



TILLER HANDLE KITS, P/N 5007116, 5007117, 5007075, 5007076 INSTALLATION INSTRUCTIONS

APPLICATION

Use this instruction sheet when installing the above tiller handle kits on **2004 (SR) and newer Evinrude® E-TEC™ outboards, 75 – 115 Hp.** 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.



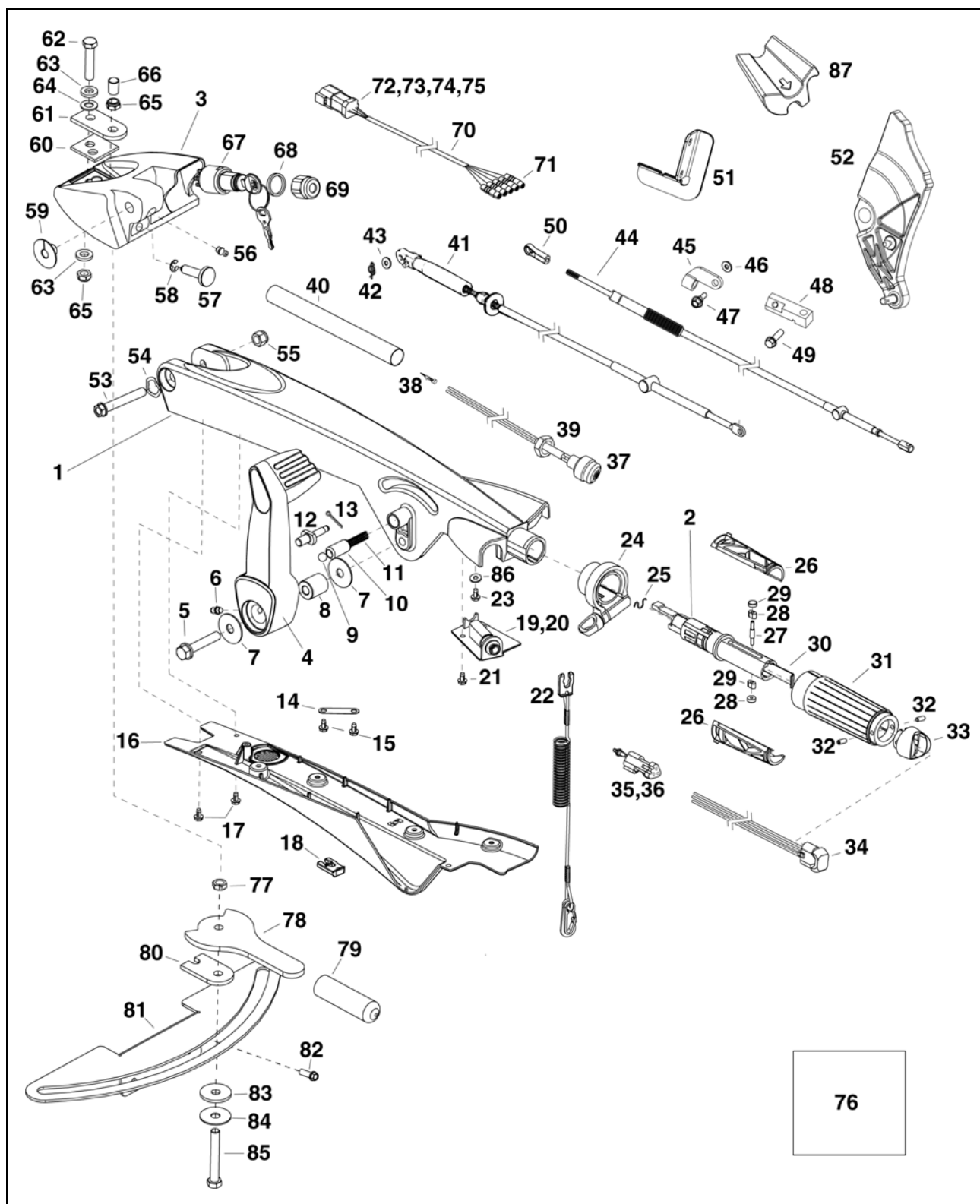


WARNING



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

TILLER CONVERSION KITS (*Evinrude E-TEC* 75 – 115 HP)



5007117 White 75–90 HP
 5007116 Blue 75–90 HP
 5007076 White 115 HP
 5007075 Blue 115 HP

TILLER CONVERSION KIT

Ref	P/N	Name of Part	Qty	Ref	P/N	Name of Part	Qty
1	352670	STEERING HANDLE, White	1	48	351209	ANCHOR BRACKET, 75–90 HP	1
	352290	STEERING HANDLE, Blue	1		352839	ANCHOR BRACKET, 115 HP	1
2	329878	STEERING HANDLE, Inner	1	49	909386	SCREW, Anchor bracket	1
3	352672	BRACKET, Steering handle, White	1	50	334153	CONNECTOR, Throttle cable	1
	352292	BRACKET, Steering handle, Blue	1	51	352859	BRACKET, Neutral safety (115 HP only)	1
4	352671	HANDLE, Shift, White	1	52	5007144	THROTTLE CAM (115 HP only)	1
	352291	HANDLE, Shift, Blue	1	53	350989	SCREW, Steering handle to bracket	1
5	329885	SCREW, Shift handle mount	1	54	328733	WASHER, Spring	1
6	313607	LUBE FITTING	1	55	307160	LOCKNUT, Steering handle screw	1
7	327400	WASHER, Shift handle	2	56	313607	LUBE FITTING	1
8	334815	BUSHING, Shift handle	1	57	352295	THUMBSCREW, Height adjustment	1
9	318626	BALL	1	58	203470	RETAINER CLIP	1
10	327178	GUIDE	1	59	325452	BUSHING, Steering handle to brkt.	2
11	309247	SPRING	1	60	352625	PLATE, Angle adjustment	1
12	351932	PIN, Shift handle to cable	1	61	333374	SHIM, Steering arm extension	1
13	303049	COTTER PIN	1	62	327254	SCREW, Bracket to steering arm	1
14	351995	RETAINER, Shift cable	1	63	320397	WASHER (Thick)	2
15	336481	SCREW, Retainer	2	64	318941	WASHER (Thin)	A 1
16	352293	COVER, Steering Handle	1	65	315077	NUT, Steering bracket	2
17	336481	SCREW, Cover	7	66	315391	CAP	1
18	333499	CLIP, Emergency stop	1	67	5005800	SWITCH, Ignition & key assy	1
19	586830	STOP SWITCH Assy	1	68	127251	SPACER	1
20	514679	*PIN, Terminal	2	69	127237	NUT, Keyswitch	1
-	514696	CONNECTOR, 2 pin receptacle	NS 1	70	586262	HARNES, Keyswitch	1
-	514697	LOCKWEDGE, 2 pin receptacle	NS 1	71	514679	*TERMINAL	5
21	336481	SCREW, Stop switch	3	72	514688	*CONNECTOR, 6 Pin receptacle	1
22	398602	CLIP & LANYARD Assy	1	73	910446	*TERMINAL, Socket	5
23	336481	SCREW, Inner handle retaining	1	74	514684	*LOCKWEDGE, 6 pin receptacle	1
24	174741	THROTTLE FRICTION CONTROL	1	75	514690	*SEAL PLUG	1
25	332089	RETAINER CLIP	1	76	586895	HARNES, Tiller handle	1
26	339722	HELIX, Twist grip	2	-	176295	*CONNECTOR, 2 Socket plug	NS 2
27	329880	PIN	1	-	514685	*CONNECTOR, 3 Socket plug	NS 2
28	329879	GUIDE	2	-	514687	*CONNECTOR, 6 Socket plug	NS 1
29	329881	ROLLER, Helix to cable	2	-	514688	*CONNECTOR, 6 Pin receptacle	NS 1
30	352104	GUIDE, Wire	1	-	514690	*SEAL PLUG	NS 5
31	352813	TWIST GRIP, Assy	1	77	345348	NUT, Steering friction	1
32	324967	SCREW	2	78	345201	LEVER, Steering friction	1
33	352103	HOUSING, Trim switch	1	79	345202	GRIP, Lever	1
34	352270	SWITCH, Trim & Tilt	1	80	344709	WASHER, Steering friction	1
35	514686	CONNECTOR, Trim & Tilt	1	81	344705	BRACKET, Steering friction	1
36	514682	LOCKWEDGE, 3 pin receptacle	1	82	328694	SCREW, Bracket	4
37	586827	START SWITCH Assy	1	83	345476	WASHER, Steering friction	1
38	514679	*PIN, Terminal	2	84	327400	WASHER, Steering friction	1
-	514696	CONNECTOR, 2 pin receptacle	NS 1	85	344706	SCREW, Steering friction	1
-	514697	LOCKWEDGE, 2 pin receptacle	NS 1	-	5000266	DECAL, Friction	NS 1
39	327805	NUT, Start switch	1	-	335299	DECAL, Emergency stop clip	NS 1
40	3010591	SLEEVE (bulk roll)	1	-	330575	DECAL, Start warning (white)	NS 1
41	5006160	CABLE, Shift	1	-	333978	DECAL, Start warning (blue)	NS 1
42	333774	RETAINER CLIP	1	-	330713	DECAL, Gear shift (white)	NS 1
43	328702	WASHER	1	-	333979	DECAL, Gear shift (blue)	NS 1
44	5006159	CABLE, Throttle	1	-	320107	TIE STRAP	NS 13
45	334083	ANCHOR, Throttle cable	1	-	317893	TIE STRAP	NS 2
46	328739	WASHER, Anchor to bracket	1	86	328739	WASHER	1
47	329160	SCREW, Anchor to bracket	1	87	353028	SUPPORT, grommet (115 HP only)	1

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

NS Not Shown

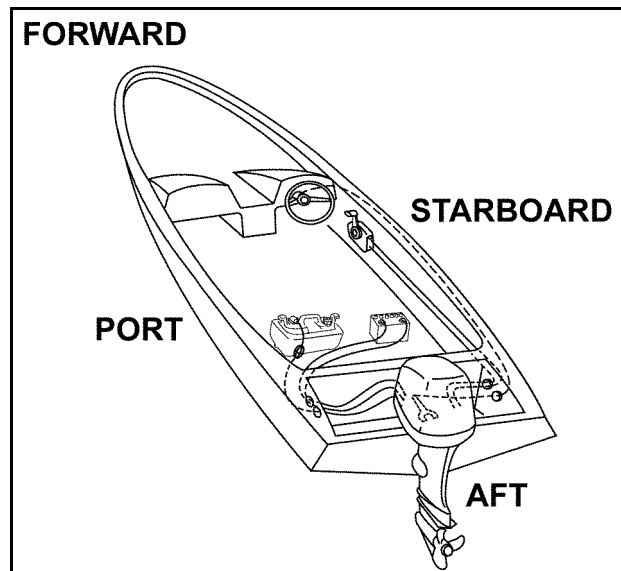
⚠ WARNING ⚠

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.



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.

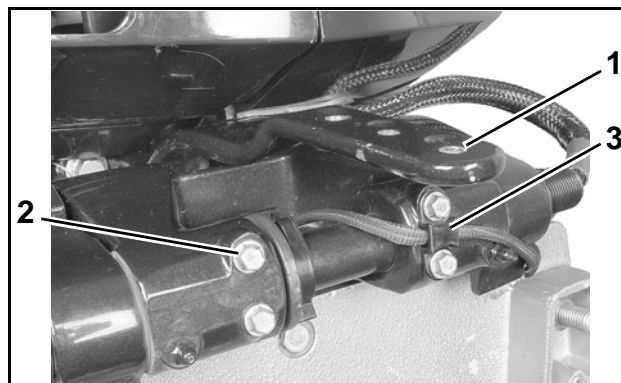
INSTALLATION

Disconnect the battery cables at the battery.

Remove any screws from steering arm holes. Make sure all paint or locking material is cleaned from threads.

V4 Models: Remove lower engine covers. Refer to Service Manual for detailed information.

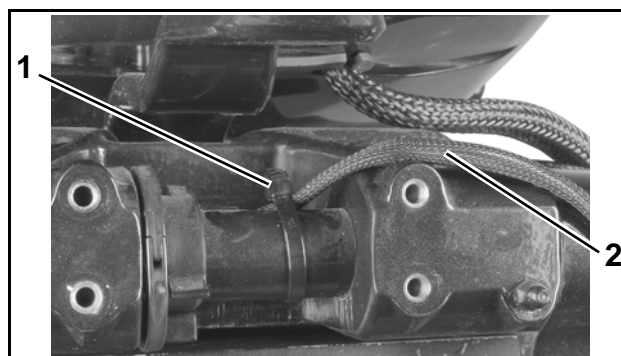
Remove and discard four (4) screws and tilt limit switch wire retainer from swivel bracket.



1. Steering arm hole
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.

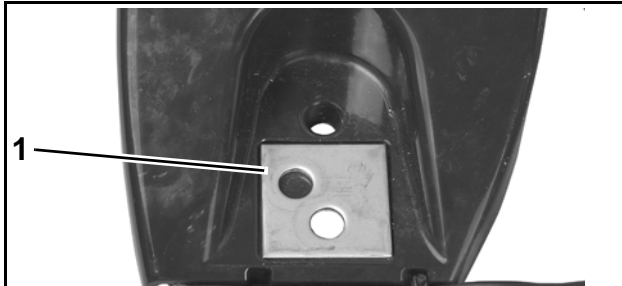


1. Tie strap
2. Tilt limit switch wire

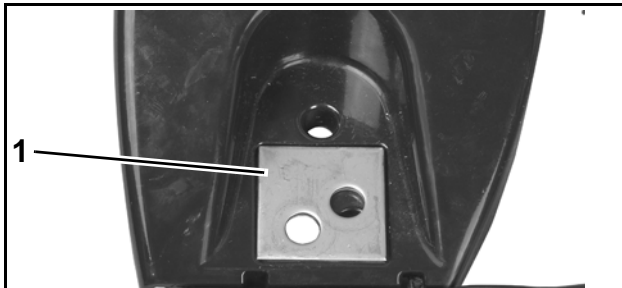
005082

Place angle adjustment plate in pocket of steering arm bracket.

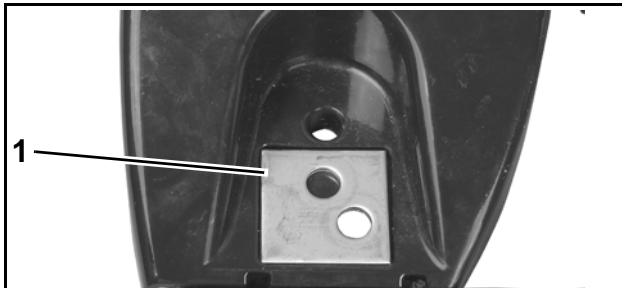
The steering arm can be positioned straight, or angled 15° port or starboard by moving the adjustment plate.



1. Plate adjustment for tiller in CENTER position. 005083

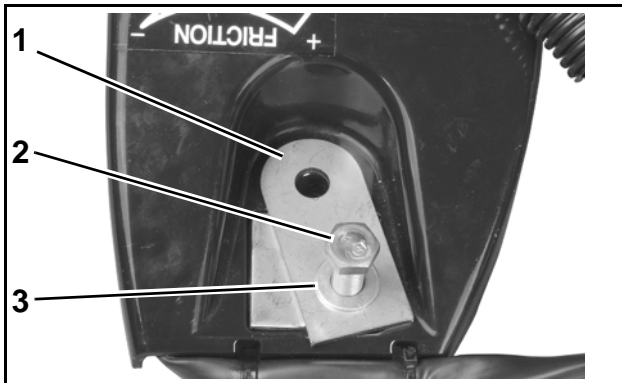


1. Plate adjustment for tiller in PORT position. 005084



1. Plate adjustment for tiller in STARBOARD position. 005085

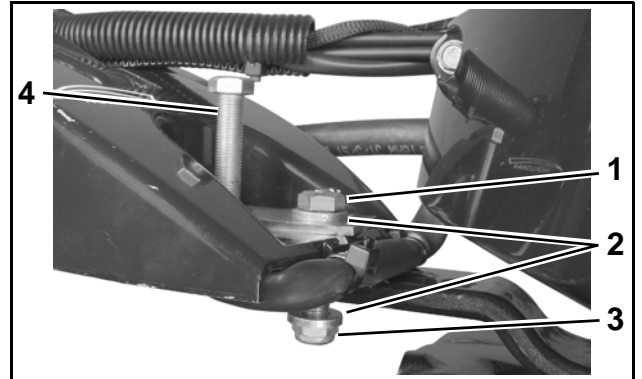
Place shim plate on tiller handle. Insert steering arm screw (3/8" x 2") with (thick) washer through aft hole.



1. Shim plate
2. Steering arm screw (3/8 x 2)
3. Washer (thick) 005086

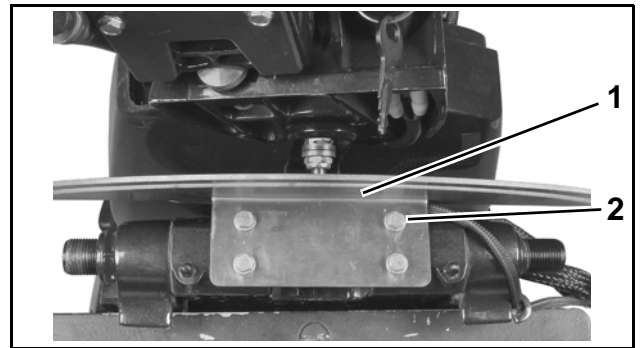
Place tiller handle on steering arm. Thread steering arm screw into center hole of steering arm and install (thick) washer and locknut by hand. Temporarily thread steering friction screw (3/8" x 2.5") through forward hole to align tiller handle on steering arm.

Tighten screw to a 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 screw (3/8 x 2)
2. Washer (thick)
3. Locknut
4. Steering friction screw (3/8 x 2.5) 005087

Secure steering friction bracket to swivel bracket with four screws (1/4" x 1"). Tighten screws to torque of 60 to 80 in. lbs. (7 to 9 N-m).



1. Steering friction bracket
2. Screws (1/4 x 1) 005088

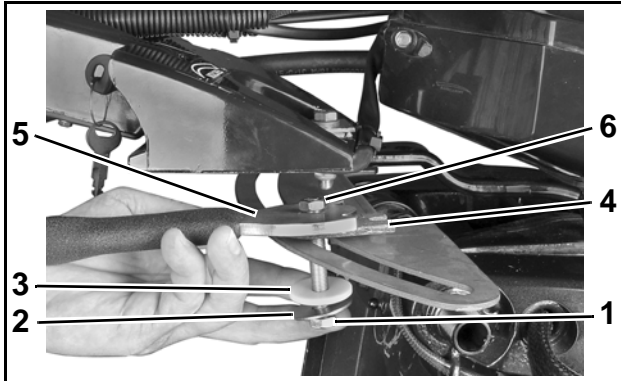
Slide lever grip onto steering friction lever.



1. Lever grip
2. Steering friction lever 002403

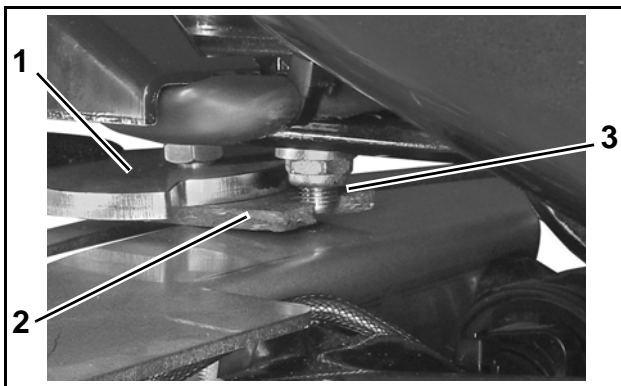
Install washer and plastic washer onto steering friction screw. Insert screw through steering friction bracket and steering friction pad, as shown.

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. Steering friction screw (3/8 x 2.5) 005089
2. Washer
3. Plastic washer
4. Steering friction pad
5. Steering friction lever
6. Jam nut

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

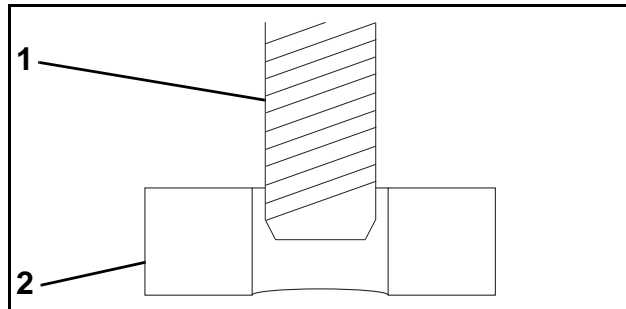


1. Steering friction lever 005090
2. Steering friction pad
3. Steering friction screw

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.

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

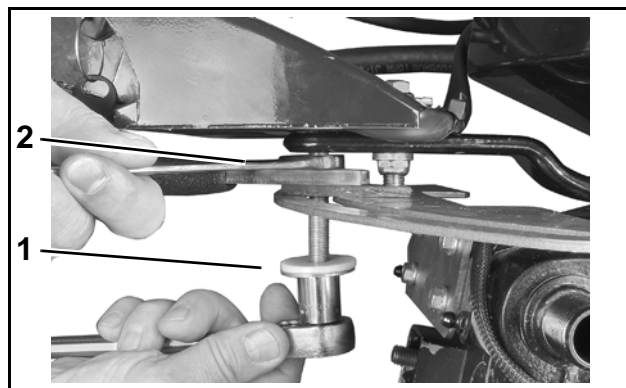
If there is still not enough engagement, remove washer and install steering arm screw **without** a washer.



- Minimum Screw Engagement** 002879
1. Steering arm screw
 2. Steering 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.

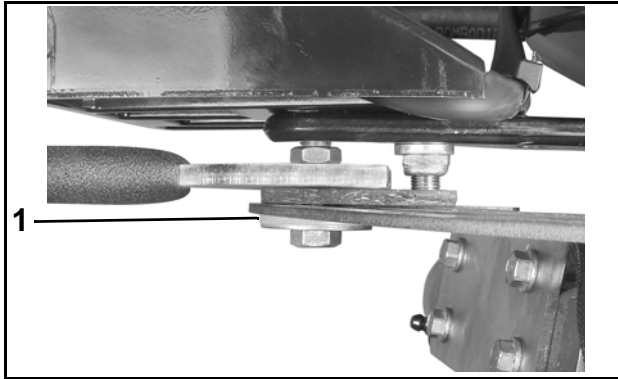


005091

⚠ 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 could jam, resulting in a loss of steering control.

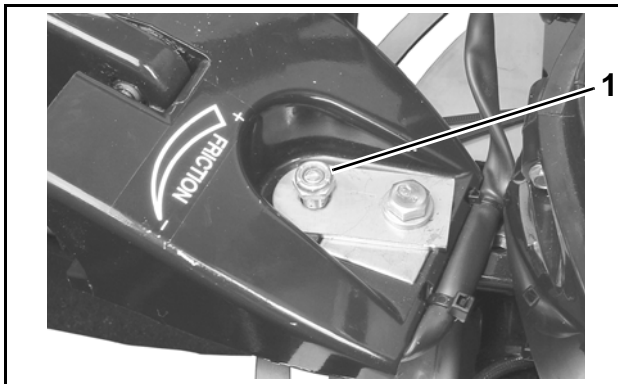
Turn steering friction screw until plastic washer contacts bottom of steering friction bracket.



1. Plastic washer

005092

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



1. Locknut

005094

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

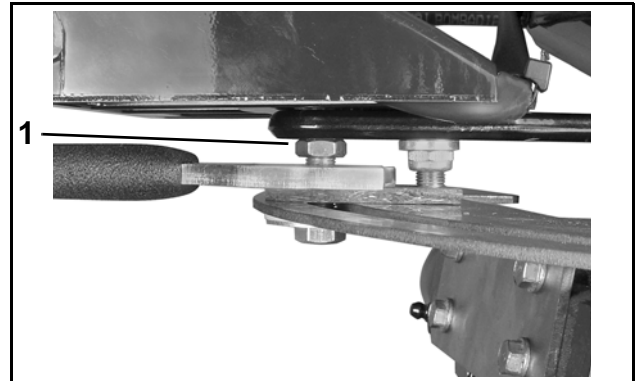
Steer outboard from side to side. Adjust steering friction screw upward until steering effort is comfortably stiff with steering friction lever at full **starboard** position (increased friction).

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

WARNING

Steering friction device is not intended to hold boat on a set course. **DO NOT** overtighten 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.

When range of friction is satisfactory, hold screw with wrench and tighten jam nut up against steering arm.



1. Jam nut tightened against steering arm

005093

Hold steering friction screw with wrench and tighten locknut to torque of 18 to 20 ft. lbs. (25 to 27 N·m). Install protective cap on exposed screw threads.



1. Protective cap

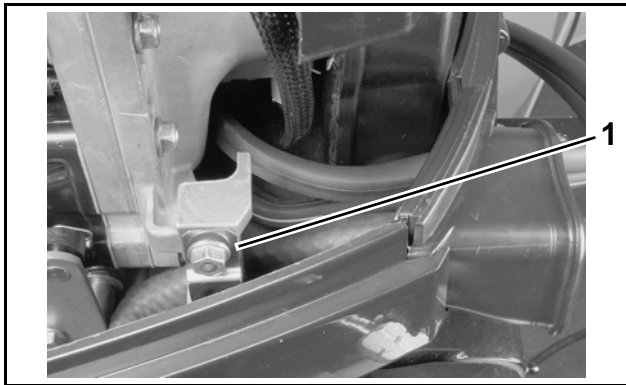
005095

CONTROL CABLE INSTALLATION

75 – 90 HP

IMPORTANT: DO NOT complete final attachment of cables to shift and throttle levers until all cables, wires, and hoses have been routed and grommet has been placed into the lower engine cover.

Remove cable retainer from anchor block.

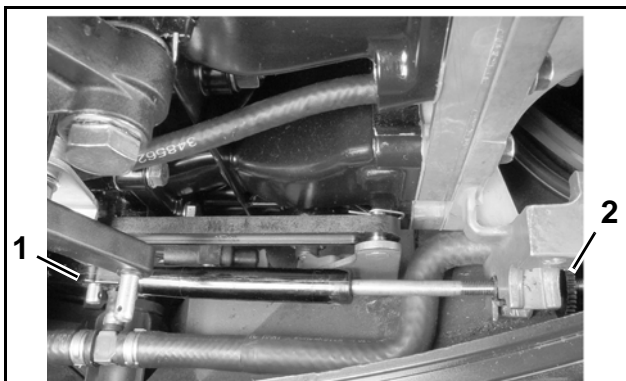


1. Cable retainer

002099

Remove grommet from lower engine cover and insert shift cable through opening.

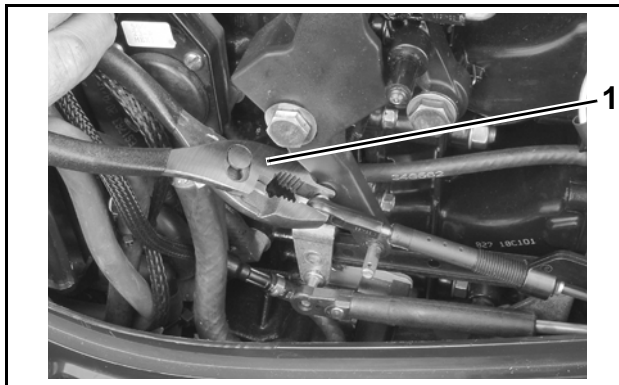
Pull firmly on shift cable casing to remove backlash. With outboard and tiller handle shift lever in NEUTRAL, place the cable trunnion into the lower anchor pocket. Adjust the trunnion nut so the casing fits onto the shift lever pin.



1. Shift lever pin
2. Trunnion nut

002100

Use Ball Socket Installer tool, P/N 342225, to snap throttle cable connector onto throttle lever. (Use Remover tool, P/N 342226, to remove cable.)

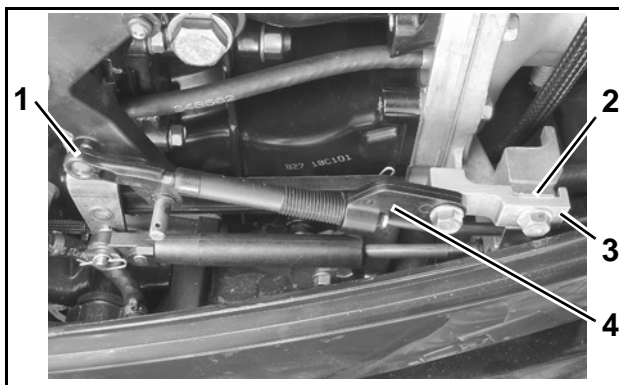


1. Installer tool

005106

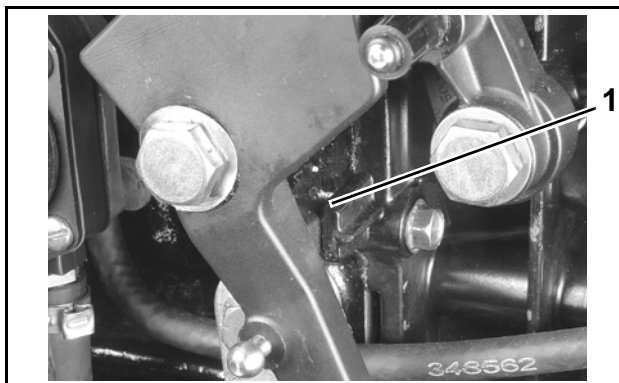
Place throttle cable in upper anchor pocket. Install cable retainer and anchor bracket, P/N 351209, on anchor block using screw supplied with kit. Tighten screw 60 to 84 in. lbs. (7 to 9 N·m).

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



1. Throttle cable connector
2. Trunnion retainer
3. Anchor bracket
4. Cable anchor

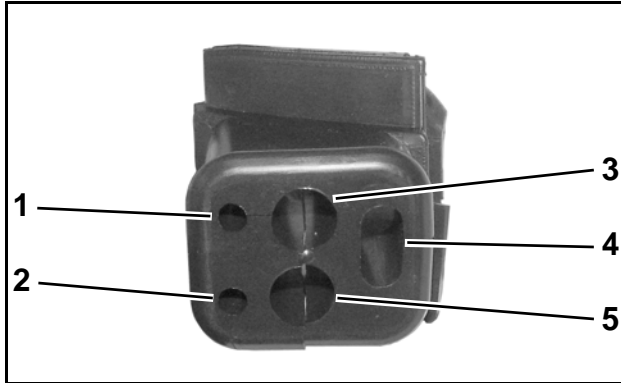
005096



1. Throttle stop

005111

Apply soapy water to the inside surfaces of grommet and install cables and fuel line as shown:

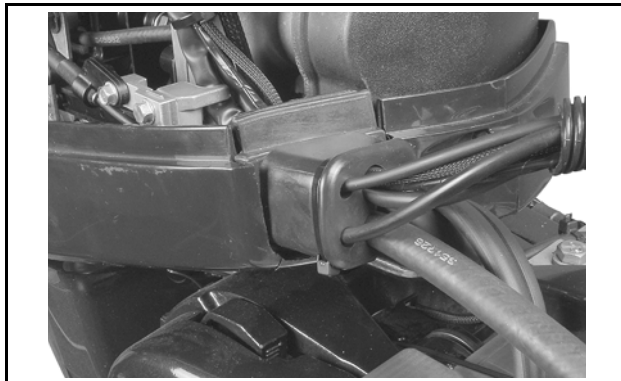


1. Throttle cable
2. Shift cable
3. Wiring harnesses
4. Battery cable
5. Fuel line

001998

Place the grommet into position in the lower motor cover.

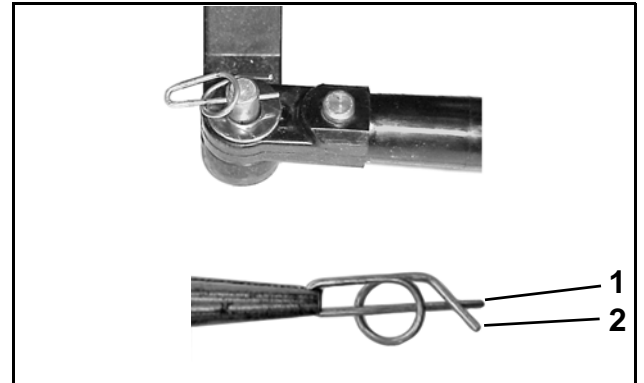
When grommet is in place and all cables have been installed, tighten a tie strap, P/N 500081, around the outside of the grommet to form a watertight seal around the cables.



005097

Secure control cables to the throttle and shift lever pins. For proper installation of shift cable, review the following steps:

- Place washer on pin.
- Position retainer clip with straight section on the bottom and angled section on the top.
- Use long noses pliers to position retainer clip on pin.
- Insert straight section of clip into linkage pin hole.



1. Straight section
2. Angled section

DP0818

DP0817

- Push the clip towards the hole while lifting on the curved end with the pliers.
- Be sure retainer clip fully engages the pin.
- Lock the retainer by moving the angled section **behind** the straight section.



Locked Retainer Clip

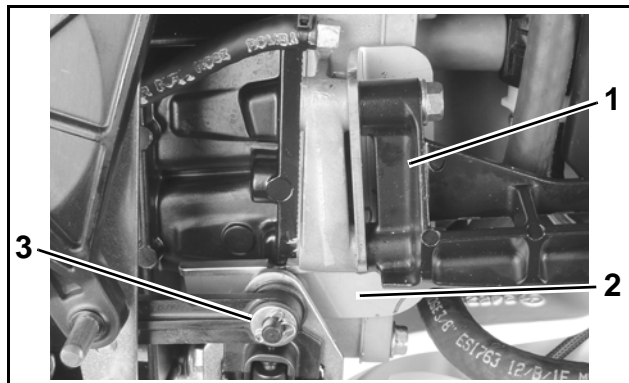
1. Angled section behind straight section

DP0817a

CONTROL CABLE INSTALLATION

115 HP

Remove trunnion bracket from powerhead and install neutral safety bracket above and behind existing shift switch. Reinstall trunnion bracket. Apply *Nut Lock™* to threads and tighten screws 72 to 96 in. lbs. (8 to 11 N-m).

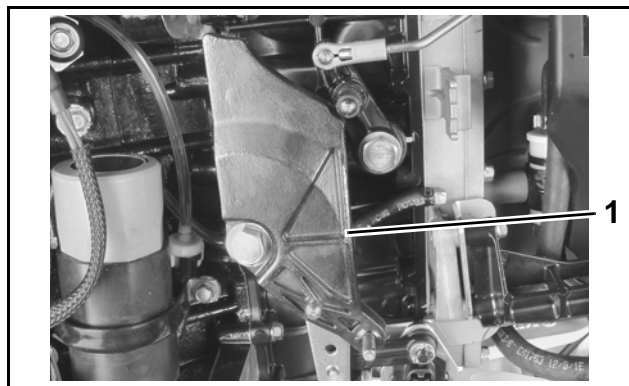


1. Trunnion bracket
2. Neutral safety bracket
3. Shift switch

005127

IMPORTANT: Neutral safety bracket is adjustable. When tiller kit installation is complete, test that outboard will crank, but not start, when control is in FORWARD or REVERSE. If necessary, move bracket up or down to activate switch when outboard is in gear.

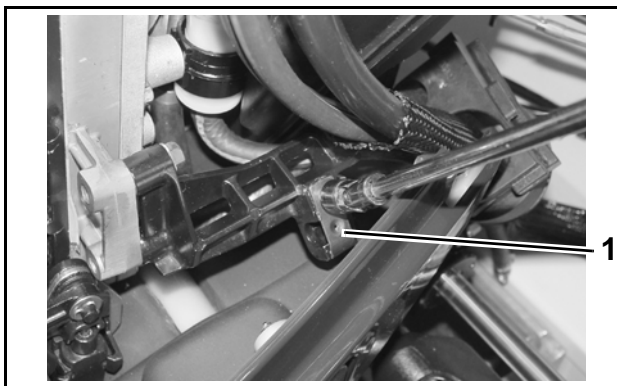
Remove throttle cam from powerhead and install new throttle cam from kit. Apply *Nut Lock* to threads of shoulder screw and tighten 120 to 144 in. lbs. (14 to 16 N-m).



1. Replacement throttle cam

005128

Remove cable retainers from trunnion bracket.



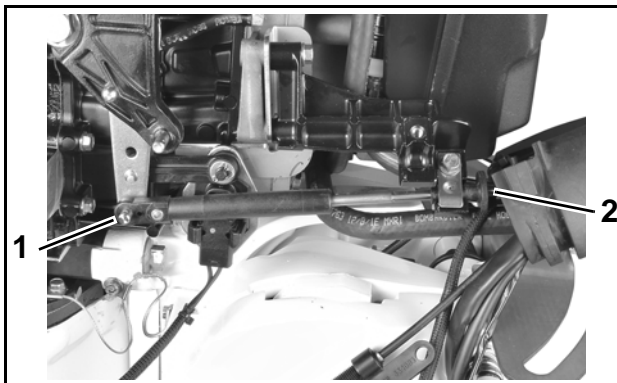
1. Cable retainer

004955

Install cables, harness, and fuel and oil lines through grommet.

Push and pull on the shift cable and observe the cable slack. Position the casing guide in the center of the slack.

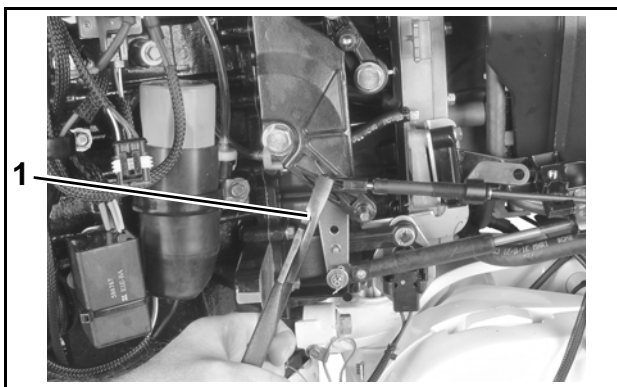
With outboard and tiller handle shift lever in NEUTRAL, place the cable trunnion into the lower anchor pocket. Adjust the trunnion nut so the casing fits onto the shift lever pin.



1. Shift lever pin
2. Trunnion nut

005129

Use Ball Socket Installer tool, P/N 342225, to snap throttle cable connector onto throttle cam pin. (Use Remover tool, P/N 342226, to remove cable.)

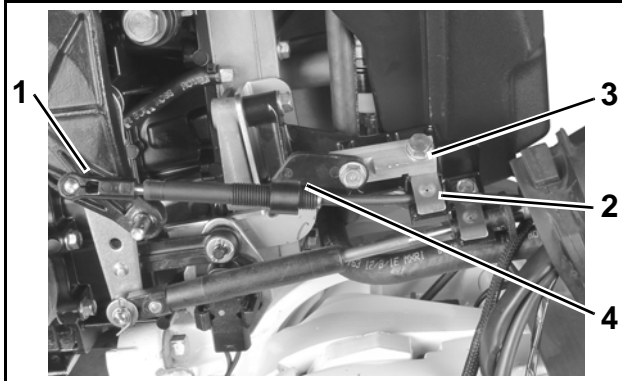


1. Installer tool

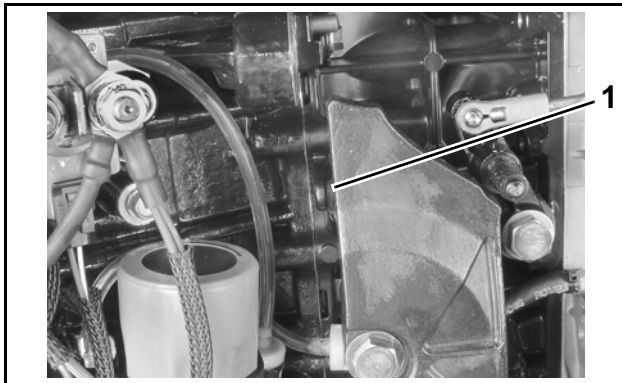
005130

Place throttle cable in upper anchor pocket. Install cable retainer and anchor bracket, P/N 352839, on trunnion bracket using screw supplied with kit. Tighten screw 60 to 84 in. lbs. (7 to 9 N-m).

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



1. Throttle cable connector 005126
 2. Trunnion retainer
 3. Anchor bracket
 4. Cable anchor

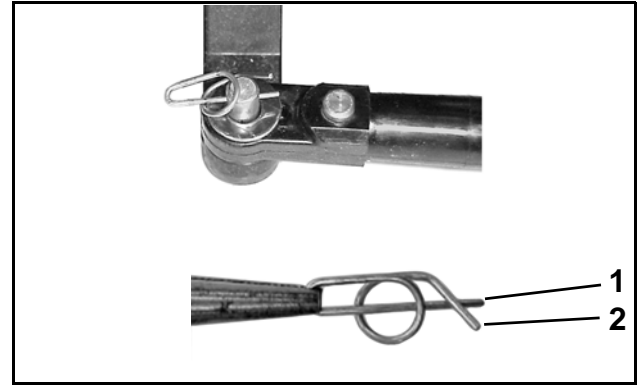


1. Throttle stop 005125

Secure control cables to the throttle and shift lever pins. For proper installation of shift cable, review the following steps:

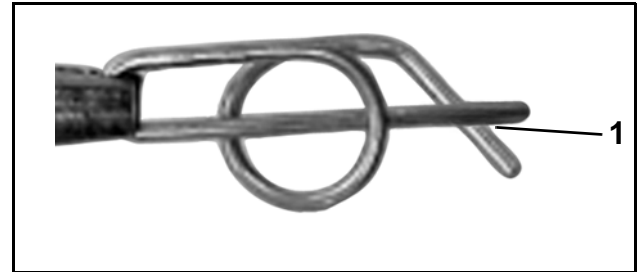
- Place washer on pin.
- Position retainer clip with straight section on the bottom and angled section on the top.
- Use long noses pliers to position retainer clip on pin.

- Insert straight section of clip into linkage pin hole.



1. Straight section DP0818
 2. Angled section DP0817

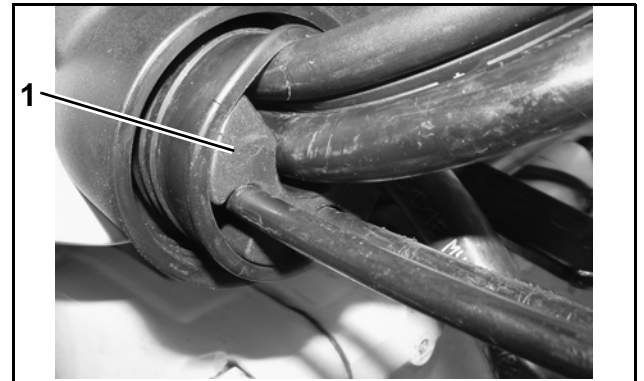
- Push the clip towards the hole while lifting on the curved end with the pliers.
- Be sure retainer clip fully engages the pin.
- Lock the retainer by moving the angled section **behind** the straight section.



Locked Retainer Clip DP0817a
 1. Angled section behind straight section

Install lower engine covers. Refer to Service Manual for detailed information.

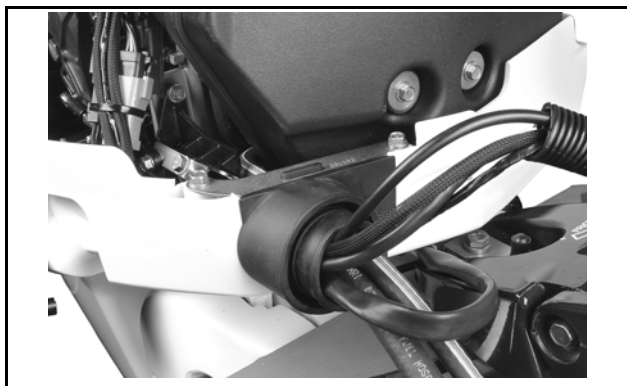
IMPORTANT: Position support in grommet with arrow facing forward.



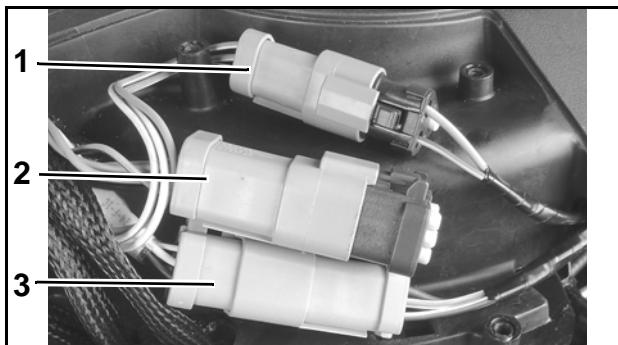
1. Support 005961

Place grommet in position in lower cover and secure with bracket.

SystemCheck connector with 6-Pin Connector Seal, P/N 586076 (not included in kit).



005131



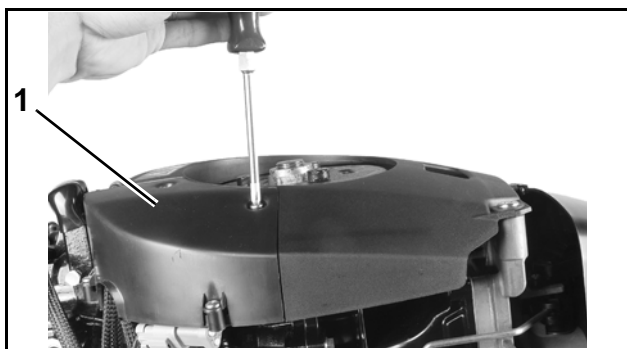
005098
 1. Trim and tilt harness
 2. SystemCheck™ connector (Shown with seal)
 3. Start/stop harness

ELECTRICAL CONNECTIONS

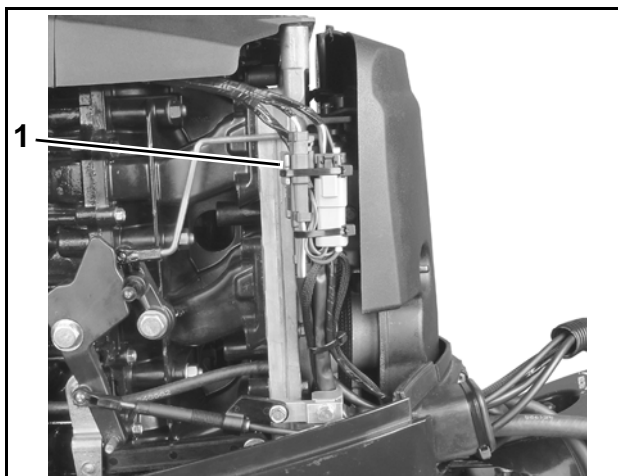
75 – 90 HP

Remove electrical cover.

Use tie straps to secure harness to throttle body bracket.



002421
 1. Electrical cover



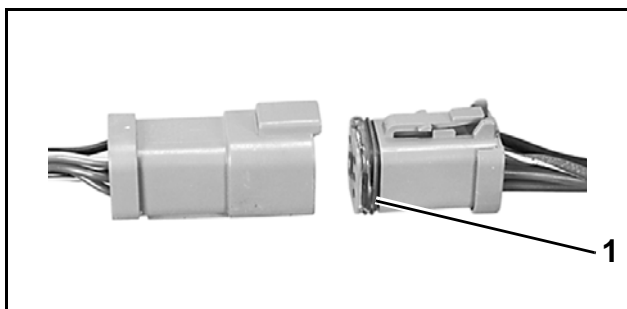
005102
 1. Bracket

Route wiring harnesses from tiller handle through channel in flywheel cover.

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

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

Use *Evinrude E-TEC* Diagnostics Software to reprogram Engine Management Module (EMM) for Tiller Model start-in-gear protection.



42079a
 1. Seal

⚠ WARNING ⚠

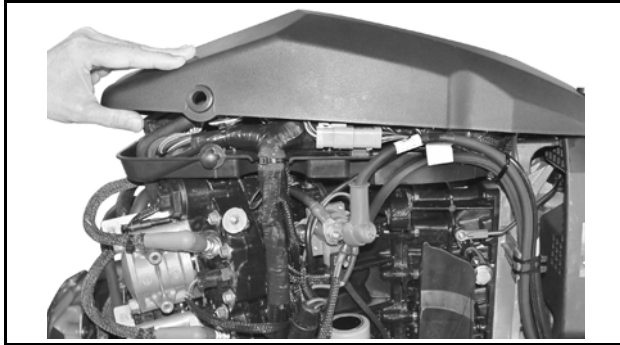
After installation, dealer must use *Evinrude E-TEC* Diagnostics Software to reprogram Engine Management Module (EMM) to provide start-in-gear protection. Failure to provide start-in-gear protection could create a risk of personal injury or property damage.

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

ELECTRICAL CONNECTIONS

115 HP

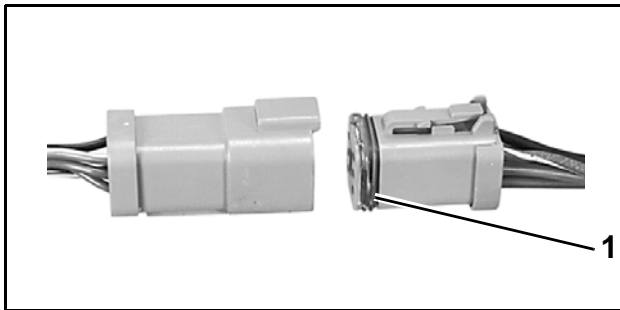
Remove flywheel/harness connector cover.



004954

Route wiring harnesses from tiller handle through channel in flywheel cover.

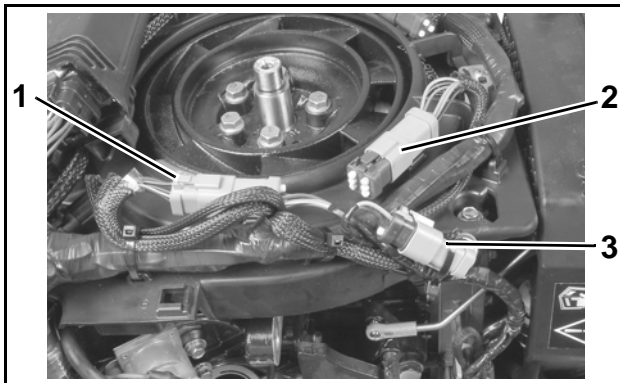
Apply *Electrical Grease* to connector seals, then connect tiller handle wiring harness to engine harness.



1. Seal

42079a

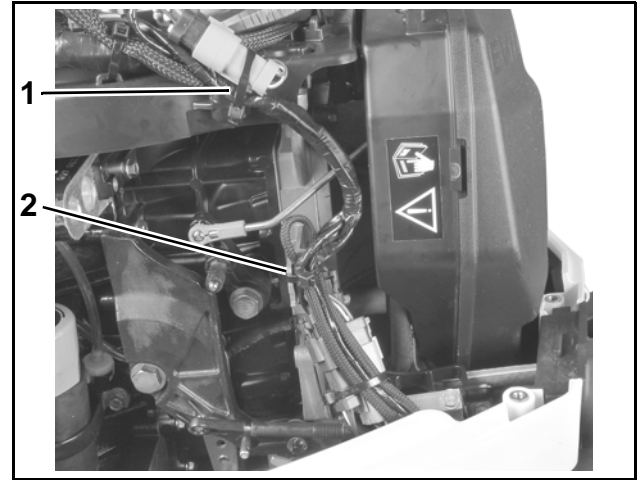
Arrange connectors in flywheel cover, as shown, and install electrical cover. Seal unused *SystemCheck* connector with 6-Pin Connector Seal, P/N 586076 (not included in kit).



1. Start/stop harness
2. SystemCheck™ connector (Shown with seal)
3. Trim and tilt harness

005123

Use tie straps to secure harness to flywheel cover base and throttle body bracket.



1. Flywheel cover base
2. Throttle body racket

005124

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

Use *Evinrude E-TEC* Diagnostics Software to reprogram Engine Management Module (*EMM*) for Tiller Model start-in-gear protection.

WARNING	
<p>After installation, dealer must use <i>Evinrude E-TEC</i> Diagnostics Software to reprogram Engine Management Module (<i>EMM</i>) to provide start-in-gear protection. Failure to provide start-in-gear protection could create a risk of personal injury or property damage.</p>	
<p>Make certain that outboard will not start in gear. If necessary, adjust neutral safety bracket up or down so that shift switch is activated when control is moved to FORWARD or REVERSE. Refer to Control Cable Installation.</p>	

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

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.

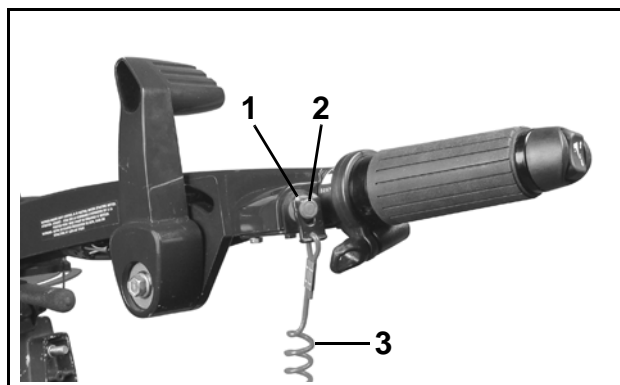
- !** Always shut off the outboard when your boat is near people who are in the water.
- !** Be familiar with the waters you are operating in. The gearcase of this outboard extends below the water surface and could potentially come in contact with underwater obstructions. Contact with underwater obstructions 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 starting. Engine damage can occur quickly.

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

005099

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.

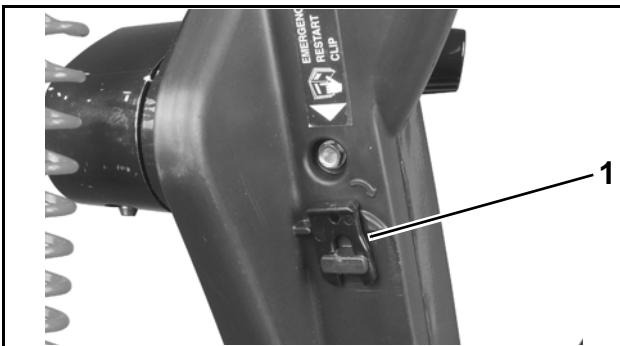
Keep the lanyard free from obstructions and entanglements.

⚠ 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.

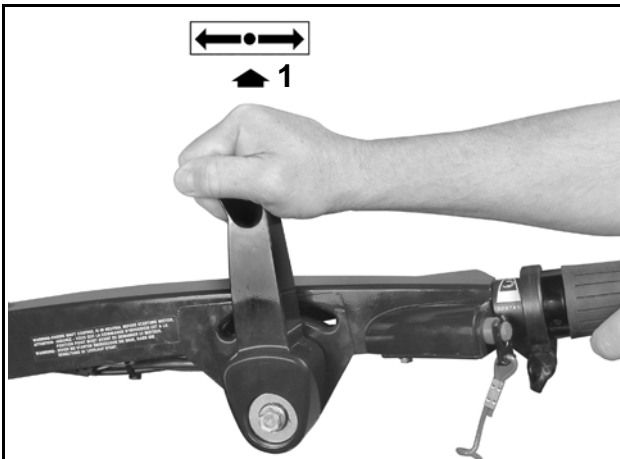
If clip and lanyard should be lost overboard, a spare clip can be found on the bottom of the tiller handle.

IMPORTANT: Spare clip is for emergency use only. Clip with lanyard should always be attached to operator during normal operation.



1. Spare emergency clip 005105

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

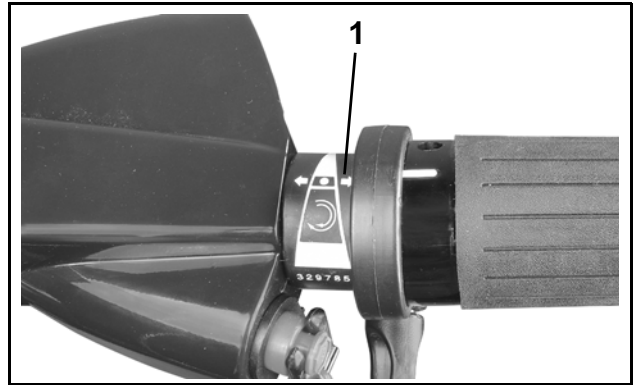


1. NEUTRAL 005100

⚠ WARNING ⚠

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

Twist throttle grip to slowest IDLE position. Refer to **Speed Control**.



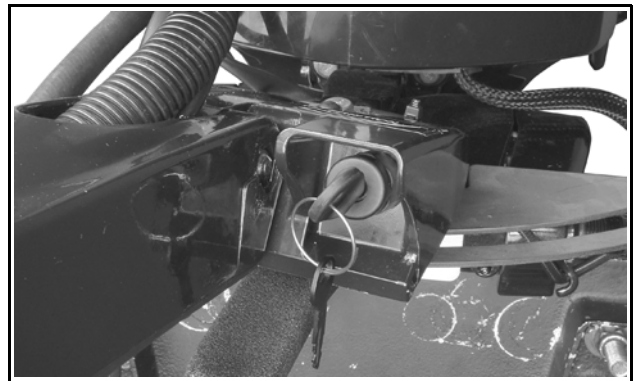
1. SHIFT position 005101

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 IDLE before shifting.

Key Switch

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



005103

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

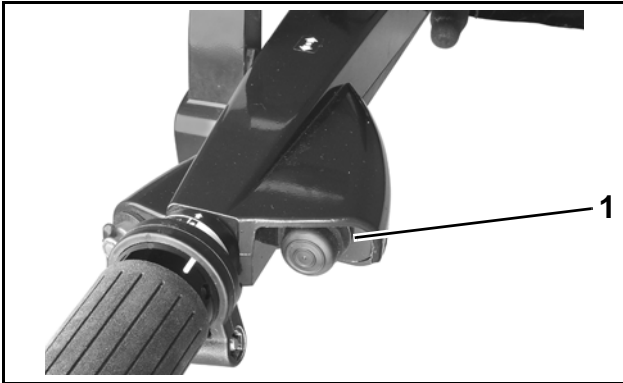
Upon start-up, release the key.

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

IMPORTANT: Engine will crank but will not start if outboard is in gear.

Start Button

While seated, press the start button. (Key switch must be in the ON position.) Crank the engine no longer than 20 seconds.



1. Start button
2. NEUTRAL

005104

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

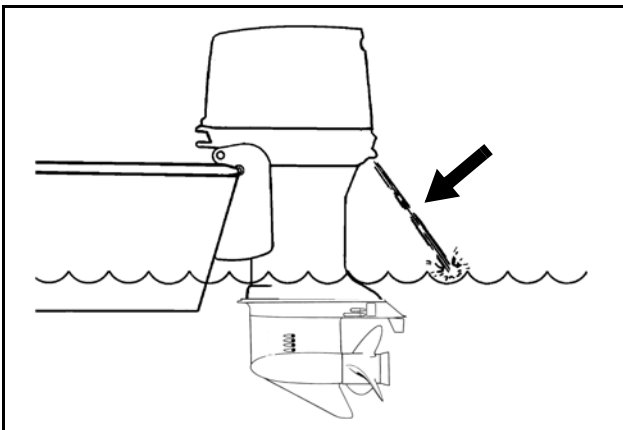
Upon start-up, release the start button.

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

IMPORTANT: Engine will crank but will not start if outboard is in gear, or if key switch is in OFF position.

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

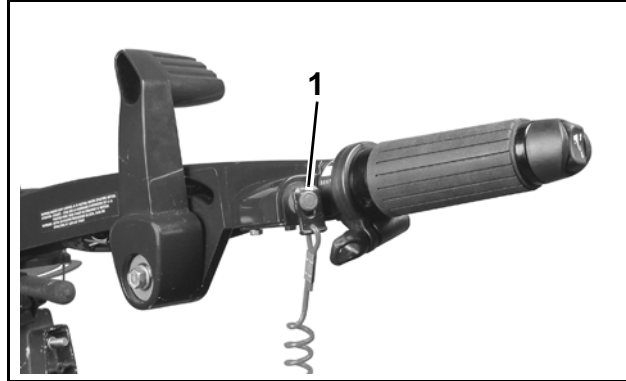
drc4952a

ENGINE STOPPING

Twist the throttle grip to IDLE position.

Move shift lever to NEUTRAL.

Outboard may be stopped by turning the key switch to the OFF position, or by pressing the STOP button until the outboard stops running.



1. STOP button

005099

IMPORTANT: Be sure to turn key OFF when outboard is not in use to avoid discharging the battery.

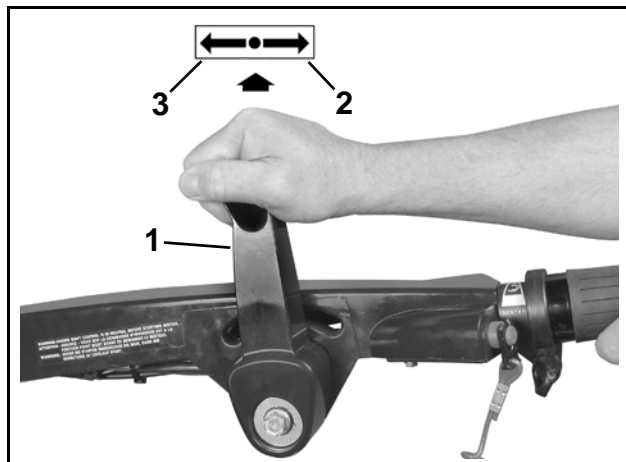
SHIFTING AND SPEED CONTROL

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 IDLE position.

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



1. Shift lever
2. FORWARD
3. REVERSE

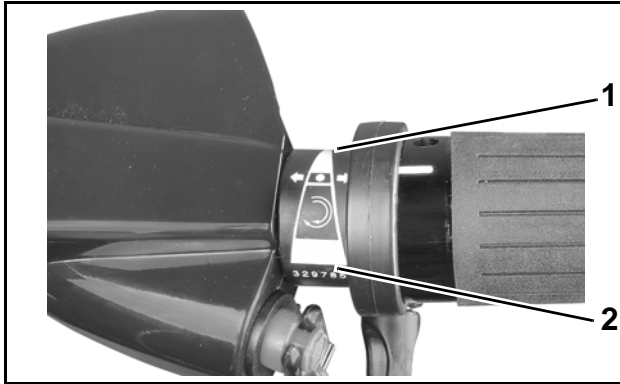
005100

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:

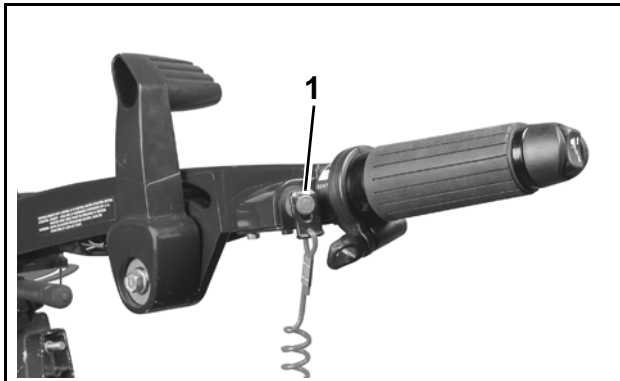
- Clockwise to decrease speed; or
- Counterclockwise to increase speed.



1. Decrease speed
2. Increase speed

005101

Tiller is equipped with a throttle friction adjustment knob. Tighten the knob to reduce the effort required to hold a throttle setting.



1. Throttle friction knob

005099



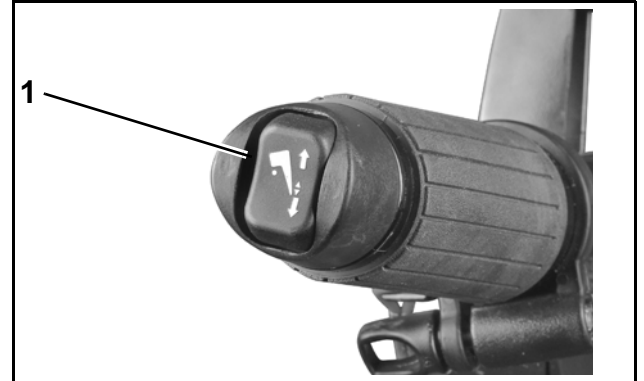
WARNING



Tighten knob only enough to hold throttle at a constant engine speed. Overtightening will prevent quick throttle change in case of emergency.

TRIM CONTROL

Tiller includes a handle mounted trim/tilt switch.



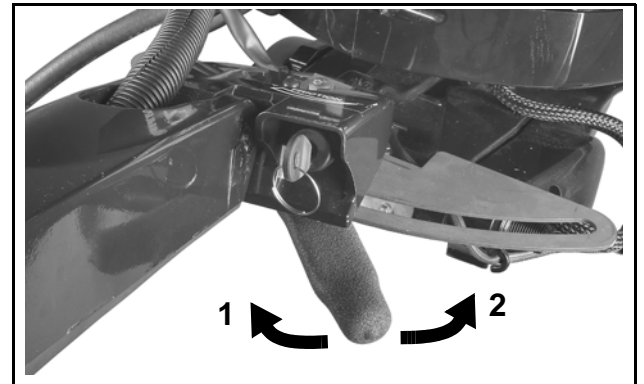
1. Trim/tilt switch

005107

STEERING FRICTION LEVER

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.

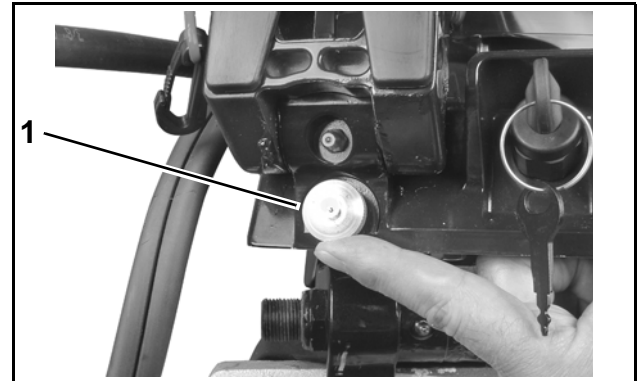


1. Increase friction
2. Decrease friction

005110

TILLER HEIGHT

The angle of the tiller handle can be raised or lowered by adjusting a thumbscrew under the handle.



1. Height adjustment screw

005108

STORAGE (WINTERIZATION)

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) Top off the oil reservoir and inspect the fuel filter. If there is debris in the fuel filter, it must be replaced.

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, 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) Top off the oil reservoir and inspect the fuel filter. If there is debris in the fuel filter, it must be replaced.
- 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.

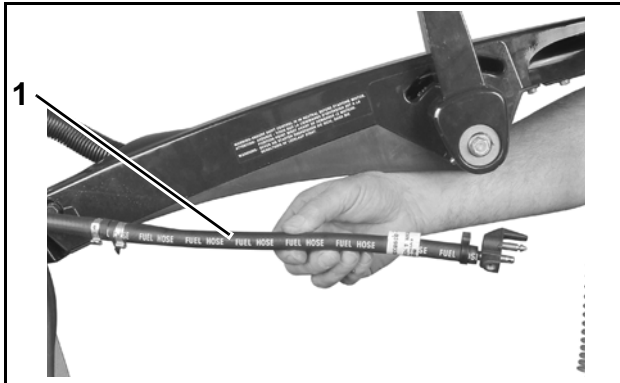
When using this winterization procedure, engine oil may appear on the skeg below the gearcase area. **This is normal.** Avoid potential oil stains by placing a shop towel or suitable container under the propeller and skeg for the duration of the storage.

OPTIONAL ACCESSORIES

Owners of tiller equipped outboards may be interested in adding the following additional equipment:

Modular Wiring System (MWS) Harness Kit, P/N 586853—Allows addition of a *SystemCheck* warning system gauge.

Quick Disconnect Hose Kit, P/N 398339—Provides easy connection to a portable fuel tank.



1. Quick disconnect kit

005109