

TILLER HANDLE KIT, P/N 5005579 and 5005777 INSTALLATION INSTRUCTIONS

APPLICATION

This kit is designed for use on **2004 (SR) and newer Evinrude® E-TEC™ 75 and 90 HP 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 and the operating instructions 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.





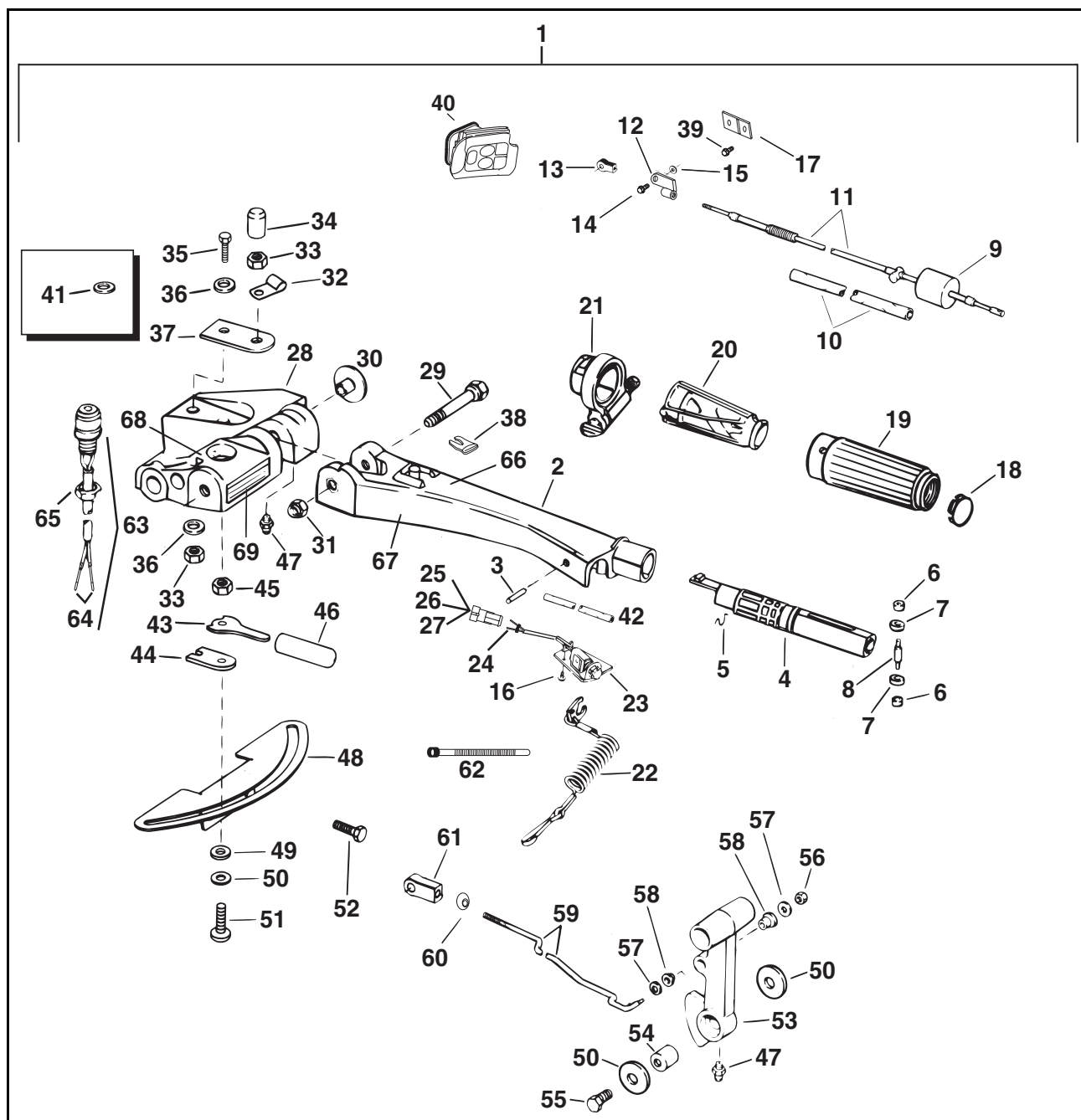
WARNING



Do not install this kit unless you have the ability to communicate with the engine using *Evinrude E-TEC* Engine Diagnostic Software. Complete installation of this kit requires reprogramming the Engine Management Module (EMM) to provide start-in-gear protection.



TILLER CONVERSION KIT (*Evinrude E-TEC* – 75/90 HP)



TILLER CONVERSION KIT (*Evinrude E-TEC* – 75/90 HP)

Ref	P/N	Name of Part	Qty	Ref	P/N	Name of Part	Qty
1	5005777	TILLER CONVERSION KIT - WHITE	1	37	333374	*SHIM, Steering arm extension	1
1	5005579	TILLER CONVERSION KIT - BLUE	1	38	333499	*CLIP, Emergency stop	1
2	434930	*STEERING HANDLE Assy.	1	39	909386	*SCREW, Bracket to intake	1
3	334960	**SPIRAL PIN	1	40	351376	GROMMET, Cable	1
4	329878	**STEERING HANDLE, Inner	1	41	318941	*WASHER, Steering handle A	1
5	332089	**RETAINING RING	1	42	342803	*SLEEVE, Throttle cable & lead wire	1
6	329881	*ROLLER, Helix to cable	2	43	345201	*LEVER, Steering friction	1
7	329879	*GUIDE	2	44	344709	*WASHER, Steering friction	1
8	329880	*PIN, Cable to rollers	1	45	345348	*NUT, Steering friction	1
9	329063	*SEAL, Steering handle	1	46	345202	*GRIP, Lever	1
10	351565	*SLEEVE, Throttle cable	1	47	313607	*LUBE FITTING	1
11	5005692	*CABLE, Throttle	1	48	344705	*BRACKET, Steering friction	1
12	334083	*ANCHOR, Throttle cable	1	49	345476	*WASHER, Steering friction	1
13	334153	*CONNECTOR, Throttle cable	1	50	327400	*WASHER, Steering friction	3
14	329160	*SCREW, Anchor to bracket	1	51	344706	*SCREW, Steering friction	1
15	328739	*WASHER, Anchor to bracket	1	52	328694	*SCREW, Steering friction	4
16	336481	*SCREW, Emgy. Stop assy	3	53	340532	*HANDLE, Shift	1
17	351209	*BRACKET, Anchor to intake	1	54	334815	*BUSHING, Shift handle	1
18	342933	*PLUG, Idle adjustment	1	55	329885	*SCREW, Shift handle mount	1
19	436216	*TWIST GRIP & SLEEVE	1	56	313022	*NUT, Linkage rod to handle	1
20	339722	*HELIX, Twist grip	2	57	328703	*WASHER, Linkage rod nut to handle	2
21	174741	*THROTTLE FRICTION CONTROL	1	58	314125	*BUSHING, Shift handle linkage rod	2
22	398602	*LANYARD	1	59	351191	*ROD, Shift linkage	1
23	586830	*EMGY. STOP SWITCH Assy	1	60	334373	*BUSHING, Shift linkage rod snap	1
24	514679	**PIN, Terminal	2	61	334119	*CONNECTOR, Shift linkage rod	1
25	514690	*SEAL PLUG	2	62	320107	*TIE STRAP	4
26	514688	*CONNECTOR, Start & Stop 6 Pin	1	63	586827	*START SWITCH Assy	1
27	514684	*LOCKWEDGE	1	64	514679	**PIN, Terminal	2
28	340779	*BRACKET, Steering handle	1	65	327805	*NUT, Start switch	1
29	350989	*SCREW, Steering handle to bracket	1	66	335298	DECAL, Emergency stop clip (white)	1
30	325452	*BUSHING, Steering handle to brkt.	2	66	335299	DECAL, Emergency stop clip (blue)	1
31	307160	*LOCKNUT, Steering handle screw	1	67	330575	DECAL, Start warning (white)	1
32	310928	*CLAMP, Stop switch leads	1	67	333978	DECAL, Start warning (blue)	1
33	315077	*NUT, Steering bracket	2	68	330713	DECAL, Gear shift (white)	1
34	315391	*COVER, Screw	1	68	333979	DECAL, Gear shift (blue)	1
35	327254	*SCREW, Strg. brkt. to strg. arm	1	69	5000266	DECAL, Friction	1
36	320397	*WASHER, Steering handle	2				

A Use only under screw head if washer P/N 320397 is too thick.



WARNING



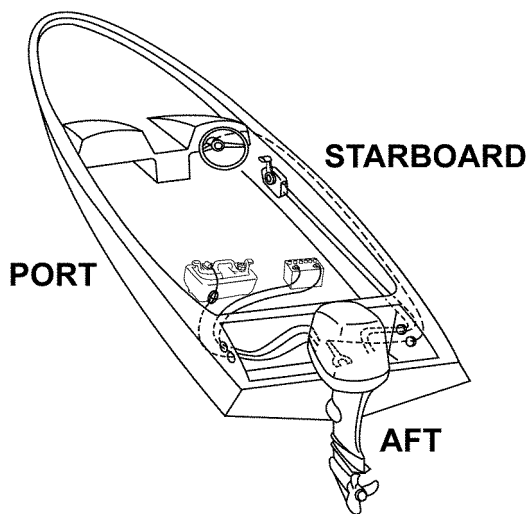
Improper installation of this kit could result in personal injury due to loss of boat control.

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

INSPECTION

Before installation, check boat for obstructions that could interfere with free movement of tiller handle when steering or tilting outboard.



CAUTION



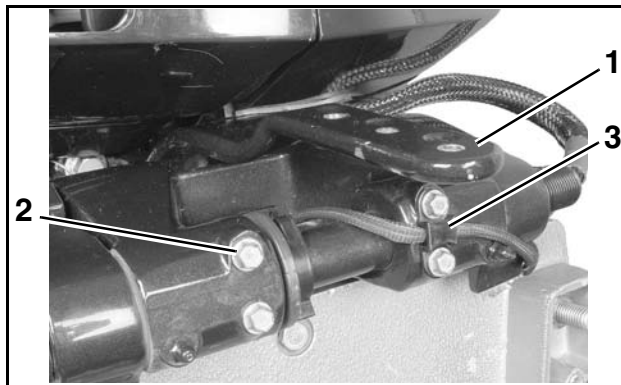
To avoid damaging the tiller handle when tilting the outboard up, position the outboard to clear obstacles in the motor well and boat.

INSTALLATION

Disconnect battery cables from outboard.

Shift outboard to NEUTRAL. Remove any screws from steering arm holes.

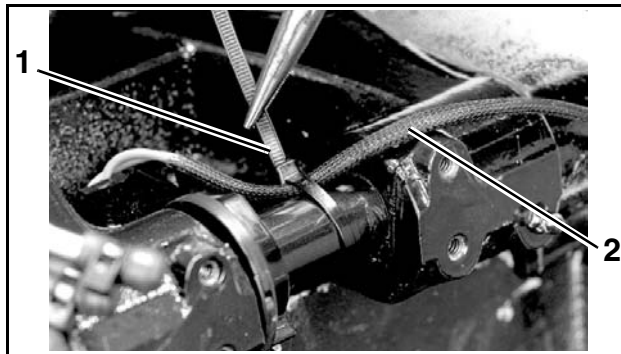
Remove four (4) screws and tilt limit switch wire retainer from swivel bracket.



1. Steering arm
2. Screws (4)
3. Tilt limit switch wire retainer

002397

Use tie strap to secure tilt limit switch wire to tilt tube. Route wire over transom bracket.



1. Tie strap
2. Tilt limit switch wire

48865

Place shim plate on tiller handle, as shown. Insert steering arm screw with washer through aft hole.

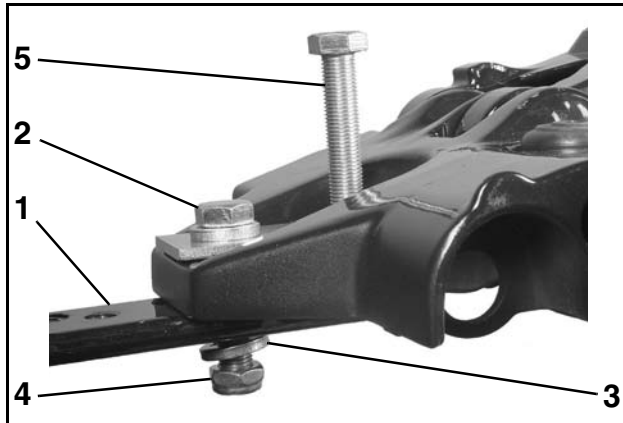


1. Shim plate
2. Steering arm screw
3. Washer

002398

Install tiller handle on steering arm. Thread screw into center hole of steering arm and install washer and locknut by hand. Temporarily thread steering friction screw through forward hole to steady tiller handle on steering arm.

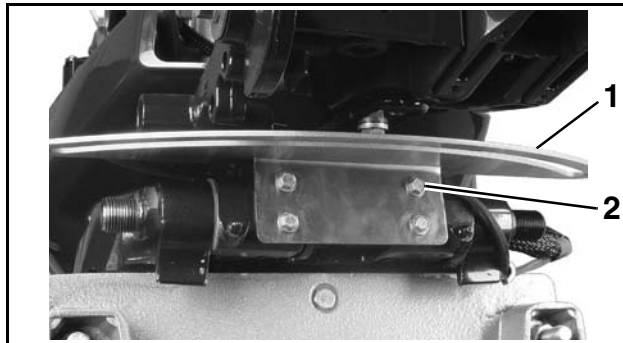
Tighten screw to torque of 18 to 20 ft. lbs. (25 to 27 N·m), then hold screw with a wrench and tighten locknut to same torque. Remove steering friction screw from forward hole.



1. Steering arm
2. Steering arm screw
3. Washer
4. Locknut
5. Steering friction screw

002400

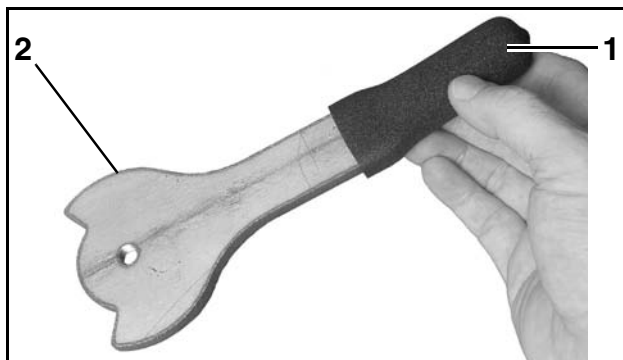
Secure steering friction bracket to swivel bracket with four (4) screws. Tighten screws to torque of 60 to 80 in. lbs. (7 to 9 N·m).



1. Steering friction bracket
2. Screws (4)

002401

Slide lever grip onto steering friction lever.

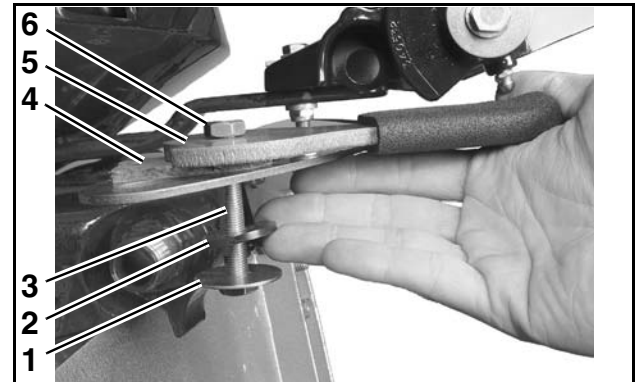


1. Lever grip
2. Steering friction lever

002403

Install washer and plastic washer onto steering friction screw. Insert screw through steering friction bracket and steering friction pad, as shown.

Thread steering friction screw through steering friction lever. Thread jam nut onto screw until top of jam nut is flush with end of screw.



1. Washer
2. Plastic washer
3. Steering friction screw
4. Steering friction pad
5. Steering friction lever
6. Jam nut

002408

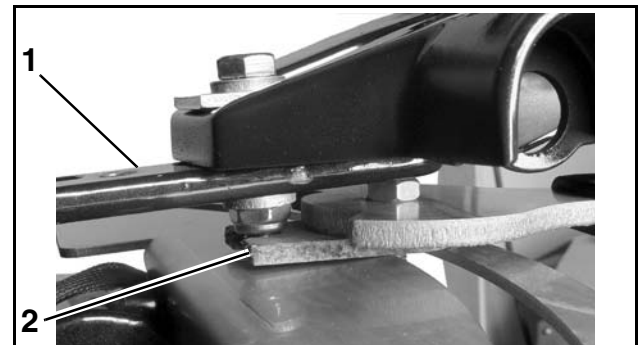


WARNING



If the notch in the steering friction pad is not installed around the screw threads, the steering friction control could jam, resulting in loss of steering control.

Slide steering friction lever under steering arm. Fit notch in steering friction pad around threads of steering arm screw, as shown.



1. Steering arm
2. Steering friction pad

002409

⚠
WARNING
⚠

If there is not enough engagement between the steering arm screw and the notch in the steering friction pad, or if the screw contacts the steering friction bracket, the steering friction control will not function properly and could result in a loss of steering control.

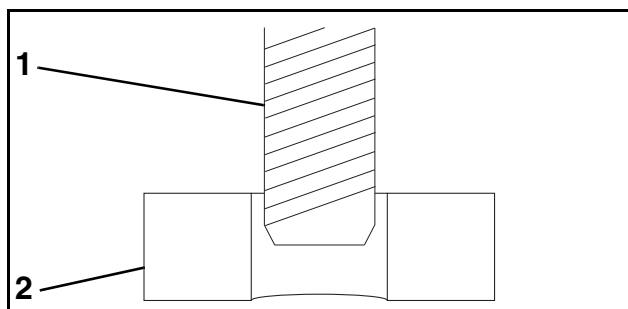
⚠
WARNING
⚠

Steering friction device is not intended to hold boat on a set course. **DO NOT** over-tighten steering friction screw for “hands-off” steering. Reduced control of the boat could result in loss of control by the operator, creating a risk of personal injury or property damage.

IMPORTANT: When installing the steering friction control, the threads of the steering arm screw must engage at least half the thickness of the steering friction pad notch. However, the screw must **not** contact the steering friction bracket beneath the friction pad.

Align steering friction screw with forward hole in steering arm. Hold jam nut with open-end wrench. With steering friction pad and lever lying on top of steering friction bracket, thread screw up until it engages threads of steering arm hole.

IMPORTANT: Lever and friction pad must be kept tight against bracket while installing screw.



Minimum Screw Engagement
 1. Steering arm screw
 2. Steering friction pad

002879

If there is not enough screw engagement, remove steering arm screw and replace top washer, P/N 320397, with alternate thinner washer, P/N 318941.

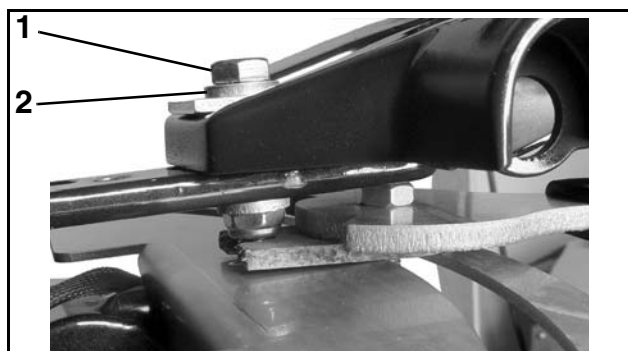
If there is still not enough engagement, remove washer and install steering arm screw **without** a washer.



1. Steering friction screw
 2. Jam nut

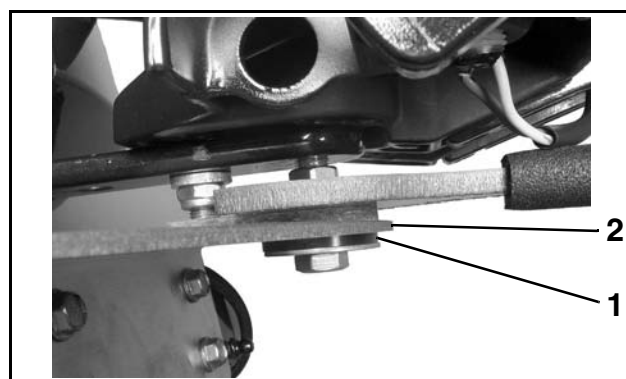
002410

Turn steering friction screw until plastic washer contacts bottom of steering friction bracket, as shown.



1. Steering arm screw
 2. Washer

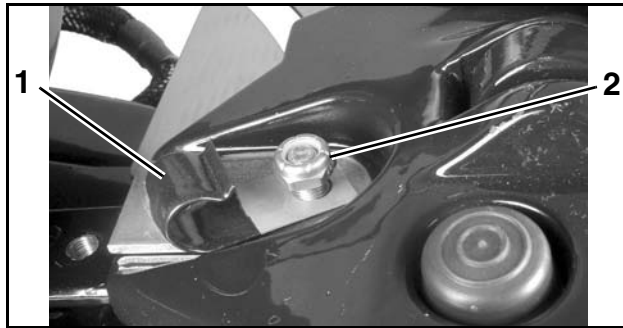
002409



1. Plastic washer
 2. Steering friction bracket

002411

Install clamp and locknut on steering friction screw. Do not tighten locknut at this time.



1. Clamp
2. Locknut

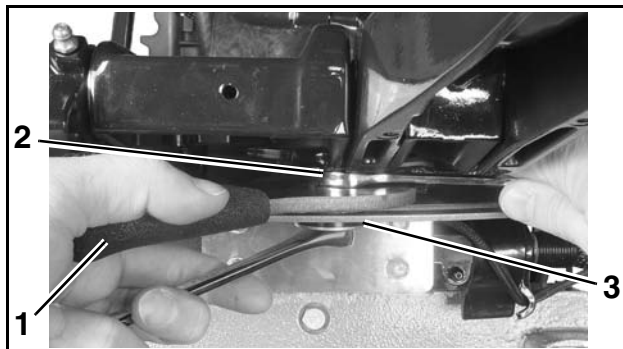
002412

Hold steering friction lever at full **starboard** position (increased friction). Hold jam nut with wrench and tighten steering friction screw until plastic washer is seated snug against steering friction bracket.

Steer outboard from side to side. Adjust steering friction screw upward until steering effort is comfortably stiff with steering friction lever at full **starboard** position (increased friction).

Move steering friction lever to full **port** position (decreased friction). Steer outboard from side to side. Outboard must move with only slight drag.

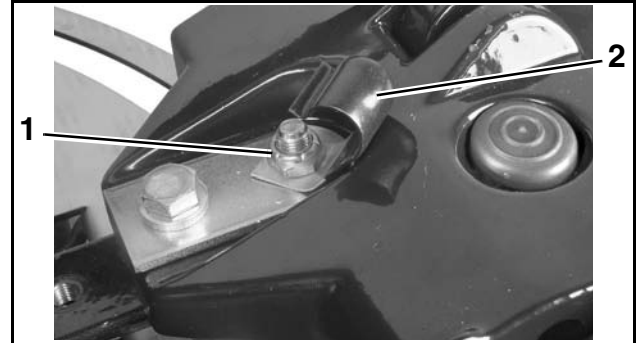
Adjust steering friction screw until range of friction is satisfactory. Hold screw with wrench and tighten jam nut up against steering arm.



1. Steering friction lever
2. Jam nut
3. Plastic washer

002413

Hold steering friction screw with wrench and tighten locknut. Make sure clamp is turned toward starboard side, as shown. Continue to hold screw and clamp in position and tighten locknut to torque of 18 to 20 ft. lbs. (25 to 27 N·m).

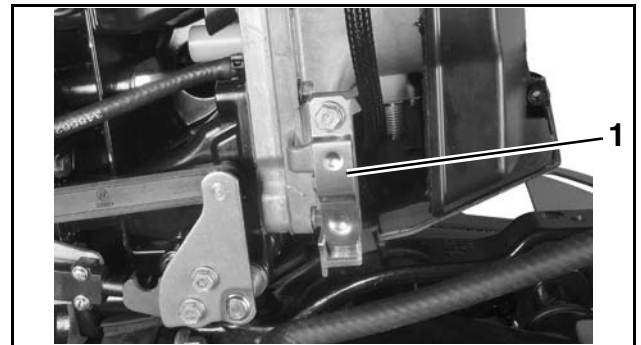


1. Locknut
2. Clamp

002414

IMPORTANT: In some of the following images, the starboard lower engine cover has been removed for photographic clarity only.

Remove trunnion retainer.



1. Trunnion retainer

002404

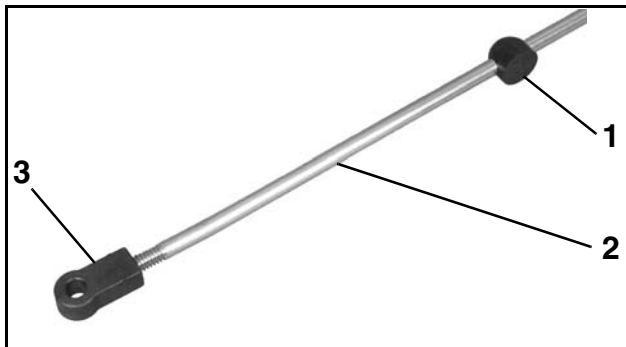
Install bushing into each side of upper hole in shift handle.



1. Bushing (2)
2. Shift handle

002405

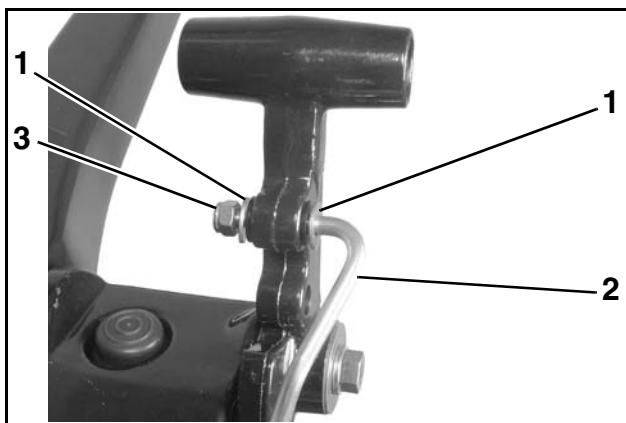
Slide trunnion onto shift rod. Thread connector completely onto end of shift rod.



- 1. Trunnion
- 2. Shift rod
- 3. Connector

002406

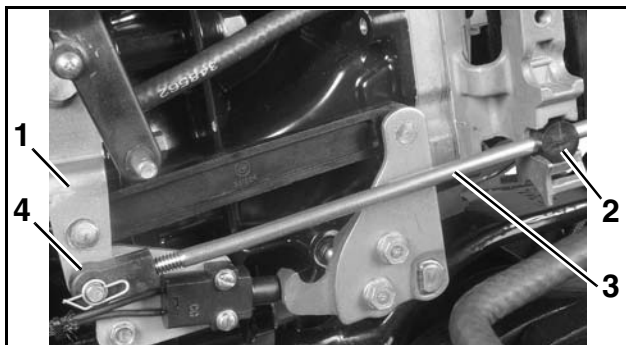
Place washer on bent end of shift rod. Install shift rod through bushings in shift handle. Secure shift rod to shift handle with washer and locknut. Tighten locknut to a torque of 60 to 84 in. lbs. (7 to 9 N·m).



- 1. Washer (2)
- 2. Shift rod
- 3. Locknut

002407

Move shift handle and shift lever into NEUTRAL. Position trunnion on shift rod in lower bracket pocket. Adjust shift rod connector and slide it onto shift lever. Secure shift rod to shift lever with clip, P/N 333774 (not included in kit).



- 1. Shift lever
- 2. Trunnion
- 3. Shift rod
- 4. Shift rod connector

002415

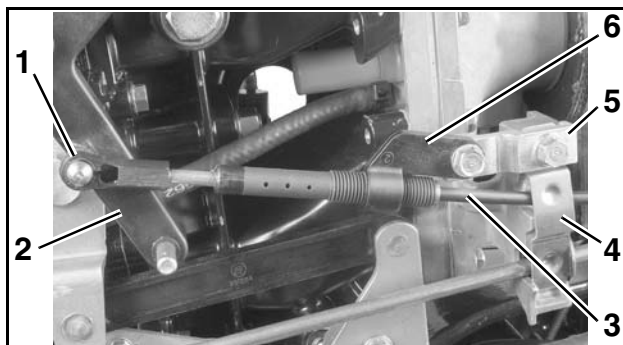
⚠
WARNING
⚠

The shift rod and throttle cable connectors must be properly installed. A risk of personal injury or property damage from loss of boat control could occur if the throttle or shift linkage connectors come loose.

Snap throttle cable connector onto throttle lever.

Position throttle cable in upper bracket pocket. Install trunnion retainer and anchor bracket on cable bracket by using screw, P/N 909386, supplied with kit. Tighten screw to a torque of 60 to 84 in. lbs. (7 to 9 N·m).

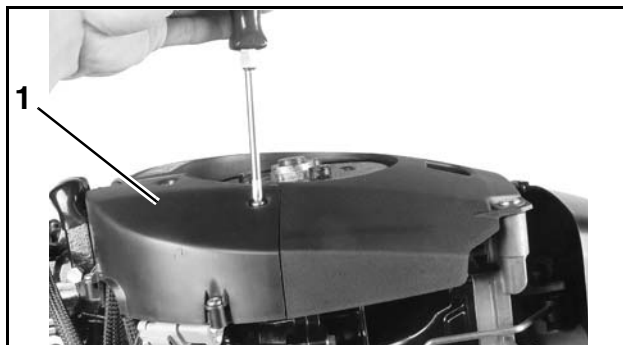
Adjust cable anchor so throttle lever is against its stop when twist grip is at IDLE. Install washer, cable anchor, and cable anchor screw. Tighten screw securely.



- 1. Throttle cable connector
- 2. Throttle lever
- 3. Throttle cable
- 4. Trunnion retainer
- 5. Anchor bracket
- 6. Cable anchor

002420

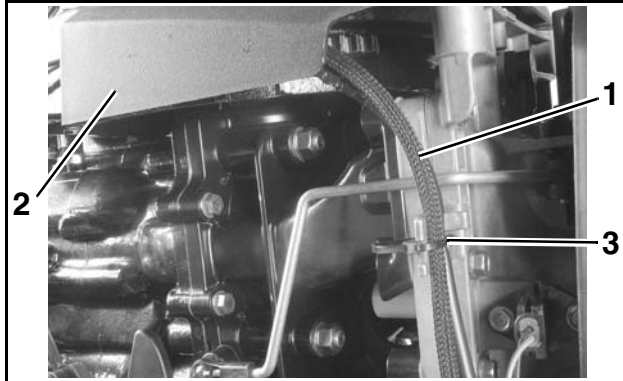
Remove electrical cover to access engine wiring harness.



- 1. Electrical cover

002421

Route wiring harness from tiller handle through channel in flywheel cover. Use tie strap to secure harness to wiring bracket.



1. Wiring harness
2. Flywheel cover
3. Wiring bracket

002422

Apply *Electrical Grease* to engine wiring harness connector seal, then connect to tiller handle wiring harness.



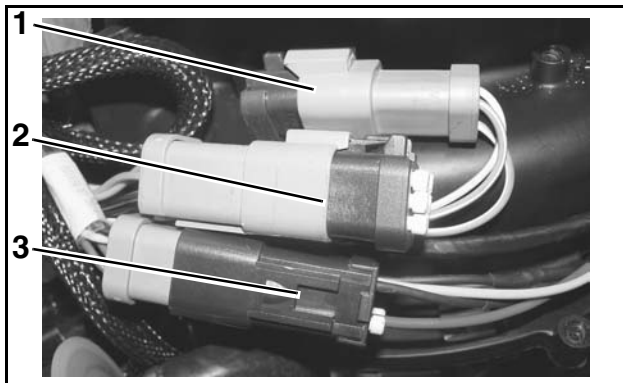
1. Tiller handle wiring harness
2. Engine wiring harness

002423

Arrange connectors in flywheel cover, as shown, and install electrical cover. Seal any unused connectors.

- 6-pin connector seal, P/N 586076
- 3-pin connector seal, P/N 586111

IMPORTANT: Route and secure all wires to avoid contact with moving parts.

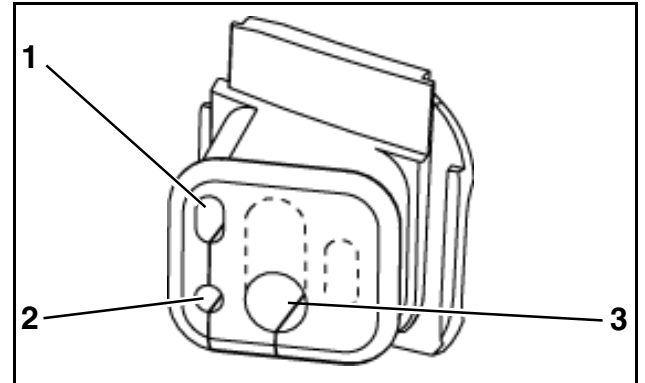


1. Trim and tilt harness (Shown with connector seal)
2. SystemCheck™ harness (Shown with connector seal)
3. Tiller handle harness (Start/Stop switch)

002591

Apply soapy water to inside surfaces of grommet and install components in holes as shown.

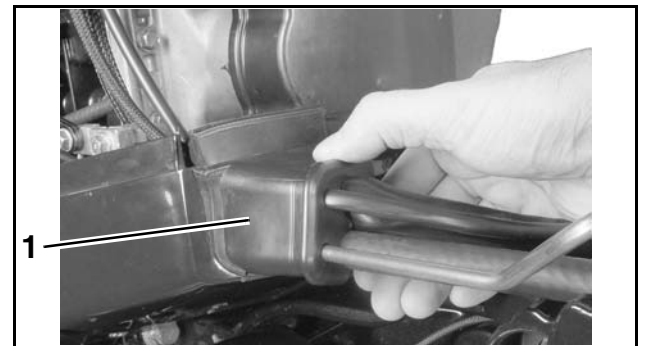
Grommet can be modified by cutting at dotted lines for other accessories.



1. Throttle cable and wiring harness
2. Shift rod
3. Fuel hose

002209A

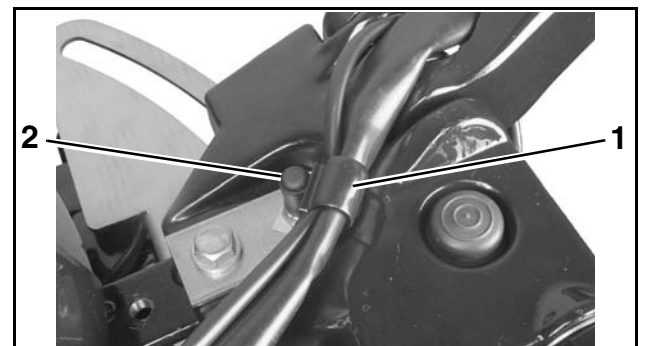
Place grommet into position in lower engine cover. Make sure fuel hose is not kinked inside the lower engine cover once grommet is in place.



1. Grommet

002416

Route throttle cable, emergency stop switch wire, and start button wire through clamp and squeeze clamp closed. Place screw cover over exposed threads of steering friction screw.

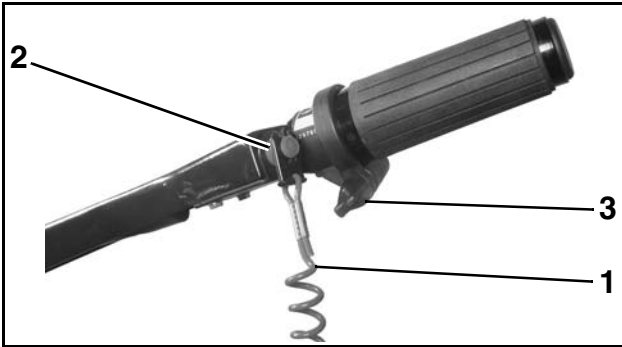


1. Clamp
2. Screw cover

002417

Attach lanyard to emergency stop switch.

Throttle friction control is provided to adjust the effort required to hold a throttle setting. Turn knob clockwise to increase friction or counter-clockwise to decrease friction.



1. Lanyard
2. Emergency stop switch
3. Throttle friction control

002418

Have dealer use *Evinrude E-TEC* Engine Diagnostic Software to reprogram Engine Management Module (*EMM*) for Tiller Model start-in-gear protection.

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
- Trim and tilt control



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.



WARNING



After installation, dealer must use *Evinrude E-TEC* Engine Diagnostic Software to reprogram Engine Management Module (*EMM*) to provide start-in-gear protection. Failure to provide start-in-gear protection could create a risk of personal injury or property damage.

OPERATING INSTRUCTIONS

IMPORTANT: Store these instructions onboard the boat with the operator's guide.

SAFETY INFORMATION



DANGER



DO NOT run the engine indoors or without adequate ventilation or permit exhaust fumes to accumulate in confined areas. Engine exhaust contains carbon monoxide which, if inhaled, can cause serious brain damage or death.

Contact with a rotating propeller is likely to result in serious injury or death. Assure the engine and prop area is clear of people and objects before starting engine or operating boat. Do not allow anyone near a propeller, even when the engine is off. Blades can be sharp and the propeller can continue to turn even after the engine is off. Always shut off the engine when near people in the water.



WARNING



The engine cover is a machinery guard. **DO NOT** operate your outboard with the cover off unless you are performing maintenance or emergency starting, and then be careful to keep hands, hair, and clothing clear of all moving parts. Contact with moving parts could cause injury.

 Always shut off the outboard when your boat is near people who are in the water.

 Be familiar with the waters you are operating in. The gearcase of this outboard extends below the water surface and could potentially come in contact with underwater obstructions. Contact with underwater obstructions may result in loss of control and personal injury.

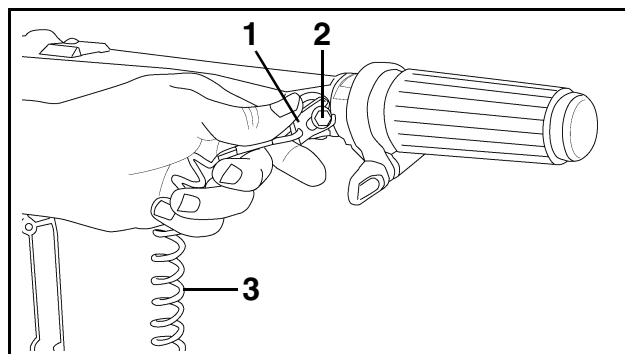
ENGINE STARTING

Refer to the **Routine Inspection Checklist** in the *Evinrude E-TEC* Operator's Guide for pre-launch checks before using your outboard.

You **MUST** supply water to the engine before attempting to start it. Engine damage can occur quickly.

Be sure the water intake screens are below the water surface.

Connect the clip to the emergency stop switch. Snap the lanyard to a **secure** place on the operator's clothing or life vest — not where it might tear away instead of activating the stop switch.



1. Clip
2. Emergency stop switch
3. Lanyard

002405

IMPORTANT: The operator should always use the clip and lanyard anytime the engine is running.



WARNING



Always use the safety lanyard when operating your boat to help prevent a runaway boat and reduce the risk of personal injury or death.

Avoid knocking or pulling the clip off the stop switch during normal boating. The resulting unexpected loss of forward motion can throw occupants forward, causing injury.

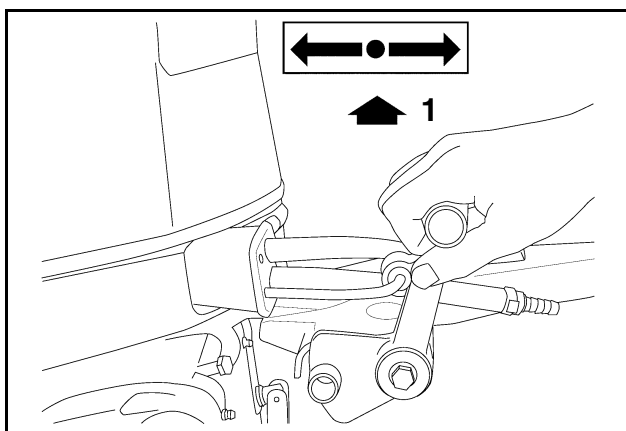
Your emergency stop switch can be effective only when in good working condition. At each outing, inspect clip and lanyard for cuts, breaks, or wear. Replace worn or damaged parts.

Keep the lanyard free from obstructions and entanglements.

⚠
WARNING
⚠

At each outing, test the system's operation. With the engine running, remove the clip from the switch by pulling the lanyard. If the engine does not stop running, see your Dealer.

Move the shift lever to NEUTRAL. Refer to **Shifting and Speed Control**.



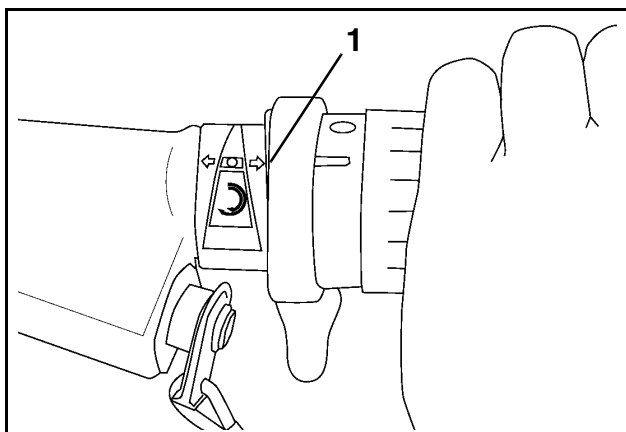
1. NEUTRAL

002415

⚠
WARNING
⚠

Always shift to NEUTRAL before starting the outboard to prevent sudden boat movement, which can cause injury.

Twist throttle grip to SHIFT position or slower. Refer to **Speed Control**.



1. SHIFT position

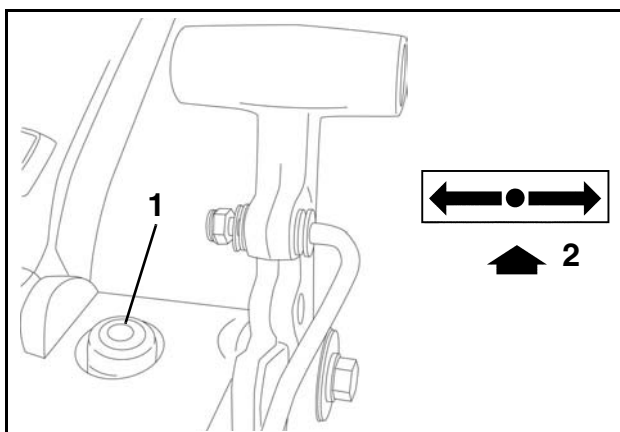
002406

DO NOT advance the throttle before start-up. Advancing the throttle overrides the electronic idle control system. After the engine starts, the engine management module (EMM) will automatically increase idle speed slightly. Idle speed will decrease as the engine warms up.

If the outboard is started at wide open throttle, twist the throttle grip back to SHIFT before shifting.

Electric Start Button Models

While seated, press the start button. Crank the engine no longer than 20 seconds.



1. Start button

002407

2. NEUTRAL

dr4402

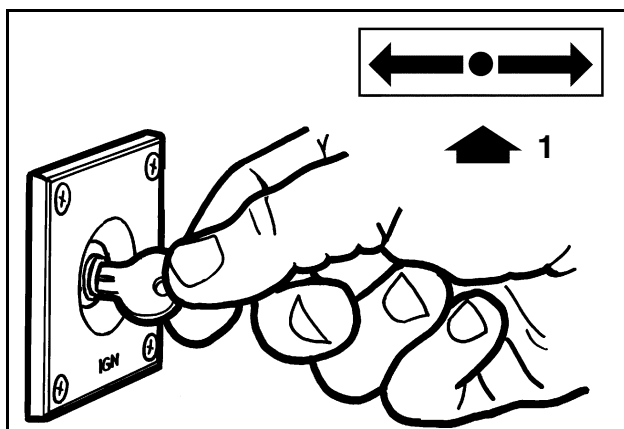
IMPORTANT: The starter motor can be damaged if operated **continuously** for more than 20 seconds.

Upon start-up, release the start button.

If the engine did not start, release the start button momentarily, then try again.

Key Start Models

While seated, turn the key switch fully clockwise to the START position. Crank the engine no longer than 20 seconds.



1. NEUTRAL

dr4402

IMPORTANT: The starter motor can be damaged if operated **continuously** for more than 20 seconds.

Upon start-up, release the key.

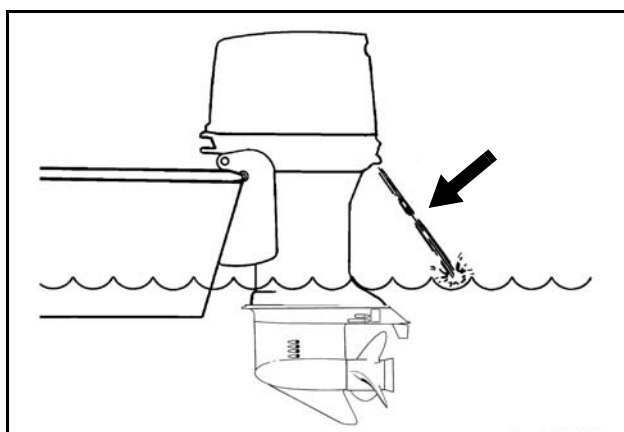
If the engine did not start, release the key momentarily, then try again.

All Models

If your outboard does not react normally to one of these starting procedures, or if it fails to start, refer to the **Troubleshooting** chart in the *Evinrude E-TEC Operator's Guide*.

After Engine Starts

Check the water pump indicator. A steady stream of water indicates the water pump is working. If a steady stream of water from the water pump indicator is not visible, stop the engine. Refer to **Engine Overheating** in the *Evinrude E-TEC Operator's Guide*.



Water Pump Indicator

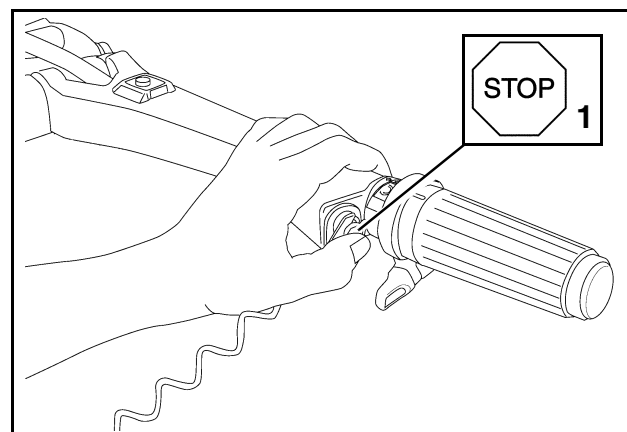
drc4952a

ENGINE STOPPING

Twist the throttle grip to SHIFT position or slower.

Move shift lever to NEUTRAL.

Press the STOP button until the outboard stops running. If equipped, close the vent screw on the fuel tank's filler cap.



1. STOP button

002413
dr3755a

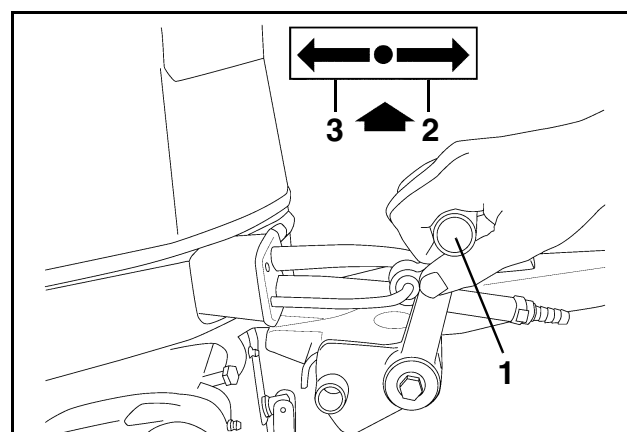
SHIFTING AND SPEED CONTROL

IMPORTANT: Carefully check the function of all control and engine systems before leaving the dock. DO NOT shift the outboard into FORWARD or REVERSE while it is shut OFF.

Shifting

With engine running, twist the throttle grip to SHIFT or slower.

Move the shift lever briskly and decisively to FORWARD or REVERSE.



1. Shift lever
2. FORWARD
3. REVERSE

002415
dr4402



WARNING



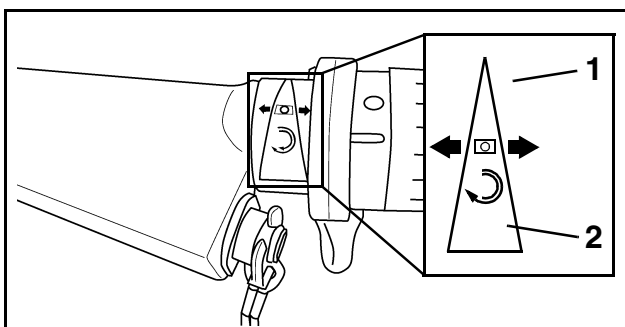
Do not operate the outboard in REVERSE with the tilt/run lever in TILT. The outboard may tilt out of the water, resulting in loss of control.

IMPORTANT: When shifting from FORWARD to REVERSE or from REVERSE to FORWARD, pause at NEUTRAL until the engine is at idle speed and the boat has slowed.

Speed Control

With the outboard running, twist throttle grip:

- Clockwise to decrease speed; or
- Counterclockwise to increase speed.



1. Decrease speed
2. Increase speed

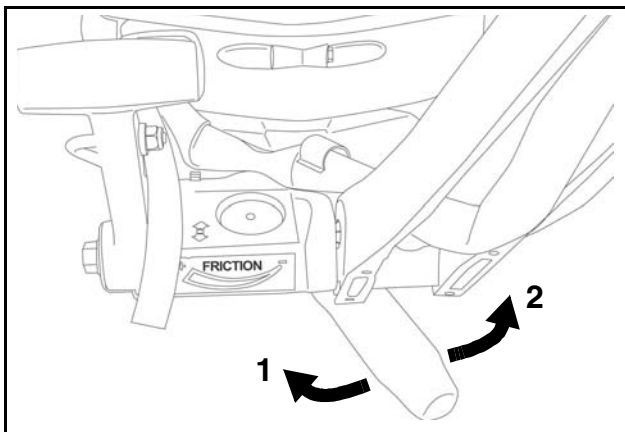
002417

STEERING FRICTION LEVER

Adjustment

A slight drag should be felt when turning the outboard with the steering handle. If adjustment is necessary, turn the steering friction lever:

- Starboard to increase friction; or
- Port to decrease friction.



1. Increase friction
2. Decrease friction

002419

STORAGE

WINTERIZATION (Tiller Steering Model)

You can winterize your outboard either in the water or on a trailer. **DO NOT** start the outboard once winterization is completed.

In the Water

Prepare your outboard for the off-season by following these steps:

- 1) Make sure that the throttle is in NEUTRAL and the water intake screens are completely submerged.
- 2) Add 2+4® Fuel Conditioner to the fuel tank and fill it with fuel.
- 3) Advance the throttle to 1/2 throttle position and start the outboard. The outboard will run at idle speed.
- 4) After approximately 15 seconds, move the throttle to IDLE position. Run the outboard at idle for another 15 seconds, then advance the throttle again to 1/2 throttle position.
- 5) The outboard will automatically go to fast idle and fog itself. Allow the outboard to run until it shuts itself off (about one minute).
- 6) Remove the engine cover. Top off the oil reservoir and inspect the fuel filter. If there is debris in the fuel filter, it must be replaced. Reinstall the engine cover.
- IMPORTANT:** When finished, leave the outboard in a vertical position long enough to completely drain the water from the powerhead.
- 7) If equipped, disconnect the speedometer pickup at the upper connection and blow all water out of the hose using air pressure of 25 psi (172 kPa) or less. Reconnect the speedometer pickup after all of the water has been removed.

On a Trailer

	WARNING	
To prevent injury from contact with rotating propeller, temporarily disconnect the battery cables at the battery and remove the propeller before servicing and when running the outboard with a flushing device.		

Prepare your outboard for the off-season by following these steps:

- 1) Make sure that the throttle is in NEUTRAL. Remove the propeller.
- 2) Add 2+4® Fuel Conditioner to the fuel tank and fill it with fuel.
- 3) Attach a garden hose to the flushing port and turn on the water.
- 4) Advance the throttle to 1/2 throttle position and start the outboard. The outboard will run at idle speed.
- 5) After approximately 15 seconds, move the throttle to IDLE position. Run the outboard at idle for another 15 seconds, then advance the throttle again to 1/2 throttle position.
- 6) The outboard will automatically go to fast idle and fog itself. Allow the outboard to run until it shuts itself off (about one minute).
- 7) After the outboard shuts itself off, detach garden hose.
- 8) Remove the engine cover. Top off the oil reservoir and inspect the fuel filter. If there is debris in the fuel filter, it must be replaced. Reinstall the engine cover.
- 9) Apply the recommended lubricant to the propeller shaft splines, then install the propeller.

IMPORTANT: When finished, leave the outboard in a vertical position long enough to completely drain the water from the powerhead.

- 10) If equipped, disconnect the speedometer pickup at the upper connection and blow all water out of the hose using air pressure of 25 psi (172 kPa) or less. Reconnect the speedometer pickup after all of the water has been removed.

When using this winterization procedure, engine oil may appear on the skeg below the gearcase area. **This is normal.** Avoid potential oil stains by placing a shop towel or suitable container under the propeller and skeg for the duration of the storage.