

INSTALLATION AND PREDELIVERY OUTBOARD RIGGING PROCEDURE

OUTBOARD RIGGING PROCEDURE



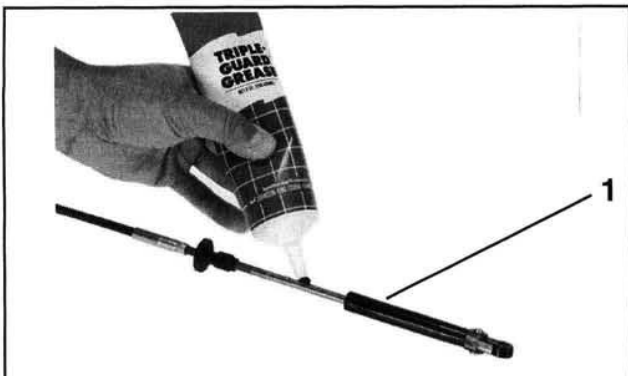
WARNING



To prevent accidental starting of engine, confirm the battery cables are disconnected at battery and spark plug leads are disconnected from spark plugs.

Control Cable Installation

Extend the casing guide of the throttle cable and lubricate cable with *Triple-Guard* grease.

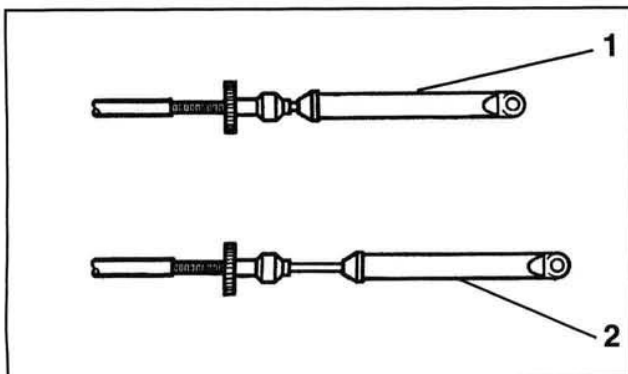


1. Fully extended casing guide

30501

IMPORTANT: Control cable function must be identified before continuing with installation.

Put the control handle into NEUTRAL position. The throttle cable casing guide will retract completely and the shift cable casing guide will go to the midpoint of its travel.



Control Cable Casing Guides

1. Retracted
2. Extended to midpoint

DR2067

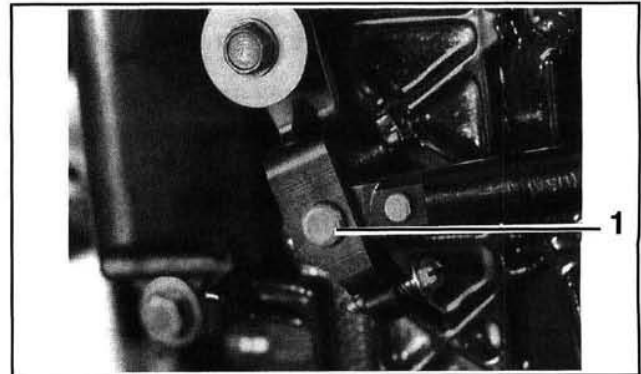
Throttle Cable Installation

Position the remote control handle in NEUTRAL. Be sure the throttle cable is retracted (IDLE).

9.9/15 MODELS

Remove rubber grommet from front of lower engine cover. Remove cable retainer. Apply a liberal amount of *Triple-Guard* grease to both anchor pockets.

Attach cable casing guide to throttle lever using clevis pin and cotter pin supplied with remote control adapter kit. Secure cable by spreading cotter pin ends.



1. Clevis pin

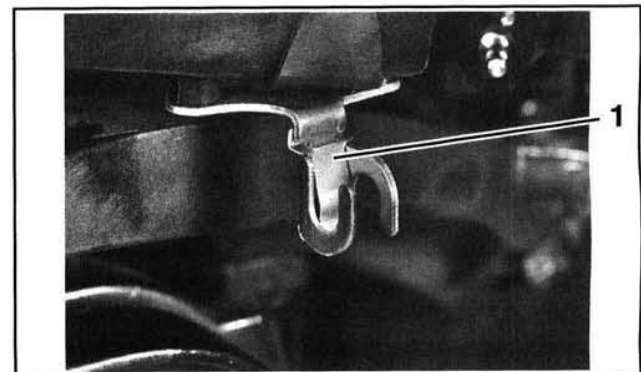
38561

Hold throttle lever tight against idle stop screw. Pull firmly on throttle cable to remove backlash and install trunnion nut in anchor pocket.

Install cable retainer and torque screw to 60 to 84 in. lbs. (7 to 9 N·m).

25/30 MODELS

Install the trunnion tension retainer onto the throttle cable trunnion bracket.

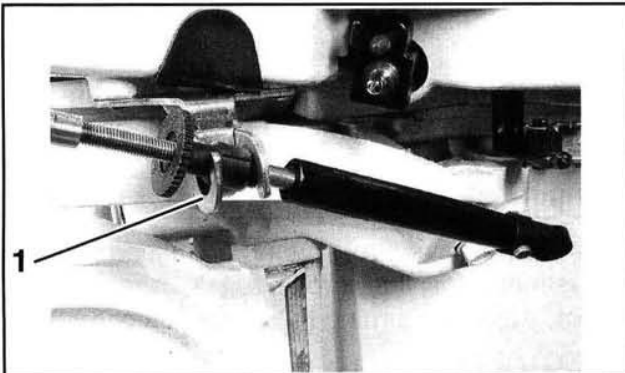


1. Trunnion tension retainer

33277

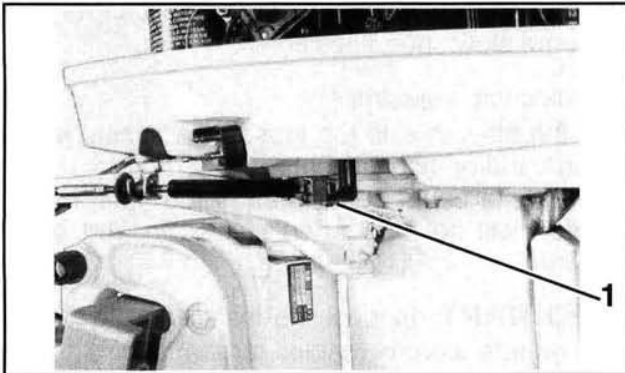
INSTALLATION AND PREDELIVERY OUTBOARD RIGGING PROCEDURE

Place throttle cable into trunnion bracket.



1. Trunnion bracket 32276

Attach spring clip to the throttle lever and pin assembly. Attach casing guide to throttle arm and secure with spring clip.



1. Spring clip 001018

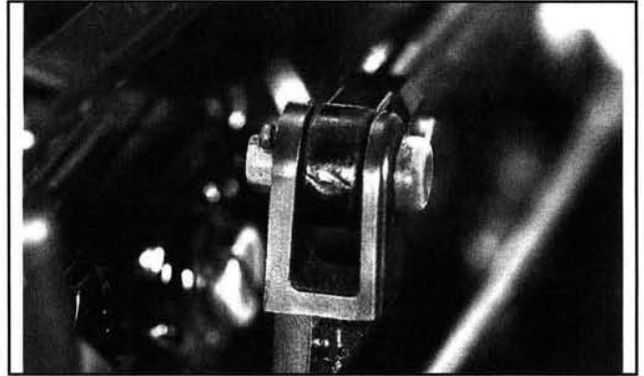
Shift Cable Installation

Position the remote control handle in NEUTRAL. Be sure the throttle cable is retracted to IDLE position and shift cable is at mid-point of travel.

Position shift linkage of outboard in NEUTRAL. Make sure gearcase is in NEUTRAL.

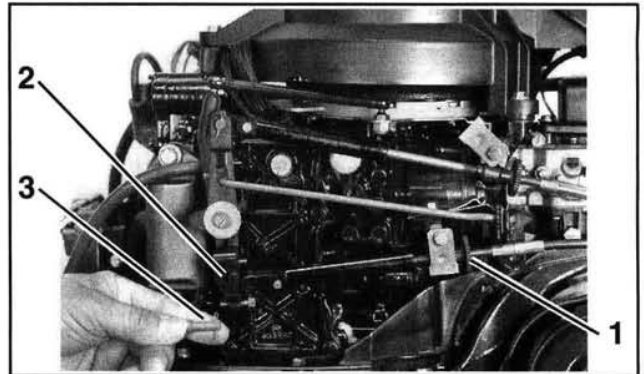
9.9/15 MODELS

Connect shift cable to shift lever using clevis pin and cotter pin supplied with remote control adapter kit.



38562

Adjust and locate cable trunnion in trunnion anchor bracket.



1. Cable trunnion
2. Shift lever
3. Clevis pin

38510

Install trunnion cover and torque the screw to 60 to 84 in. lbs. (7 to 9 N·m).



33259

2

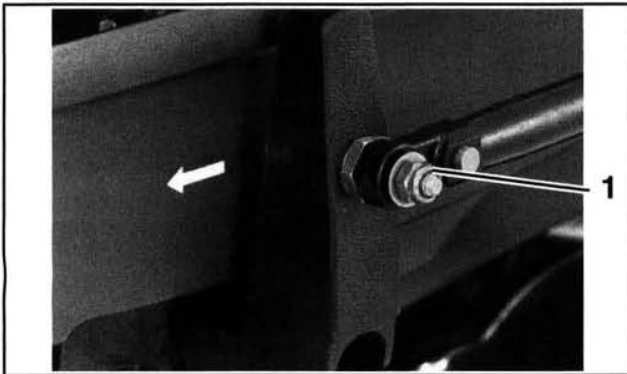
INSTALLATION AND PREDELIVERY OUTBOARD RIGGING PROCEDURE

Slip rubber grommet onto control cables and press grommet into groove in lower engine cover.

25/30 MODELS

Place shift cable through anchor bracket.

Install shift cable casing guide on shoulder bolt of shift lever. Install flat washer and locking nut supplied with outboard or accessory kit. Do not substitute locknut. Tighten locknut securely.

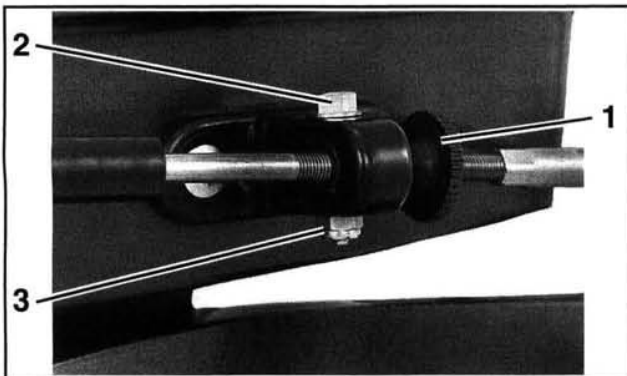


1. Locknut

22139

Adjust the length of the shift cable by turning the shift cable trunnion until the trunnion fits into the anchor bracket.

Secure shift cable in anchor bracket by installing screw and locknut. Tighten screw securely.



1. Shift cable trunnion
2. Screw
3. Locknut

22137

Control Cable Adjustment



WARNING



The trunnions on both remote control cables must be adjusted properly or operator may lose control of direction and engine speed.

The remote control cable trunnion provides adjustment for the throttle cable and the shift cable. Adjust by turning the trunnion nut.

Adjust the shift trunnion. The shift lever and gear-case must be in NEUTRAL when the remote control handle is in NEUTRAL.

Adjust the throttle trunnion. The throttle lever must be at extreme slow speed position and against the IDLE stop screw when the remote control is in extreme slow speed position.

Check cable adjustment:

- If throttle cable is too loose, idle speed will be high and/or inconsistent.
- If throttle cable adjustment is too tight, control effort will be high when shifting in and out of gear.

IMPORTANT: Inspect the installation to ensure the remote control cables are attached to the proper engine levers. Advance the fast idle lever to the START position. If correctly attached, the throttle cable and throttle lever on outboard will move.

Cable, Hose, and Wire Routing

IMPORTANT: Provide sufficient slack at outboard end to permit unrestricted steering and tilting of outboard. Do not allow cables to bind.

Battery Cables

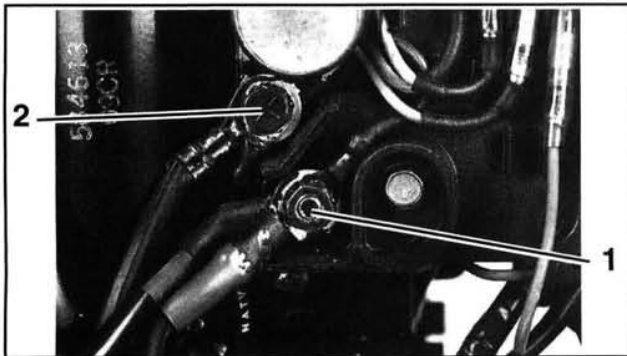


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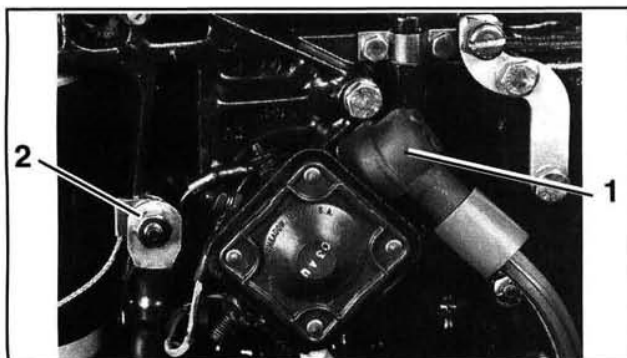
Disconnect battery cable from battery before servicing electrical systems. Failure to do so could result in injury from ignitions sources (sparks) or from contact with moving parts if accidental cranking or starting occurs.

Route battery positive (+) cable to the starter solenoid. Secure the cable to terminal. Cover terminal with rubber boot (25/30 Model) and position grommet in lower engine cover.



9.9/15 Model
1. Solenoid terminal
2. Ground terminal

35545



25/30 Model
1. Solenoid terminal
2. Ground terminal

42358

Secure the battery negative (-) cable to the powerhead ground terminal. Apply *Black Neoprene Dip* to connection.

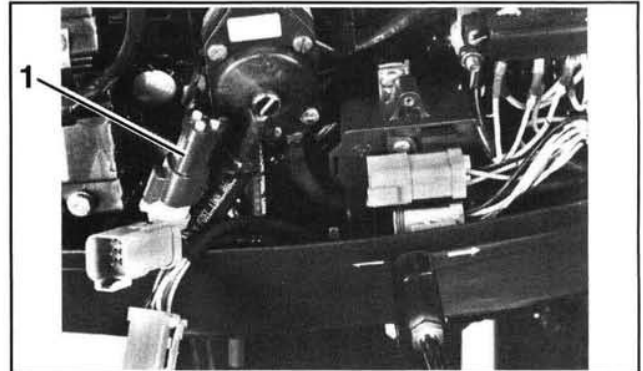
Remote Electrical Harness

9.9/15 MODELS

Refer to accessory instruction sheet.

25/30 MODELS

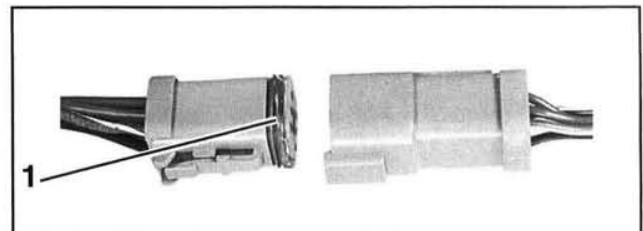
Route electrical cable along starboard side to rear connector bracket. Install protective plug on power trim/tilt connector.



1. Protective plug

42355

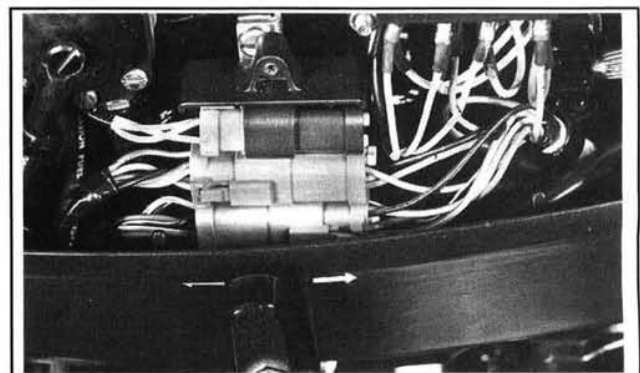
Before installing connections, check that seal is in place. Clean connectors and apply a light coat of *Electrical Grease* to the seal. Push connector together until latched.



1. Seal

42079A

Secure connectors in bracket by latching connector in slot of bracket.

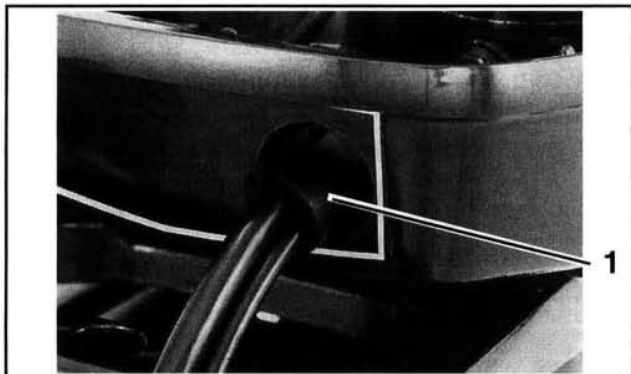


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INSTALLATION AND PREDELIVERY OUTBOARD RIGGING PROCEDURE

Install electrical bracket cover and secure with screw.

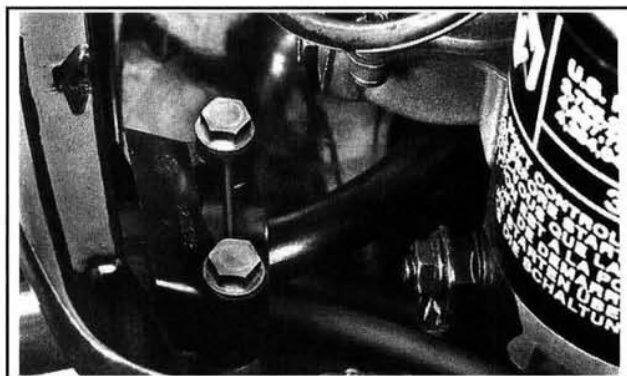
Install battery cables and electrical cable into grommet.



1. Grommet

22142

Install clamp and secure with screws.



42360

BATTERY AND CABLES

Select a battery that meets or exceeds the minimum requirements.

Minimum 12 Volt Battery Requirements

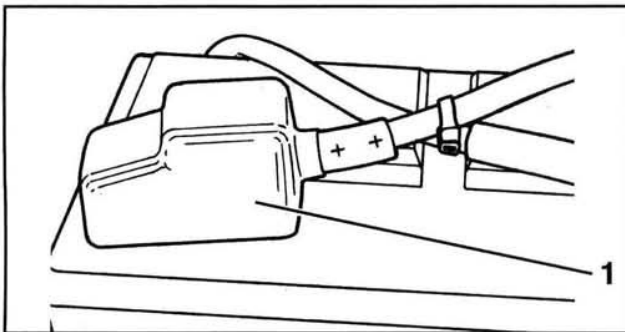
Model	Battery Rating
9.9/15 or 25/30	360 CCA (465 MCA), 50 amp-hr minimum

Installing Battery

Proper installation will prevent battery movement while underway.

Location and Preparation

- Secure all batteries in protected locations.
- Position battery as close to the outboard as possible.
- Battery location must provide access for periodic maintenance.
- Use battery mounting trays or battery boxes on all battery installations.
- Connections and terminals must be insulated.
- Battery connections must be clean and free from corrosion.
- Read and understand the safety information supplied with the battery before installation.



1. Terminal insulator

DR5104



WARNING

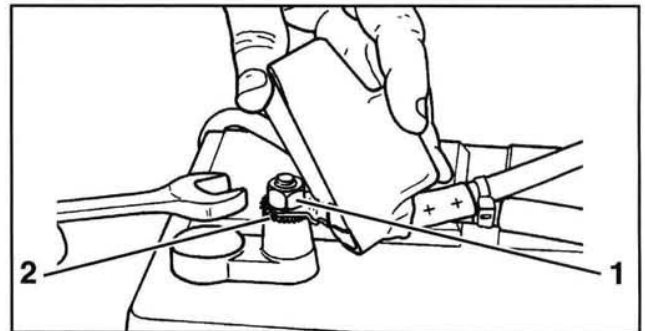


Keep the battery connections clean, tight, and insulated to prevent their shorting or arcing and causing an explosion. If the battery mounting system does not cover the connections, install protective covers. Check often to see that connections stay clean and tight.

Installation

IMPORTANT: Connect the battery positive (+) cable to the battery positive (+) post FIRST. Connect the battery negative (-) cable to the battery negative (-) post LAST.

Install a starwasher on the threaded battery post. Stack cables from the outboard, then cables from accessories. Finish this connection with a hex nut.



Marine-style Battery Post

1. Starwasher
2. Hex nut

DR5103

IMPORTANT: Do not use wing nuts to fasten ANY battery cables. Wing nuts can loosen and cause electrical system damage not covered under warranty.

Tighten all connections securely. Apply *Triple-Guard* grease to prevent corrosion.

Battery Cable Requirements

Evinrude/Johnson electric start outboards are shipped with stranded copper battery cables for typical installations in which the starting battery is positioned close to the transom.

Specialized outboard installations with extended length battery cables require an increased wire size. Refer to the following table:

Cable Size	Cable Length
6 Gauge	1 to 10 ft. (0.3 to 3 m)
4 Gauge	11 to 15 ft. (3.4 to 4.6 m)
3 Gauge	16 to 20 ft. (4.9 to 6.1 m)

IMPORTANT: Inadequate battery cables can affect the performance of an outboard's high amperage start circuit and the cranking speed of the outboard. DO NOT use aluminum wire cables. Use ONLY AWG stranded copper wire cables.