TILLER HANDLE KITS, P/N 5007125, 5007126, 5007075, 5007076, 5007557, 5007558 INSTALLATION INSTRUCTIONS

APPLICATION

Use this instruction sheet when installing the above tiller handle kits on ***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 use and maintenance of your engine.

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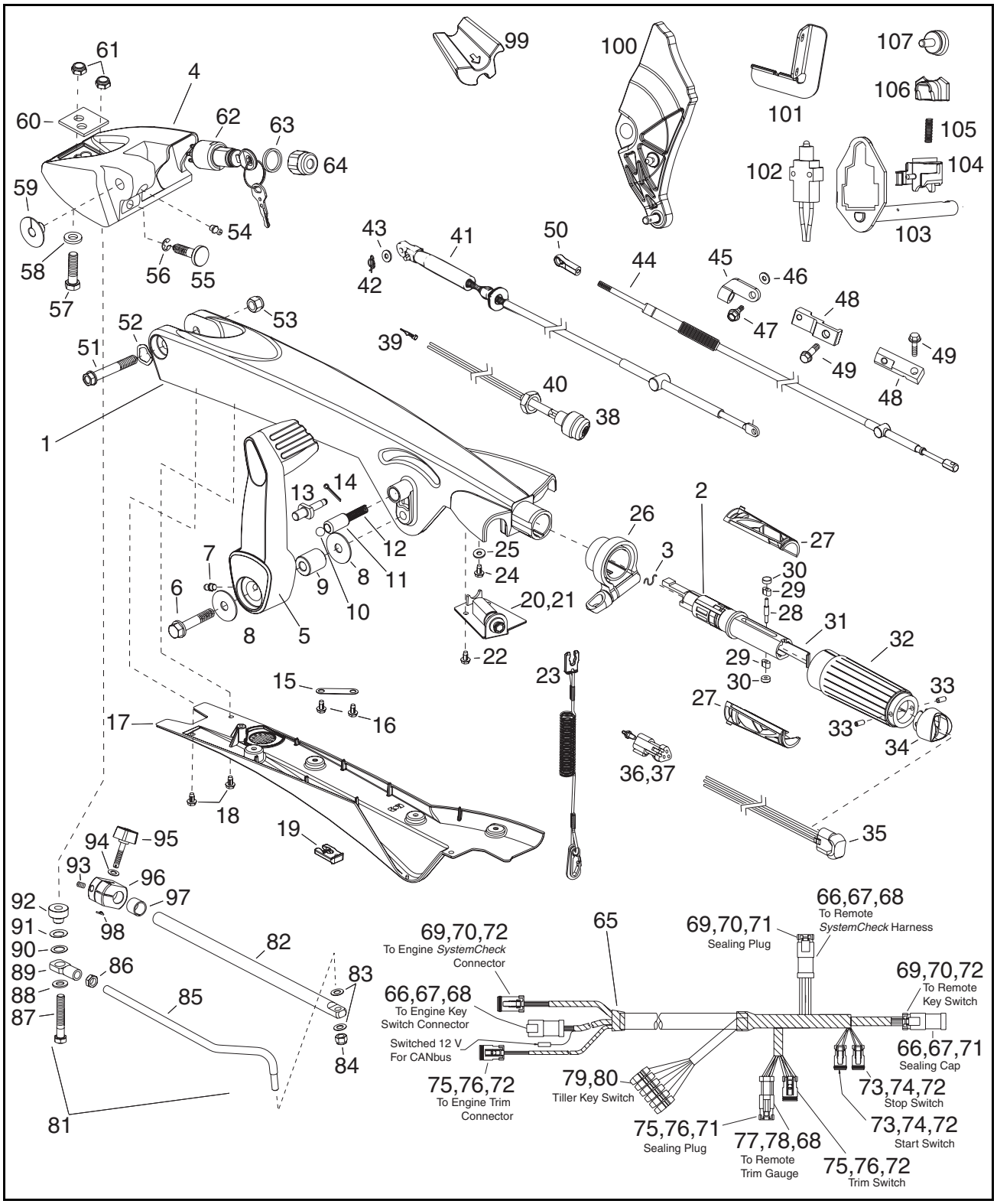
WARNING

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)



5007125 – Blue 75–90 HP **5007075 – Blue 115 HP (2007)** **5007557 – Blue 115 HP (2008 and newer)**
5007126 – White 75–90 HP **5007076 – White 115 HP (2007)** **5007558 – White 115 HP (2008 and newer)**

Ref	P/N	Name of Part		Qty
1	N/A	STEERING HANDLE		1
2	397001	STEERING HANDLE, Inner		1
3	332089	*RETAINER CLIP		1
4	N/A	BRACKET, Steering handle		1
5	352673	HANDLE, Shift		1
6	329885	SCREW, Shift handle mount		1
7	313607	LUBE FITTING		1
8	327400	WASHER, Shift handle		2
9	334815	BUSHING, Shift handle		1
10	318626	BALL		1
11	327178	GUIDE		1
12	309247	SPRING		1
13	351932	PIN, Shift handle to cable		1
14	303049	COTTER PIN		1
15	351995	RETAINER, Shift cable		1
16	336481	SCREW. Retainer		2
17	352293	COVER, Steering Handle		1
18	336481	SCREW. Cover		7
19	333499	CLIP, Emergency stop		1
20	586936	STOP SWITCH Assy		1
21	514679	*PIN, Terminal		6
NS	514696	CONNECTOR, 2 pin receptacle		1
NS	514697	LOCKWEDGE, 2 pin receptacle		1
22	336481	SCREW. Stop switch		3
23	398602	CLIP & LANYARD Assy		1
24	336481	SCREW. Inner handle retaining		1
25	121497	WASHER		1
26	174741	THROTTLE FRICTION CONTROL		1
27	339722	HELIX, Twist grip		2
28	329880	PIN		1
29	329879	GUIDE		2
30	329881	ROLLER, Helix to cable		2
31	352104	GUIDE, Wire		1
32	352813	TWIST GRIP, Assy		1
33	324967	SCREW		2
34	352103	HOUSING, Trim switch		1
35	352270	SWITCH, Trim & Tilt		1
36	514686	CONNECTOR, Trim & Tilt		1
37	514682	LOCKWEDGE, 3 pin receptacle		1
38	586935	START SWITCH Assy		1
39	514679	*PIN, Terminal		2
NS	514696	CONNECTOR, 2 pin receptacle		1
NS	514697	LOCKWEDGE, 2 pin receptacle		1
40	327805	NUT, Start switch		1
41	5006160	CABLE, Shift		1
42	333774	RETAINER CLIP		1
43	328702	WASHER		1
44	5006159	CABLE, Throttle		1
45	334083	ANCHOR, Throttle cable		1
46	328739	WASHER, Anchor to bracket		1
47	329160	SCREW, Anchor to bracket		1
48	351209	ANCHOR BRACKET, 75–90 HP		1
48	352839	ANCHOR BRACKET	***A***	1
49	909386	SCREW, Anchor bracket, 75–90 HP		1
49	333710	SCREW, Anchor bracket	***A***	1
50	334153	CONNECTOR, Throttle cable		1
51	350989	SCREW, Steering handle to bracket		1
52	328733	WASHER, Spring		1
53	307160	LOCKNUT, Steering handle screw		1
54	313607	LUBE FITTING		1
55	352295	THUMBSCREW, Height adjustment		1
56	203470	RETAINER CLIP		1
57	325729	SCREW, Bracket to steering arm		1
58	320397	WASHER		1
59	325452	BUSHING, Steering handle to brkt.		2
60	352625	PLATE, Angle adjustment		1
61	315077	NUT, Steering bracket		2
62	5005800	SWITCH, Ignition & key assy		1
63	127251	SPACER		1
64	127237	NUT, Keyswitch		1
65	586934	HARNESS, Tiller handle		1
66	514688	*CONNECTOR, 6 pin receptacle		3
67	514684	*LOCKWEDGE		3
68	514679	*PIN, Terminal		15
69	514687	*CONNECTOR, 6 Socket plug		3
70	514683	*LOCKWEDGE		3
71	514690	*SEAL PLUG		15
72	514680	*SOCKET, Terminal		22
73	176295	*CONNECTOR, 2 Socket plug		2
74	127287	*LOCKWEDGE		2
75	514685	*CONNECTOR, 3 Socket plug		3
76	514681	*LOCKWEDGE		3
77	514686	*CONNECTOR, 3 Pin receptacle		1
78	514682	*LOCKWEDGE		1
79	910446	*SOCKET, Terminal		6
80	126908	*SLEEVE		6
81	5007322	STEERING FRICTION KIT		1
82	353244	*ROD, Steering friction		1
83	328743	*WASHER		2
84	327969	*LOCKNUT		1
85	353245	*LINK, Steering friction		1
86	345348	*NUT		1
87	351206	*SCREW		1
88	319453	*WASHER		1
89	353247	*ROD END		1
90	127386	*WASHER		1
91	553766	*WASHER, Spring		1
92	353248	*SPACER		1
93	126023	*SET SCREW		1
94	328702	*WASHER		1
95	353243	*KNOB		1
96	353241	*CLAMP, Steering friction		1
97	353242	*BUSHING		1
98	305650	*COTTER PIN		1
99	353028	SUPPORT, grommet	***A***	1
100	5007144	THROTTLE CAM	***A***	1
101	352859	BRACKET, Neutral safety	***A***	1
102	586780	SWITCH, Neutral	***A/B***	1
103	431908	LEVER, Neutral switch	***A/B***	1
104	513134	BRACKET, Neutral switch	***A/B***	1
105	333749	SPRING, Neutral switch	***A/B***	1
106	513811	BRACKET, Neutral switch slider	***A/B***	1
107	331404	PIN, Neutral switch	***A/B***	1
NS	335299	DECAL, Emergency stop clip		1
NS	330575	DECAL, Start warning (white)		1
NS	333978	DECAL, Start warning (blue)		1
NS	330713	DECAL, Gear shift (white)		1
NS	333979	DECAL, Gear shift (blue)		1
NS	320107	TIE STRAP		15
NS	317893	TIE STRAP		2

NS Not Shown

A 115 HP Only
B 2008 and newer models

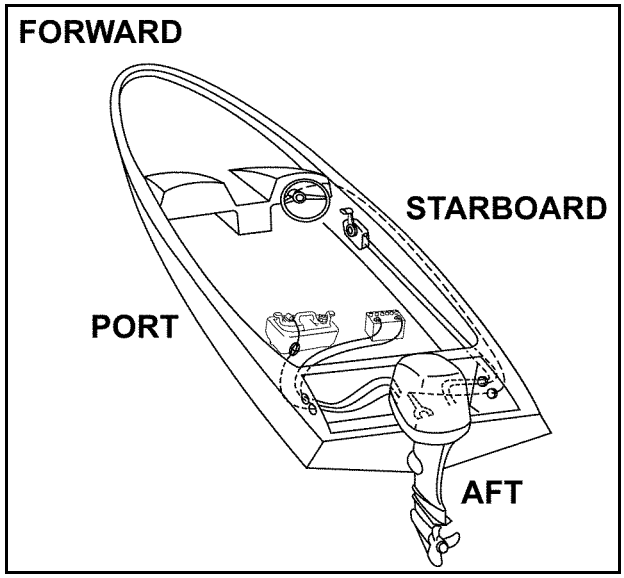
⚠ WARNING ⚠

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

IMPORTANT: An optional MWS harness may be added to this tiller kit to allow installation of remote *SystemCheck* gauges or trim control. Before installing tiller on outboard, refer to **OPTIONAL MODULAR WIRING SYSTEM (MWS) HARNESS INSTALLATION** on p. 13.

Remote gauges may also be added through an *I-Command* (CANbus) network.

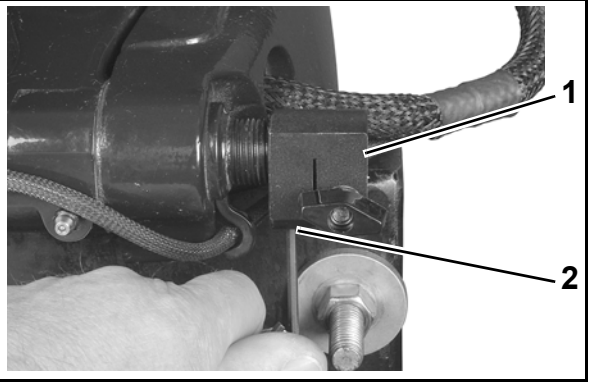
Disconnect the battery cables at the battery.

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

Remove grommet from lower motor cover.

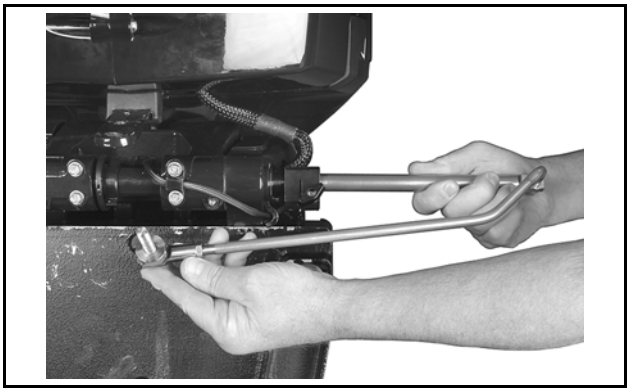
V4 Models 003694
1. Grommet retaining bracket

Install steering friction clamp on tilt tube as far as it will go, then back off into position shown. Tighten set screw no more than 60 to 84 in. lbs (7 to 9.5 N·m).



1. Steering friction clamp 006323
2. Set screw

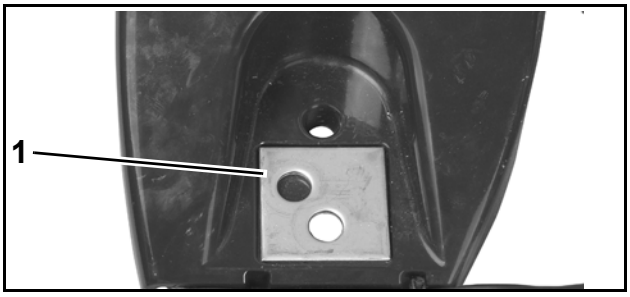
Apply a light coat of *Triple-Guard* grease to steering friction rod and install through clamp and tilt tube. Be sure that plastic bushing is in place inside clamp.



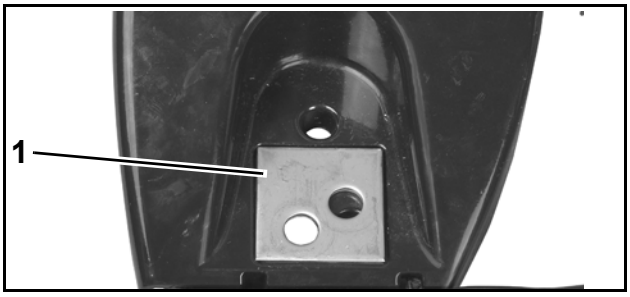
006324

Place angle adjustment plate in pocket of steering arm bracket.

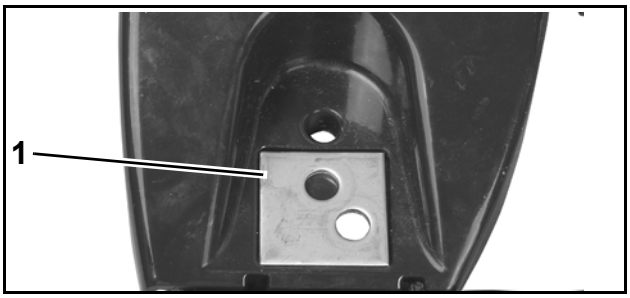
The steering arm can be positioned straight, or angled 15° port or starboard by moving the adjustment plate.



1. Plate adjustment for tiller in CENTER position. 005083

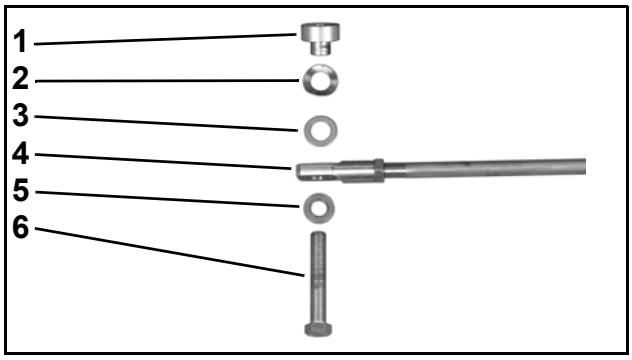


1. Plate adjustment for tiller in PORT position. 005084



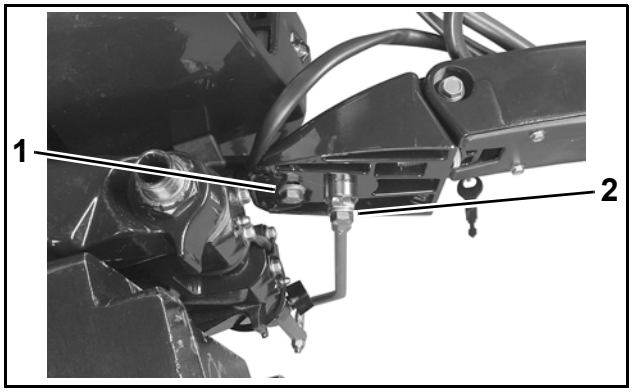
1. Plate adjustment for tiller in STARBOARD position. 005085

Assemble drag link parts as shown:



1. Spacer 006363
2. Spring washer
3. Washer
4. Rod end
5. Washer
6. Drag link screw

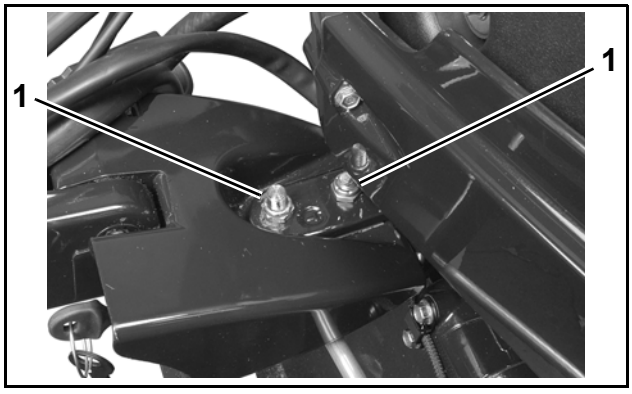
Place tiller bracket on steering arm from the bottom. Thread drag link screw through bracket into forward hole of steering arm. Thread steering arm screw, with washer, into center hole of steering arm.



1. Steering arm screw and washer 006329
2. Drag link screw

Tighten both screws to a torque of 18 to 20 ft. lbs. (25 to 27 N·m).

Install locknuts on screws on top of steering arm. Hold screws with a wrench and tighten locknuts to 18 to 20 ft. lbs. (25 to 27 N·m).



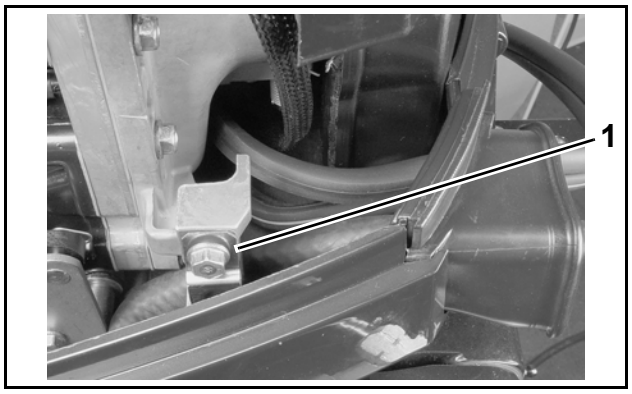
1. Locknuts 006325

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.

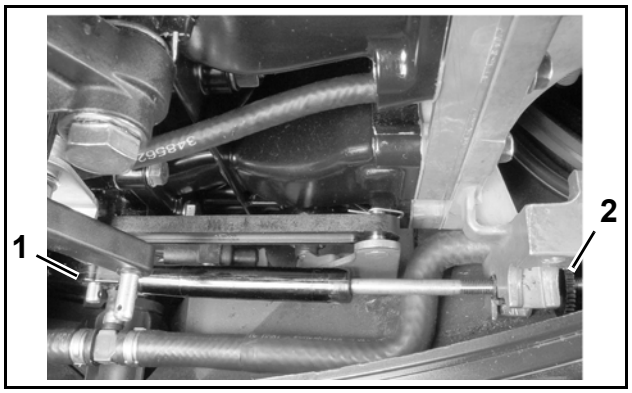
Remove cable retainer from anchor block.



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 002100
2. Trunnion nut

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.)

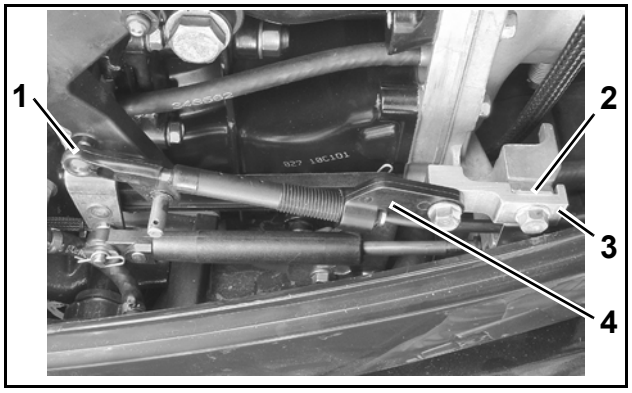
1. Installer tool 005106

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).

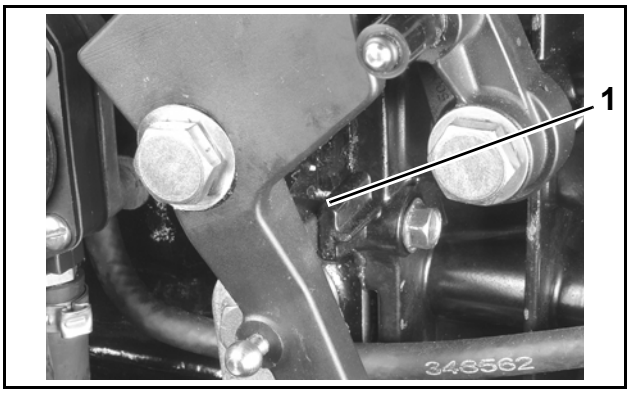
Hold twist grip in full SLOW position. Pull firmly on cable to remove backlash.

Adjust cable anchor so throttle cam is against idle stop when anchor screw aligns with throttle body boss. Then, rotate anchor four turns toward the end of the cable.

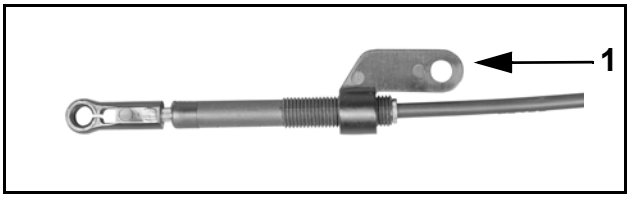
Install washer, cable anchor, and cable anchor screw on anchor bracket. Tighten screw securely.



1. Throttle cable connector 005096
2. Cable retainer
3. Anchor bracket
4. Cable anchor



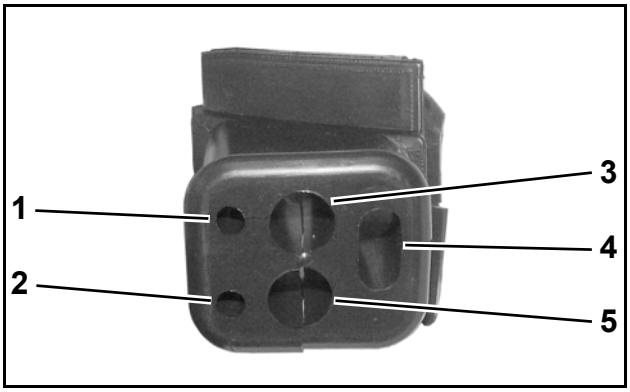
1. Idle stop 005111



1. Turn anchor four turns toward cable end. 006564

IMPORTANT: Rotate twist grip. Make sure throttle cam goes to full throttle without excessive cable preload, and still returns to IDLE stop.

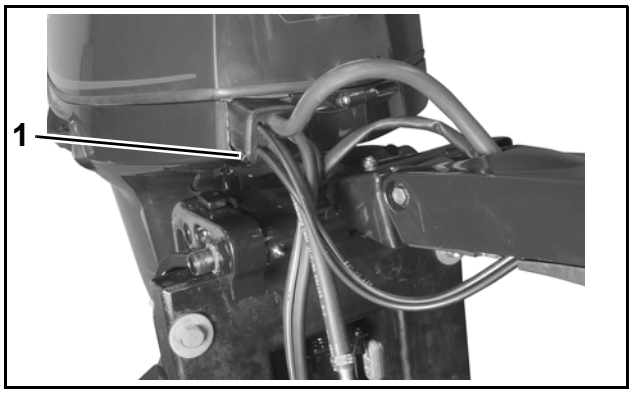
Apply soapy water to the inside surfaces of grommet and install cables and fuel line as shown:



1. Throttle cable 001998
2. Shift cable
3. Wiring harnesses
4. Battery cable
5. Fuel line

Place the grommet into position in the lower motor cover.

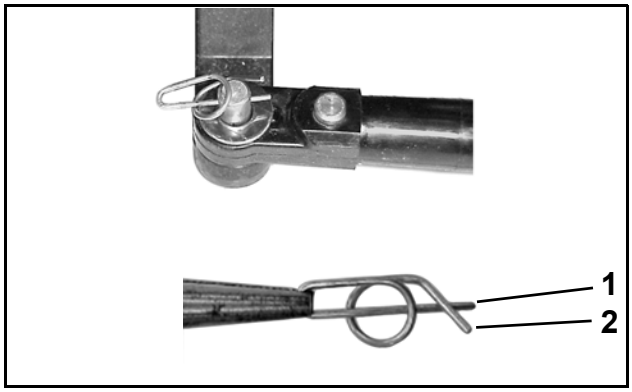
When grommet is in place and all cables have been installed, tighten a tie strap, P/N 500081, around the outside of the grommet to form a seal around the cables.



1. Tie strap 006563

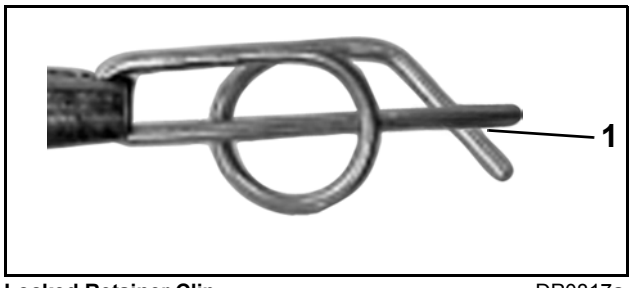
Secure shift cable to the shift lever pin. For proper installation, review the following steps:

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

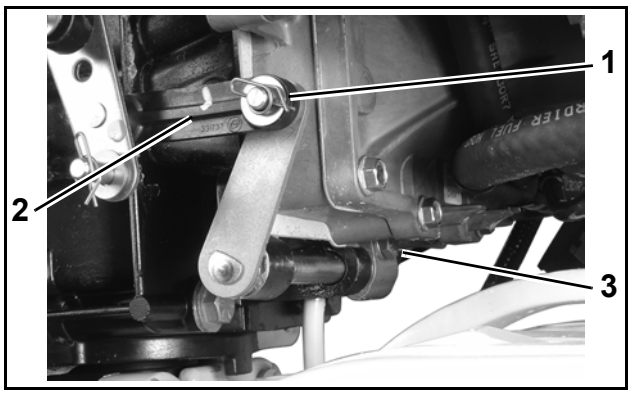
CONTROL CABLE INSTALLATION

115 HP

Neutral Switch Installation
2008 and Newer Models

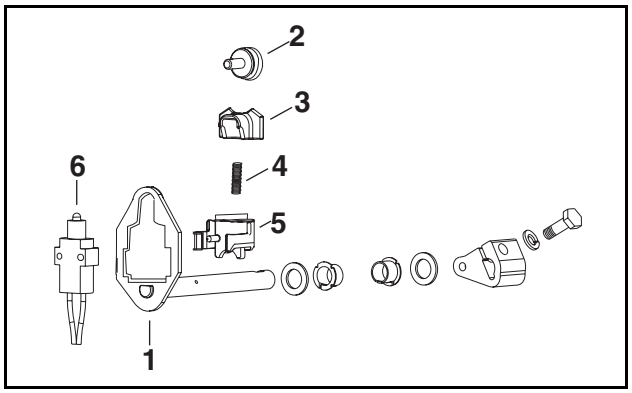
Remove starboard lower cover. Refer to **Service Manual** for specific instructions.

Remove clip and washer from shift lever and shaft. Disconnect link from lever. Remove screw from shift rod lever. Remove shift lever and shaft from crankcase.



1. *Clip and washer* 006529
2. *Link*
3. *Screw, shift rod lever*

Assemble neutral switch components on the shift lever and shaft in the order shown.

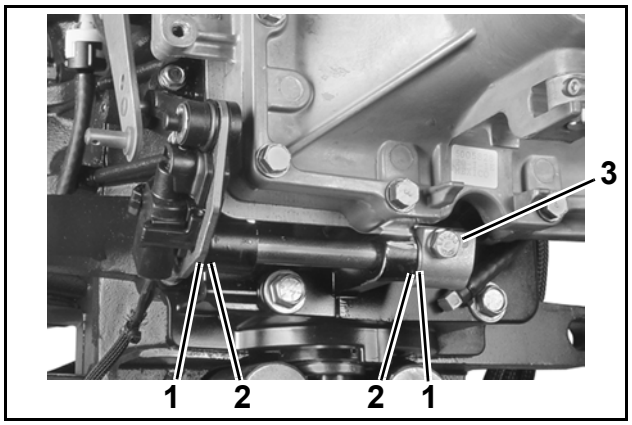


1. *Shft lever and shaft* 006530
2. *Pin*
3. *Sliding bracket*
4. *Spring*
5. *Switch bracket*
6. *Switch*

Apply *Triple-Guard* grease to the shaft of the shift lever/switch assembly. Guide shaft through existing washers and bushings in crankcase.

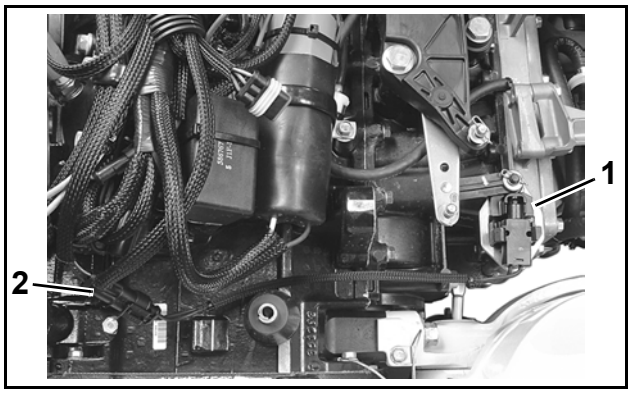
Install shift rod lever and tighten screw to a torque of 60 to 84 in. lbs. (7 to 9.5 N·m).

Connect link to pin and secure with clip and washer.



1. *Washer* 006532
2. *Bushing*
3. *Screw, shift rod lever*

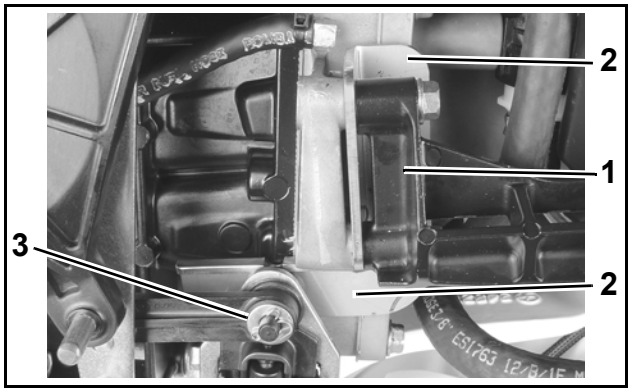
Install switch connector to existing engine harness connector. The harness wires are black and black/yellow.



1. *Neutral switch assembly* 006531
2. *Harness connector*

All 115 HP Models

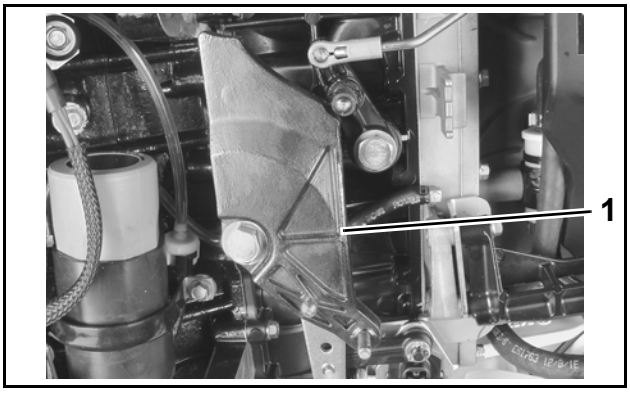
Remove trunnion bracket from powerhead and install neutral safety bracket above and behind existing shift switch. Reinstall trunnion bracket. Apply *Nut Lock*™ to threads and tighten screws 72 to 96 in. lbs. (8 to 11 N·m).



1. *Trunnion bracket* 005127
2. *Neutral safety bracket*
3. *Neutral switch*

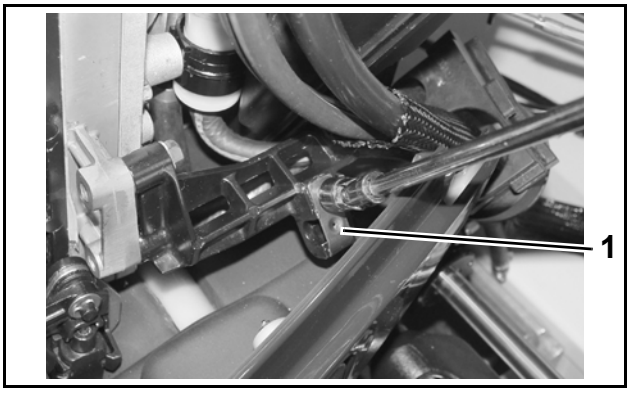
IMPORTANT: Neutral safety bracket is adjustable. When tiller kit installation is complete, test that outboard will not start when control is in FORWARD or REVERSE. If necessary, move bracket up or down to activate switch when outboard is in gear.

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.

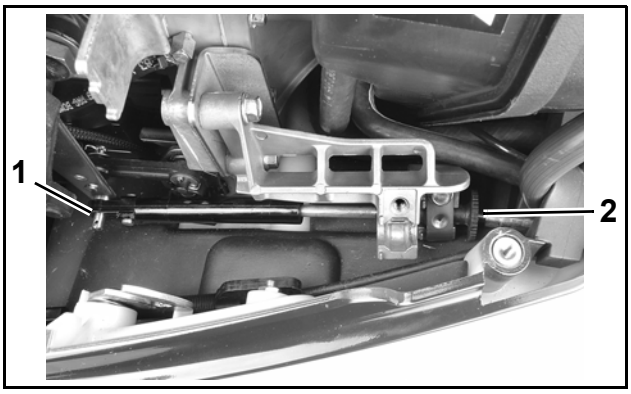


1. Cable retainer 004955

Install all cables and hoses through grommet and place grommet into position in lower cover.

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

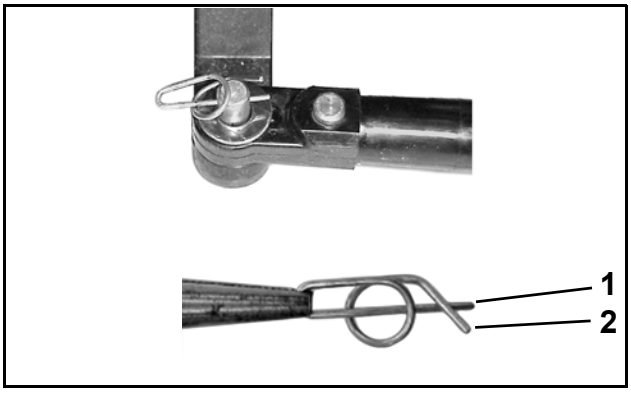
With outboard and tiller handle shift lever in NEUTRAL, place the cable trunnion into the lower anchor pocket. Adjust the trunnion nut so the casing fits onto the shift lever pin.



1. Shift lever pin 006330
2. Trunnion nut

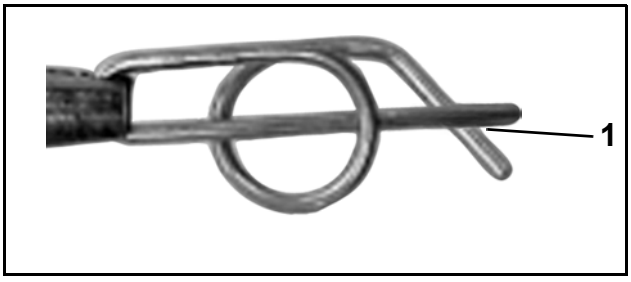
Secure shift cable to the shift lever pin. For proper installation, review the following steps:

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



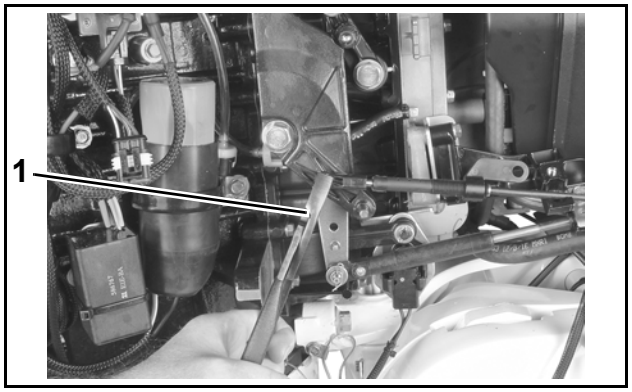
1. Straight section DP0818
2. Angled section DP0817

- 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

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.)

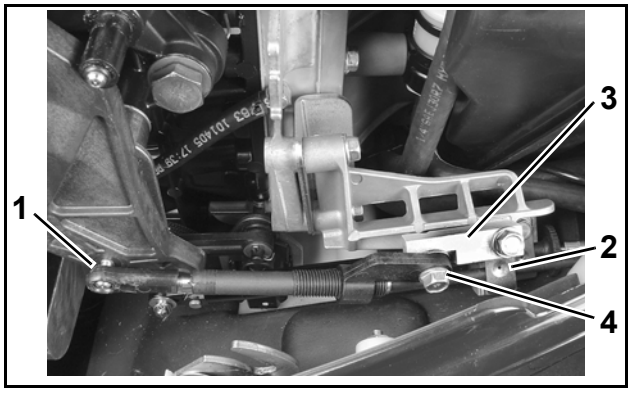


1. Installer tool 005130

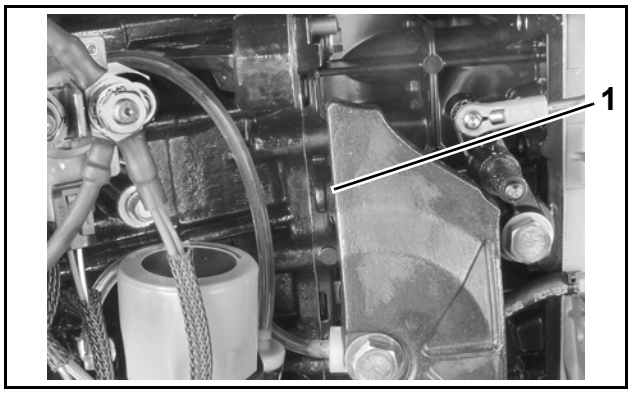
Place throttle cable in upper anchor pocket. Install cable retainer and anchor bracket, P/N 352839, on trunnion bracket using screw supplied with kit. Tighten screw 60 to 84 in. lbs. (7 to 9 N·m).

With throttle cam against idle stop, adjust cable anchor so anchor screw aligns with anchor bracket when twist grip is at IDLE. Then, rotate anchor four turns toward the end of the cable.

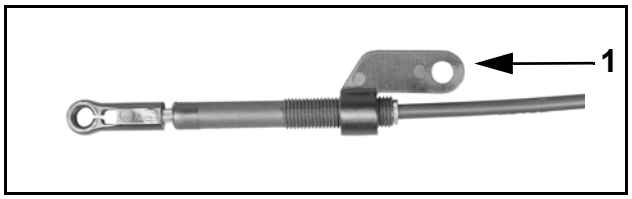
Install washer, cable anchor, and cable anchor screw on anchor bracket. Tighten screw securely.



1. Throttle cable connector 006331
2. Trunnion retainer
3. Anchor bracket
4. Cable anchor



1. Idle stop 005125



1. Turn anchor four turns toward cable end. 006564

IMPORTANT: Rotate twist grip. Make sure throttle cam goes to full throttle without excessive cable preload, and still returns to IDLE stop.

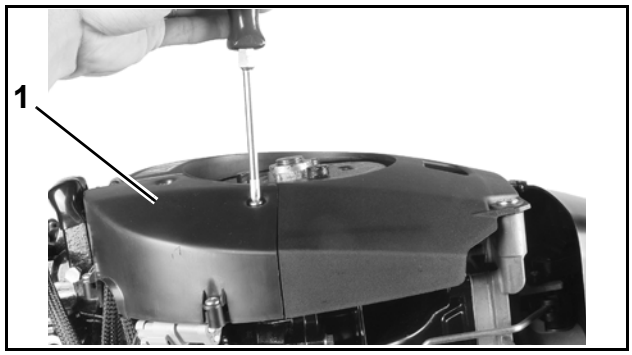
Place support in grommet with arrow facing inside of motor cover. Secure grommet with bracket

1. Support 006578

ELECTRICAL CONNECTIONS

75 – 90 HP

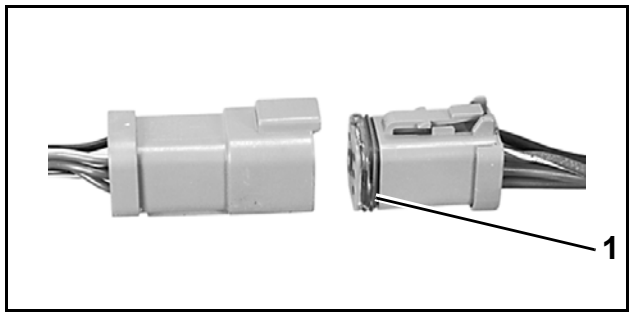
Remove electrical cover.



1. Electrical cover 002421

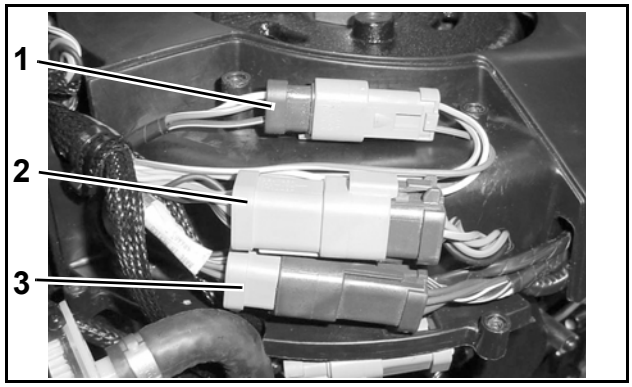
Route wiring harnesses from tiller handle through channel in flywheel cover.

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



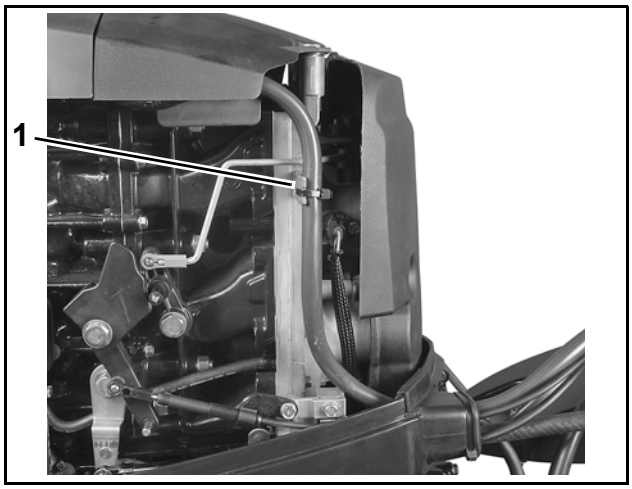
1. Seal 42079a

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



1. Trim and tilt harness 001999
2. SystemCheck™ *connector*
3. *Start/stop harness*

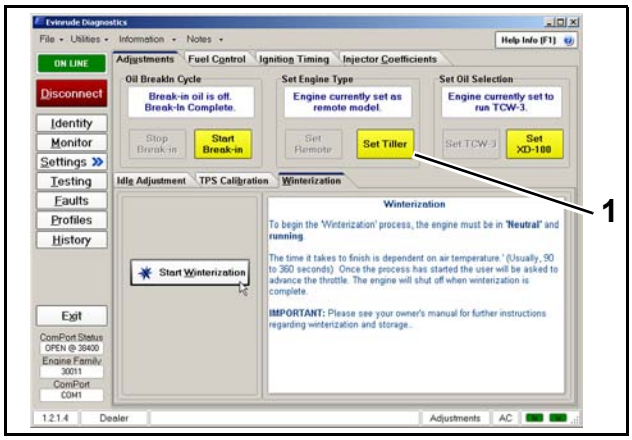
Use tie strap to secure harness to throttle body bracket.



1. Bracket 006327

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.



1. Tiller mode setting 006306

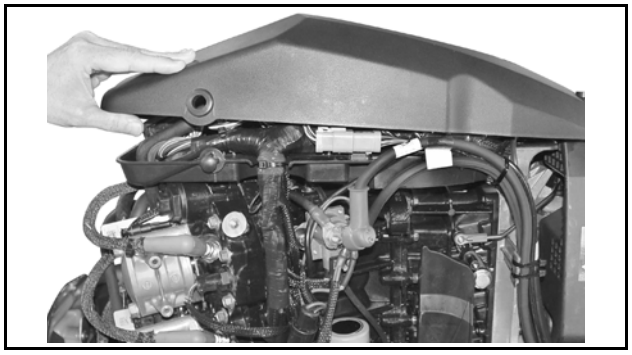
WARNING

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.

ELECTRICAL CONNECTIONS

115 HP

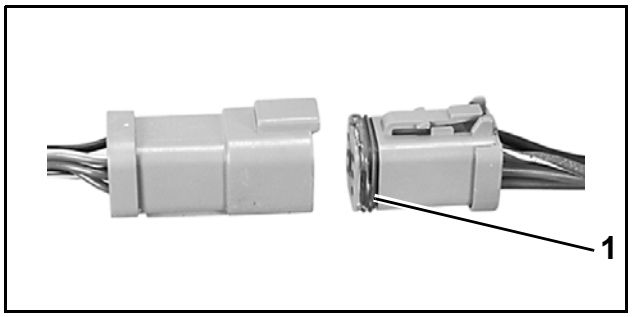
Remove flywheel/harness connector cover.



004954

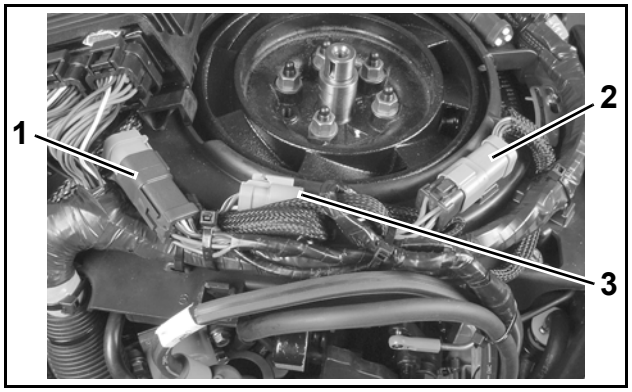
Route wiring harnesses from tiller handle through channel in flywheel cover.

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



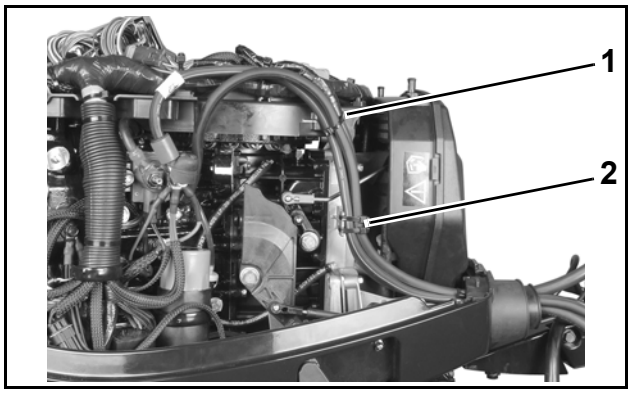
1. *Seal* 42079a

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* 006335
2. SystemCheck™ *connector*
3. *Trim and tilt harness*

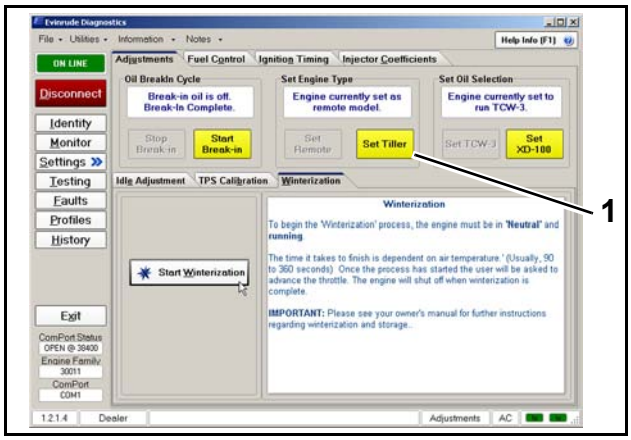
Use tie straps to secure harness to flywheel cover base and throttle body bracket.



1. *Flywheel cover base* 006333
2. *Throttle body bracket*

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.



1. *Tiller mode setting* 006306

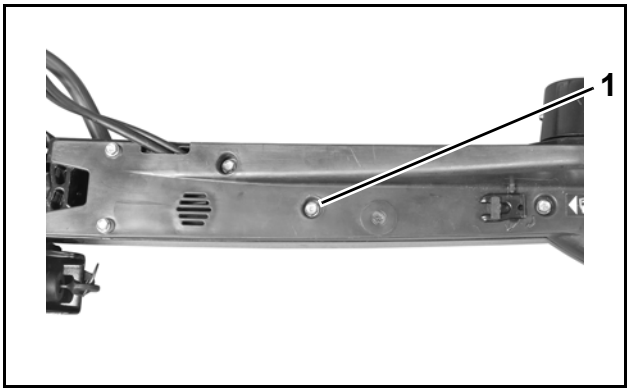
WARNING

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.

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.

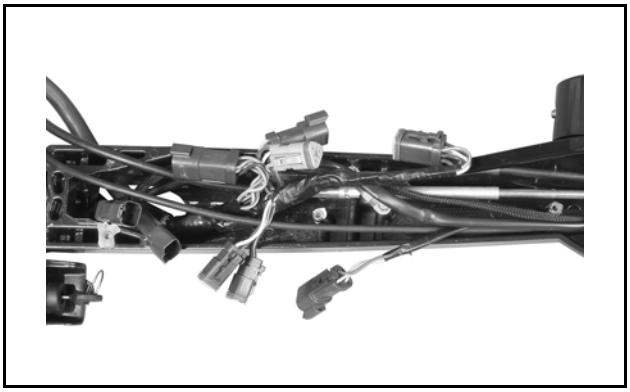
OPTIONAL MODULAR WIRING SYSTEM (MWS) HARNESS INSTALLATION

Remove seven screws and bottom cover of tiller handle.



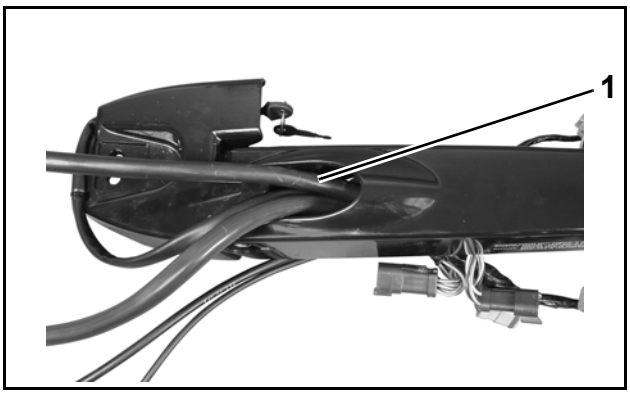
1. Cover screw 006566

Remove tie straps, disconnect tiller handle wiring harness connections, and remove sealing caps.



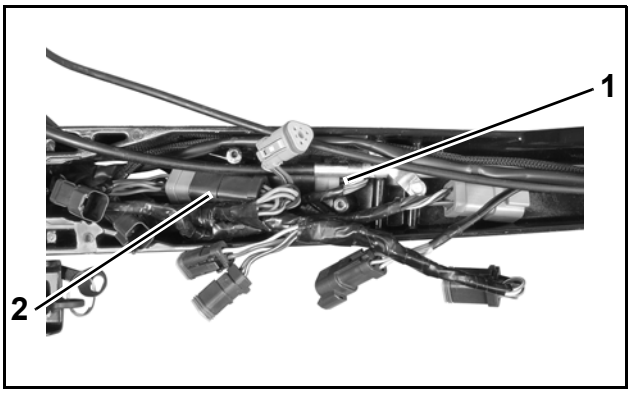
006567

Insert MWS Harness through the top of the tiller handle, to the port side of the existing cables.



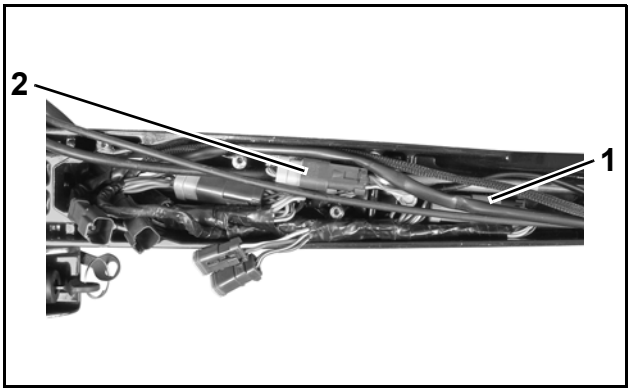
1. MWS Harness 006568

Install harness trim/tilt and *SystemCheck* connectors. First, place trim/tilt connector under shift cable. Then, place *SystemCheck* connector into handle as shown.



1. Trim/Tilt connector 006569
2. SystemCheck *connector*

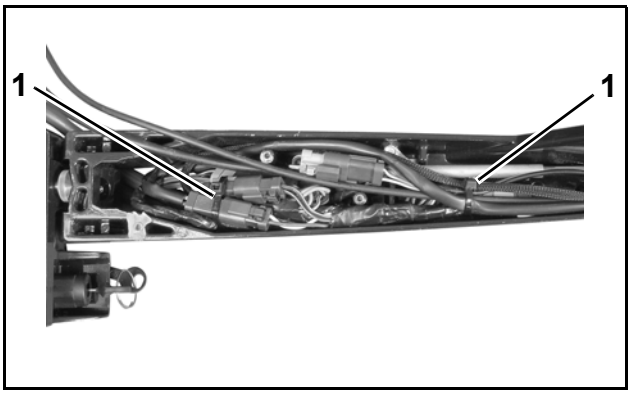
Install harness key switch connector and tiller handle trim/tilt connector. Place connectors as shown.



1. Harness key switch connector 006570
2. Tiller handle trim/tilt connector

Install tiller handle stop switch connector and start button connector.

Route cables and install tie strap as shown. Make sure that wiring cannot interfere with moving parts of shift cable.



1. Tie straps 006571

Install bottom cover. Tighten screws 24 to 36 in. lbs (2.7 to 2.9 N·m).

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.

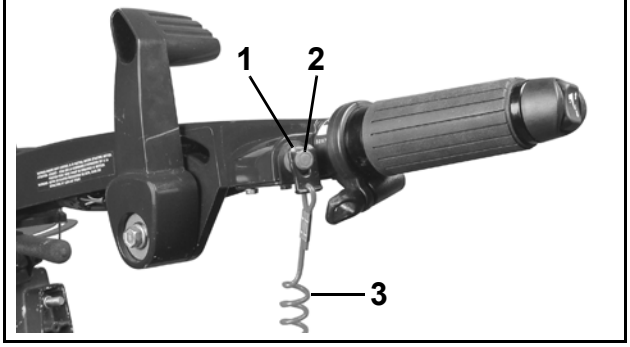
Be familiar with the waters you are operating in. The gearcase of this outboard extends below the water surface and could potentially come in contact with underwater obstructions. Contact with underwater obstructions may result in loss of control and personal injury.

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* 005099
2. *Emergency stop switch*
3. *Lanyard*

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.

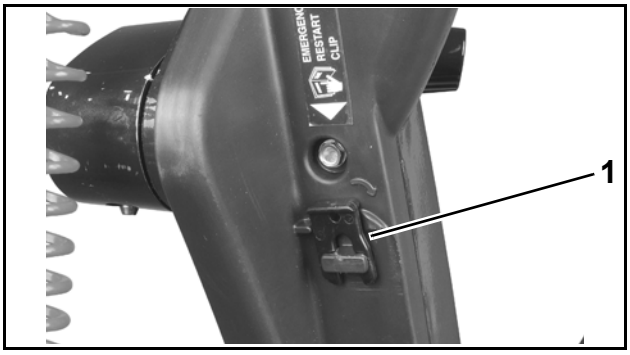
Keep the lanyard free from obstructions and entanglements.

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.

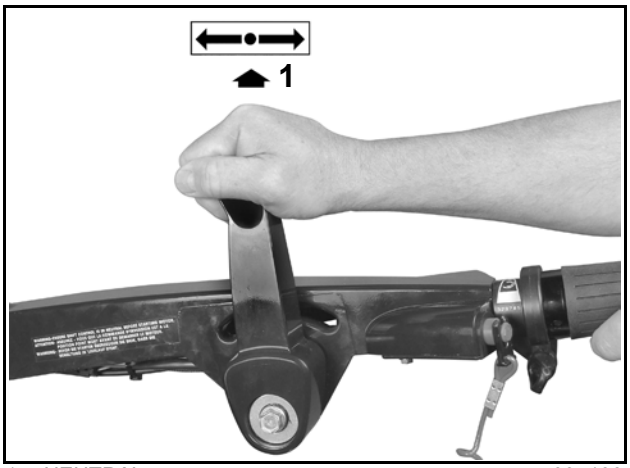
If clip and lanyard should be lost overboard, a spare clip can be found on the bottom of the tiller handle.

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**.

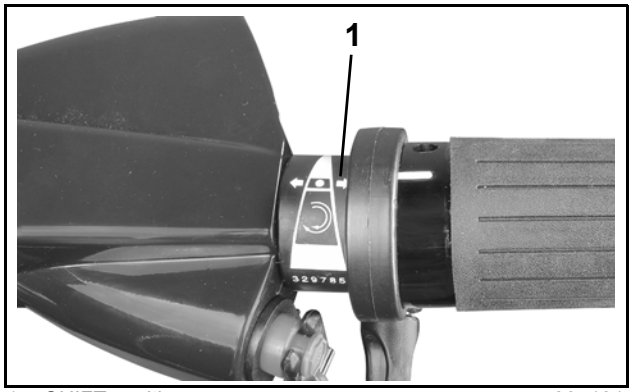


1. NEUTRAL 005100

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**.



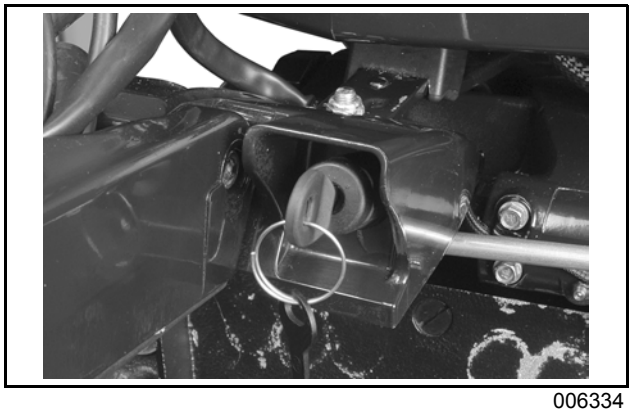
1. SHIFT position 005101

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.



006334

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

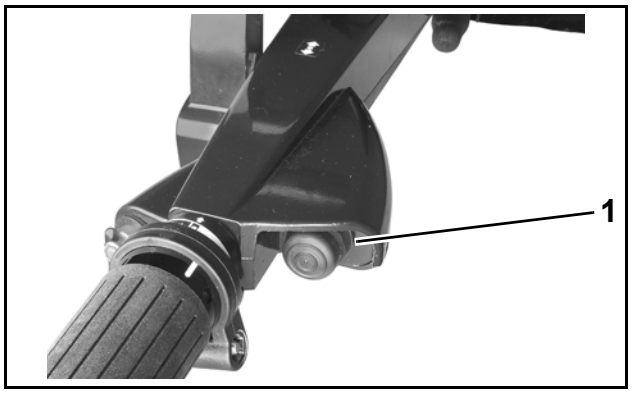
Upon start-up, release the key.

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

IMPORTANT: Engine will 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 005104
2. NEUTRAL

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

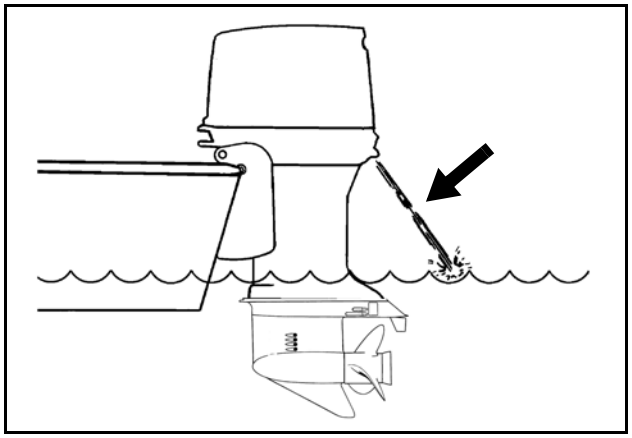
Upon start-up, release the start button.

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

IMPORTANT: Engine will not start if outboard is in gear, if lanyard is not in place, 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.



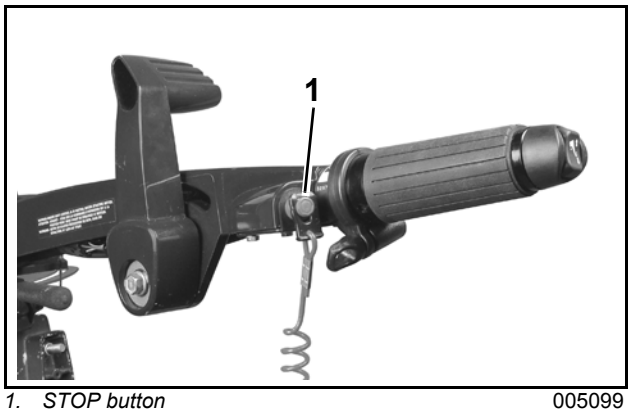
Water Pump Indicator drc4952a

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.

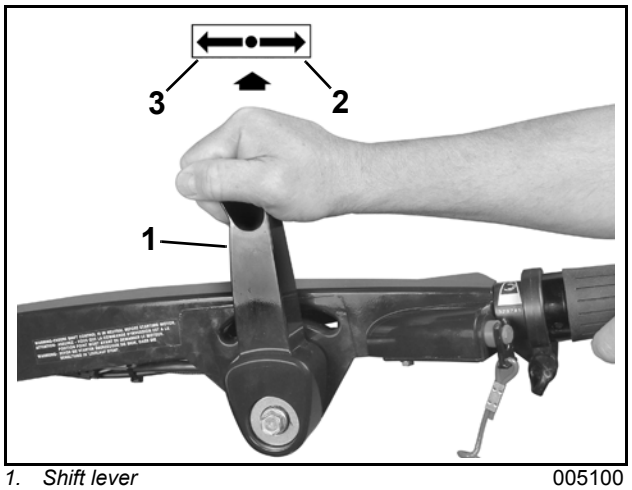
SHIFTING AND SPEED CONTROL

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.

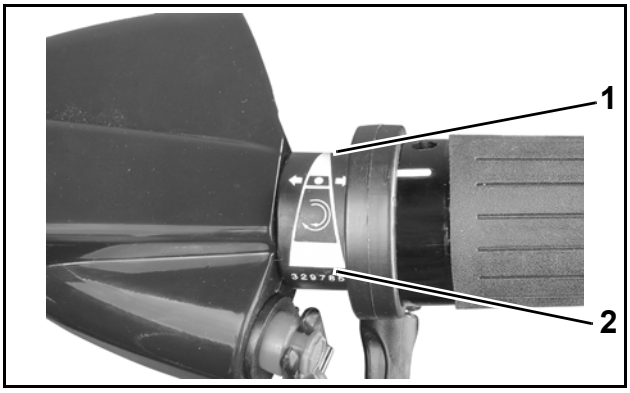


1. Shift lever 005100
2. FORWARD
3. REVERSE

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.

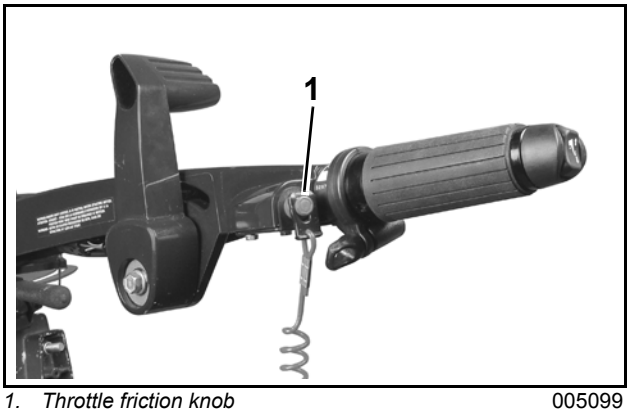
Speed Control

With the outboard running, twist throttle grip:
- Clockwise to decrease speed; or
- Counterclockwise to increase speed.



1. Decrease speed 005101
2. Increase speed

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



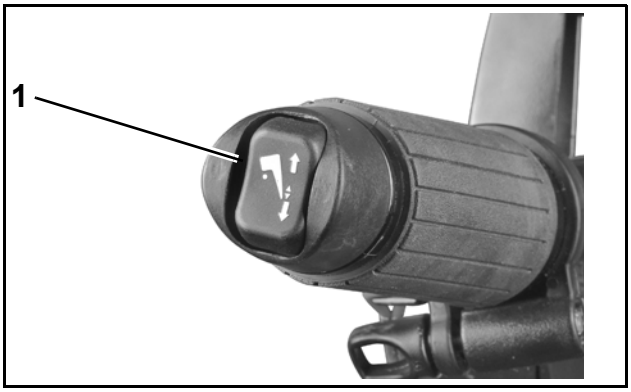
1. Throttle friction knob 005099

WARNING

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

TRIM CONROL

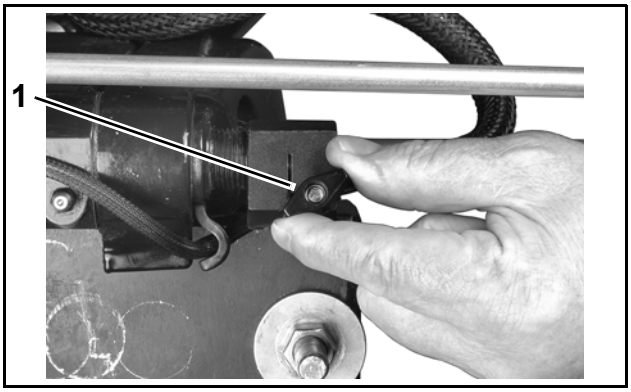
Tiller includes a handle mounted trim/tilt switch.



1. Trim/tilt switch 005107

STEERING FRICTION ADJUSTMENT

A slight drag should be felt when turning the outboard with the steering handle. If adjustment is necessary, turn the steering friction knob:
- Clockwise to increase friction; or
- Counter-clockwise to decrease friction.



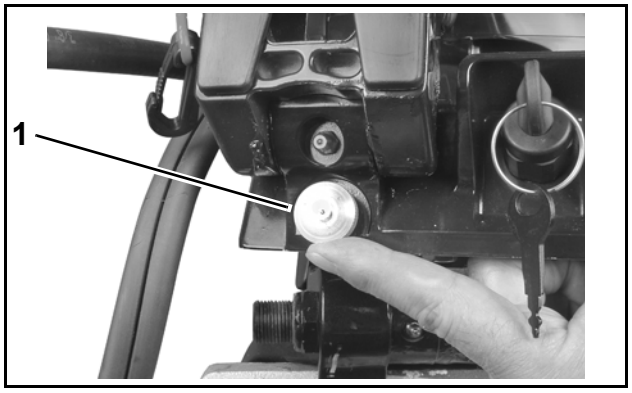
1. Steering friction knob 006328

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.

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.