transom top surface so that the motor weight can be supported by the transom through the spacer.

**NOTE:**

Make sure that there is no clearance on mating surfaces between the transom board and motor clamp brackets. Otherwise, the motor clamp brackets may be damaged.



**CAUTION**

**After completing a break-in operation (10 hours), retighten the transom nuts by the specified torque.**

# WIRE HARNESS INSTALLATION

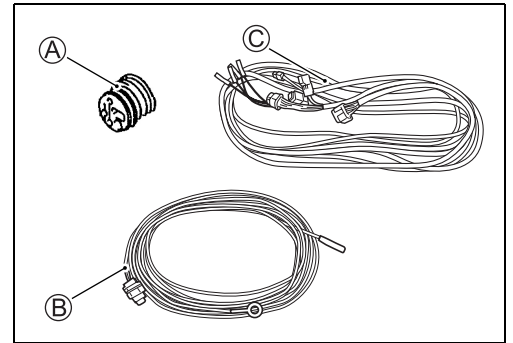
## Contained parts

Item	Part name	Part number	Q'ty
(A)	Grommet	61124-87L00	1
(B)	Battery sub wire (3.7 m)	36625-93J00	1
	Battery sub wire (6.5 m)	36625-93J10	1
(C)	Remote control harness	36620-93J00	1

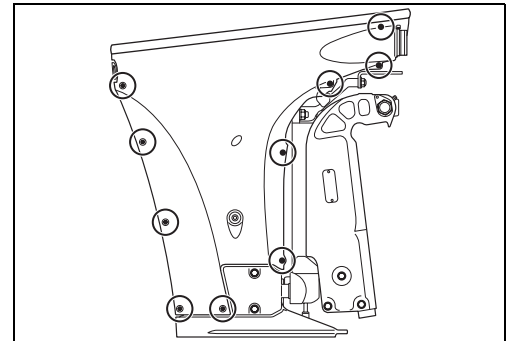
- Depending on the model specification, the battery sub wire varies.
- Depending on the model specification, the remote control harness is optional.

## Procedure

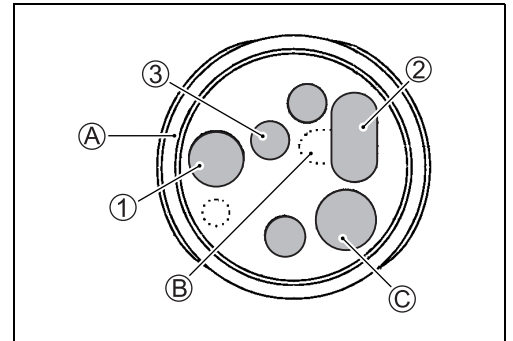
- (1) Loosen the ten (10) bolts, then remove the starboard side cover from the outboard motor.



- (2) Route the following items through the grommet (A) as shown position.
  - Fuel hose (1)
  - Battery sub wire (B)
  - Battery cable (2)
  - Remote control harness (C)
  - Speed meter pickup tube (3)

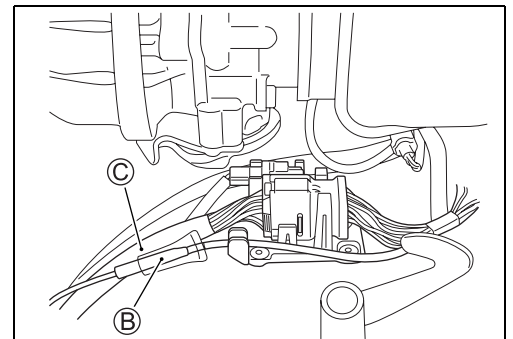


- (3) Connect the battery sub wire (B) to the engine side.
- (4) Connect the remote control harness (C) to the engine side, then press fit the connector into the holder.



## NOTE:

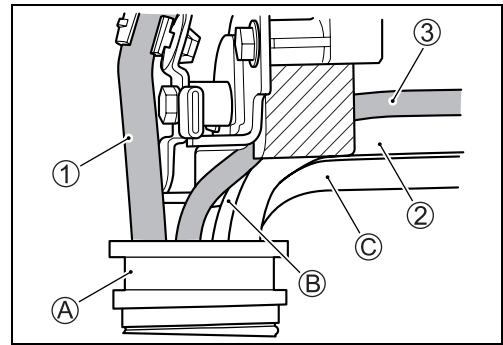
Moving parts located underneath of throttle body, rods and throttle cam should always be free from contacting with the remote control wire harness connector.



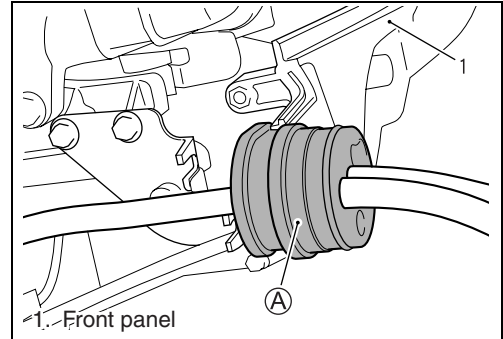
- ① Fuel hose
- ② Battery cable
- ③ Speed meter pickup tube
- Ⓐ Grommet
- Ⓑ Battery sub wire
- Ⓒ Remote control harness

**NOTE:**

Route the tube ③, battery cable ②, battery sub wire Ⓑ and remote control harness Ⓒ under the remote control cable holder (hatched area).



- (5) Push the grommet Ⓐ into the front panel.

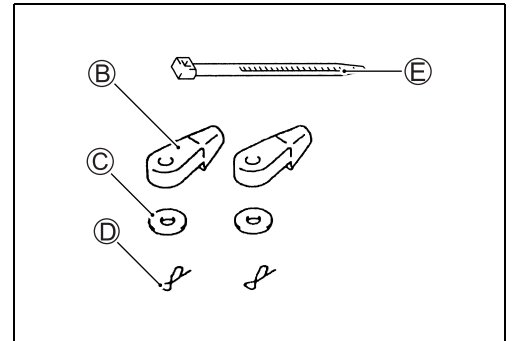


# CONTROL CABLES INSTALLATION

## Contained parts

Item	Part name	Part number	Q'ty
(A)	Remote control box (Side-mount type)	67200-93J00	1
(B)	Cable connector	67467-89J01	2
(C)	Washer	09160-06055	2
(D)	Lock pin	09385-06012	2
(E)	Band	09407-25402	1

Depending on the model specification, the remote control box is optional.



## Required parts

Part name	Part number	Q'ty
Control cable 8ft (2.4 m)	67320-93J00	2
Control cable 10ft (3.1 m)	67320-93J10	2
Control cable 12ft (3.7 m)	67320-93J20	2
Control cable 14ft (4.2 m)	67320-93J30	2
Control cable 16ft (4.8 m)	67320-93J40	2

Part name	Part number	Q'ty
Control cable 18ft (5.4 m)	67320-93J50	2
Control cable 20ft (6.0 m)	67320-93J60	2
Control cable 22ft (6.7 m)	67320-93J70	2
Control cable 24ft (7.3 m)	67320-93J80	2

Choose one item which is matched to the boat in length.

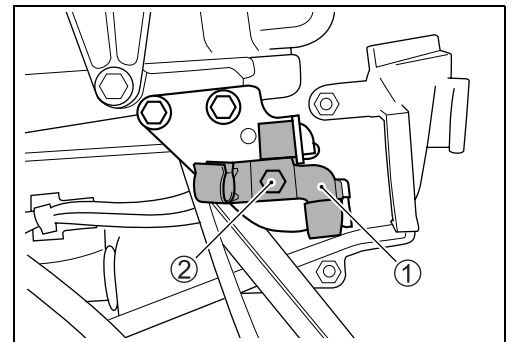
## REMOTE CONTROL BOX SIDE

For the procedure to connect the throttle control cable and clutch control cable to the remote control box, refer to the "REMOTE CONTROL BOX SET-UP INSTRUCTION" that comes supplied with each unit of remote control box.

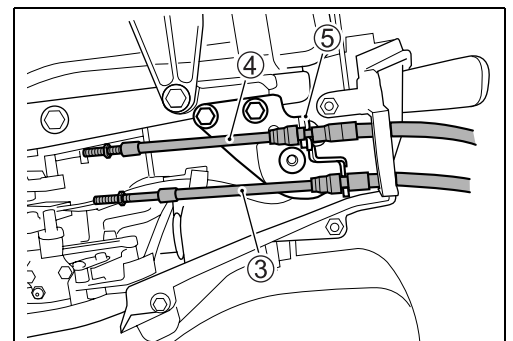
## ENGINE SIDE

### Procedure

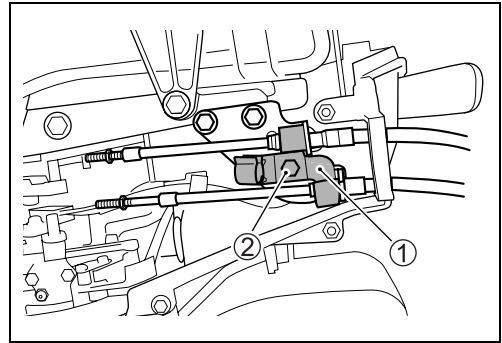
- (1) Remove the starboard side cover. (See page 10.)
- (2) Remove the bolt (2) and cable stopper (1).



- (3) Install the clutch control cable (3) and throttle control cable (4) to the grommet.
- (4) Secure the cable (3) and (4) in the cable holder (5) by fitting groove on the cable into a slot on the holder.

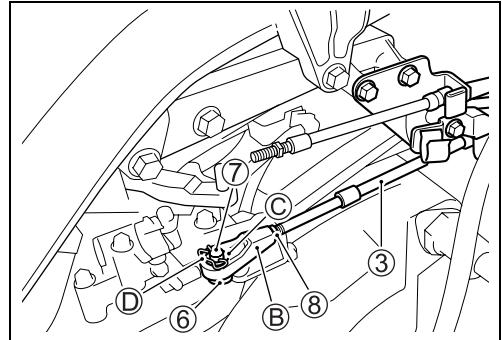


- (5) Install the cable stopper ① using the washer and bolt ② to secure the clutch control cable and throttle control cable.
- (6) Position the remote control handle into “NEUTRAL”.



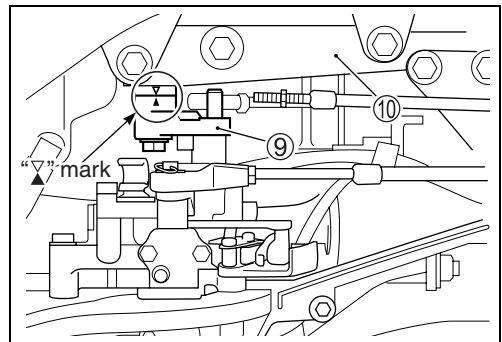
— Clutch control cable —

- (7) Make sure that the clutch control arm ⑥ is in the neutral position.
- (8) Thread the connector ⑧ onto the clutch control cable ③ until the connector hole aligns with the pivot pin ⑦ on the clutch control arm ⑥.
- (9) Set the connector ⑧ onto the pivot pin ⑦ with the flat side of connector towards the arm.
- (10) Install the washer ③ and lock pin ④, then tighten the lock nut ⑧.
- (11) Make sure that both forward and reverse gear can be engaged with the same angle of remote control handle travel from “NEUTRAL” position.

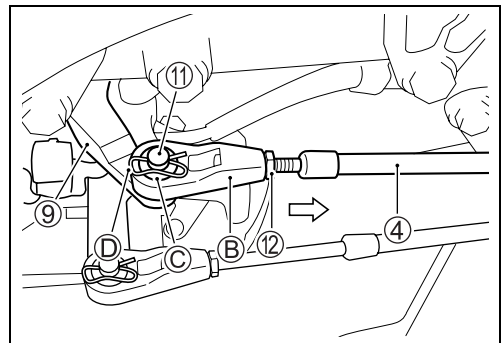


— Throttle control cable —

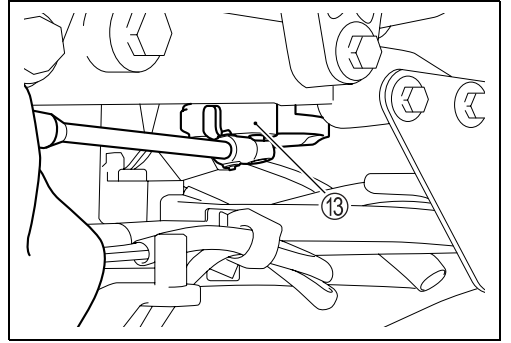
- (12) Make sure that the throttle control arm ⑨ is fully closed position, then hold this position.  
Also make sure that match mark “▲” on the throttle control arm ⑨ align with the match mark “▽” on the throttle lever holder ⑩.



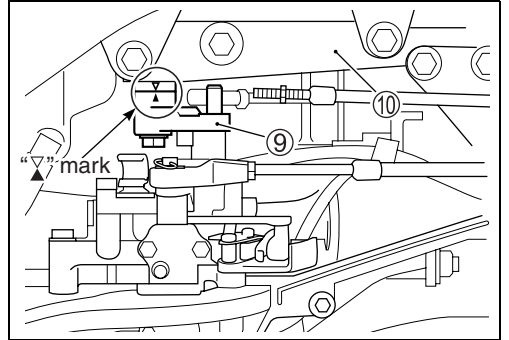
- (13) While pushing the throttle control inner cable inside as shown by arrow, thread the connector ⑧ onto the throttle control cable ④ until the connector hole aligns with the pivot pin ⑪ on the throttle control arm ⑨.
- (14) Set the connector ⑧ onto the pivot pin ⑪ with the flat side of connector towards the arm.
- (15) Install the washer ③ and lock pin ④, then tighten the lock nut ⑫.



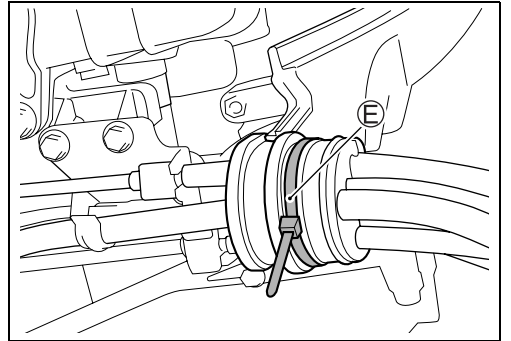
- (16) Move the remote control handle to the fully opened position. Check that the throttle lever ⑬ is in fully opened position.



- (17) Return the remote control handle to the neutral position. Check that the throttle control arm ⑨ is in fully closed position. Also make sure that match mark “▲” on the throttle control arm ⑨ align with the match mark “▽” on the throttle lever holder ⑩.



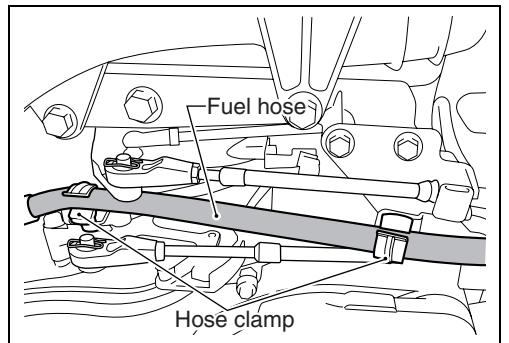
- (18) Tighten the grommet by the band ⑤ and cut off the excess.



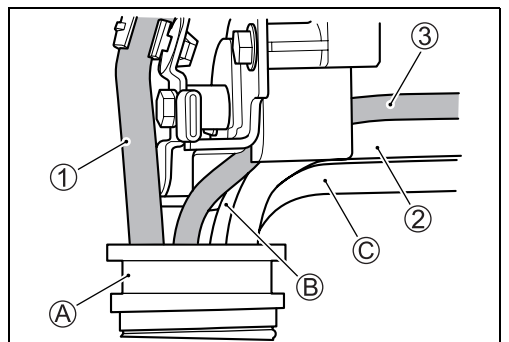
- (19) Route the fuel hose as shown in figure. Install STBD side cover.

**NOTE:**

*Before installing engine side cover, check that fuel hose routing properly.*



- ① Fuel hose
- ② Battery cable
- ③ Speed meter pickup tube
- Ⓐ Grommet
- Ⓑ Battery sub wire
- Ⓒ Remote control harness





**CAUTION**

**Cable connectors and turnbuckles must be threaded at least 12 mm (0.5 in) onto cable.**

**NOTE:**

*After assembly, make sure that the cables are not stretched or otherwise stressed when the outboard motor is turned all the way to the right and left.*

## DRAG LINK INSTALLATION

### ⚠ WARNING

Improperly installing a steering system on the outboard motor can be hazardous.

This may cause the operator to lose control of the boat and may result in serious injury.

Always follow the steering system manufacturer's instructions for proper selection and installation.

### NOTE:

These instructions are for connecting a mechanical push-pull steering system with the following specifications:

- Single cable
- Starboard cable entry into the motor tilt tube.
- Steering cable meeting the current American Boat and Yacht Council's Safety standard (P-17).

Item	Part name	Part number	Q'ty
	Drag link assembly	67701-87L00	
Ⓐ	• Drag link	• Not available separately	1
Ⓑ	• Spacer	• 67721-87L00	1
Ⓒ	• Bolt	• 67725-99E00	1
Ⓓ	• Safety nut	• 67726-99E00	2
Ⓔ	• Washer	• 67728-99E00	4
Ⓕ	Steering cable seal	41161-94400	1

### CAUTION

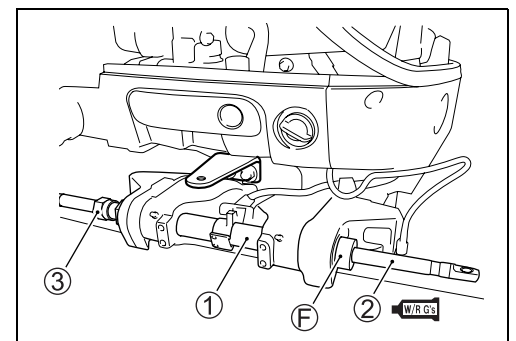
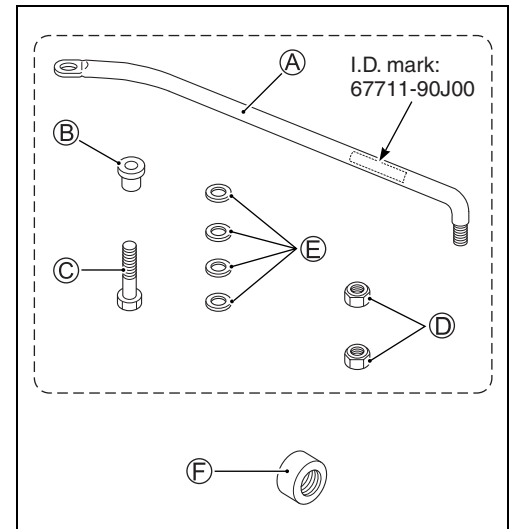
Never reuse the safety nut Ⓓ after it has been threaded into position and torqued.

### Procedure


- (1) Thread the steering cable seal Ⓕ onto the port side end of the motor tilt tube ①.
- (2) Apply SUZUKI WATER RESISTANT GREASE to the steering cable ②.
- (3) Insert the cable ② into the tube ① from the starboard side, then tighten the cable retaining nut ③ to the torque specified by the cable manufacturer.

### NOTE:


On most outboard motor installations, it will be necessary to install the steering cable prior to the outboard motor installation.



- (4) Connect the drag link (A) to the steering cable end (2) with washers (E) and safety nut (D) as shown. Tighten the nut (D) to the specified torque, then BACK THE NUT OFF 1/8 TURN.

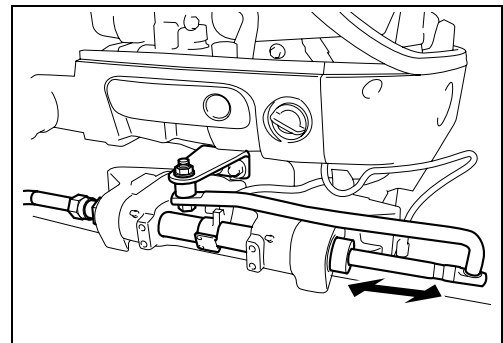
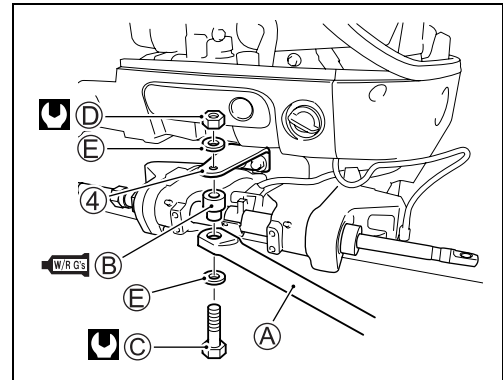
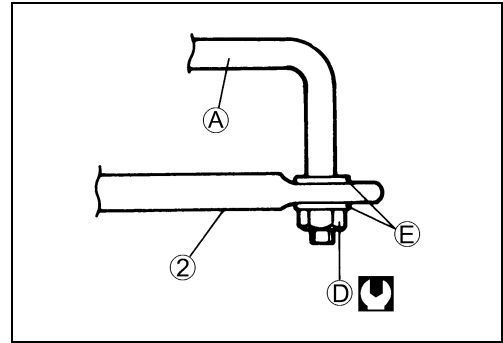
 **Safety nut (D) : 10 N·m (1.0 kgf-m, 7.0 lb-ft)**

- (5) Move the steering cable until the hole of drag link (A) aligns with the thread hole on the steering bracket (4).  
(6) Connect the drag link to the steering bracket (4) by tightening the bolt (C) with the spacer (B) and washers (E) as shown.

 **Bolt (C) : 34 N·m (3.4 kgf-m, 24.5 lb-ft)**

- (7) Tighten the safety nut (D) with the washer (E).

 **Safety nut (D) : 34 N·m (3.4 kgf-m, 24.5 lb-ft)**



**NOTE:**

*After assembly, check for smooth and free steering operation by turning the steering wheel all the way to the right and left.*

## FUEL HOSE

### ⚠ WARNING

Gasoline is extremely flammable and toxic. Always observe following precautions when working around gasoline or servicing the fuel system.

- Keep the working area well ventilated and away from open flame (such as gas heater) or sparks.
- Do not smoke or allow anyone else to smoke near the working areas.
- Wipe up fuel spills immediately.

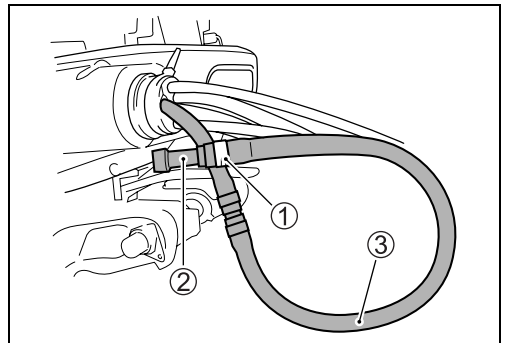
### CAUTION

Do not over bend (kink) or twist hoses when installing.

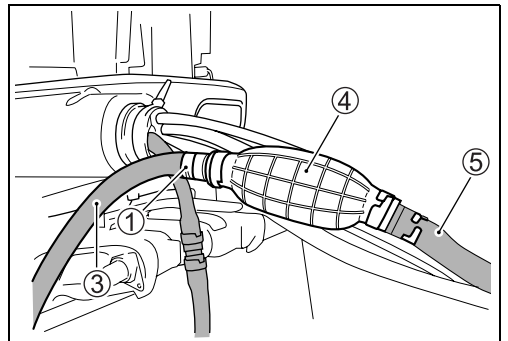
## CONNECTION

Connect the fuel hose.

- (1) Loosen the clip ①, then remove the fuel connector ② from the hose ③.



- (2) Connect the fuel primer bulb (4) (with fuel hose (5)) to the fuel hose (3) and tighten the connecting point with the clip (1).
- (3) Connect the fuel hose (5) to the fuel pipe from the boat fuel tank and tighten the connecting point with a clip.



# BATTERY

## BATTERY REQUIREMENT

Suzuki recommends a 12-volt cranking-type lead acid battery for the DF70A/80A/90A.

Minimum battery requirement for starting the engine is provided below.

The battery must satisfy one of the specifications described below.

**650 Marine Cranking Amps (MCA)/ABYC,  
or 512 Cold Cranking Amps (CCA)/SAE  
or 160 Reserve Capacity (RC) Minutes/SAE  
or 12 V 100 AH**

### NOTE:

- *The specifications listed above are the minimum battery rating requirements for starting the engine.*
- *Additional electrical loads from the boat will require larger capacity batteries.*
- *Dual-purpose (Cranking/Deep Cycle) batteries can be used if they meet the minimum specifications listed above (MCA, CCA, or RC).*
- *Do not use a Deep Cycle battery for the main cranking battery.*
- *The use of Maintenance-Free, sealed, or Gel-Cell batteries is not recommended because they may not be compatible with Suzuki's charging system.*
- *When connecting batteries in parallel, they must be of the same type, capacity, manufacturer, and of similar age. When replacement is necessary, they should be replaced as a set.*

## INSTALLATION OF BATTERY

### **⚠ WARNING**

- **Never expose battery to open flame or electric spark as batteries generate gas which is flammable and explosive.**
- **Do not place the battery near the fuel tank.**
- **Battery acid is poisonous and corrosive. Avoid contact with eyes, skin, clothing and painted surfaces. If battery acid comes in contact with any of these, flush immediately with large amounts of water. If acid contacts the eyes or skin, get immediate medical attention.**
- **Batteries should always be kept out of reach of children.**
- **When checking or servicing battery, disconnect the negative (black) cable. Be careful not to cause a short circuit by allowing metal objects to contact battery posts and motor at the same time.**
- **Wear approved eye protection.**

Store the battery free from splash of water, etc. and fix it securely to the hull with a battery band or the like to prevent it from falling down during boating.

**NOTE:**

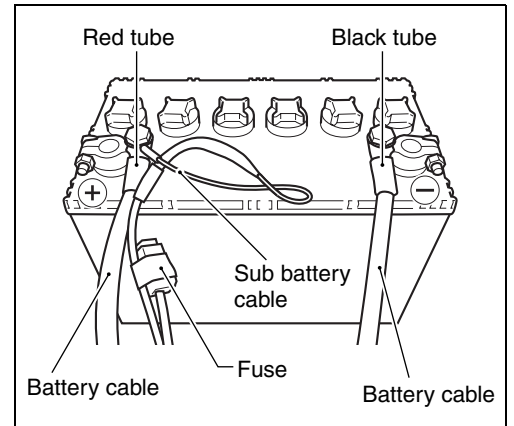
*It is recommended that the battery be installed in an enclosed case.*

**NOTE:**

*In the case of twin installation, be sure to use a battery for an engine respectively.*

**NOTE:**

*When extending the battery cable, use a cable of diameter larger than equivalence of AV20 (AWG4).*



**CONNECTION OF BATTERY CABLE**

- First connect positive battery cable and sub battery cable to positive battery terminal, then connect negative battery cable to negative battery terminal.

**NOTE:**

*Connect the sub battery cable securely to the positive ⊕ terminal of the battery.*

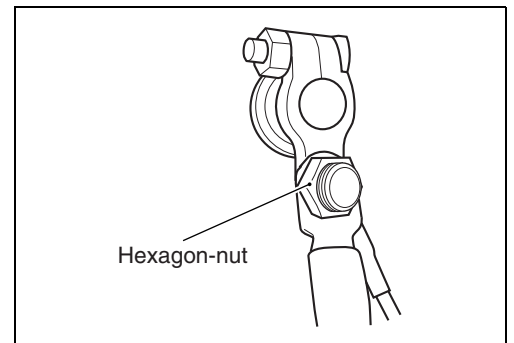
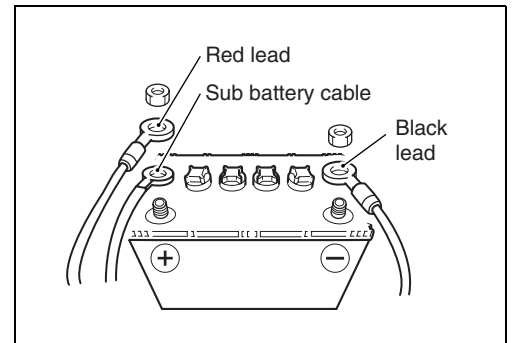
*If the sub battery cable is not correctly connected to the battery, the engine cannot start (operate).*

**NOTE:**

*Locate the sub-battery cable fuse at visible place for easy maintenance to boat operator.*

**NOTE:**

*When connecting batteries, hexagon-nuts must be used to secure battery leads (cables) to battery terminals.*

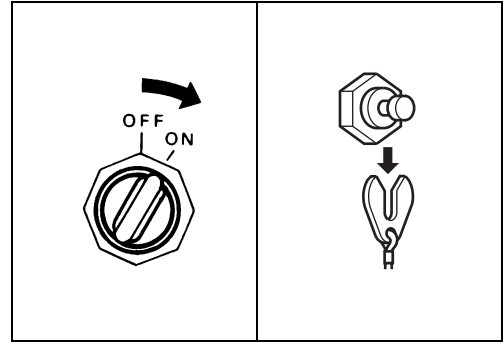


## SETTING TILT UP LIMIT POSITION

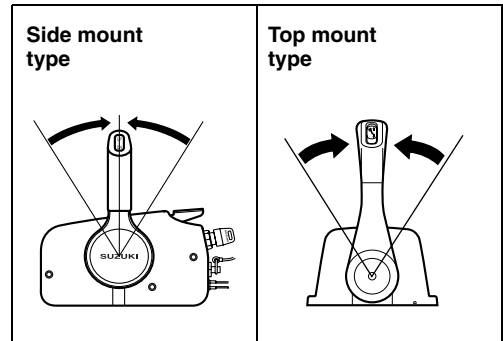
If the outboard motor contacts the motor well of the boat during full tilt up operation, the upper limit setting should be reset. Perform this set-up after the current position setting has been canceled, as explained in the following procedure.

### CANCELING TILT UP POSITION LIMIT SETTING

- (1) Turn the ignition key to the "ON" position.
- (2) Pull out the emergency stop switch lock plate.
- (3) Make sure that remote control handle is in "NEUTRAL".

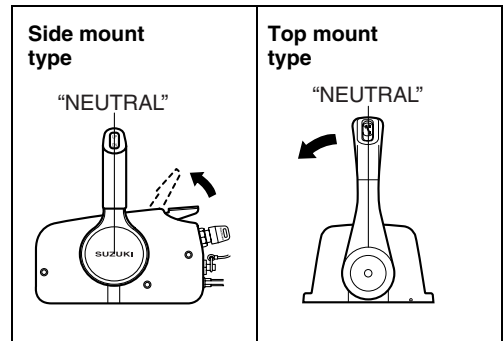


- (4) **Top mount type**  
Using the throttle only function of the remote control box, move the control handle forward until the caution buzzer sounds one time.



#### Side mount type

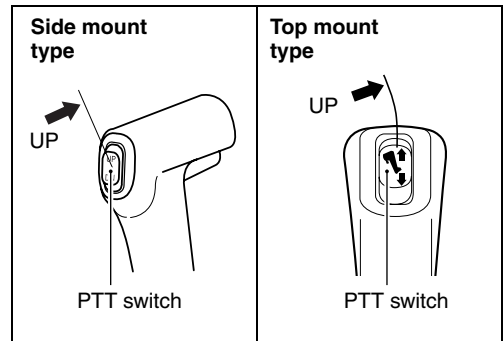
Using the throttle only function of the remote control box, move the warm-up lever upward until the caution buzzer sounds one time.



- (5) Press the "UP" side of the PTT switch for three seconds and the buzzer will sound twice briefly indicating the setting has been canceled.
- (6) Return the throttle to the fully closed position.

### SETTING TILT UP POSITION LIMIT

- (7) Press the "UP" side of the PTT switch so that the optimum full tilt up position for the boat can be obtained.
- (8) Turn the ignition key to the "ON" position.
- (9) Pull out the emergency stop switch lock plate.
- (10) Make sure that remote control handle is in "NEUTRAL".



(11) **Top mount type**

Using the throttle only function of the remote control box, move the control handle forward until the caution buzzer sounds one time.

**Side mount type**

Using the throttle only function of the remote control box, move the warm-up lever upward until the caution buzzer sounds one time.

(12) Press the "UP" side of PTT switch three times within three seconds. The buzzer will sound one time briefly indicating the setting has been accepted.

(13) Return the throttle to the fully closed position and install the lock plate on the emergency switch. Operate the full tilt up and full trim down operations several times by pressing the PTT switch and check that the settings of both the trim down limit and tilt up limit is properly set.



## ENGINE OIL

### CAUTION

The choice of engine oil is a major factor affecting engine performance and life.

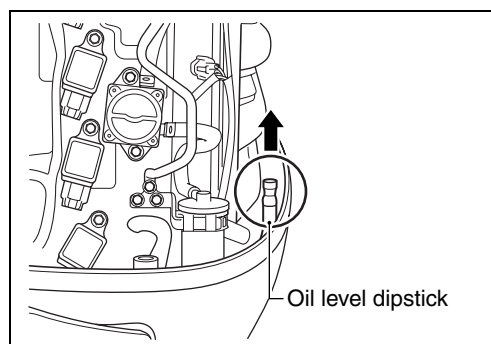
Use the following engine oil.

#### Recommended oil:

- 4 stroke motor oil
- API classification: SG, SH, SJ, SL, SM  
or NMMA FC-W Classification: SG, SH, SJ, SL, SM
- Viscosity rating: SAE 10W-40 or NMMA FC-W 10W-40

#### NOTE:

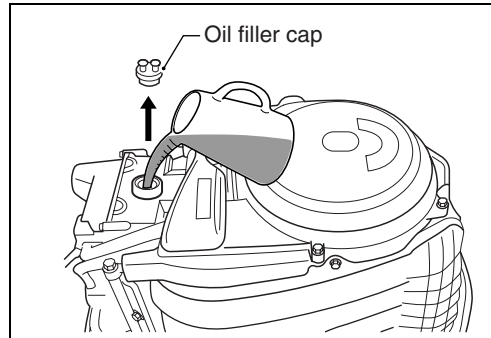
The outboard motor is shipped from the factory without the engine oil.



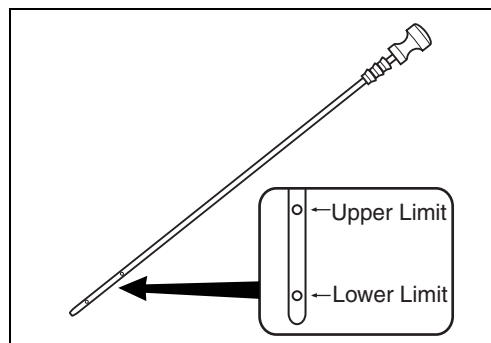
Fill the engine oil in the following procedure.

- (1) Place outboard motor upright on a level surface.
- (2) Remove the oil filler cap and oil level dipstick.
- (3) Pour recommended engine oil into oil filler opening.

**Engine oil amount: 4.0 L (4.2/3.5 US/Imp. qt)**



- (4) Check the engine oil level.
- (5) Reinstall the oil filler cap and oil level dipstick.



## PROPELLER

### Selection

Select propellers as shown below so that the specified engine rpm is obtained with the throttle fully opened.

<b>Recommended full throttle speed range</b>	DF70	5 000 – 6 000 r/min
	DF80	5 000 – 6 000 r/min
	DF90	5 500 – 6 300 r/min

### Propeller size chart

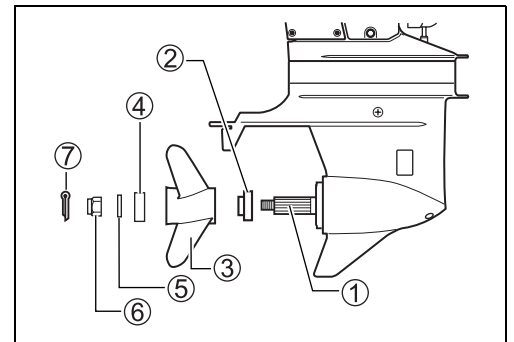
Blade × Dia. (in.) × Pitch (in.)				
3	×	14	×	13
3	×	13 and 7/8	×	15
3	×	13 and 3/4	×	17
3	×	13 and 3/4	×	19
3	×	13 and 3/4	×	21
3	×	13 and 3/4	×	23
3	×	13 and 1/2	×	15
3	×	14	×	17
3	×	14	×	19
3	×	14	×	21
3	×	14	×	23

### Installation of propeller

- (1) Coat the propeller shaft ① with the SUZUKI water-resistant grease.
- (2) Place the stopper ② on the propeller shaft.
- (3) Slide the propeller ③ onto the propeller shaft.
- (4) Place the spacer ④ and washer ⑤ on the propeller shaft.
- (5) Tighten the propeller nut ⑥ to the specified torque.

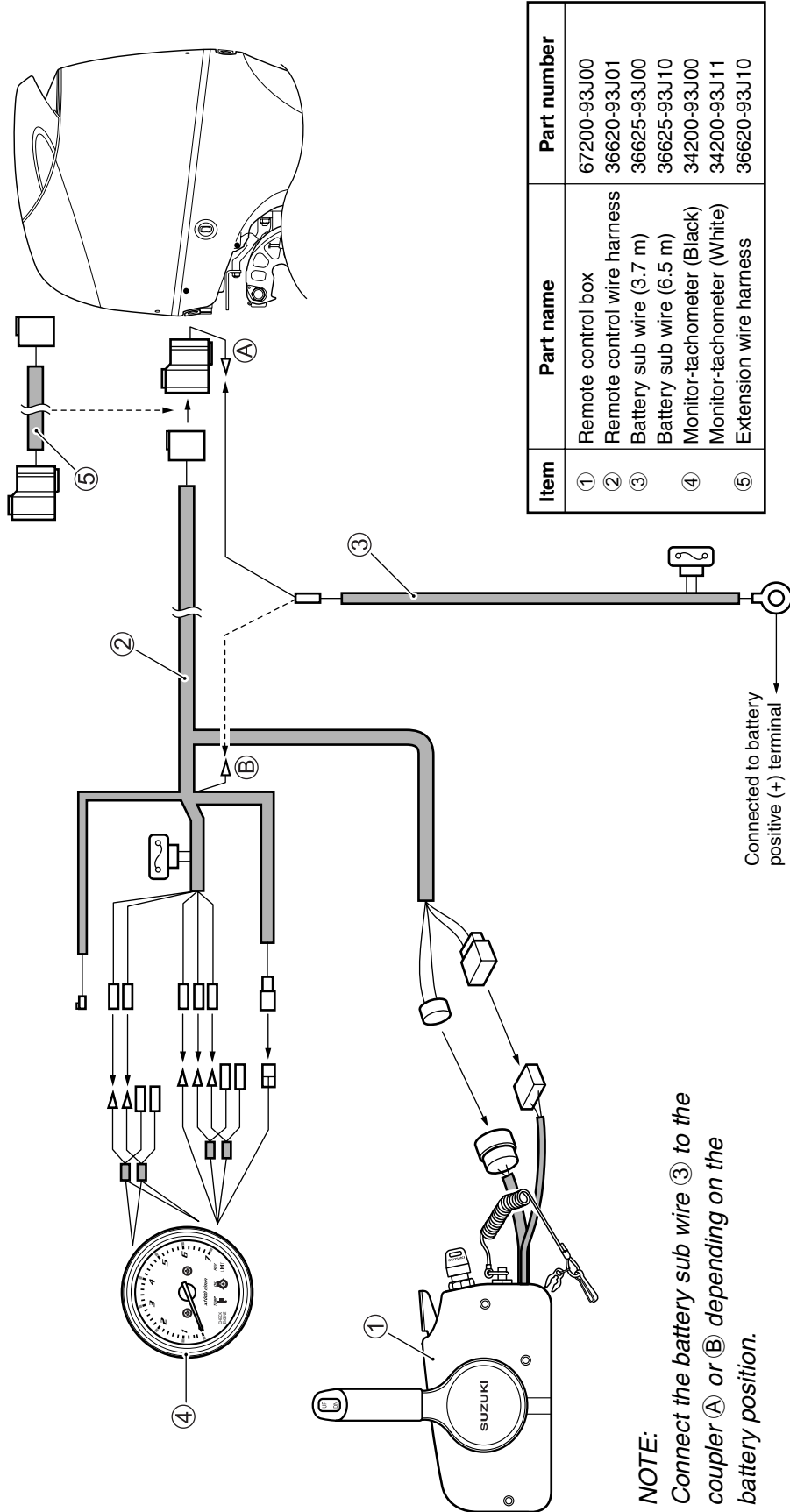
#### Propeller nut: 55 N·m (5.5 kgf·m)

- (6) Push the cotter pin ⑦ through the nut and shaft, then bend to secure.



# WIRING DIAGRAM

## Side Mount Remoto Control

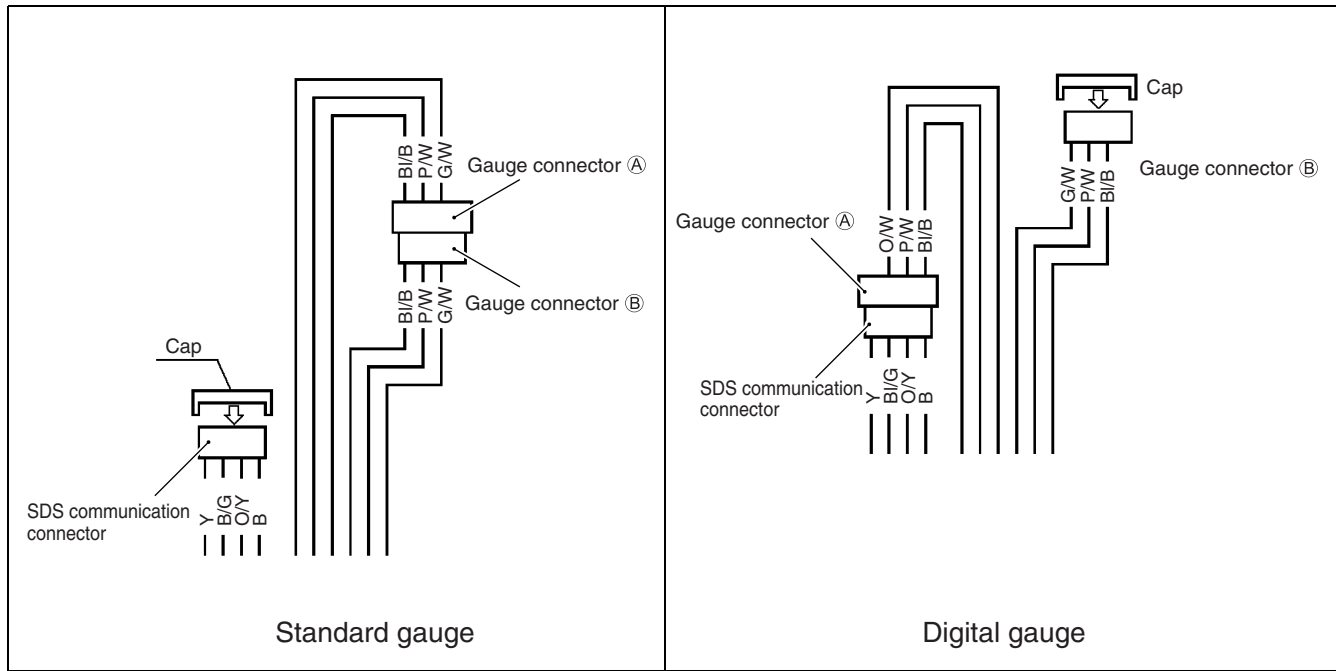




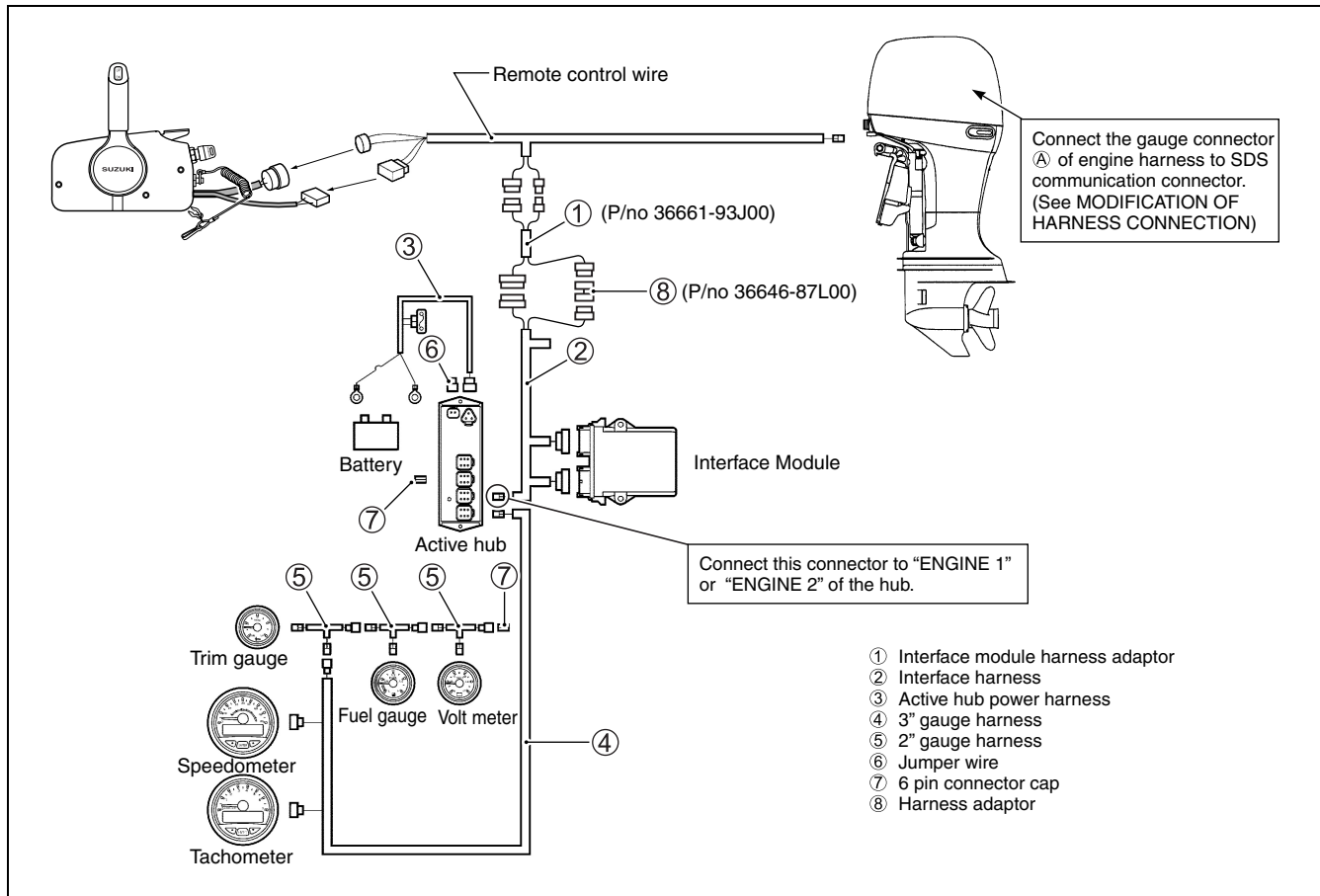
# DIGITAL GAUGE SYSTEM

## MODIFICATION OF HARNESS CONNECTION

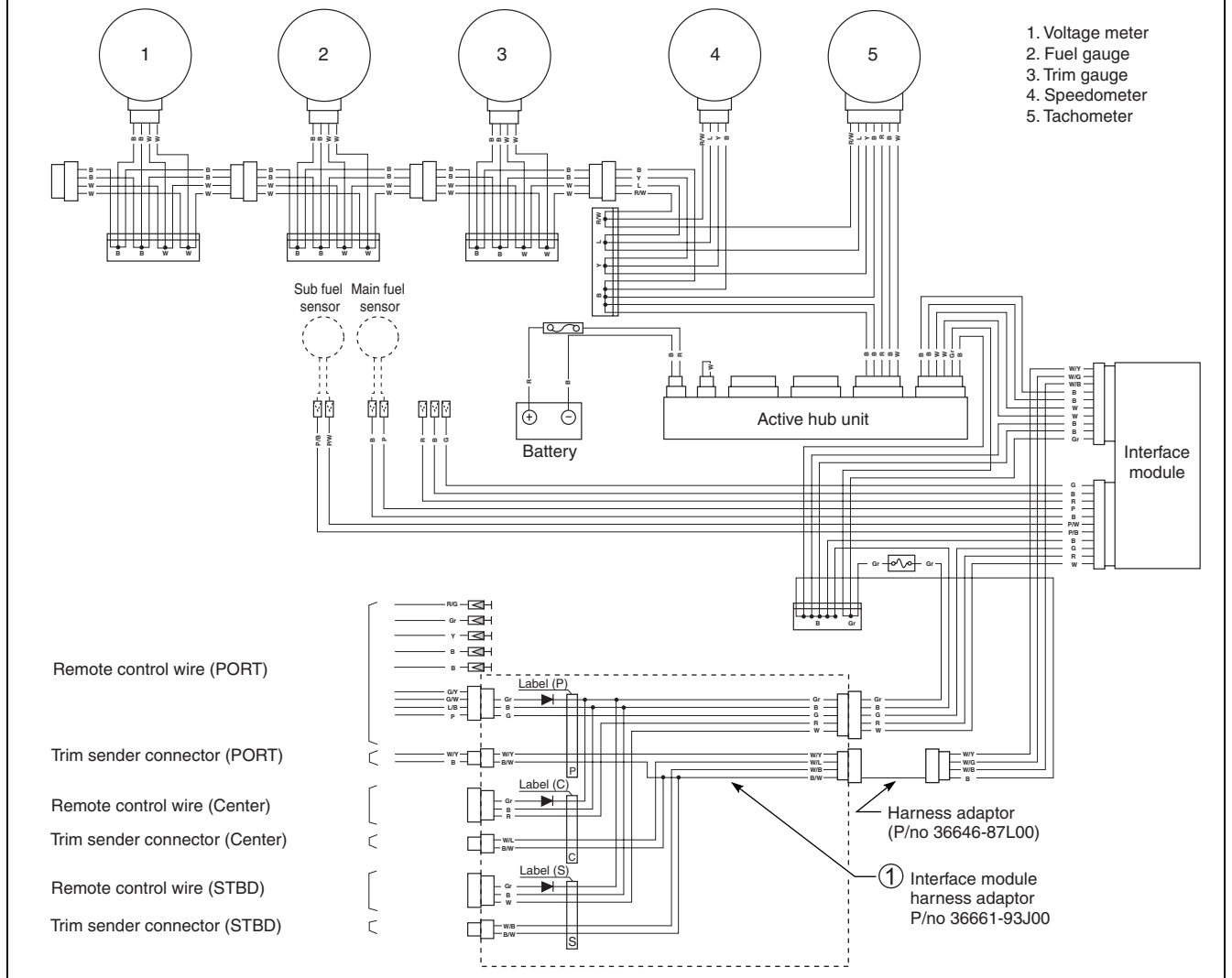
For operating the digital gauge, disconnect the gauge connector (A) from gauge connector (B), and connect the gauge connector (A) to the SDS communication connector as shown in the illustration.



## DIGITAL GAUGE AND RELATED PARTS CONNECTION



## DIGITAL GAUGE WIRING DIAGRAM



### NOTE:

- The remote control wire should be connected to the interface module harness adaptor with the specified connector as shown below. If the remote control wire is not connected to the specified connector of the interface module harness, the meter will not function properly.
- Single engine: Connect to label (P) connector.
- Twin engine:
  - PORT engine: Connect to label (P) connector.
  - STBD engine: Connect to label (S) connector.

Prepared by

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Quality Administration Department

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