

REMOTE CONTROL CONVERSION KIT, P/N 5035779 INSTALLATION INSTRUCTIONS

APPLICATION

This kit is designed for use on **2003 (ST) and newer Johnson® 4, 5, 6 HP (138 cc) 4-Stroke outboards**. DO NOT install on any other models.

SAFETY INFORMATION

For safety reasons, this kit should be installed by an authorized *Evinrude®/Johnson®* dealer. This instruction sheet is not a substitute for work experience. Additional helpful information may be found in other service literature for your engine.

This instruction sheet uses the following signal words identifying important safety messages.



DANGER



Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



WARNING



Indicates a potentially hazardous situation which, if not avoided, **CAN** result in severe injury or death.



CAUTION



Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate personal injury or property damage. It also may be used to alert against unsafe practices.

IMPORTANT: Identifies information that will help prevent damage to machinery and appears next to information that controls correct assembly and operation of the product.

These safety alert signal words mean:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

Always follow common shop safety practices. If you have not had training related to common shop safety practices, you should do so to protect yourself, as well as the people around you.

It is understood that this instruction sheet may be translated into other languages. In the event of any discrepancy, the English version shall prevail.

DO NOT do any repairs until you have read the instructions and checked the pictures relating to the repairs.

Be careful, and never rush or guess a service procedure. Human error is caused by many factors: carelessness, fatigue, overload, preoccupation, unfamiliarity with the product, and drugs and alcohol use, to name a few. Damage to a boat and outboard can be fixed in a short period of time, but injury or death has a lasting effect.

When replacement parts are required, use *Evinrude/Johnson Genuine Parts* or parts with equivalent characteristics, including type, strength and material. Using substandard parts could result in injury or product malfunction.

Torque wrench tightening specifications must be strictly followed. Replace any locking fastener (locknut or patch screw) if its locking feature becomes weak. Definite resistance to turning must be felt when reusing a locking fastener. If replacement is specified or required because the locking fastener has become weak, use only authorized *Evinrude/Johnson Genuine Parts*.

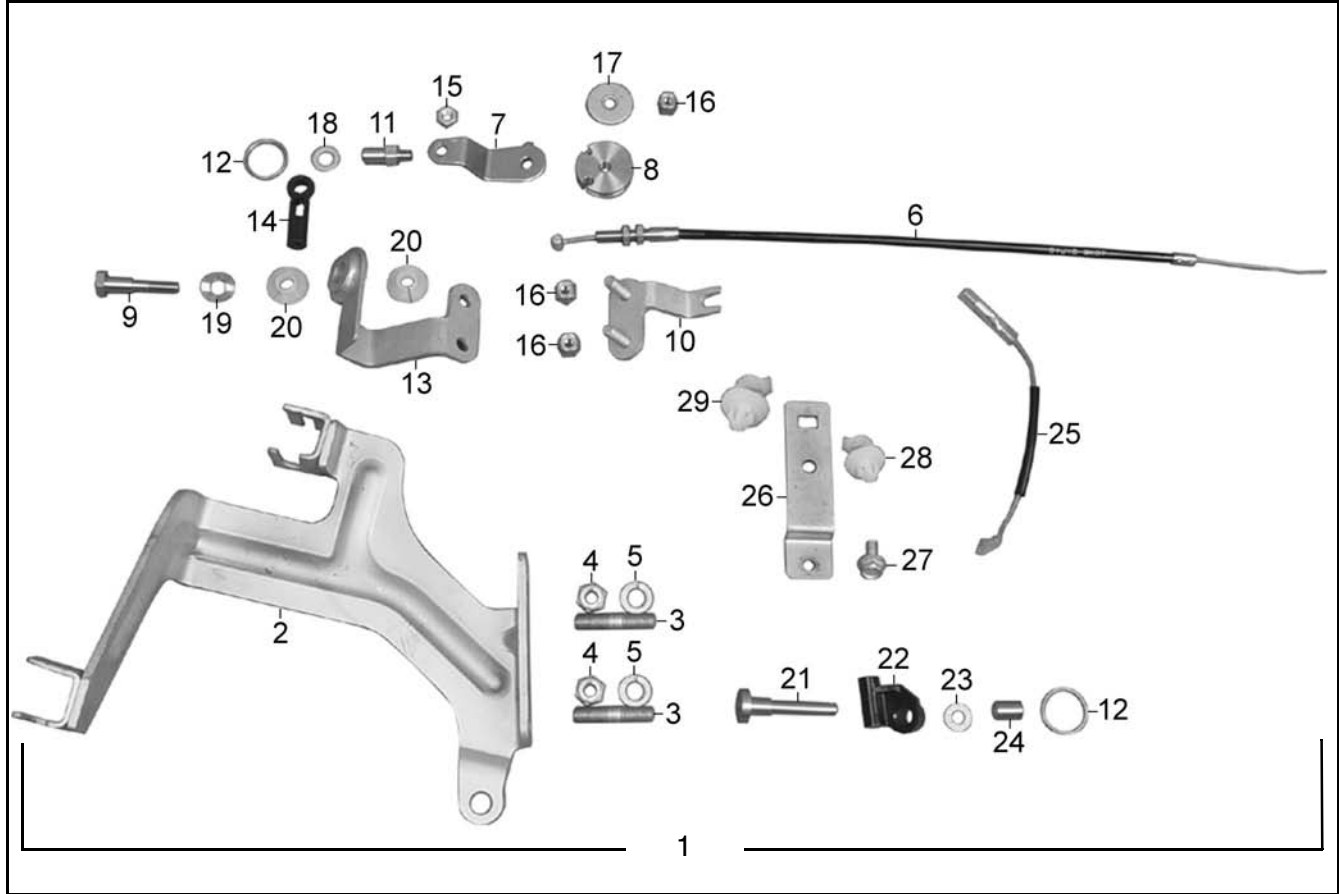
If you use procedures or service tools that are not recommended in this instruction sheet, **YOU ALONE** must decide if your actions might injure people or damage the outboard.

TO THE INSTALLER: Give this sheet to the owner. Advise the owner of any special operation or maintenance information contained in the instructions.

TO THE OWNER: Save these instructions in your owner's kit. This sheet contains information important to the future use and maintenance of your engine.



REMOTE CONTROL CONVERSION KIT – 4, 5, 6 HP (138 cc) 4-Stroke



003420

Ref	P/N	Name of Part	Qty	Ref	P/N	Name of Part	Qty
1	5035779	REMOTE CONTROL CONVERSION KIT	1	16	5035826	*NUT, LEVER & GUIDE BRACKETS	3
2	5035815	*ATTACHMENT, CABLE BRACKET	1	17	5035827	*WASHER, THROTLLE DRUM	1
3	5035816	*BOLT, ATTACHMENT STUD	2	18	5034401	*WASHER, CONNECTOR	1
4	5035817	*NUT, ATTACHMENT	2	19	5031856	*WASHER, THROTTLE LEVER	1
5	5030069	*WASHER, REMOTE THROTTLE	2	20	5030345	*BUSHING, THROTTLE LEVER	2
6	5035818	*CABLE, THROTTLE	1	21	5035828	*PIN, SHIFT CABLE	1
7	5035819	*LEVER, THROTTLE	1	22	5034077	*CONNECTOR, SHIFT CABLE	1
8	5035820	*DRUM, THROTTLE CABLE	1	23	5030429	*WASHER, SHIFT CONNECT	1
9	5035821	*BOLT, THROTTLE LEVER	1	24	5031049	*SPACER, SHIFT CONNECT	1
10	5035822	*GUIDE, THROTTLE CABLE	1	25	5035829	*LEAD, STOP SWITCH	1
11	5035823	*BOLT, THROTTLE CABLE CONNECT	1	26	5035830	*BRACKET, HOSE & CABLE CLAMP	1
12	5035824	*STOPPER, CABLE	2	27	5034517	*BOLT, CLAMP BRACKET	1
13	5035825	*BRACKET, THROTTLE	1	28	5035831	*CLAMP, STOP SWITCH CABLE	1
14	5030375	*CONNECTOR, THROTTLE CABLE	1	29	5035832	*CLAMP, FUEL HOSE	1
15	5030051	*NUT, THROTTLE BOLT	1				



WARNING



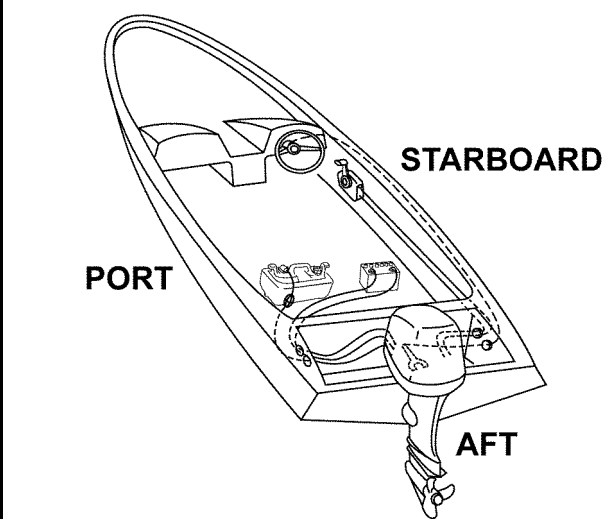
Improper installation of this kit could result in personal injury due to loss of boat control.

A boat designed for remote steering might have a lower maximum rated horsepower for a tiller-steered outboard than shown on the certification plate. To avoid overpowering a boat designed and rated for remote steering, contact boat manufacturer for tiller-steered maximum rated horsepower.

To prevent accidental starting while servicing, disconnect battery leads from battery. Twist and remove all spark plug leads.

To prevent injury from contact with a rotating propeller, remove propeller before servicing and when running outboard on a flushing device.

FORWARD



Nautical Orientation

REMOTE CONTROL SELECTION

Before performing these procedures, be sure that the throttle and shift cables are installed in the remote control box according to the remote control manufacturer's instructions.

Remote control styles and applications are described in the *Evinrude/Johnson Genuine Parts and Accessories Catalog*. Plan the installation of all remote controls carefully. Read the outboard's Operator's Guide and the remote control's installation instructions prior to installation.

The remote control used must have the following features:

- Shift stroke must conform to the outboard's specifications, 1.125 to 1.330 in. (28.6 to 33.8 mm) measured between NEUTRAL and FORWARD.

IMPORTANT: The remote control cables must have an SAE fitting on the output (engine) end. Refer to the *Evinrude/Johnson Genuine Parts and Accessories Catalog* for stern drive (SAE output end) cable applications.

INSPECTION

Before installation, check boat for obstructions that could interfere with free movement of outboard, remote control cables, and steering components when steering or tilting outboard.



CAUTION



To avoid damaging the tiller handle when tilting the outboard up, position the outboard to clear obstacles in the motor well and boat.

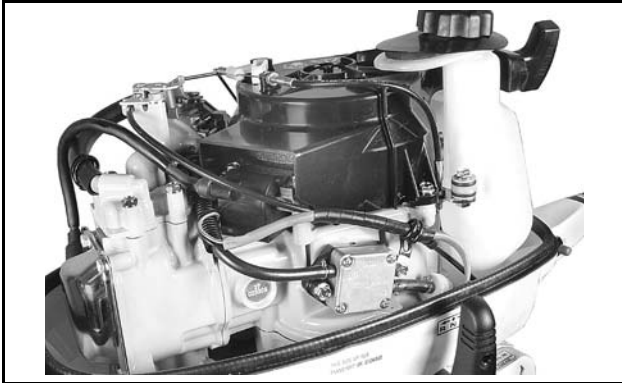
IMPORTANT: Prior to starting installation, perform the following:

- Stop the engine.
- Disconnect spark plug wire from spark plug.
- Make sure the engine is sufficiently cooled.

PARTS REMOVAL

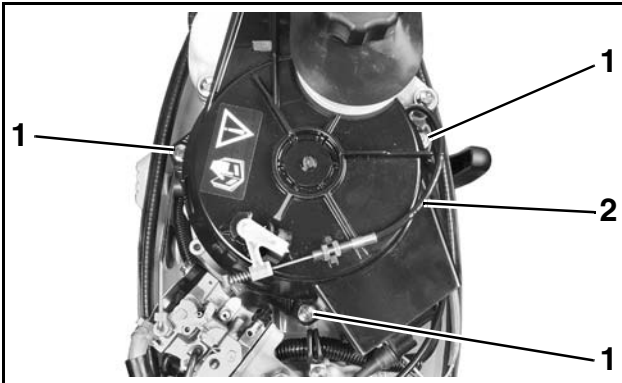
Remove the parts in the following procedures prior to installing the Remote Control Conversion Kit.

Remove the upper motor cover.



003417

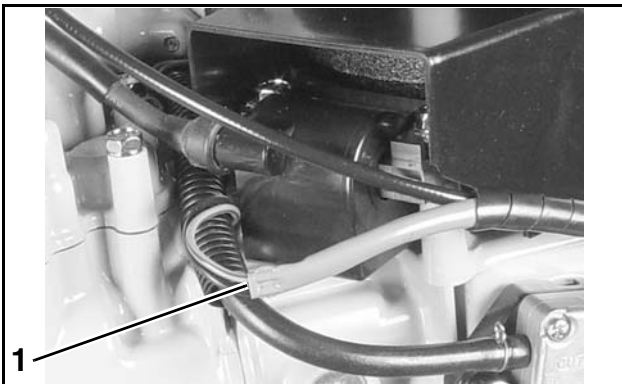
Remove the fuel tank cap and rubber seal and the grommet under the rubber seal. Remove three 6 mm recoil starter retaining screws and the recoil starter. Leave the neutral start interlock cable as it is.



1. Screws
2. Interlock cable

003416

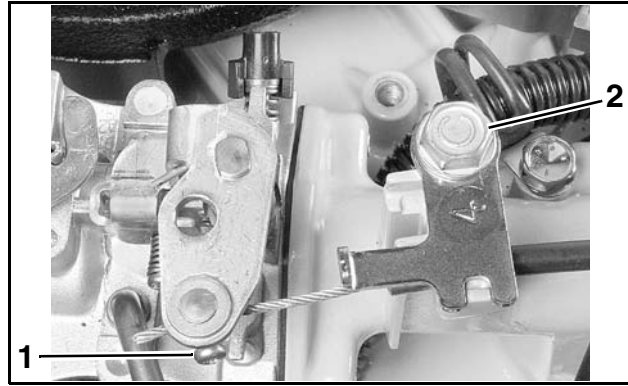
Disconnect stop switch wire from ignition coil (blue/red wire) and remove ground wire (black) by removing ignition coil screw. Replace ignition coil mounting screw and tighten securely.



1. Stop switch wire

003422

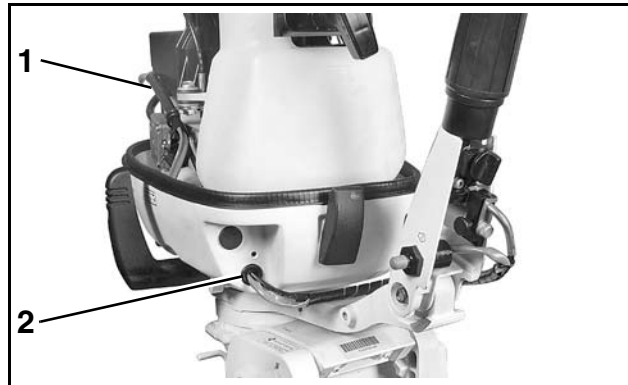
Loosen throttle cable set screw and retainer bracket screw. Remove throttle cable.



1. Set screw
2. Retainer bracket screw

003501

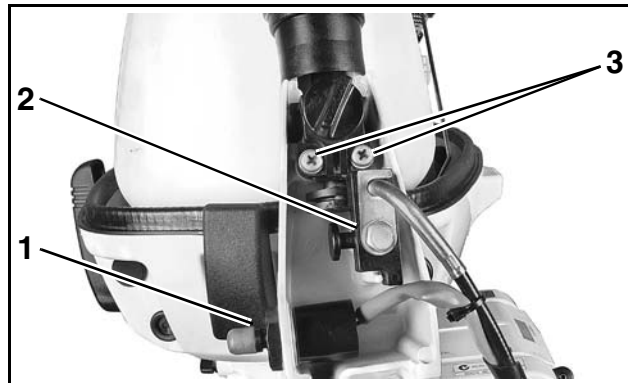
Unbind the spiral tubing and remove throttle cable and stop switch wires from lower cover. Do not remove rubber grommet from lower engine cover. Save spiral tube to be reused.



1. Spiral tube
2. Grommet

003418

Remove stop switch from tiller handle. Save switch and mount at remote location. Remove throttle cable from tiller handle by removing throttle cable holder, handle grip screw, and handle rod support screws. Reinstall handle rod and grip without throttle cable. Do not install cable holder.

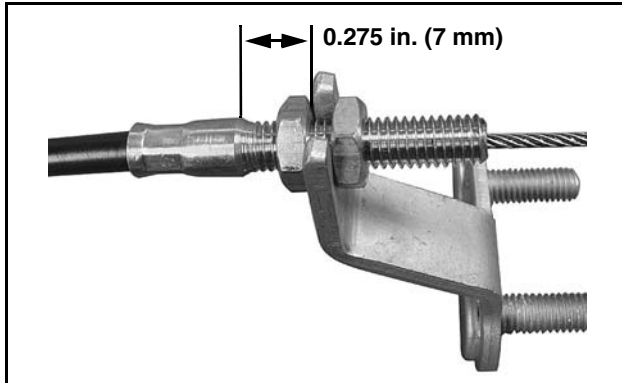


1. Stop switch
2. Holder, throttle cable
3. Screws, handle rod support

003419

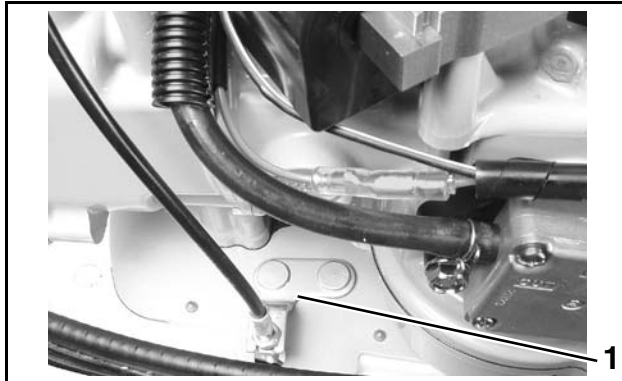
INSTALLATION

Install throttle cable outer tube on the throttle cable guide using nuts provided. Remove core wire of cable to install nuts. Locate the cable guide about 0.275 in. (7 mm) from the threaded end of cable casing as shown. Tighten nuts securely.



003502

Remove grommets and install throttle cable guide onto lower engine cover.



1. Guide

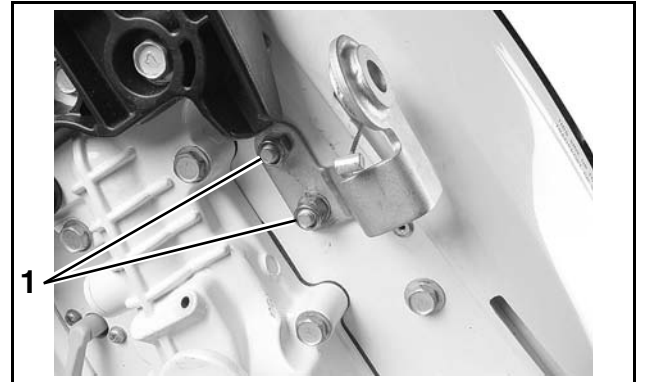
003503

Insert inner throttle cable through outer throttle cable tube.



003504

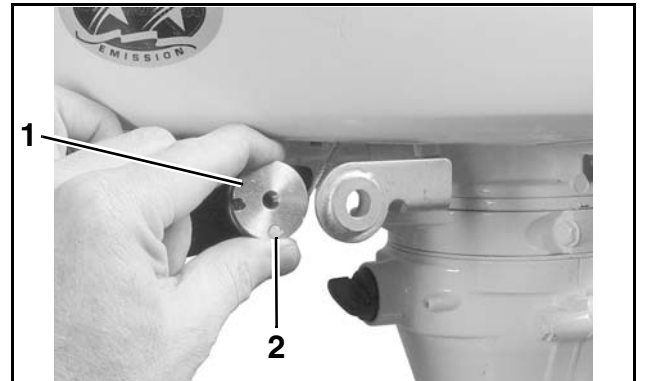
Install throttle lever bracket and nuts and torque nuts to 90 in. lbs. (10 N-m).



1. Nuts

003505

Assemble throttle lever drum with inner cable. Inner cable end is fitted into hole in drum and cable is positioned in groove of drum.



1. Drum

2. Inner cable end

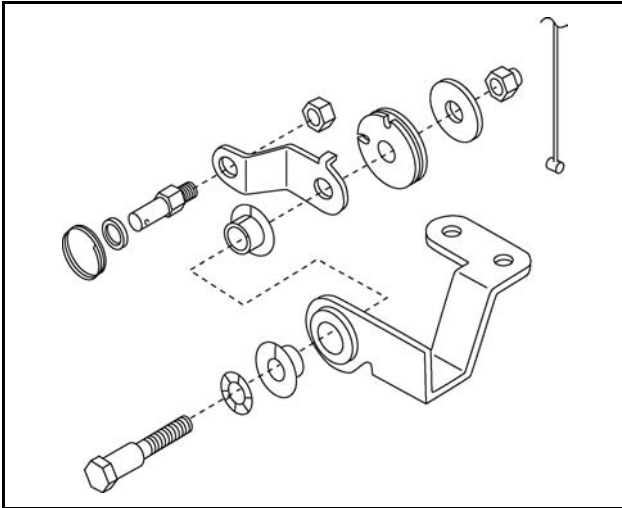
003509

Assemble throttle lever components as shown. Apply *Triple-Guard*® grease to all moving surfaces such as the inner cable end, pivot part of throttle lever, and throttle lever drum.



003510

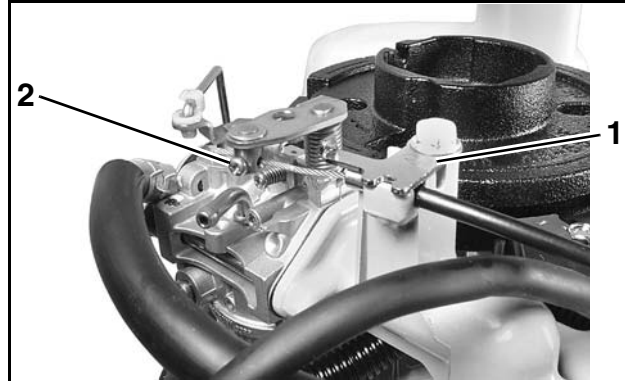
Refer to diagrams on next page.



Throttle Lever Assembly Diagram

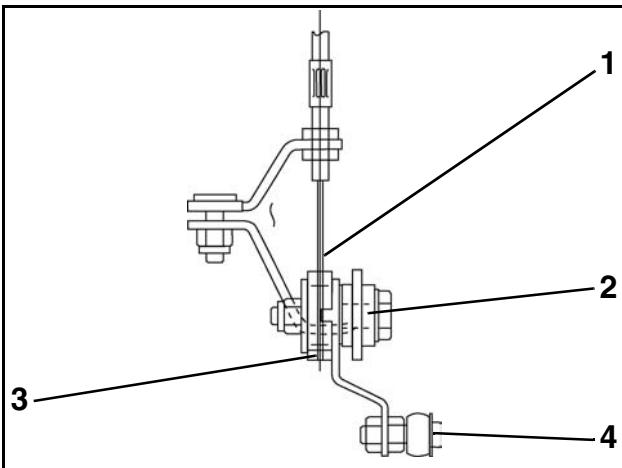
003518

Connect the throttle cable to the carburetor throttle lever. Secure cable under retainer bracket and tighten screw. Adjust cable length with the carburetor throttle lever and throttle cable lever in closed position. Tighten set screw.



1. Bracket
2. Set screw

003535

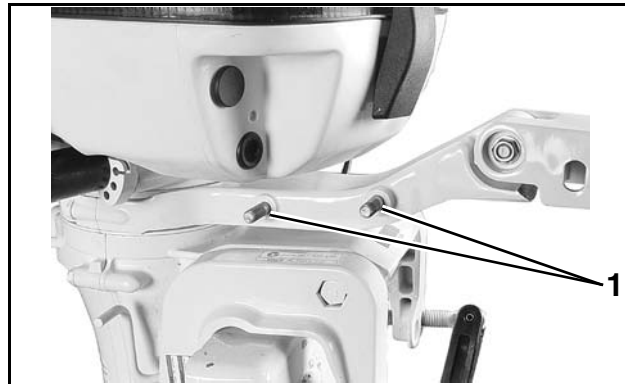


Lubrication points

1. Cable, throttle
2. Pivot, throttle lever
3. Drum, throttle
4. Pin, remote control cable

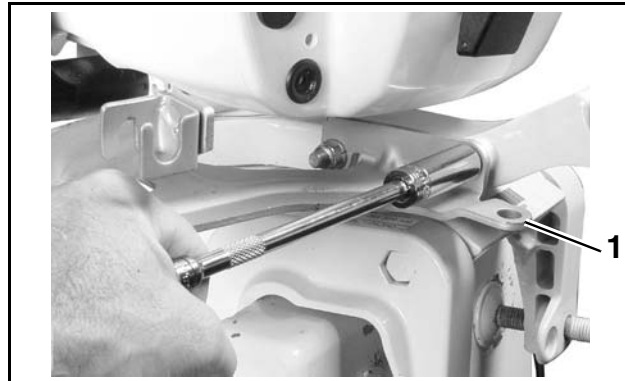
003519

Install two studs in the steering bracket. Position remote control cable holder on studs and fasten with lockwashers and nuts. Torque nuts to 18 ft. lbs. (25 N·m). The remote control cable holder also provides steering attachment point.



1. Studs

003506

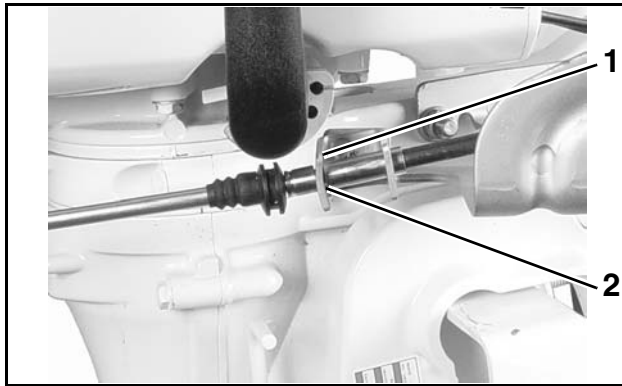


1. Steering attachment point

003511

IMPORTANT: Install remote control cables in control box before proceeding. Follow instructions provided with remote control assembly. Place remote control in NEUTRAL position.

Install throttle cable in control cable holder. Cable housing groove engages holder.



1. Holder
2. Groove

003512

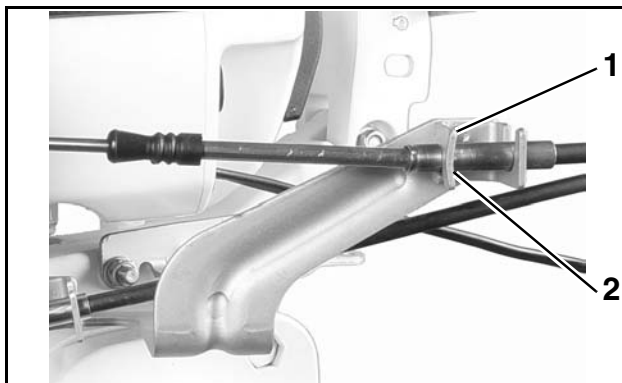
Thread cable connector onto the threaded end of throttle cable. The thread engagement depth must be a minimum of 0.50 in. (13 mm). Align cable connector opening with pin of throttle lever. Install cable connector on pin and install washer and retainer clip. Tighten locking nut of throttle cable against connector.



1. Locking nut

003507

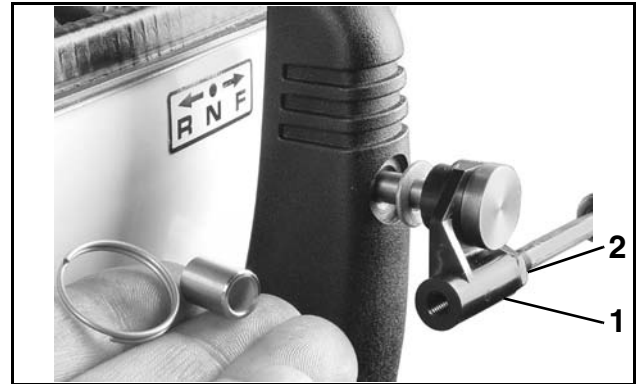
Install shift cable in control cable holder. Cable housing groove engages holder.



1. Holder
2. Groove

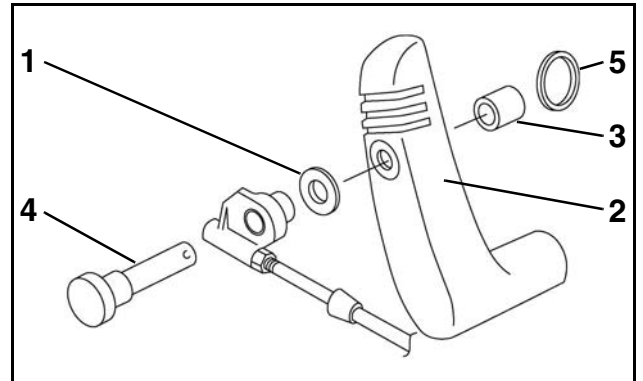
003514

With remote control in NEUTRAL position, thread cable connector onto the threaded end of shift cable. The thread engagement depth must be a minimum of 0.50 in. (13 mm). Align shift cable connector opening with washer, shift lever and the spacer. Insert pin and install retainer into the pin hole. Tighten locking nut of shift cable against connector.



1. Connector
2. Locking nut

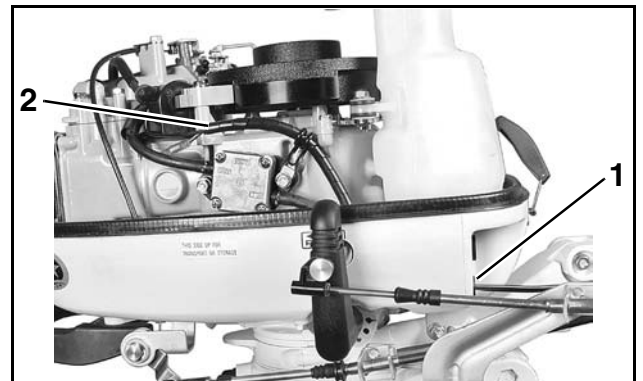
003513



1. Washer
2. Shift lever
3. Spacer
4. Pin
5. Retainer

003513

Install stop switch adjacent to the helm. Extend and route wiring to outboard using wire and connectors suited to application. Route wire through the rubber grommet of lower engine cover and connect to ignition coil as before. Use spiral tube removed previously to wrap and protect wires.



1. Grommet
2. Spiral tube

003515



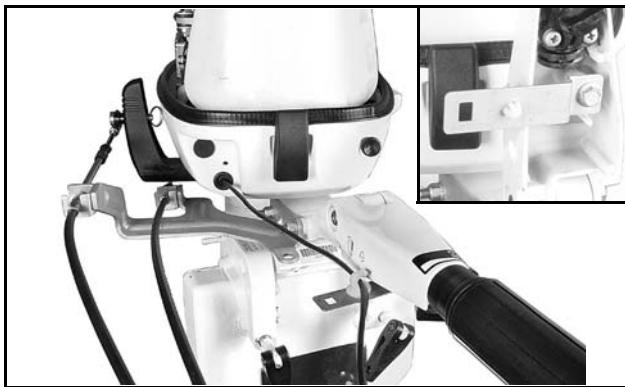
CAUTION



Clamp stop switch wires and use spiral wrap to prevent interference with flywheel. Damage to wiring could result in loss of operator control.

Install recoil starter and rubber grommet and fuel tank cap in reverse order of removal.

Install the wire and hose bracket on the backside of the tiller handle with the screw provided. Torque bolt to 7.0 ft. lbs. (10 N·m). Insert the stop switch wire clamp and fuel hose clamp to the holes on the bracket.



003516

CHECK INSTALLATION

Make sure the following operate properly before returning outboard to customer:

- Engine stop circuit
- Emergency stop switch and lanyard
- Steering movement and friction control
- Throttle control (IDLE to WIDE OPEN)
- Shift control and proper gear engagement
- Start-in-gear protection (on engine)



WARNING



Only shift outboard with throttle in IDLE position. If outboard is shifted into gear with throttle setting above IDLE speed, the boat could accelerate suddenly, injuring boat occupants and bystanders.