



TILLER HANDLE KIT, P/N 5008470, P/N 5008471, INSTALLATION INSTRUCTIONS

APPLICATION

Use this instruction sheet when installing the above tiller handle kits on **2011 and newer Evinrude® E-TEC® 15–30 HP** outboards. DO NOT install on any other models.

SAFETY INFORMATION

The following symbols and/or signal words may be used in this document:

DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury

CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate personal injury.

NOTICE Indicates an instruction which, if not followed, could severely damage engine components or other property.

These safety alert signal words mean:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

For safety reasons, this kit must 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.

DO NOT perform any work until you have read and understood these instructions completely.

Torque wrench tightening specifications must strictly be adhered to.

Should removal of any locking fastener (lock tabs, locknuts, or patch screws) be required, always replace with a new one.

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

Always wear EYE PROTECTION AND APPROPRIATE GLOVES when using power tools.

Unless otherwise specified, engine must be OFF when performing this work.

Always be aware of parts that can move, such as flywheels, propellers, etc.

Some components may be HOT. Always wait for engine to cool down before performing work.

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.

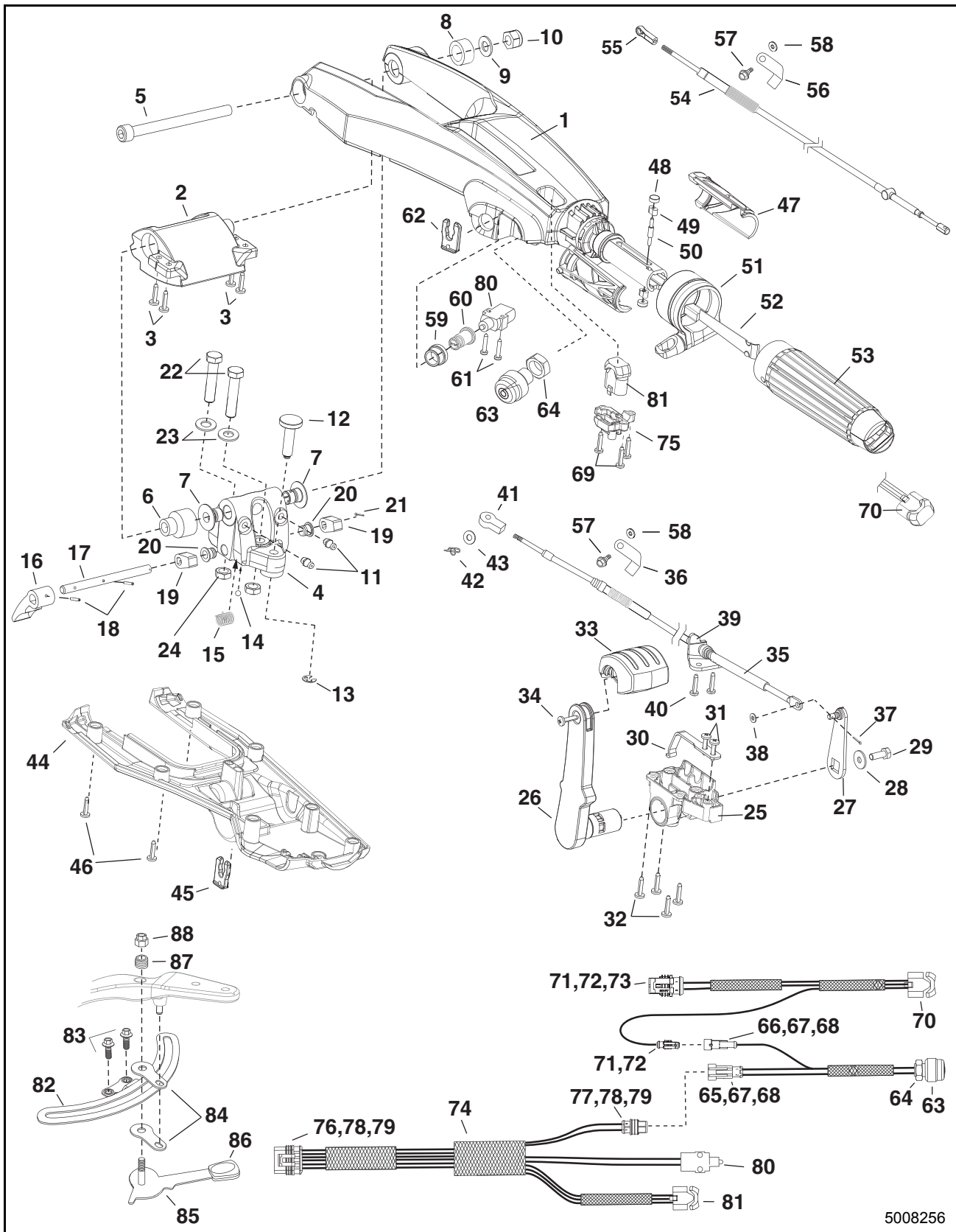
This instruction sheet may be translated into other languages. In the event of any discrepancy, the English version shall prevail.

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 for the use and maintenance of your engine.



TILLER HANDLE KIT (Evinrude E-TEC 15-30 HP)



TILLER HANDLE KIT (Evinrude E-TEC 15–30 HP)

Ref	P/N	Name of Part	Qty	Ref	P/N	Name of Part	Qty
-	5008470	TILLER KIT - Blue	1	50	329880	*PIN	1
-	5008471	TILLER KIT - White	1	51	5007694	*THROTTLE FRICTION Assy	1
1	353404	*COVER, Tiller arm upper - Blue	1	NS	308993	**SPRING, Throttle friction	1
1	353564	*COVER, Tiller arm upper - White	1	NS	328740	** NUT, Throttle friction	1
2	353775	*BRACKET, Stopper	1	NS	434081	** SCREW, Throttle friction	1
3	353420	*SCREW, Bracket to upper cover	4	52	353820	*GUIDE, Wire	1
4	353401	*BASE, Pivot	1	53	353409	*TWIST GRIP Assy	1
5	353410	*SCREW, Steering handle	1	54	5007459	*CABLE, Throttle	1
6	353933	*BUSHING, Stbd	1	55	334153	*CONNECTOR, Throttle cable	1
7	353755	*BUSHING, Main pivot	2	56	334083	*ANCHOR, Control cable	1
8	353964	*BUSHING, Port	1	57	353871	*SCREW, Cable anchor	2
9	353741	*WASHER	1	58	353735	*WASHER, Cable anchor	2
10	353729	*LOCKNUT	1	59	353561	*HOUSING, Stop switch	1
11	313607	*LUBRICATION FITTING	2	60	353560	*BUTTON, Stop switch	1
12	352295	*THUMBSCREW, Height adjustment	1	NS	354363	*SPACER, Stop switch	1
13	203470	*RETAINER CLIP	1	NS	353562	*SPRING, Stop switch	1
14	353934	*BALL, Pivot base plug	2	61	354366	*SCREW, Stop switch	2
15	352540	*SPRING, Tilt detent	1	62	398602	*CLIP & LANYARD Assy	1
16	354138	*LEVER, Release tilt detent	1	63	586995	*START SWITCH Assy	1
17	353779	*PIN, Tilt detent	1	64	327805	**NUT	1
18	338997	*PIN, Roll	2	65	3011154	**CONNECTOR, 2 Position cap	1
19	353786	*PAWL, Tilt detent	2	66	3011152	**CONNECTOR, 1 Position cap	1
20	353418	*BUSHING, Tilt detent	2	67	3011148	**CONTACT,Tab	3
21	303049	*COTTER PIN, Tilt detent	1	68	3011149	**SEAL, Wire	3
22	327254	*SCREW, Steering arm	2	69	328649	*SCREW, Troll switch retainer	3
23	320397	*WASHER	2	70	586996	*SWITCH, Trim	1
24	315077	*NUT, Steering bracket	2	71	3011147	**CONTACT, Receptacle	3
25	353632	*BRACKET, Shift lever	1	72	3011149	**SEAL, WIRE	3
26	353406	*LEVER, Shift	1	73	3011153	*CONNECTOR, 2 Position plug	1
27	5007448	*SHIFT LINK AY	1	74	587093	*HARNESS, Tiller handle	1
28	353761	*WASHER, Shift lever	1	75	353722	**BRACKET, Troll switch	1
29	353785	*SCREW, Shift link	1	76	3011157	**CONNECTOR, 6 Position plug	1
30	354024	*SPRING, Shift detent	1	77	3011153	**CONNECTOR, 2 Position plug	1
31	353420	*SCREW, Detent spring	2	78	3011147	**CONTACT, Receptacle	8
32	353420	*SCREW, Shift lever bracket	4	79	3011149	**SEAL, WIRE	8
33	353407	*GRIP, Shift lever	1	80	N/A	**SWITCH, Stop	1
34	353420	*SCREW, Grip	1	81	N/A	**SWITCH, Troll	1
35	5007458	*CABLE, Shift	1	NS	317893	**TIE STRAP	2
36	334083	**ANCHOR, Control cable	1	82	353285	*PLATE, Steering Friction	1
37	303049	*COTTER PIN, Shift cable	1	83	353589	*SCREW, Friction plate	2
38	353743	*WASHER, Shift cable retainer	1	84	353708	*WASHER	2
39	353976	*RETAINER, Shift cable	1	85	5007338	*LEVER Assy	1
40	328649	*SCREW, Shift cable retainer	2	86	353726	*HANDLE, Lever	1
41	334120	*CONNECTOR, Shift cable end	1	87	353288	*BUSHING, Threaded	1
42	333774	*CLIP, Shift cable	1	88	353718	*NUT, Locking	1
43	328702	*WASHER, Shift cable	1	NS	355634	*DECAL, Emergency stop clip - Blue	1
44	353724	*COVER, Tiller arm bottom - Blue	1	NS	355621	*DECAL, Emergency stop clip - White	1
44	353762	*COVER, Tiller arm bottom - White	1	NS	355620	*DECAL, Start in Gear Warning	1
45	333499	*CLIP, Emergency stop	1	NS	353417	*DECAL, Gear shift	1
46	353420	*SCREW, Bottom cover	8	NS	353772	*DECAL, RPM	1
47	339722	*HELIX, Twist grip	2	NS	354413	*DECAL, Tilt release	1
48	329881	*ROLLER, Helix to cable	2	NS	354709	*DECAL, Blank	2
49	329879	*GUIDE	2	NS	320107	*TIE STRAP	4

⚠ WARNING

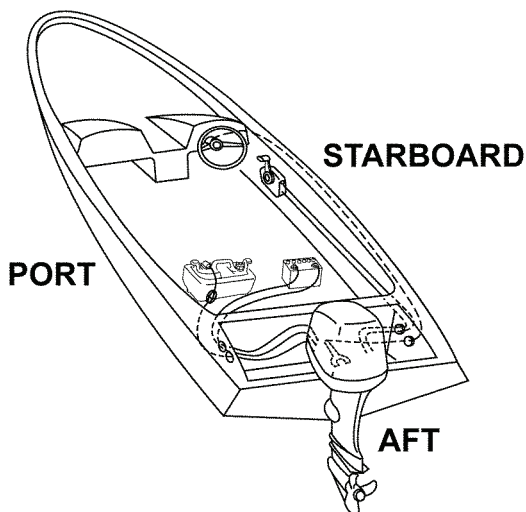
Improper installation of this kit could result in personal injury due to loss of boat control.

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

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

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

FORWARD



Nautical Orientation

INSPECTION

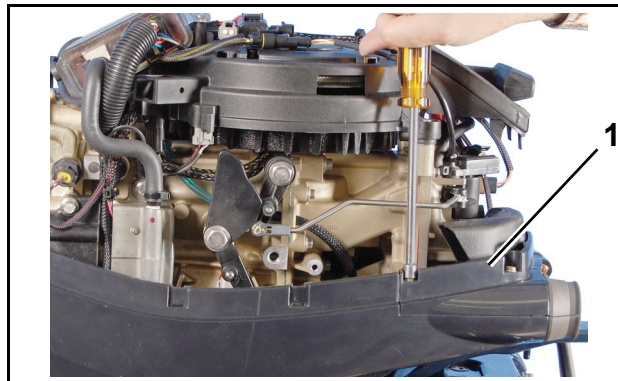
Check boat for obstructions that could interfere with free movement of tiller handle when steering or tilting outboard.

NOTICE 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.

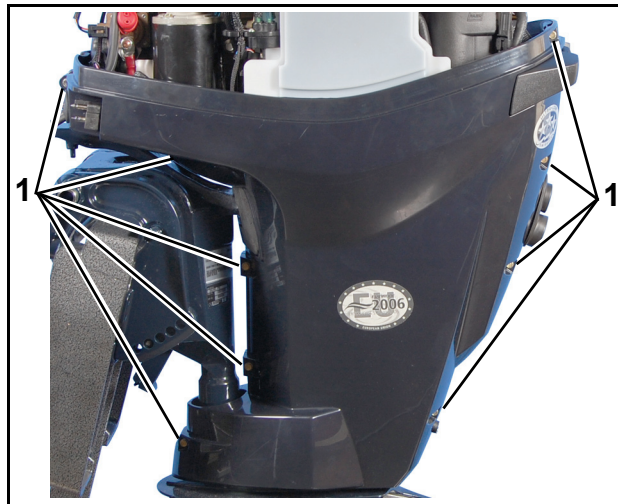
Remove cable entry cover and cable entry grommets.



1. Cable entry cover

007308

Remove nine lower engine cover screws. Remove lower engine covers.



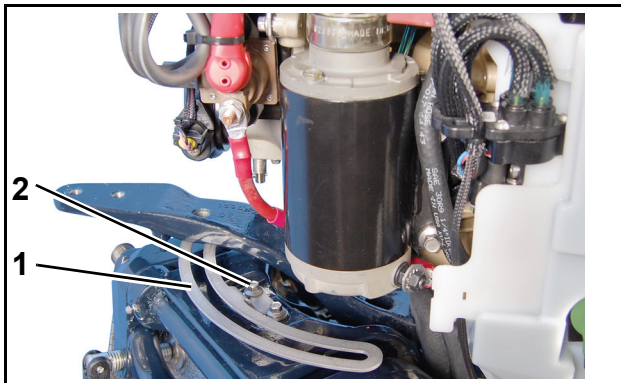
1. Screws

007309

Turn outboard as shown.

Install friction plate on swivel bracket. Secure friction plate with two M6 x 16 screws.

Tighten screws to a torque of 84 to 106 in. lbs. (9.5 to 12 N·m).

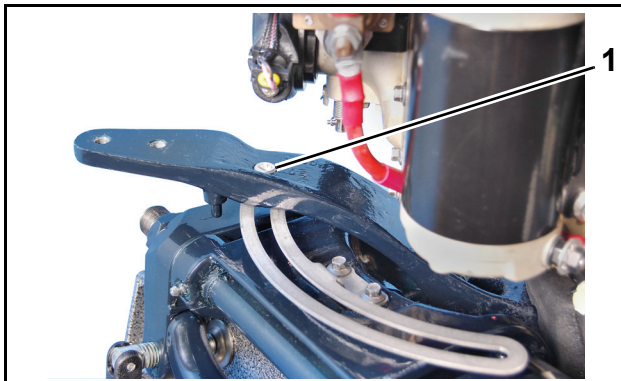


1. Friction plate
2. Screws

007455

Apply *Triple Guard* grease to the threads of threaded bushing.

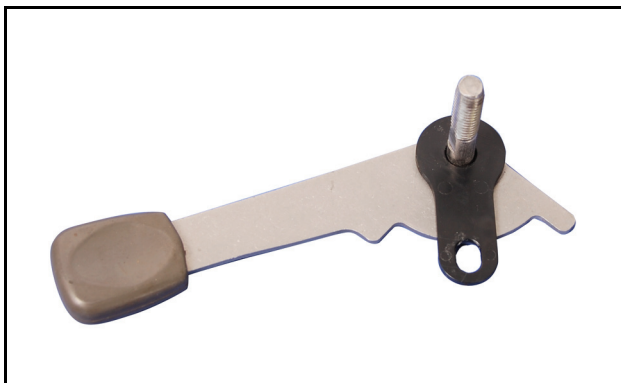
Install threaded bushing into steering arm with the top of the threaded bushing 0.050 in. (1.27 mm) above the top of the steering arm.



1. Threaded bushing

007456

Place one friction washer on the lever assembly.



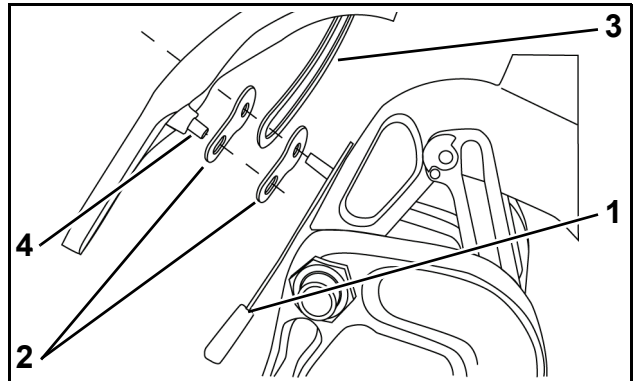
007476

Tilt outboard to full tilt position.

Install lever assembly and friction washer through friction plate.

Install second friction washer on lever assembly. Install lever assembly through threaded bushing.

Align slots of friction washers with dowel pin.



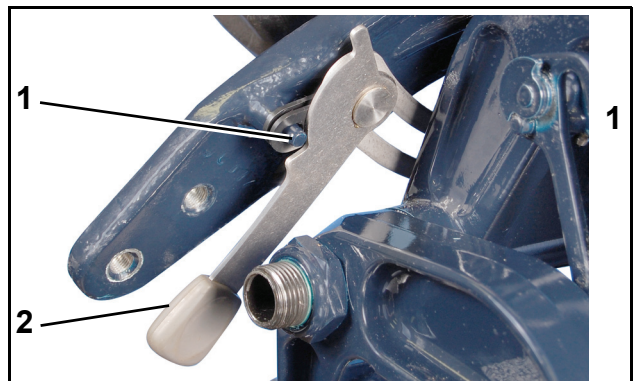
1. Lever assembly
2. Friction washers
3. Friction plate
4. Dowel pin

007491

Note – Installation of the lever assembly will be easier if:

- Installed from starboard side of outboard on power tilt models.
- Installed from port side of outboard on manual tilt models.

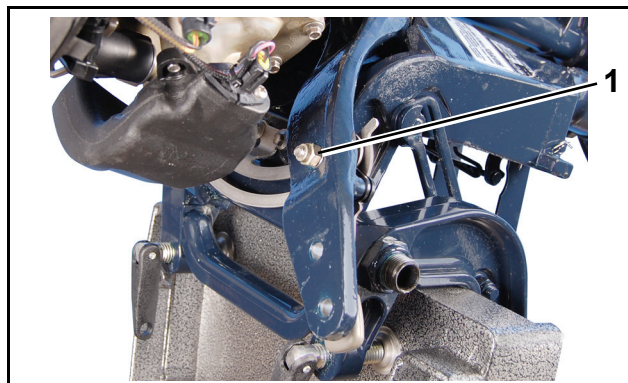
Align dowel pin and lever assembly as shown.



1. Dowel pin
2. Lever assembly

007458

Install locking nut. Temporarily tighten locking nut three to four full turns. Final adjustment will be performed later.



1. Locking nut

007459

Tilt outboard down.

Make sure steering arm threads are clean.

Place tiller handle base on steering arm.

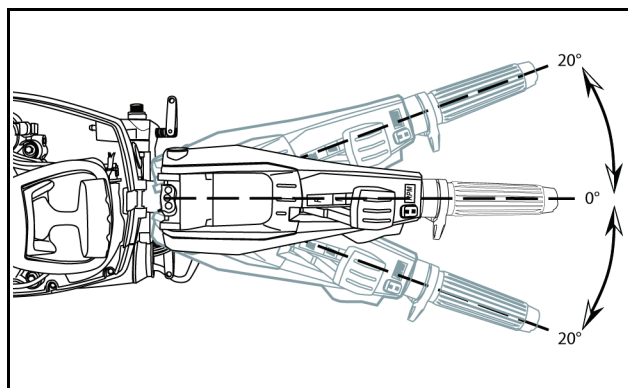
Install one washer and one screw, in the front mounting hole.



1. Screw
2. Washer

007460

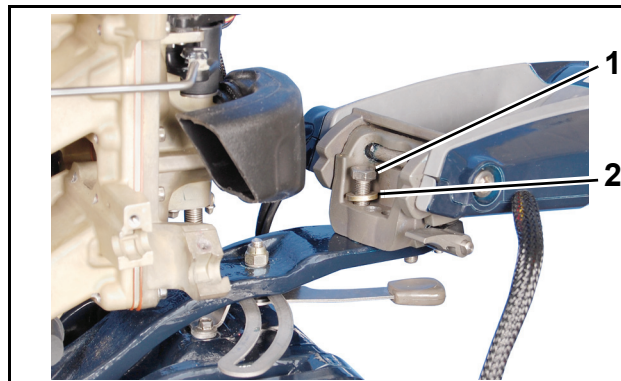
The tiller handle angle can be set to center or angled to port or starboard 20°.



007214

Install remaining washer and screw in appropriate location.

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

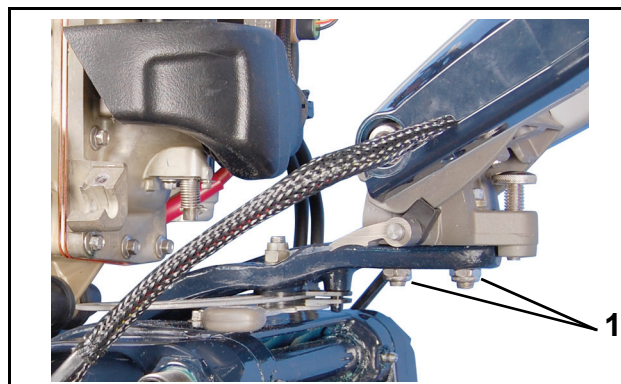


1. Screw
2. Washer

007461

Install locknuts on screws.

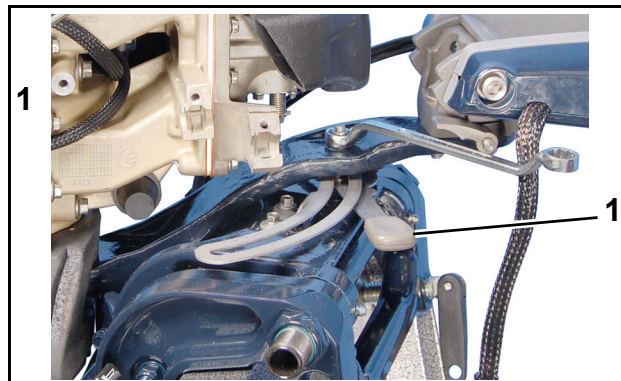
Hold screws with a wrench and tighten locknuts to a torque of 18 to 20 ft. lbs. (25 to 27 N·m).



1. Locknuts

007462

Position lever assembly as shown. Tighten locking nut so that a slight drag is felt when steering.



1. Lever assembly

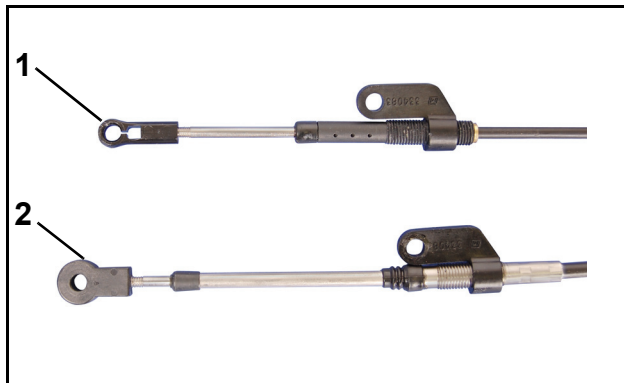
007463

⚠ WARNING

DO NOT overtighten steering friction for “hands-off” steering. Steering friction device is not intended to hold boat on a set course.

Control Cable Installation

Make sure throttle and shift cable ends are fully seated.



1. Throttle cable end
2. Shift cable end

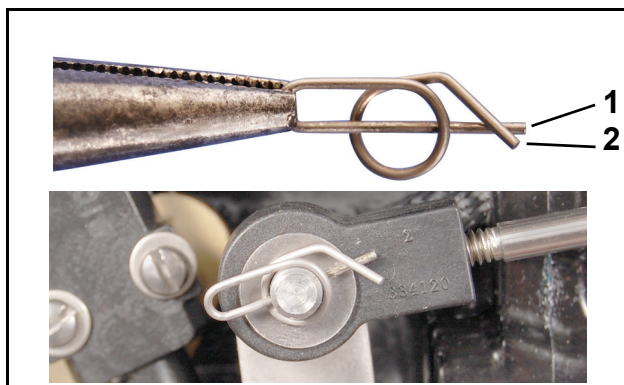
007473

IMPORTANT: Do NOT use threaded cable ends to make cable adjustments.

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.

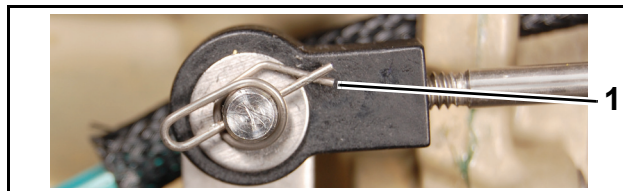


1. Straight section
2. Angled section

007472

008270

- 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.



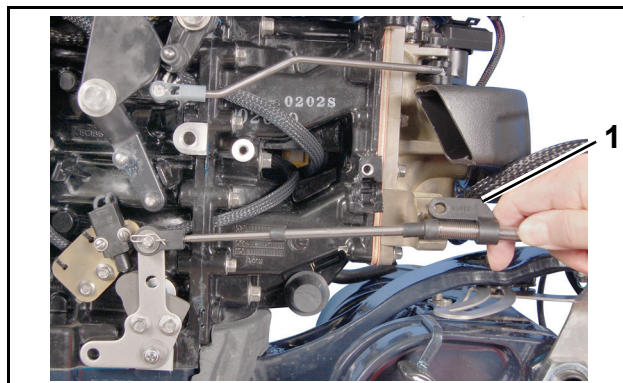
Locked Retainer Clip

007465

1. Angled section behind straight section

Pull firmly on shift cable casing to remove backlash.

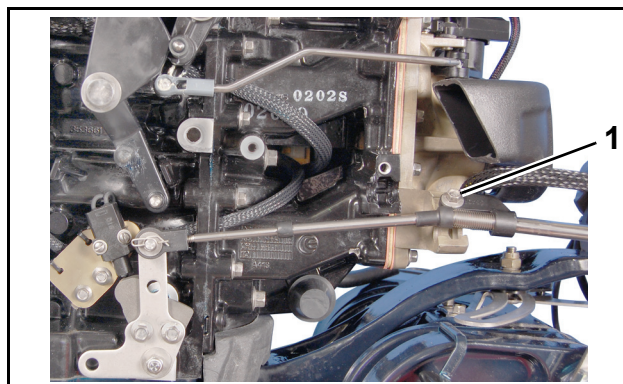
With outboard and shift lever in NEUTRAL, place shift cable on the trunnion bracket of intake manifold as shown. Rotate the anchor to align.



1. Anchor

008271

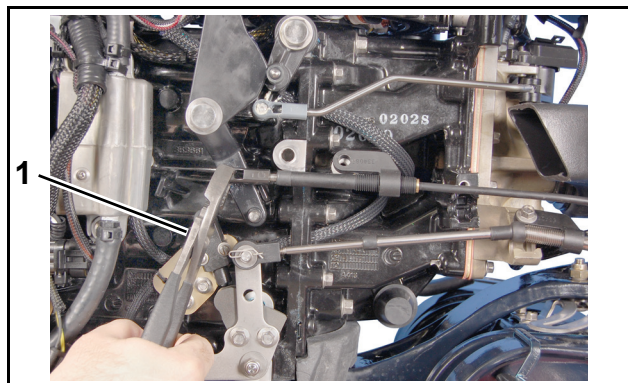
Install washer between anchor and trunnion bracket. Install screw. Tighten screw to a torque of 84 to 106 in. lbs. (9.5 to 12 N·m).



1. Screw

008272

Install throttle cable connector with ball socket installer tool, P/N 342225. (Use remover tool, P/N 342226, to remove cable.)

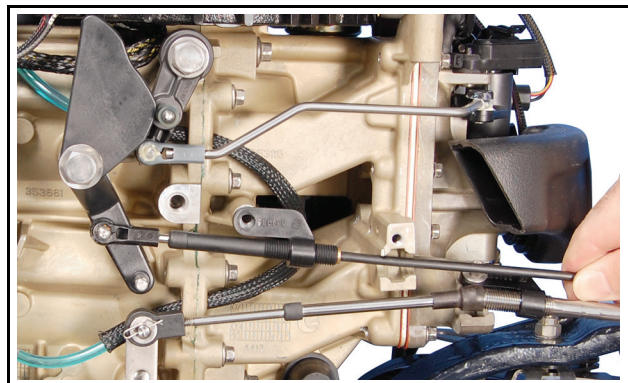


1. Installer tool

008273

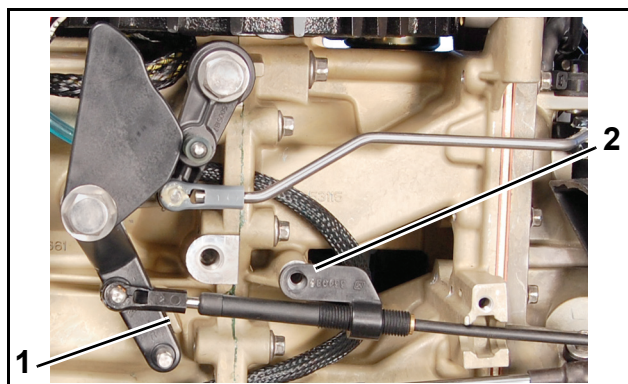
Place throttle cable through upper trunnion pocket.

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



007469

Adjust cable anchor so throttle cam is against IDLE stop when anchor screw hole aligns with screw boss on block.

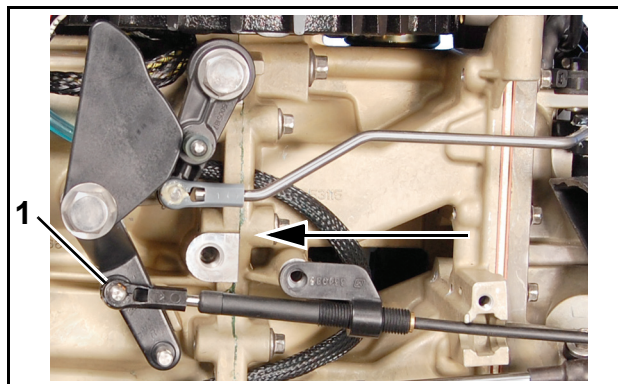


1. Idle stop

2. Anchor aligned with screw hole

007470

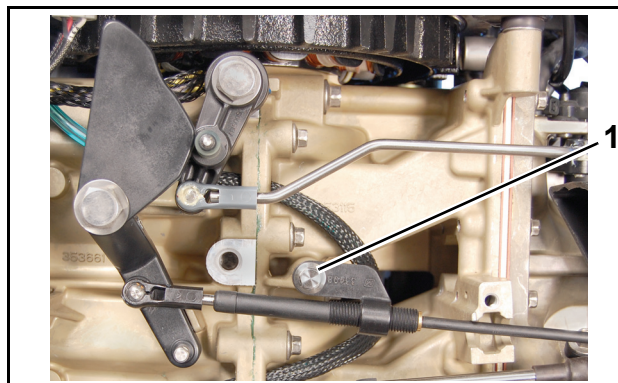
Rotate anchor one additional turn toward the end of the cable.



1. End of cable

007470

Install washer between anchor and boss. Install screw. Tighten screw to a torque of 84 to 106 in. lbs. (9.5 to 12 N·m).



1. Cable anchor screw

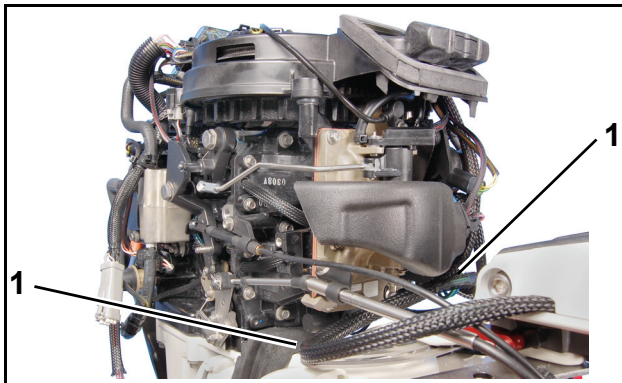
007471

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

Turn propeller shaft and shift outboard into FORWARD gear.

Route tiller control harness as shown.

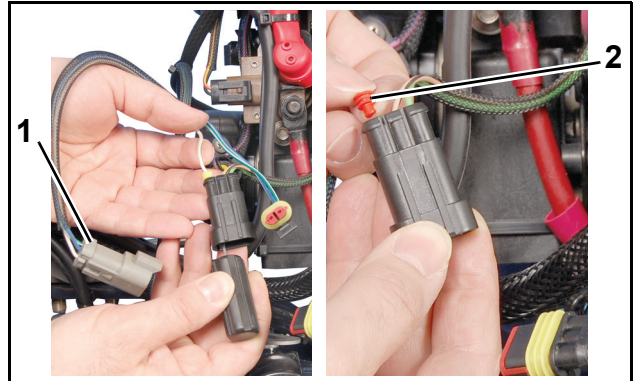
Remove sealing plug and connect electrical connector. Secure to retainer on starter housing.



1. Harness routing

008274

Remove one red seal from one of the previously removed sealing plugs. Install seal in place of white/tan wire in connector.

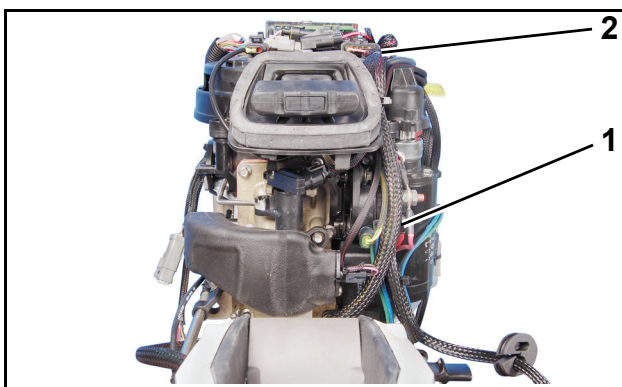


1. Original engine trim and tilt harness

007487

2. Seal

007488



1. Harness routing

008275

2. Retainer

Models with Trim and Tilt

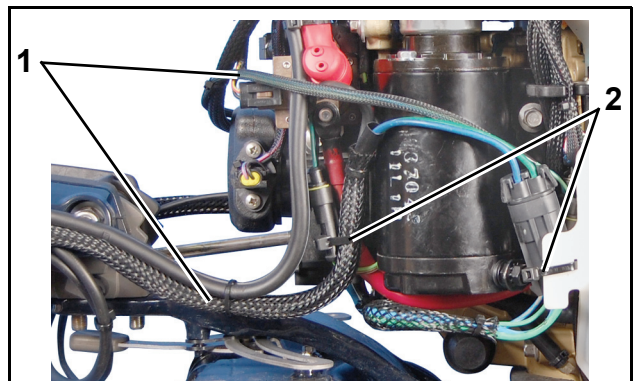
Use AMP connector tools, P/N 777077 and P/N 777078, to remove lock and white/tan wire from engine harness trim and tilt connector.

Discard the *Deustch* connector and 2-position connector with the original engine trim and tilt harness.

Place battery cables and trim and tilt harness through hole in port lower engine cover.

Route trim and tilt wiring as shown.

Connect electrical connector and use tie strap to secure as shown.



1. Wire routing

007485

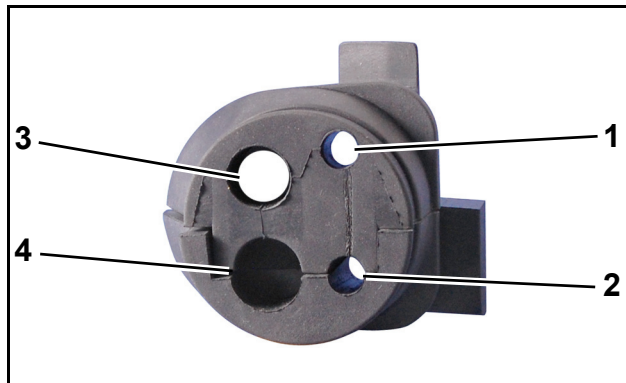
2. Secure with straps

All Models

Install lower engine covers.

Remove rubber membrane from cable entry grommet as needed.

Install cables and wiring harness(es) through grommet as shown:



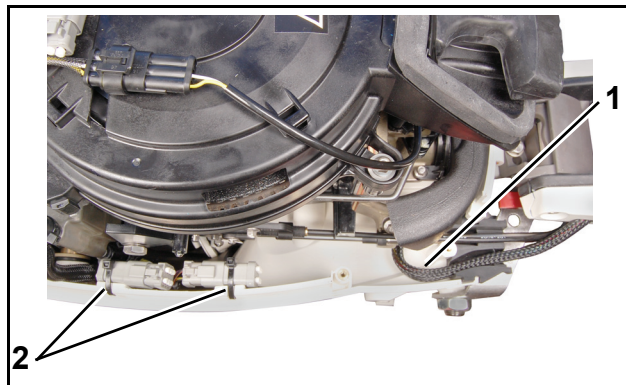
- 1. Throttle cable
- 2. Shift cable
- 3. Tiller wiring harness
- 4. MWS or CANbus harness (optional)

007129

Place the lower cable entry grommet into position in the lower engine cover.

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

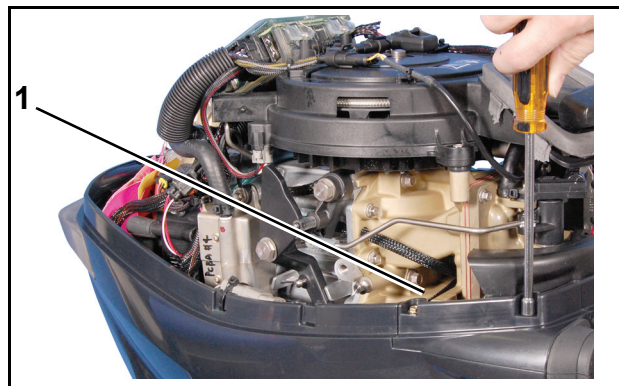
Secure key switch and tachometer connectors to lower cover with tie straps as shown.



- 1. Wire routing
- 2. Tie straps

008276

Install upper cable entry grommet and cable entry cover.

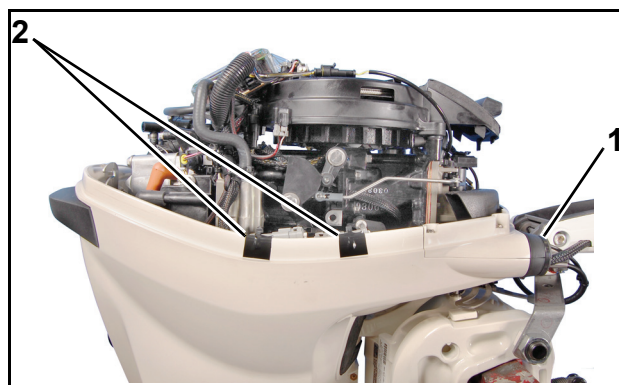


- 1. Cable entry cover

007126

Install tie strap around the outside of the grommet to form a seal around the cables.

Position blank sealing decal on lip of lower engine cover at each tie strap to prevent water intrusion.

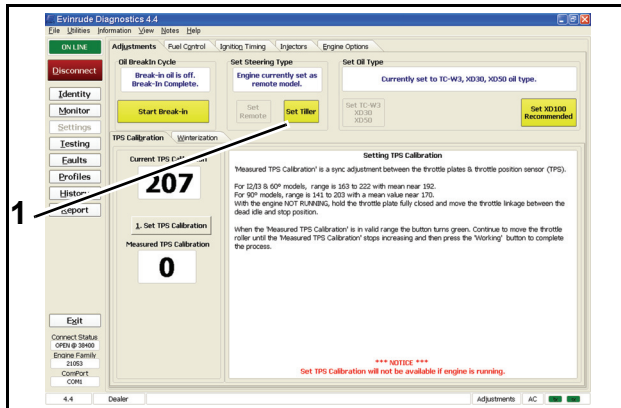


- 1. Tie strap
- 1. Blank sealing decal

008277

Install battery cable grommet.

Use the *Evinrude Diagnostics* software Settings screen to reprogram Engine Management Module (EMM) for tiller model start-in-gear protection.



1. Set Tiller

008141

⚠ WARNING

Dealer must 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

CHECK INSTALLATION

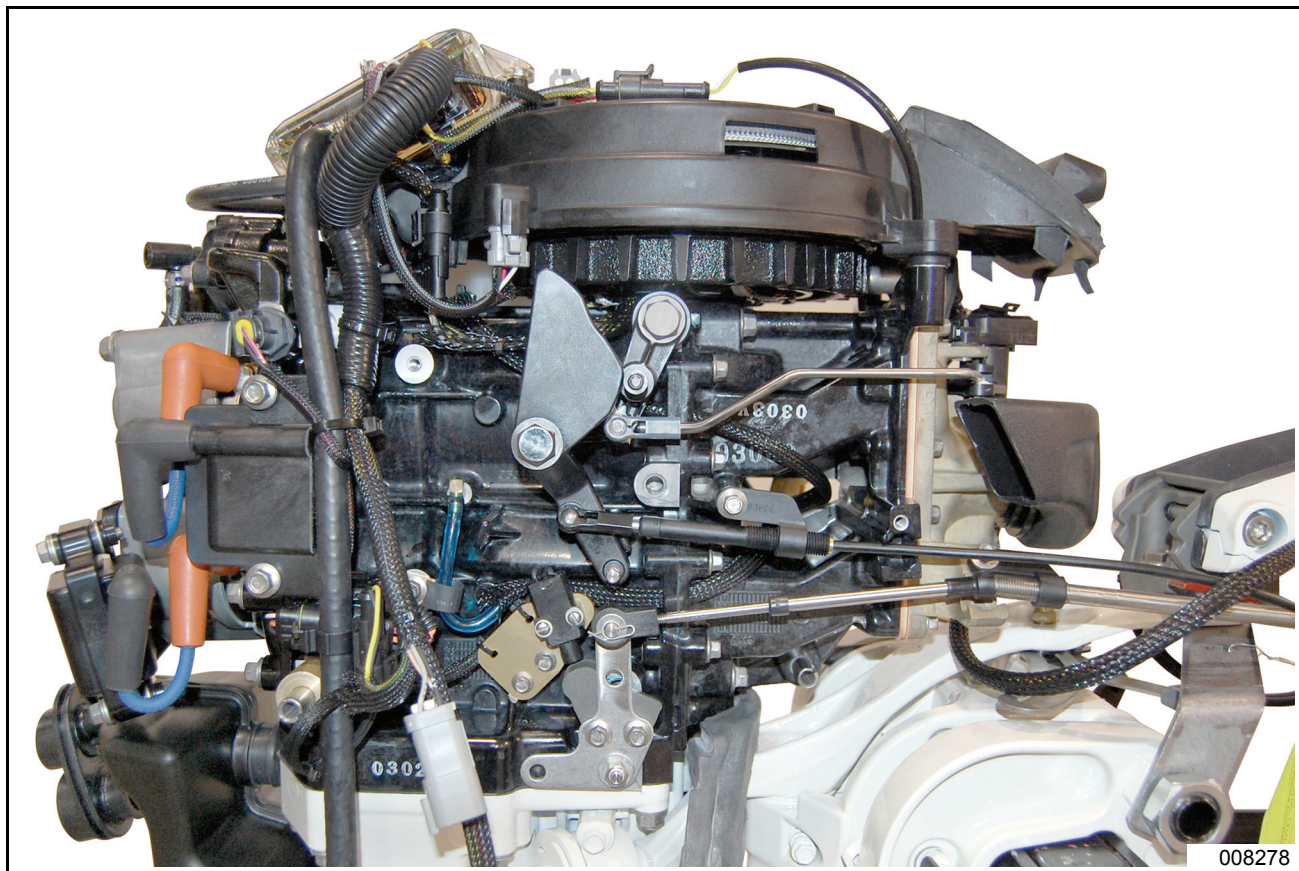
Make sure the following operate properly before returning outboard to customer:

- Start switch
- Engine stop circuit
- Emergency stop switch and lanyard
- Steering movement
- Friction control
- Throttle control (IDLE to WIDE OPEN)
- Touch Troll operation
- Shift control and proper gear engagement
- Start-in-gear protection
- Trim and tilt control

⚠ WARNING

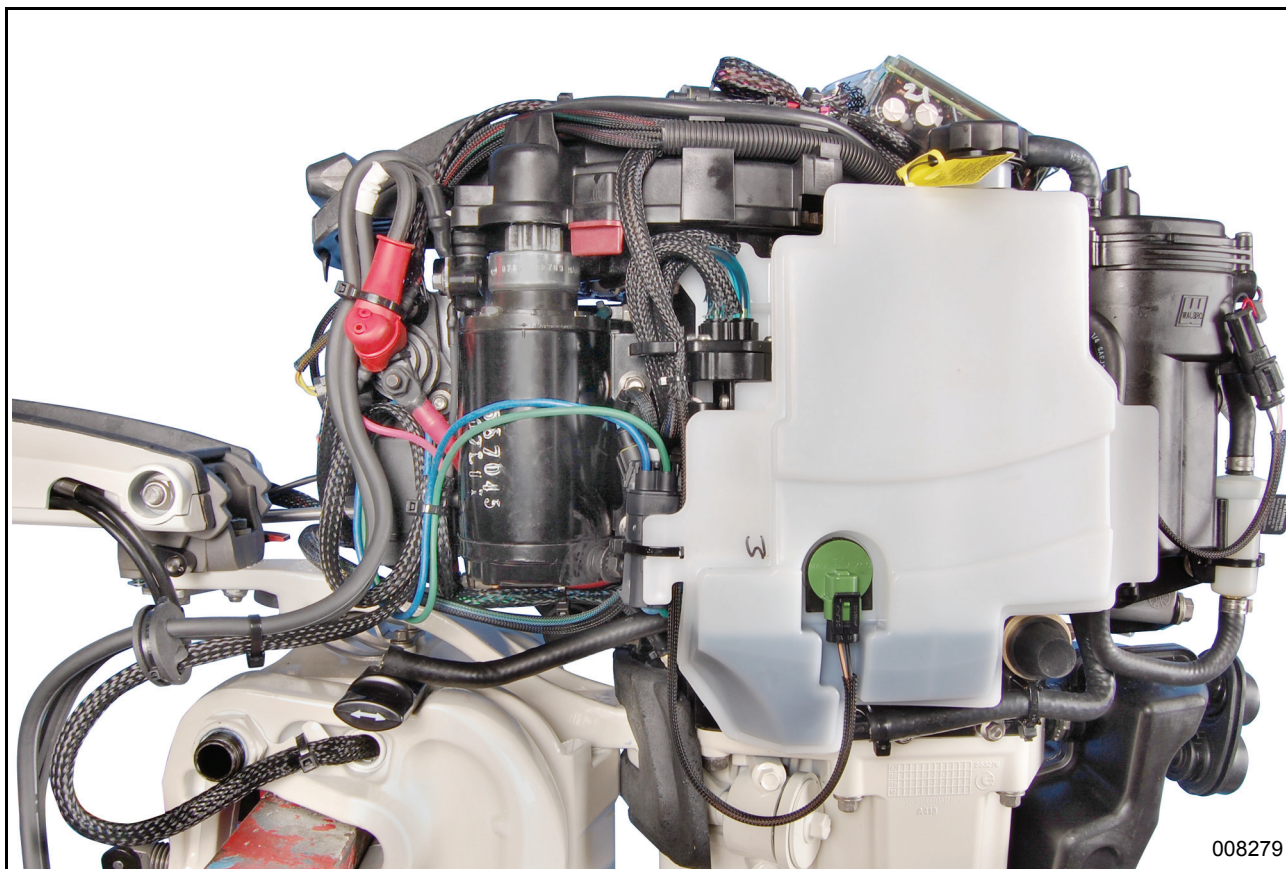
Only shift outboard with throttle in IDLE position. If outboard is shifted into gear with throttle setting above IDLE speed, the boat could accelerate suddenly, injuring boat occupants and bystanders.

REFERENCE VIEW – STARBOARD SIDE

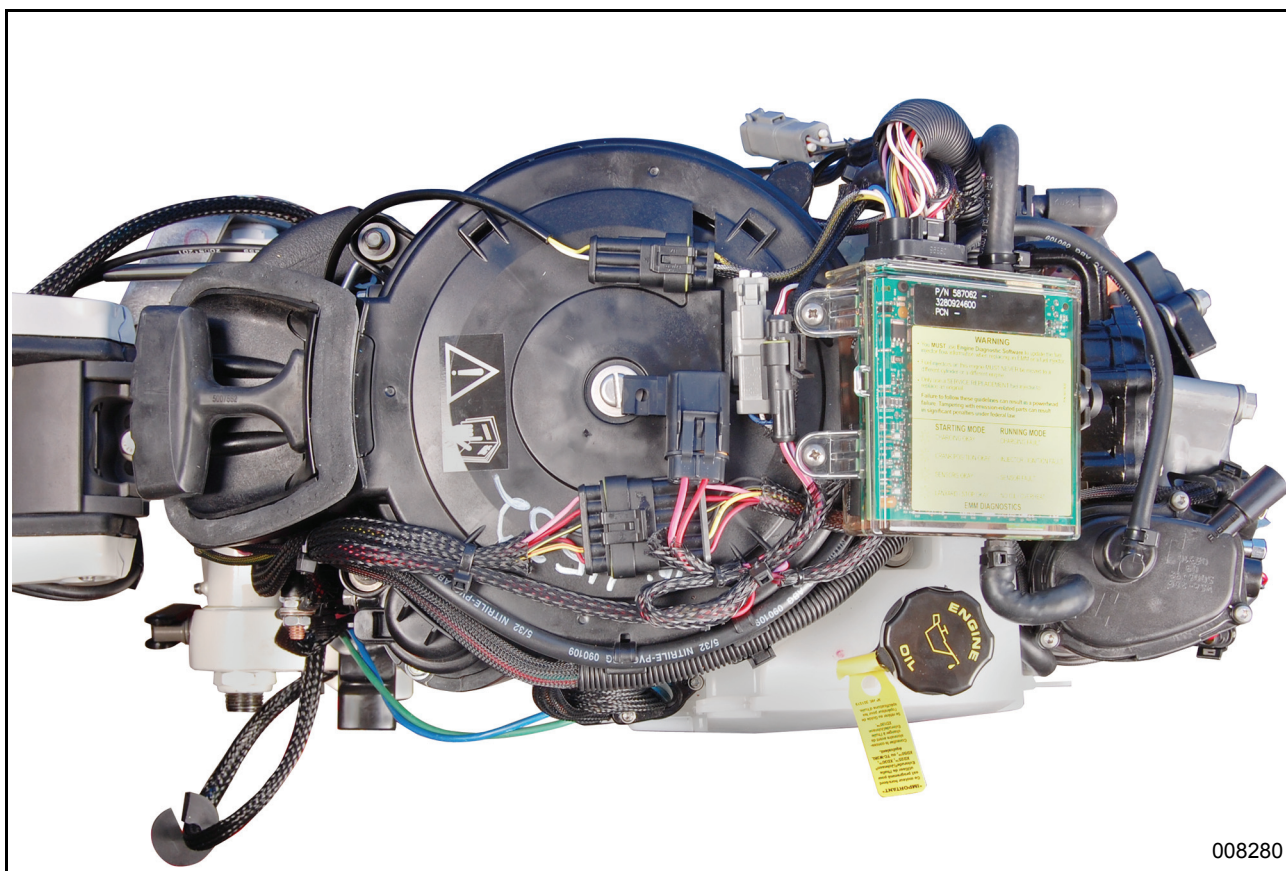


008278

REFERENCE VIEW – PORT SIDE



REFERENCE VIEW – TOP



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.

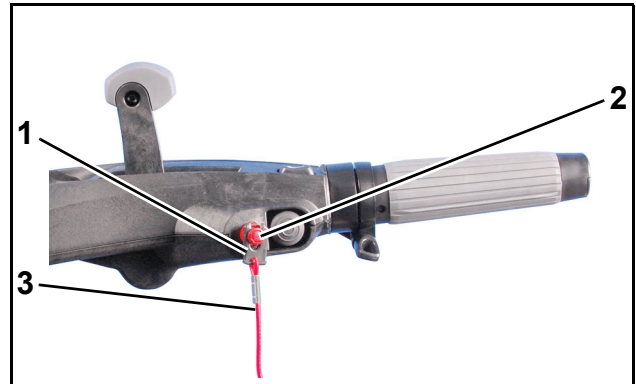
 Be familiar with the waters you are operating in. The gearcase of this outboard extends below the water surface and could potentially come in contact with underwater obstructions. Contact with underwater obstructions may result in loss of control and personal injury.

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

007448

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.

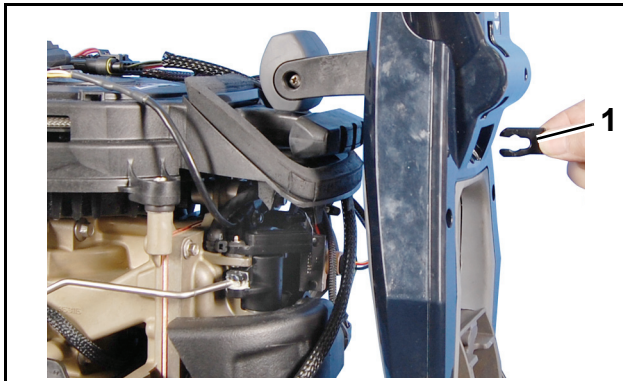
Keep the lanyard free from obstructions and entanglements.

⚠ 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.

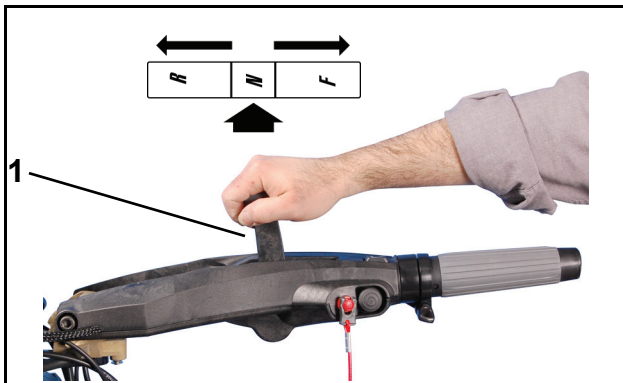
IMPORTANT: Spare clip is for emergency use only. Clip with lanyard should always be attached to operator during normal operation.



1. Spare emergency clip

007475

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



1. NEUTRAL

007449
007490

⚠ 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. Idle position

007481

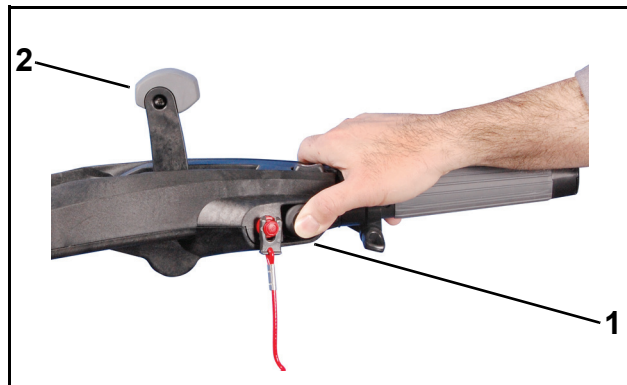


DO NOT advance the throttle before start-up. Advancing the throttle overrides the electronic idle control system.

If the outboard is started with the throttle advanced, it may not advance above idle rpm. Twist the throttle grip back to IDLE before accelerating.

Start Button

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



1. Start button

2. NEUTRAL

007451

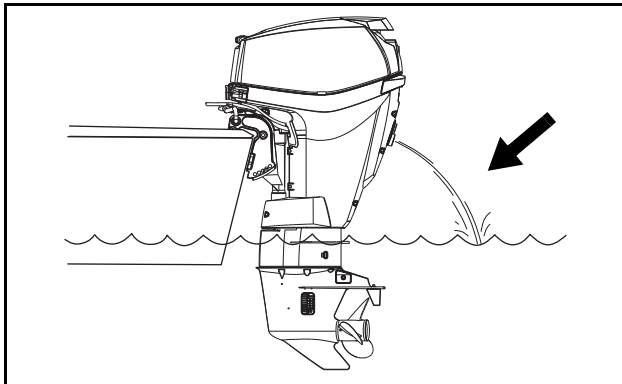
IMPORTANT: The starter motor can be damaged if operated **continuously** for more than 20 seconds.

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, or if lanyard is not in place.

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

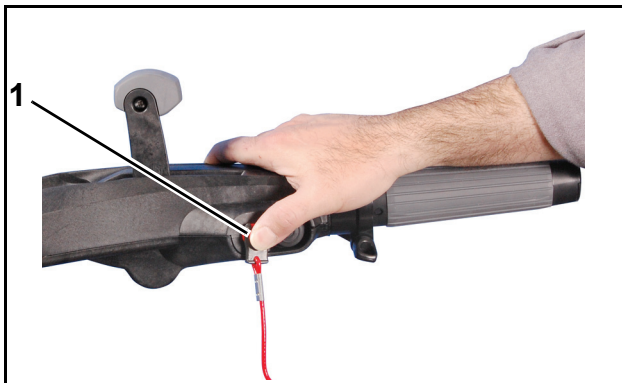
007031

Engine Stopping

Twist the throttle grip to SHIFT position or slower.

Move shift lever to NEUTRAL.

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



1. STOP button

007450

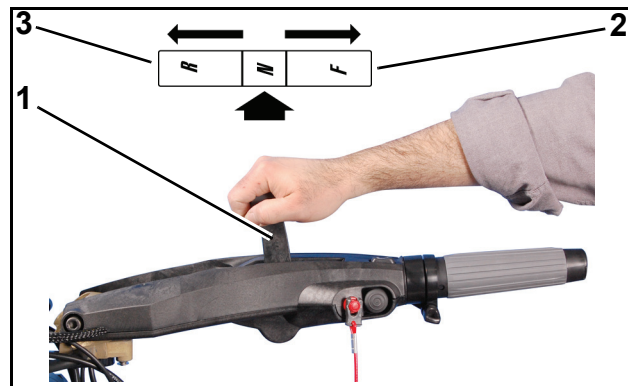
SHIFTING AND SPEED CONTROL

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

007449

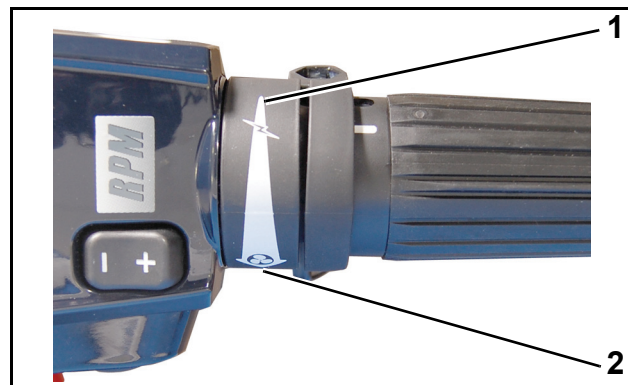
007490

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.



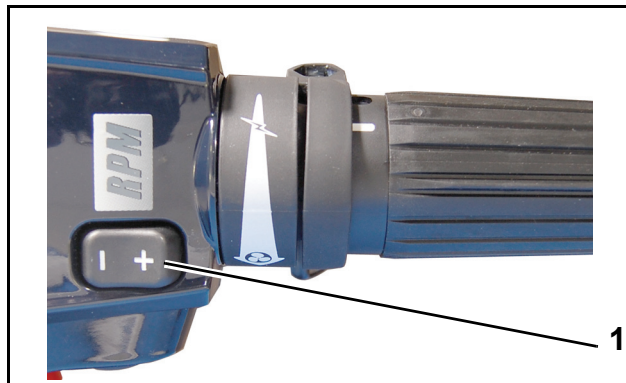
1. Decrease speed
2. Increase speed

007481

Idle Speed Control Switch

Touch troll allows the idle to be adjusted between 600 and 900 RPM (approximate).

Press and release the – side of the touch troll switch to decrease speed. Press and release the + side of the switch to increase speed. Engine speed changes in 50 RPM increments.



1. Touch Troll button

007481

Touch troll also features a cruise mode. Advance the throttle twist grip to the desired rpm. Use the touch troll switch to increase or decrease engine speed from 600 to 2300 RPM.

Shifting out of gear or changing the throttle twist grip position will deactivate touch troll. Stopping the engine restores the factory idle speed setting.

Throttle Friction

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

007452

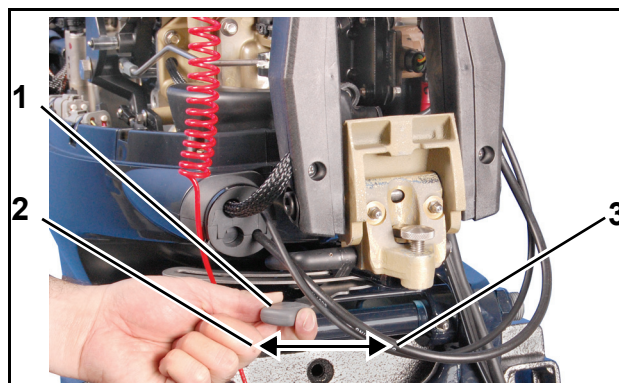
WARNING

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

Steering Friction Adjustment

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

- To PORT to increase friction; or
- To STARBOARD decrease friction.



1. Steering friction lever

2. Decrease friction

3. Increase friction

007454

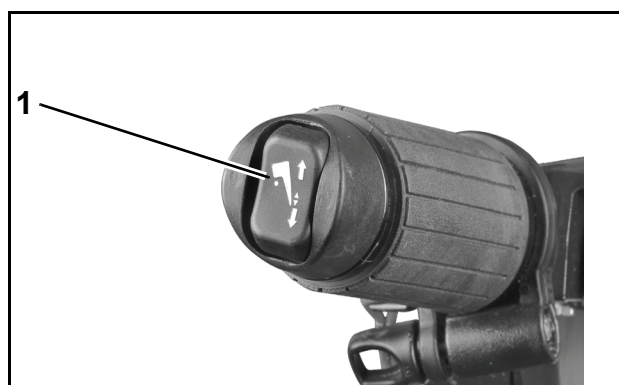
WARNING

Steering friction device is not intended to hold boat on a set course.

DO NOT overtighten steering friction for “hands-off” steering. Reduced steering control of the boat could result in loss of control by the operator, creating a risk of personal injury or property damage.

Trim Control

Tiller includes a handle mounted trim/tilt switch.



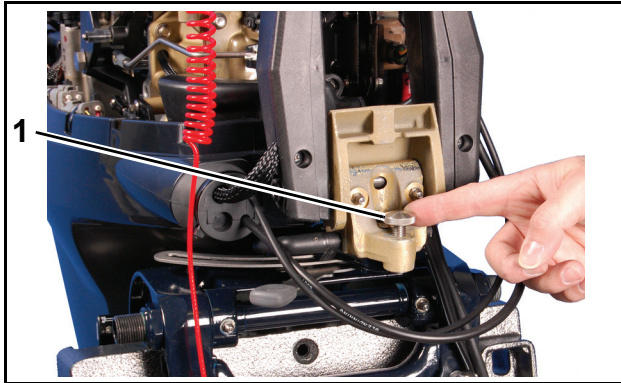
1. Trim/tilt switch

005107

NOTICE If tiller kit is installed on a manual tilt outboard, DO NOT use tiller as a lever to help tilt the outboard. Damage can result.

Tiller Height

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

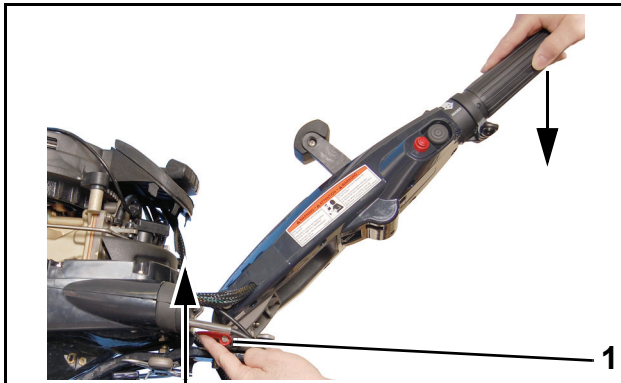


1. Height adjustment screw

007453

Tiller Handle Ratchet

Tiller models feature a ratchet which holds the tiller arm at approximately 30° or 90° positions. To release the tiller arm, press up on the release lever.

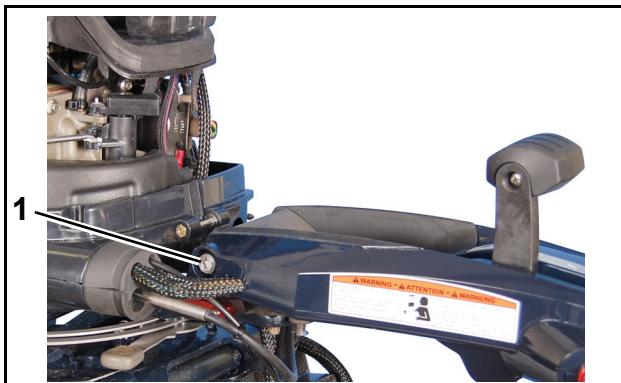


1. Release lever

007483

Tiller Handle Friction

The tiller handle screw may be tightened to adjust the amount of friction when tilting the tiller handle.



1. Screw

007484

STORAGE (WINTERIZATION)

⚠ WARNING

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.

You must protect against natural environmental conditions that can be damaging to an outboard. Your warranty does not cover engine failure caused by these conditions.

Temperature and humidity changes during storage period can cause corrosion of internal engine components.

Winterization prepares your outboard for long-term off-season storage. During winterization, the engine is “fogged” and extra oil is used to coat internal engine components.

Winterization requires a specific process of steps.

Stabilize the fuel supply. Fuel remaining in your fuel tank can oxidize, resulting in loss of octane and fuel system deposits.

Use *Evinrude/Johnson 2+4 Fuel Conditioner* to prevent gum and varnish deposits from forming in fuel system components.

⚠ WARNING

Prevent injury from moving engine components. Before starting the outboard:

- Shift it to NEUTRAL.
- Keep hands, clothes, and hair clear of powerhead.
- Remove the propeller.

Store fuel tanks in a well-ventilated area, away from heat and open flame. Prevent escape of liquid or vapors which could accidentally ignite. Close filler cap vent screws (if equipped) and be sure any disconnected fuel hoses do not drip.

⚠ WARNING

Outboard must be in NEUTRAL before performing winterization. Starting outboard in gear can cause personal injury.

If winterizing on a trailer, the propeller must be removed before performing procedure. Failure to remove propeller can cause personal injury or death.

Advance throttle grip to HALF THROTTLE position. Start the outboard. Outboard runs at slow idle speed.



1. Half throttle position

007482

After outboard runs for about 15 seconds, move throttle grip to IDLE position. Outboard continues to run at slow idle speed.



1. Idle position

007481

1) After outboard runs for another 15 seconds, advance throttle grip to HALF THROTTLE position. Outboard will accelerate to fast idle speed and fog itself.

2) Allow outboard to run until it shuts itself OFF automatically (less than two minutes).

Winterization is complete when outboard shuts itself off.

- If the outboard **DOES NOT** shut itself off, you may not have properly advanced throttle grip.
- If the engine exceeds **3000 RPM**, the outboard may have been shifted into gear.

In either event, immediately press STOP button to turn outboard OFF and re-start the procedure.

After Winterization

1) After the outboard shuts itself off, turn key switch OFF. (For tiller models, remove emergency stop clip / key switch.) Do not start the outboard again after winterization is completed.

2) If winterizing on a trailer, turn off water and detach garden hose. Grease propeller shaft splines with recommended lubricant, and re-install propeller.

IMPORTANT: When winterizing is finished, leave the outboard in vertical position long enough to completely drain the powerhead. If equipped, disconnect the speedometer pickup at the upper connection and blow all water out of the hose using air pressure of 25 psi or less. Re-connect speedometer pickup after all the water has been removed.

3) Top off oil tank.