

CALIFORNIA PROPOSITION 65 WARNING

⚠ WARNING. This product can expose you to chemicals including gasoline engine exhaust, which is known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm.

For more information go to www.p65warnings.ca.gov

Operator's Guide

15 H.O. / 25 / 30 HORSEPOWER

Original instructions



Original

Features at a Glance

Easy to Own and Operate

- Three-Year Limited Warranty
- No Scheduled Dealer Maintenance for Three Years of Normal Recreational Use
- No Operational Break-In Procedure
- Easy Starts (no choking or priming)
- Digital Engine Management
- Self Flushing Cooling System
- Long Term Storage Design
- Simplified Winterization Procedure
- Digital Diagnostics
- Low Oil Usage

Durable and Reliable

- Full Corrosion Protection
- *Evinrude E-TEC* Lubrication System
- Auto-Calibrated Linkage
- Robust, Heavy-Duty Design
- Posi-Lock Latches
- Extra Capacity Water Pump
- Iridium Spark Plugs
- Vibration Isolated Electronics
- Beltless 15 Amp Charging System
- Stainless Steel Thermostat
- Nickel/Chrome-Faced Piston Rings
- Micro Finished Connecting Rods/Crankshaft

Cleaner and Quieter

- EPA Emissions Compliance
- European Union Emissions Compliance
- California 3-Star Emissions Compliance
- Sealed Fuel System
- Low Friction Design (No powerhead gears, belts, cams, oil scraping rings, or mechanical oil pump)
- Full Length Insulated Lower Pans
- Quiet Signature Sound
- Air Intake/Silencer
- Idle Air Bypass

The following trademarks are the property of Bombardier Recreational Products Inc. or its affiliates:

Evinrude®

Evinrude E-TEC®

Evinrude/ Genuine Parts

Evinrude/ XD100™

Evinrude/ XD50™

Evinrude/Johnson XD30™

BRP Logo

2+4™ Fuel Conditioner

HPF Pro™ Gearcase Lubricant

S.A.F.E.™

SystemCheck™

Triple-Guard™ Grease

Table of Contents

About This Guide	4
Important Safety Messages	5
Product References, Illustrations and Specifications	7
Declaration of Conformity	8
 Using Your <i>Evinrude E-TEC</i> Outboard	
Important On-Product Labels	10
Component Identification	
Tiller Models	13
Manual Tilt Models	14
Power Tilt Models	16
2-Stroke Engine Oil and Fuel	18
2- Stroke Engine Oil Requirements	18
Oiling System Information	18
Priming the Oil System	19
Fuel Requirements	20
Fueling Procedure	21
Fuel System Information	22
Operation	23
Safety Information	23
Tiller Models	23
Remote Control Models	29
Remote Controls - <i>Evinrude</i> (BRP) Controls	33
Fuel Economy	34
Tilting and Trim	35
Engine Monitoring	42
Special Operating Conditions	45
Auxiliary Outboard Operation	45
Cold and Freezing Weather	45
Multiple Outboard Operation	45
High Altitude	45
Salt Water	45
Shallow Water	46
Under Tow	46
Weedy Water	46

Transporting the Outboard	47
Pre-Ride Inspection	48
Aquatic Invasive Species (AIS)	49

Maintenance

Engine Emissions Installation Information	52
Maintenance Schedule	54
Service	55
Anti-Corrosion Anodes	55
Flushing	55
Fuse	56
Hull Finish	56
Outboard External Finish	57
Scratch Repair	57
Spark Plugs	57
Submerged Outboard	57
Storage	58
Short-Term Storage	58
Long-Term Storage (Winterization)	59
Pre-Season Check	62
Troubleshooting	63
S.A.F.E. Reset	64

Product Information

Installation	66
Transom Height	66
Installing the Outboard	66
Boat-Mounted Fuel Filters	68
Battery - Electric Start Models	68
Propeller	70
Adjustments	71
Specifications	72
Product Warranty Information	73
Readiness Test	83
Frequently Asked Questions	85
Change of Address / Change of Ownership	87
Confirmation of Receipt	89

About This Guide

This Operator's Guide is an essential part of your *Evinrude E-TEC G2* outboard. It contains pertinent information which, if followed, will provide you with a thorough understanding needed for proper operation, maintenance, care, and—above all—safety. Safety is our first priority and it should be yours too. It is strongly recommended you read this Guide from cover to cover. The more you know and understand about your *Evinrude E-TEC G2* outboard, the greater the safety and pleasure you will get from using it. Following this recommendation will assure the completeness of the information essential to your safety, the safety of any passengers, and other water users.

This Operator's Guide identifies important safety messages.

Although the mere reading of such information does not eliminate the hazard, the understanding and application of the information will promote the correct use of your outboard engine.

Safety Alert Symbol

This is the Safety Alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

This Guide should be kept in a waterproof bag with the outboard at all times during operation. If the product ownership is transferred, this Guide should be forwarded to the new owners.

A responsible, educated boater will fully appreciate the pleasures of boating and will be a safe boater. Boating Safety Classes are conducted by the U.S. Coast Guard Auxiliary, the U.S. Power Squadron and some Red Cross Chapters. For information about classes, call toll free 1-800-336-BOAT.

For additional information about boating safety and regulations, call:

- U.S. Coast Guard Boating Safety Hotline
1-800-368-5647.

Outside North America please contact your Dealer or distributor for details about boating safety.

This Operator's Guide uses the following signal words identifying important safety messages.

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 injury

NOTICE

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

ENVIRONMENTAL NOTE

A note which provides tips and behaviors related to protecting the environment.

IMPORTANT: Identifies information that will help with assembly and operation of the product.

Important Safety Messages

This Operator's Guide contains essential information to help prevent personal injury and damage to equipment. Safety messages appear throughout this Guide in the applicable section.

Be careful! Human error is caused by many factors: carelessness, fatigue, overload, pre-occupation, unfamiliarity of operator with the product, drugs and alcohol to name a few. Damage to your boat and outboard can be fixed in a short period of time, but injury or death, has a lasting effect.

WARNING

For your safety and the safety of others, follow all safety warnings and recommendations. Do not disregard any of the safety precautions and instructions.

Anyone operating your boat should first read and understand this guide before they operate your boat and outboard.

SAFETY MEASURES — General

- To fully appreciate the pleasures, enjoyment and excitement of boating there are some basic rules that should be observed and followed by any boater. Some rules may be new to you and others may be common sense or obvious... irrespective, take them seriously!
- Be sure at least one of your passengers knows how to handle your boat in case of an emergency.
- All passengers should know the location of emergency equipment and how to use it.
- Know the marine traffic laws and obey them.
- All safety equipment and personal flotation devices must be in good condition and suitable for your type of boat. Always comply with the regulations that apply to your boat.
- Remember, gasoline fumes are flammable and explosive. Always adhere to the fueling procedure contained in this Operator's Guide and those given to you by the fueling station. Always verify fuel level before use and during the ride. Apply the principle of 1/3 fuel to destination, 1/3 back and 1/3 reserve fuel supply. Do not carry spare fuel or flammable liquids in any storage or engine compartments.
- Whenever running the engine, assure there is proper ventilation to avoid the accumulation of carbon monoxide (CO), which is odorless, colorless, and tasteless, and can lead to unconsciousness, brain damage, or death if inhaled in sufficient concentrations. CO accumulation can occur while docked, anchored, or underway, and in many confined areas such as the boat cabin, cockpit, swim platform, and heads. It can be worsened or caused by weather, mooring and operating conditions, and other boats. Avoid exhaust fumes from your engine or other boats, provide proper ventilation, shut off your engine when not needed, and be aware of the risk of backdrafting and conditions that create CO accumulation. In high concentrations, CO can be fatal within minutes. Lower concentrations are just as lethal over long periods of time.
- Avoid standing up or shifting weight suddenly in light weight boats.
- Keep your passengers seated in seats. The boat's bow, gunwale, transom and seat backs are not intended for use as seats.
- Insist on the use of personal flotation devices, approved by the U.S. Coast Guard, by all passengers when boating conditions are hazardous, and by children and nonswimmers at all times.
- Proceed with caution and at very low speed in shallow water. Grounding or abrupt stops may result in personal injury or property damage. Also be alert for debris and objects in the water.

Safety Measures — Installation and Maintenance

- 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.
- Respect no wake zones, rights of other water users and the environment. As the "skipper" and owner of a boat you are responsible for damage to other boats caused by the wake of your boat. Allow no one to throw refuse overboard.
- Do not operate your boat if you are under the influence of drugs or alcohol.
- High performance boats have a high power-to-weight ratio. If you are not experienced in the operation of a high performance boat, do not attempt to operate one at, or near, its top speed until you have gained that experience.
- Become completely familiar with the control and operation of your boat and outboard before embarking on your first trip or taking on a passenger(s). If you have not had the opportunity to do so with your Dealer, practice driving in a suitable area and feel the response of each control. Be familiar with all controls before applying the throttle above idle speed. As the operator, you are in control and responsible for safe operation.
- The outboard must be correctly installed. Failure to correctly install the outboard could result in serious injury, death or property damage. BRP recommends that your Dealer install your outboard to ensure proper installation.
- Do not overpower your boat by using an engine that exceeds the horsepower indicated on the boat's capacity plate. Overpowering could result in loss of control. If your boat has no capacity plate, contact your Dealer or the boat's manufacturer.
- When replacement parts are required, use *Evinrude Genuine Parts* or parts with equivalent characteristics, including type, strength and material. Using sub-standard parts could result in injury or product malfunction.
- Only perform service procedures which are detailed in this Operator's Guide. Attempting to perform maintenance or repair on your outboard if you are not familiar with the correct service and safety procedure could cause personal injury or death. Further information can be obtained from your authorized *Evinrude* Dealer. In many instances proper tools and training are required for certain service or repair procedures.
- Maintain your boat and engine in top condition at all times. Adhere to the **Maintenance Schedule** on page 54.
- Operate your boat and outboard prudently and have fun. Do not forget that all persons must assist other boaters in case of emergency.
- Prevent injury from contact with rotating propeller; remove propeller before flushing or before performing any maintenance.

Product References, Illustrations and Specifications

BRP reserves the right to make changes at any time, without notice, to features, specifications and model availability, and to change any specification or part at any time without incurring any obligation to update older models. The information in the Guide is based on the latest specifications available at the time of publication.

Photographs and illustrations used in this Guide might not depict actual models or equipment but are intended as representative views for reference only.

Certain features of systems discussed in this Guide might not be found on all models in all marketing areas.

Owner's Identification

United States and Canada — At the time of purchase, your Dealer will complete your outboard registration forms. Your portion provides proof of ownership and date of purchase.

Outside United States and Canada — See your Dealer or distributor for details.

Model and Serial Numbers

The model and serial numbers appear on a plate attached to the stern bracket or swivel bracket. Record your outboard's:

Model Number _____

Serial Number _____

Purchase Date _____

Ignition Key Number _____

Stolen Outboards

United States and Canada — Report stolen outboards to your local dealer or distributor.

Outside United States and Canada — Report the theft to the Bombardier Recreational Products distributor where the outboard was registered.

Technical Literature

BRP offers technical literature specifically for your outboard. A service manual, or an extra Operator's Guide can be purchased from your selling Dealer. For the name and location of the nearest *Evinrude* Dealer in the United States and Canada visit **www.evinrude.com**.

Declaration of Conformity

The EC Declaration of Conformity does not appear in this version of the Operator's Guide. Please refer to the printed version that was delivered with your vehicle.

**Using Your
Evinrude E-TEC
Outboard**

Important On-Product Labels

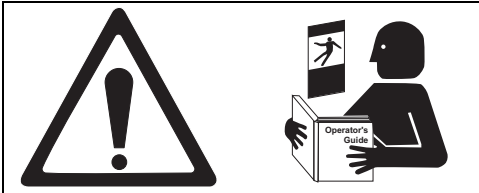
This outboard comes with hang tags and labels containing important safety information about the operation of the outboard. Any person who operates this outboard should read and understand this safety information.

Labels

All outboards have the following labels attached:

Warning Symbols

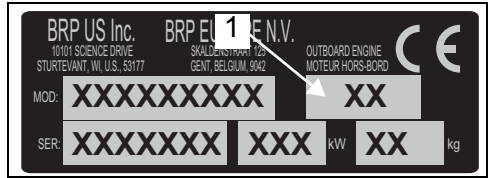
The following symbols are used together to indicate “CAUTION: Read the engine’s Operator’s Guide before proceeding.”



1. Read Operator’s Guide Label

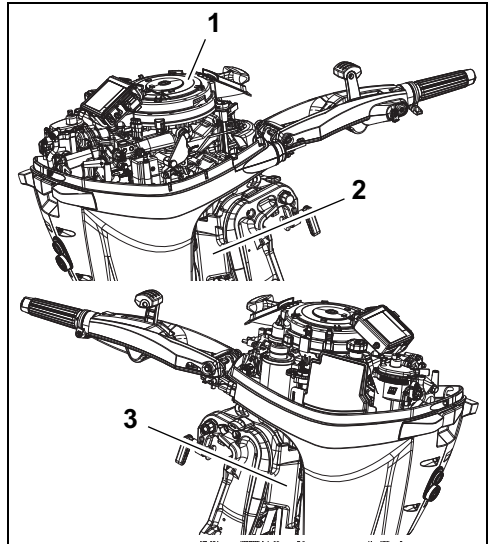
355633

<https://www.epa.gov/vehicle-and-engine-certification/information-about-family-naming-conventions-vehicles-and-engines>



3. Serial / Model Number Label

1. Manufacturing date code



Label Locations

010581

1. Read Operator’s Guide Label
2. Emissions Control Label
3. Serial / Model Number Label

1. Manufacturing date code



2. Emissions Control Label

5008922

Manufacturing Date

A two-character code is used to indicate the month and year of manufacture, following the U.S. EPA model year naming convention.

- The first character is the year.
- The second character is the month (January=A, February=B, March=C, etc.).

For more information about Family Naming Conventions for Vehicles and Engines, go to:

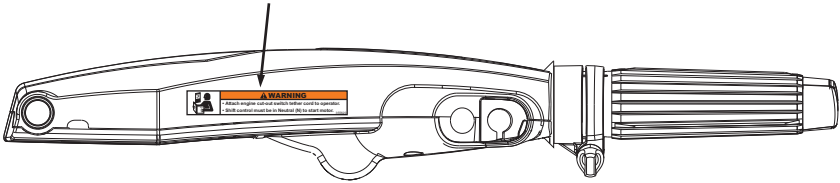
Tiller Handle Decals



⚠ WARNING

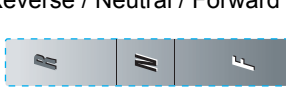
- Attach engine cut-out switch tether cord to operator.
- Shift control must be in Neutral (N) to start motor.

355620

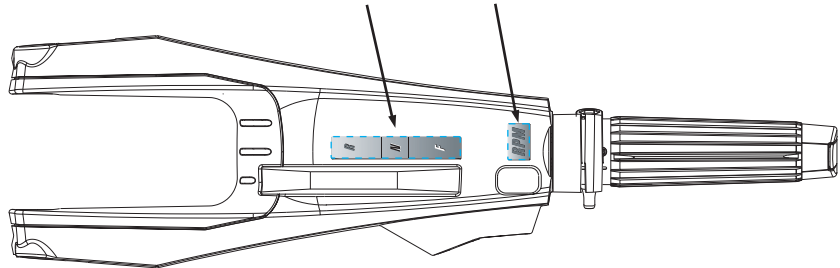


Shift position
Reverse / Neutral / Forward

353417



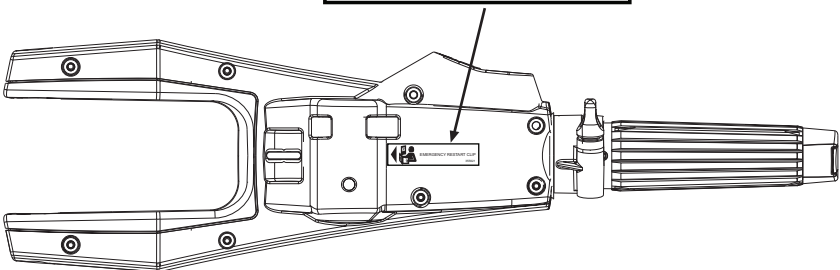
Idle speed control



EMERGENCY RESTART CLIP

355621

335621





008487

Using Your Evinrude E-TEC Outboard

Hang Tag

All outboards are shipped with the following hang tag attached.



EN WARNING: LOCATE AND READ OPERATOR'S GUIDE, FOLLOW ALL INSTRUCTIONS & WARNINGS.

FR AVERTISSEMENT : LOCALISER ET LIRE LE GUIDE DE L'OPÉRATEUR. SUIVRE TOUS LES CONSIGNES ET AVERTISSEMENTS.

DE WARNUNG: BETREIBSANLEITUNG AUSFINDIG MACHEN UND LESEN. ALLE ANWEISUNGEN UND WARHINWEISE BEFOLGEN.

NO ADVERSEL: FINN OG LES BRUKSANVISNINGEN. FØLG ALLE ANVISNINGER OG ADVARSLER.

ES ADVERTENCIA: UBICAR Y LEER LA GUÍA DEL OPERADOR. ATENERSE A TODAS LAS INSTRUCCIONES Y MENSAJES DE ADVERTENCIA.


PT-BR ADVERTENCIA: LOCALIZE E LEIA O MANUAL DO OPERADOR. SIGA TODAS AS INSTRUÇÕES E OS AVISOS.

355926

Remote Control Labels


All remote controls have the following labels attached.

⚠ WARNING



Locate, read and understand operator's guide and all warnings. Failure to do so could result in serious injury.

Attach engine shut-off cord (Lanyard) to operator.



⚠ WARNING

Shift position
Reverse / Neutral / Forward

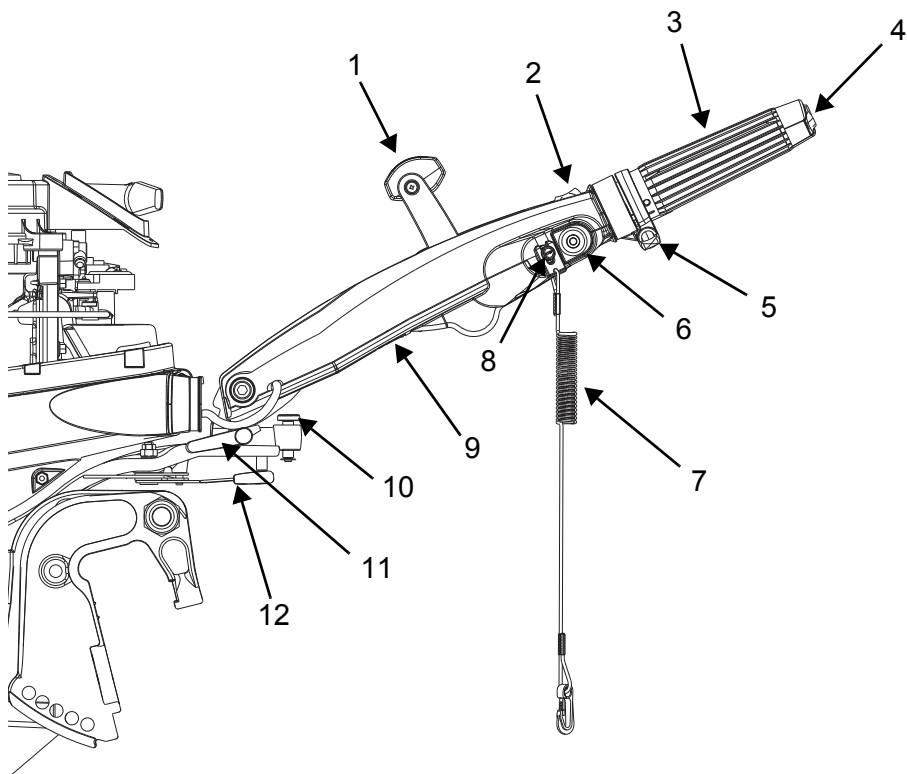
R

N

F

008488

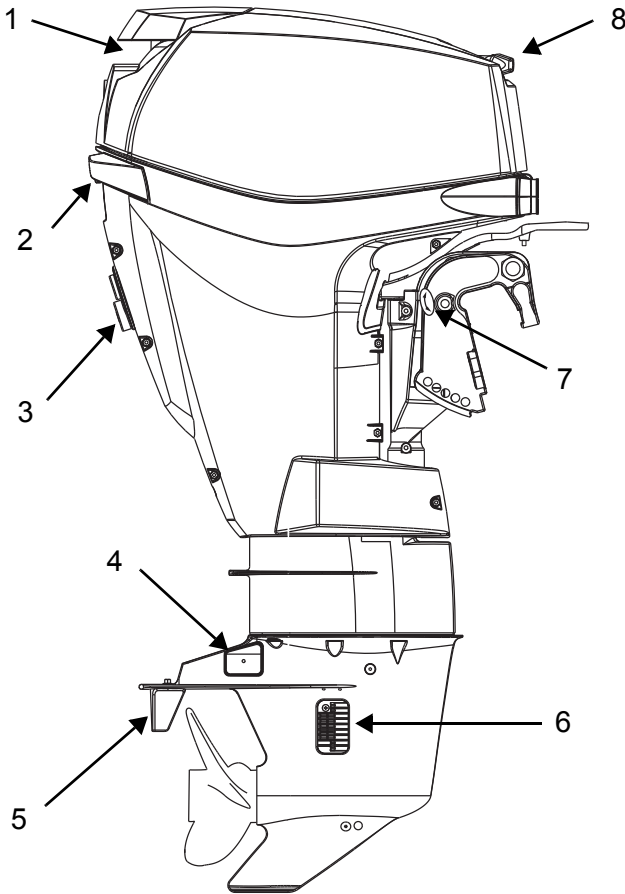
Component Identification – Tiller Models



008492

Item	Description	Item	Description
1	Shift Lever	7	Clip and Tether Cord Assembly
2	Idle Speed Adjustment Switch	8	Stop Button/Engine Cut-off Switch
3	Steering Handle <i>Twist Grip™</i> Throttle	9	Emergency Start Clip
4	Tilt Switch (<i>power tilt models only</i>)	10	Tiller Arm Height Adjustment Screw
5	Throttle Friction Adjustment	11	Tiller Arm Tilt Release Lever (<i>red</i>)
6	Start Button (<i>electric start models only</i>)	12	Steering Friction Adjustment

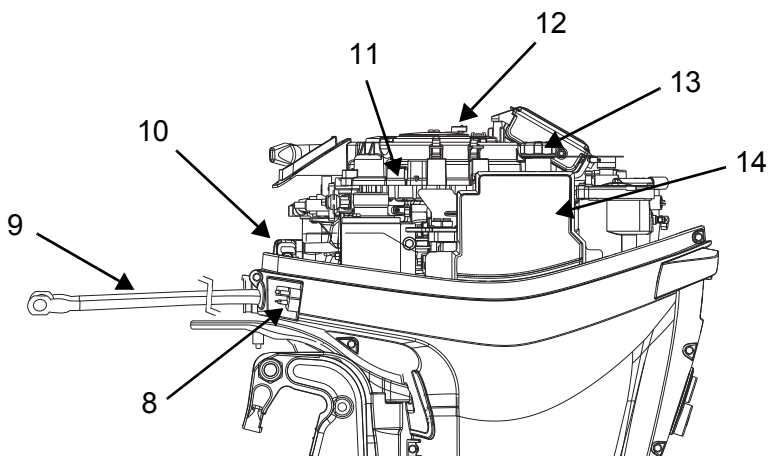
Component Identification – Manual Tilt Models



008493

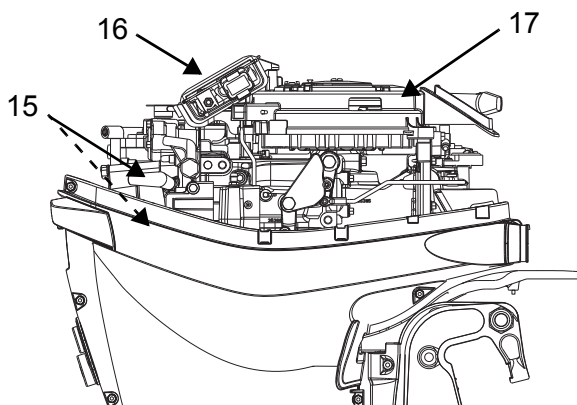
Item	Description	Item	Description
1	Air Inlet, Tilt Handle	5	Trim Tab
2	Engine Cover Latch	6	Water Intake Screens
3	Water Pump Indicator, Flushing Port	7	Tilt / Run Lever
4	Anti-Corrosion Anodes	8	Rope Pull Start Handle

Port



008494

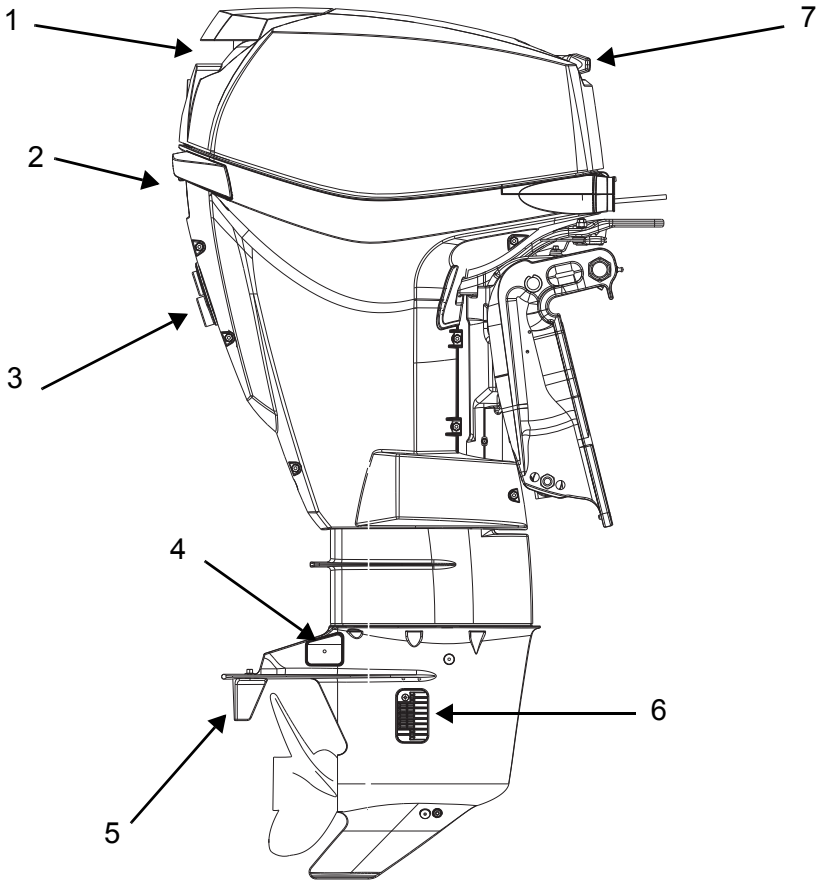
Starboard



008495

Item	Description	Item	Description
8	Fuel Connector	13	Oil Fill Cap
9	Battery Cable (<i>electric start models only</i>)	14	Oil Tank
10	Air Silencer	15	Spark Plugs
11	Fuse	16	EMM (Engine Management Module)
12	Spare Fuse	17	Rewind Starter / Flywheel Guard

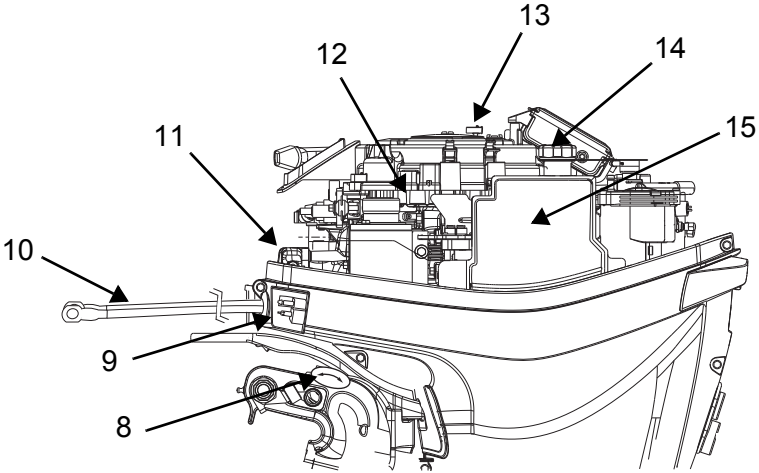
Component Identification – Power Tilt Models



006997

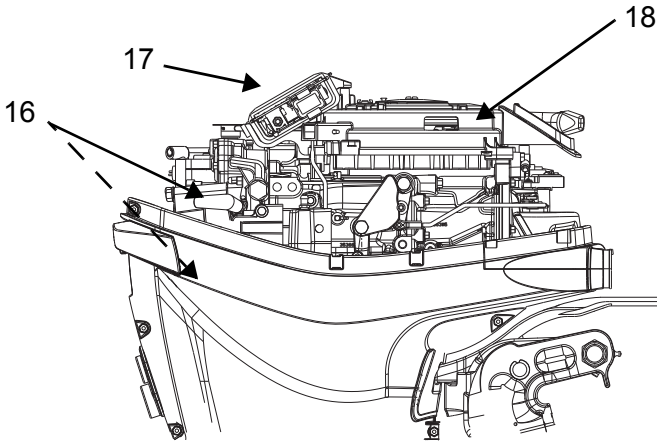
Item	Description	Item	Description
1	Air Inlet, Tilt Handle	5	Trim Tab
2	Engine Cover Latch	6	Water Intake Screens
3	Water Pump Indicator, Flushing Port	7	Rope Pull Start Handle
4	Anti-Corrosion Anodes		

Port



006998

Starboard



006999

Item	Description	Item	Description
8	Tilt Support Lever	14	Oil Fill Cap
9	Fuel Connector	15	Oil Tank
10	Battery Cables	16	Spark Plugs
11	Air Silencer	17	EMM (Engine Management Module)
12	Spare Fuse	18	Rewind Starter / Flywheel Guard
13	Fuse		

2-Stroke Engine Oil and Fuel

2- Stroke Engine Oil Requirements

NOTICE

When operating in conditions under 32°F (0°C), *Evinrude XD100* oil must be used.

NOTICE

DO NOT add automotive type 4-stroke oils to *Evinrude E-TEC* 2-stroke engine oil tank.

Evinrude Brand Oils

Evinrude outboard oils are formulated to give best engine performance while controlling piston and combustion chamber deposits, providing superior lubrication, and ensuring maximum spark plug life.

The following outboard oils are recommended for use in your *Evinrude E-TEC* outboard:

- *Evinrude XD100*;
- *Evinrude XD50*; or
- *Evinrude XD30*.

Evinrude XD100 Oil

Evinrude XD100 oil is preferred for your *Evinrude E-TEC* outboard. This synthetic formula oil provides uncompromised lubrication and superior performance, even in extreme conditions—especially in cold temperatures down to 0°F (-17°C).

If requested, an authorized dealer can program your *Evinrude E-TEC* outboard *EMM* for the exclusive use of *Evinrude XD100*. **Only an authorized *Evinrude* dealer can program your outboard for this optional benefit.** Oil consumption is reduced if the outboard is programmed for exclusive use of *Evinrude XD100* as compared to using a conventional oil. The *XD100* oil setting is not available on all models.

IMPORTANT: If your *EMM* has been programmed for *Evinrude XD100*, DO NOT use any other oil unless in an emergency. If *Evinrude XD100* is temporarily unavailable, a one-time-only use of an oil that meets *NMMA TC-W3* certification standards is allowed. If you discontinue using *Evinrude XD100*, you MUST first return to your Dealer

to have the *EMM* reprogrammed back to the original factory setting.

Other Oils

If *Evinrude* brand oils are not available, you must use an oil that meets *NMMA TC-W3* certification standards.

Failure to follow oil specifications could void the engine warranty if a lubrication-related failure occurs.

Oiling System Information

IMPORTANT: The oiling system must be primed on new outboards. Refer to **Priming the Oil System** on page 19.

If a “LOW OIL” warning occurs, you have a limited amount of time of normal operation before running out of oil. Refill the oil tank with approved oil as soon as possible.

Refer to **Engine Monitoring** on page 42.

Check the oil tank level frequently. Always “top off” your oil tank prior to prolonged usage or long trips.

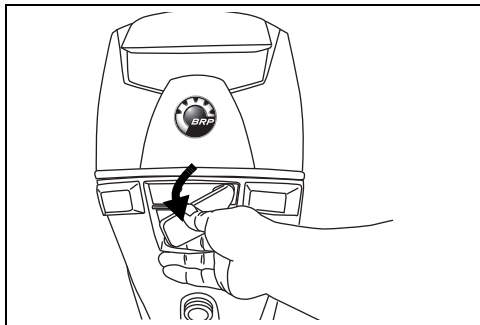
New outboards are programmed to use additional oil during the first two hours of operation above 2000 RPM.

Always keep an extra supply of outboard oil in the boat. Refer to **2- Stroke Engine Oil Requirements** on page 18.

If you run the oil tank empty, you **MUST** refill the oil tank and prime the oil system before using the engine. Refer to **Filling the Oil Tank** on page 19 and **Priming the Oil System** on page 19.

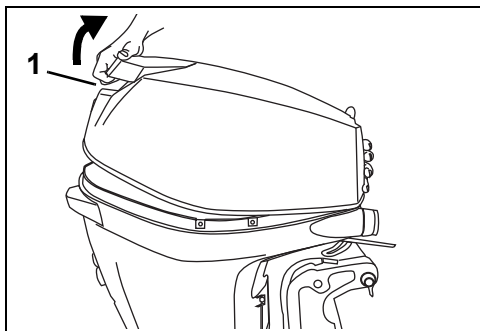
Filling the Oil Tank

Release rear engine cover latch by pulling the handle back and turning downward.



007000

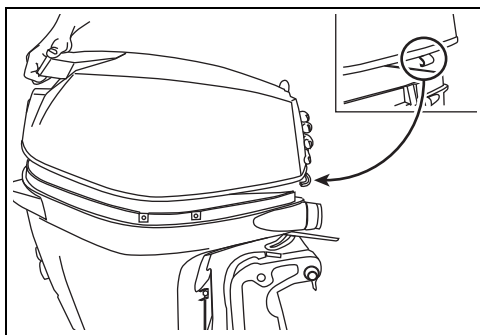
Pull up on the tilt handle to release the engine cover seal on the engine cover.



1. Tilt handle

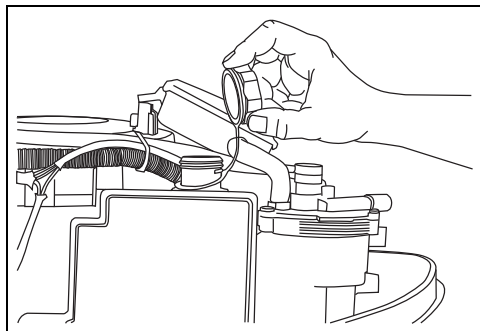
007001

Release the hook from its catch in the front and remove the engine cover to access the oil tank.



007002

Remove the filler cap and fill the tank with the recommended outboard lubricant, as specified in **2- Stroke Engine Oil Requirements** on page 18.



007003

Replace the filler cap and tighten securely. Reinstall the engine cover.

IMPORTANT: The oil tank capacity is 1.5 quarts (1.4 liters).

Priming the Oil System

NOTICE

The oiling system **MUST** be primed to avoid engine damage from a lack of lubrication.

Prime the oiling system to remove air from the system before operating the outboard if:

- The outboard is new – Service technician must prime the oiling system using *Evinrude Diagnostic* software;
- The oil tank is emptied or outboard is run out of oil;
- The outboard is laid down for transportation or storage.

Prime the oiling system by performing winterization. Refer to **Long-Term Storage (Winterization)** on page 59.

Fuel Requirements

WARNING

Gasoline is extremely flammable and highly explosive under certain conditions. Follow the instructions in this section explicitly. Improper handling of fuel could result in property damage, serious injury or death.

Leaking fuel is a fire and explosion hazard. All parts in the fuel system should be inspected frequently and replaced if signs of deterioration or leakage are found. Inspect the fuel system each time you refuel, each time you remove the engine cover and annually.

NOTICE

Always use fresh gasoline. Gasoline will oxidize; the result is loss of octane, volatile compounds, and the production of gum and varnish deposits which can damage the fuel system.

Fuel blending varies by country and region. Your outboard has been designed to operate using the recommended fuels; however, be aware of the following:

- The boat's fuel system may have different requirements regarding the use of alcohol fuels. Refer to the boat's owner guide.
- Alcohol blended fuels attract and hold moisture which may lead to fuel phase separation and can result in engine performance problems or engine damage.
- Use of fuel containing alcohol above the percentage specified by government regulation can result in the following problems in outboard engines and fuel system components:
 - Vapor lock or fuel starvation
 - Starting and operating difficulties
 - Deterioration of rubber or plastic parts
 - Corrosion of metal parts
 - Damage to internal engine parts
- Have your service technician inspect for fuel leaks or other fuel system abnormalities if you suspect the presence of alcohol in gasoline exceeds the current government regulation limits.

Recommended Fuel: Use unleaded gasoline with an AKI (R+M)/2 octane rating of 87, or an RON octane rating of 90.

Biobutanol (Bu16) Fuel

Biobutanol is a four-carbon alcohol produced from renewable, plant-derived energy sources in a fermentation process similar to beer and wine production. Biobutanol delivers more renewable energy content than ethanol while remaining compatible with current vehicles, boats, and infrastructure. Biobutanol does not phase separate in the presence of water like ethanol and is less corrosive to fuel system components such as fuel tanks, fuel fittings and fuel hoses.

Biobutanol blended fuel (either isobutanol or n-butanol) may be used in all *Evinrude* outboards. Use of biobutanol blended fuel will NOT void the warranty of *Evinrude* outboards.

Biobutanol blended fuel (Bu16 - up to 16.1% by volume) has been approved for use by the *National Marine Manufacturers Association (NMMA)*.

Use in North America

NOTICE

Do NOT use fuel from fuel pumps labeled E85. Never experiment with other fuels.

The use of unleaded gasoline containing alcohol above the percentage specified by government regulations is not recommended. Use of fuel labeled E15 is prohibited by U.S. EPA Regulations.

Use of a boat mounted water separating fuel filter is strongly recommended.

Use Outside North America

The use of unleaded gasoline containing alcohol above the percentage specified by local government regulations is not recommended.

Use of a boat mounted water separating fuel filter is strongly recommended.⁴⁹

Fueling Procedure

⚠ WARNING

Fuel is flammable and explosive under certain conditions. Follow these instructions to ensure safety when handling fuel:

- Always work in a well ventilated area.
- Always turn off the engine before fueling.
- Never permit anyone other than an adult to refill the fuel tank.
- Do not smoke, or allow open flames, or sparks or use electrical devices such as cellular phones in the vicinity of a fuel leak or while fueling.
- When fueling, keep boat level.
- Remove portable fuel tanks from the boat before fueling.
- Fuel tank may be pressurized, turn cap slowly when opening.
- Do not overfill or top off the fuel tank and leave boat in the sun. As temperature increases, fuel expands and might overflow.
- To prevent fuel back-flow, fill the fuel tank slowly so air can escape from tank.
- Always wipe off any fuel spillage.

ENVIRONMENTAL NOTE

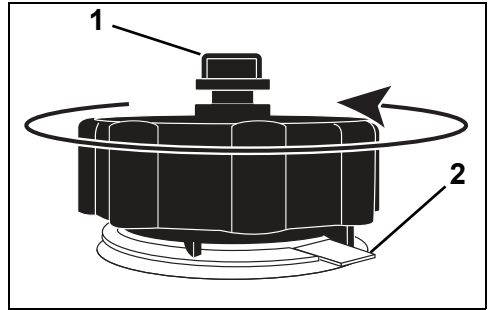
Dispose of fuel contaminated towels in an environmentally responsible manner, or according to local regulations.

Portable Fuel Tank Cap

Allow fuel vapor to escape before removing the fuel tank cap.

- 1) Open the vent screw on fuel tank cap.
- 2) Turn the cap counterclockwise until the cap contacts the pressure relief tab.
- 3) Press down on the tab and turn the cap one-quarter turn counterclockwise until the cap contacts the pressure relief tab again.
- 4) Allow fuel vapor to escape.

- 5) Press down on tab to remove cap.



1. Vent screw
2. Pressure relief tab

008556

Always follow the instructions provided with the fuel tank and cap.

On a Trailer

- 1) Make sure the boat is level.
- 2) Slowly turn the fuel tank cap counterclockwise to remove it.
- 3) Insert the gas pump nozzle into the filler neck of the fuel tank.
- 4) Fill the fuel tank.
- 5) Stop filling immediately when the automatic shut-off feature of the gas pump handle activates.
- 6) Wait a moment before removing the gas pump nozzle from the filler neck. Do not retract the gas pump nozzle from the filler neck to top off the fuel tank.
- 7) Install the fuel tank cap and turn clockwise to fully tighten it.

In the Water

- 1) Turn off engine.
- 2) Tie boat securely to the fueling pier.
- 3) Do not allow anyone to remain in or on the boat.
- 4) Have a fire extinguisher close at hand.
- 5) Slowly turn the fuel tank cap counterclockwise to remove it.
- 6) Insert the gas pump nozzle into the filler neck of the fuel tank.
- 7) Fill the fuel tank.
- 8) Stop filling immediately when the automatic shut-off feature of the gas pump handle activates.
- 9) Wait a moment before removing the gas pump nozzle from the filler neck. Do not retract the gas pump nozzle from the filler neck to top off the fuel tank.

Using Your Evinrude E-TEC Outboard

Install fuel tank cap and turn clockwise to fully tighten it.

Fuel Additives

NOTICE

Use of other fuel additives can result in poor performance or engine damage.

The only fuel additives approved for use in your *Evinrude E-TEC* outboard are:

- *Evinrude 2+4 Fuel Conditioner*
- *Evinrude Fuel System Cleaner*

Evinrude 2+4 Fuel Conditioner will help prevent gum and varnish deposits from forming in fuel system components and will remove moisture from the fuel system. It can be used continuously and should be used during any period when the outboard is not being operated on a regular basis. Its use will help reduce spark plug fouling and deterioration of fuel system components.

Evinrude Fuel System Cleaner will help keep fuel injectors in optimal operating condition.

Fuel System Information

⚠ WARNING

Store portable fuel tanks in well-ventilated areas, away from heat sources and open flames.

Close the vent screw of the fuel tank cap, if equipped, to prevent escape of fuel or fuel vapors which could accidentally ignite.

Do not allow disconnected fuel hoses to leak fuel.

Always wipe off any fuel spillage.

In the United States, the U.S. EPA requires "low permeability" fuel hose, fuel primer bulbs, portable fuel tanks and fuel caps to be used with outboard engines.

IMPORTANT: Fuel distribution hoses in the boat must deliver fuel at a specific flow rate. Minimum inside diameter of fuel hoses must be 5/16 in. (8 mm).

Fuel systems with built-in tanks, particularly those that include antisiphon valves and filter/primer units, may have restrictions not allowing the engine fuel pump to deliver

sufficient fuel under all conditions. This can result in a loss of performance. If a performance problem exists, see the **Service Note** on page 64.

Fuel Filters

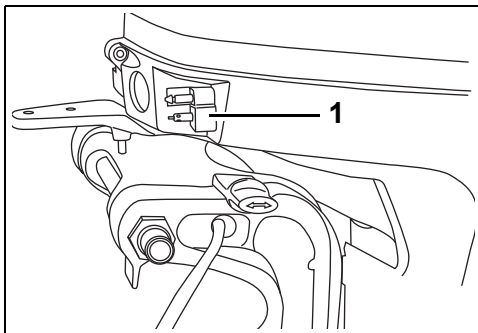
A boat-mounted water-separating fuel filter assembly will help prevent water and other contaminants from entering the engine fuel system.

Use of a boat mounted water-separating fuel filter is highly recommended on all boats.

Boat-mounted water-separating fuel filter assemblies must meet the required fuel flow and filter specification. Refer to **Boat-Mounted Fuel Filters** on page 68.

Fuel Hose Connections

- 1) If the fuel hose is disconnected for any reason, seal it to prevent spillage. Cap the fuel fitting to prevent contamination.
- 2) Connect the fuel hose to the 3/8 in. (9 mm) fuel fitting. Fasten hose securely with clamp (18.5 mm) from owner's kit.
- 3) Squeeze fuel primer bulb, outlet end up, until firm.



1. Fuel connector

007004

Fuel System Priming

If the outboard is run out of fuel, refill the fuel tank and squeeze the primer bulb until firm.

Rope Start Models

Prime the electric fuel pump by first removing the engine cut-off switch clip and then pulling the rope at least two times. This will cause the fuel pump to fill the injectors. Replace the engine cut-off switch clip and follow the normal starting procedure.

Operation

Safety Information

⚠ DANGER

Serious injury or death can result from contact with a rotating propeller or moving boat and outboard.

Propeller blades can be sharp and the propeller can continue to turn even after the engine is off.

Assure the engine propeller area is clear of people and objects before starting engine or operating the boat.

Be alert of people in the water.

Always shift the outboard to NEUTRAL and shut off the engine immediately when your boat is in an area where there might be people in the water.

⚠ 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.

⚠ WARNING

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

⚠ WARNING

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 / Stopping - Tiller Models

Refer to the **Pre-Ride Inspection** on page 48. Complete the inspection before using your *Evinrude E-TEC* outboard.

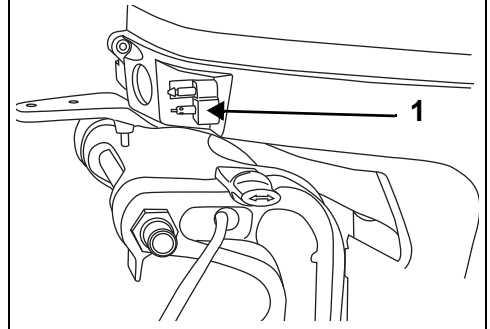
NOTICE

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

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

Connecting the Fuel Hose

Connect the fuel hose to the fuel connector.



1. Fuel connector

007004

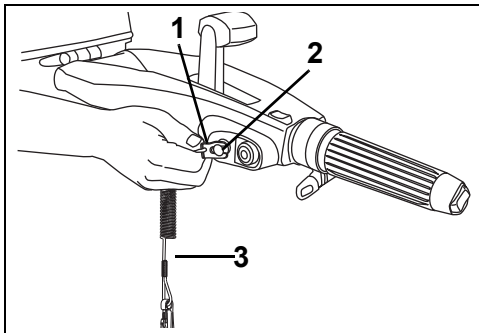
If equipped, open vent screw on fuel tank cap. Squeeze fuel primer bulb, outlet end up, until firm.

Engine Cut-off Switch

The engine cut-off switch is on the steering handle. Use of the engine cut-off switch feature is highly recommended on all boats.

Using Your Evinrude E-TEC Outboard

Connect the clip to the engine cut-off switch.

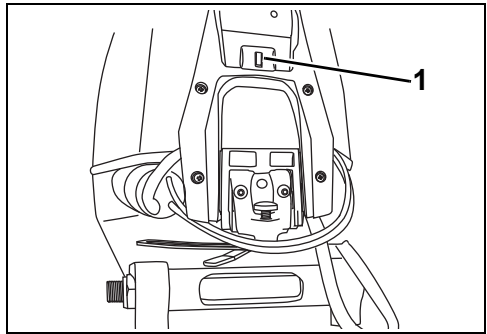


007013

1. Clip
2. Engine cut-off switch clip / switch
3. Tether cord

Disconnecting the clip and tether cord will stop the engine and prevent the boat from becoming a runaway if the driver moves beyond the range of the tether cord. If the tether cord is too long, it can be shortened by knotting or looping it. **DO NOT** cut and retie the tether cord.

An extra clip is stored on the tiller handle. If the operator is thrown from the boat, another person can insert the extra clip in the engine cut-off switch and start the outboard.



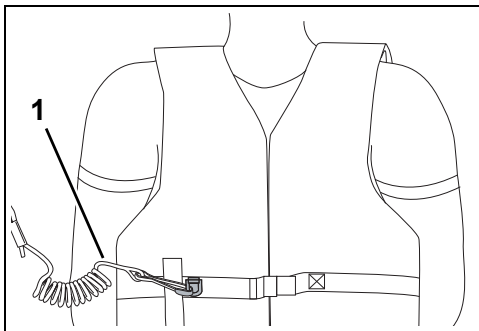
1. Extra clip

007014

⚠ WARNING

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

Snap the tether cord to a **secure** place on the operator's clothing or life vest — not where it might tear away instead of activating the engine cut-off switch.



1. Tether cord

008489

⚠ WARNING

Avoid knocking or pulling the clip off the engine cut-off switch during normal boating. Avoid bumping the key if operating without the clip on the switch. The resulting unexpected loss of forward motion can throw occupants forward, causing injury.

Keep the tether cord free from obstructions and entanglements.

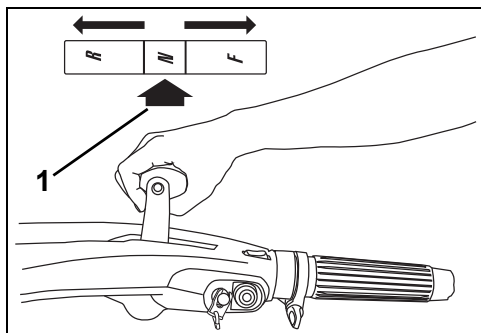
At each outing, test the system's operation. With the engine running, remove the clip from the switch by pulling the tether cord. If the engine does not stop running, see the Service Note on page 45.

NOTICE

Carefully check the function of all control and engine systems before leaving the dock.

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

on page 27.



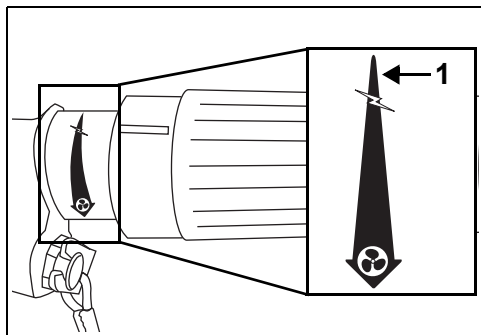
1. NEUTRAL

007006

⚠ WARNING

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

Twist throttle grip to SLOWEST speed position.



1. SLOWEST speed position

007067

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, the outboard will be in a safety mode. It will not respond to throttle until the throttle twist grip is returned to slowest speed position.

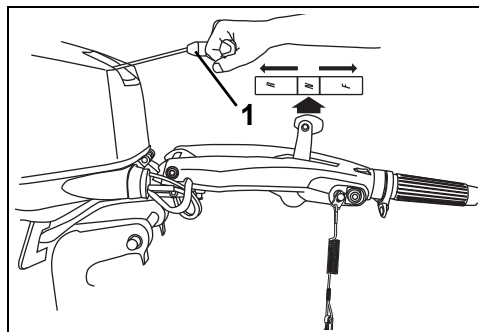
After the engine starts, the engine management module (EMM) automatically increases idle speed slightly. Idle speed will decrease as the engine warms up.

Starting – Tiller Rope Models

NOTICE

To prevent damage to starter assembly, allow starter cord to rewind before releasing starter handle.

While seated, grasp the starter handle and pull slowly until the starter engages, then pull hard. Repeat, if needed, until outboard starts.



1. Starter handle
2. NEUTRAL

007009

IMPORTANT: Engine will not start if outboard is in gear or if tether cord is not in place.

If your outboard does not react normally to this starting procedure or if it fails to start, refer to **Troubleshooting** on page 63.

Starting – Tiller Electric Models

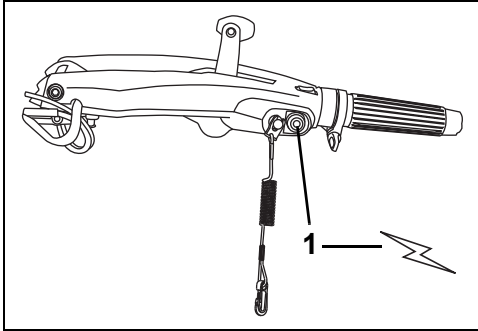
NOTICE

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

While seated, press the start button. (If equipped with a key switch, it must be in the

Using Your Evinrude E-TEC Outboard

ON position.) Crank the engine no longer than 20 seconds.



1. Start button

007010

Upon start-up, release the button.

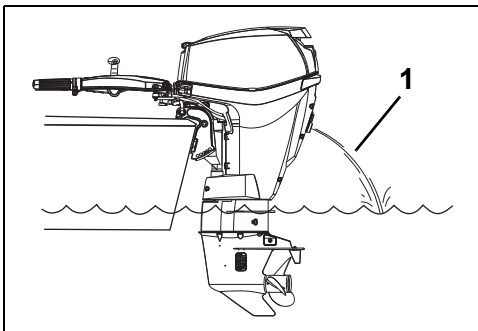
If the engine did not start, release the button momentarily, then try again.

IMPORTANT: Engine will not start if outboard is in gear or if tether cord is not in place.

If your outboard does not react normally to this starting procedure or if it fails to start, refer to **Troubleshooting** on page 63.

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 **Troubleshooting** on page 63.



1. Water pump indicator

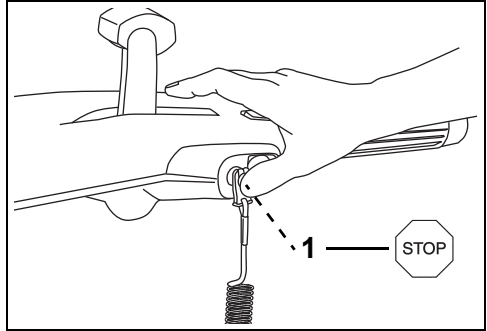
007011

Engine Stopping

Twist the throttle grip to SLOWEST speed position.

Move shift lever to NEUTRAL.

Press the engine cut-off switch until the outboard stops running. If equipped, close the vent screw on the fuel tank's filler cap.



1. STOP button

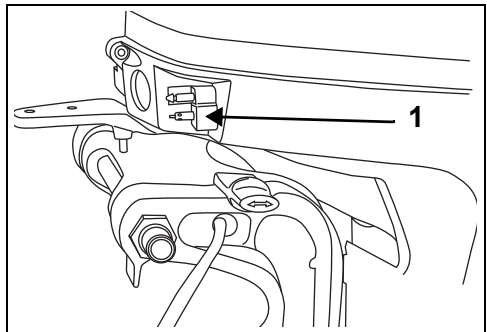
007012

Disconnecting the Fuel Hose

⚠ WARNING

A small amount of fuel may be released when the fuel connector is disconnected. Always wipe off any fuel spillage.

Disconnect the fuel hose from the fuel connector.



1. Fuel connector

007004

If equipped, close vent screw on fuel tank cap.

Shifting and Speed Control - Tiller Models

NOTICE

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

⚠ WARNING

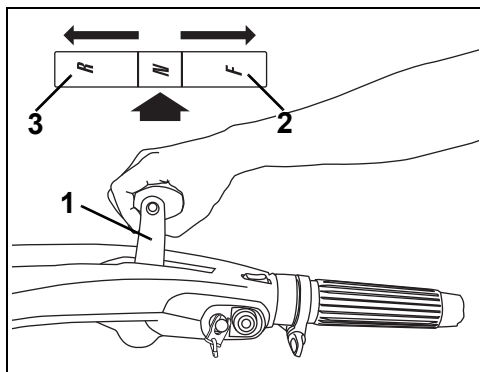
Do not operate the outboard in REVERSE with the tilt/run lever in TILT. The outboard may tilt out of the water, resulting in loss of control.

NOTICE

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.

With engine running, twist the throttle grip to SLOWEST speed position.

Move the shift lever with a firm, quick motion, to FORWARD or REVERSE gear.



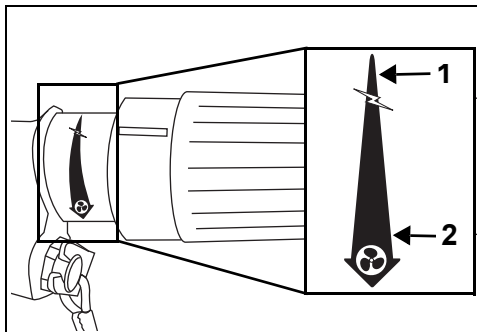
1. Shift lever
2. FORWARD
3. REVERSE

007006

Speed Control

With the outboard running, twist throttle grip:

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



1. Decrease speed
2. Increase speed

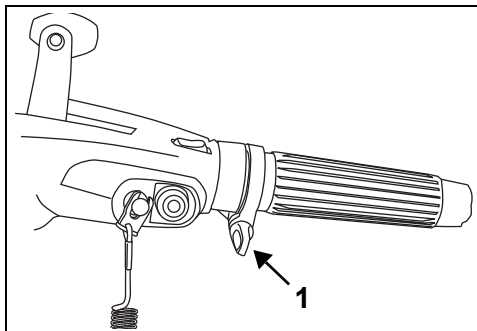
007067

Throttle Friction

⚠ WARNING

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

Adjust the throttle friction knob to reduce the effort required to hold a throttle setting.



1. Throttle friction screw

007017

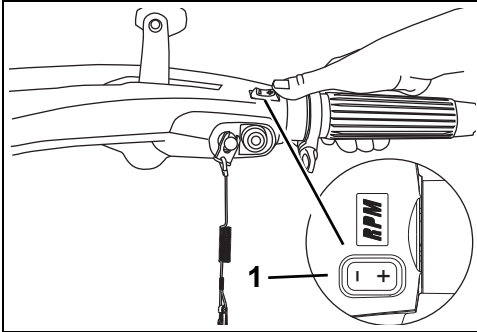
Idle Speed Control Switch

This switch allows idle speed to be adjusted between 625 RPM and 900 RPM (approximate).

Press and release the – side of the switch to decrease speed. Press and release the + side

Using Your Evinrude E-TEC Outboard

of the switch to increase speed. Engine speed changes in 50 RPM increments.



1. Idle speed control switch

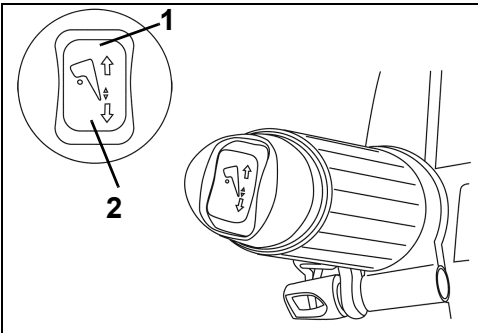
007068

This switch can be used to fine tune speeds between 600 to 2300 rpm. Advance the throttle twist grip to desired rpm. Use switch to increase or decrease engine speed.

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

Trim/Tilt Switch

If equipped, the trim/tilt switch is located in the end of tiller handle. Press switch as indicated for UP and DOWN operation.



1. Trim/tilt switch UP

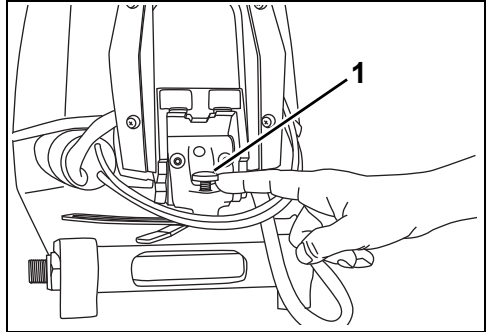
2. Trim/tilt switch DOWN

005107

Tiller Handle Adjustments

Tiller Handle Angle

Tiller handle angle can be raised or lowered by turning the adjustment screw under the handle.

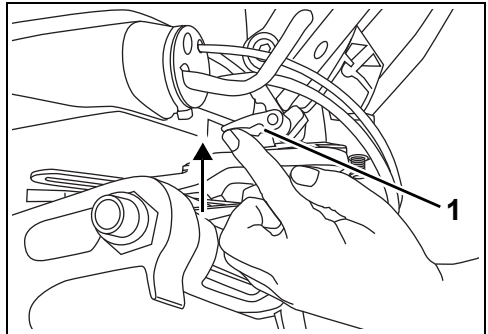


1. Adjustment screw

007020

Tiller Handle Ratchet

Tiller models feature a ratchet which holds the tiller arm at approximately 30° or 90° positions. Press up on the release lever to lower tiller arm.



1. Release lever

007019

Engine Starting / Stopping - Remote Control Models

Refer to the **Pre-Ride Inspection** on page 48. Complete the inspection before using your *Evinrude E-TEC* outboard.

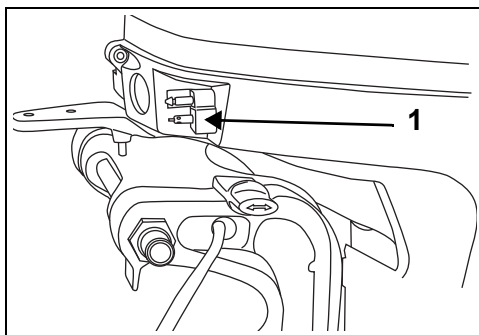
NOTICE

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

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

Connecting the Fuel Hose

Connect the fuel hose to the fuel connector.



1. Fuel connector

007004

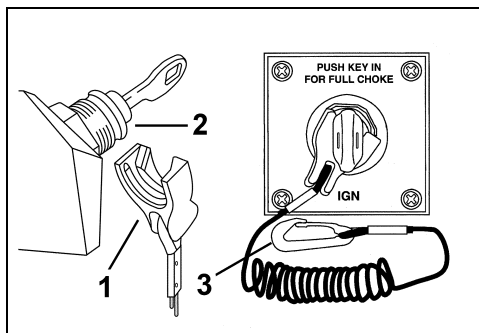
If equipped, open vent screw on fuel tank cap.

Squeeze fuel primer bulb, outlet end up, until firm.

Engine Cut-off/Key Switch

A combination engine cut-off switch and key switch is a feature of *Evinrude* prewired remote controls and all *Evinrude* control wiring kits. Use of the engine cut-off feature is highly recommended on all boats.

Connect the clip to the engine cut-off stop/key switch.



1. Clip
2. Engine cut-off/key switch
3. Tether cord

DR6819

DR5992A

⚠ WARNING

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

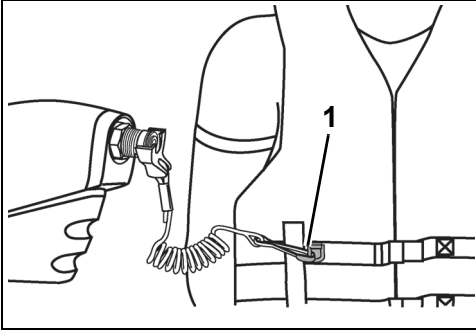
In an emergency situation, the engine can be started without the clip in place. Follow the normal starting procedure. Reinstall a clip as soon as possible. **The operator should always use the clip and tether cord anytime the engine is running.** Refer to **Engine Cut-off/Key Switch** on page 29.

IMPORTANT: Your engine cut-off switch can be effective only when in good working condition. At each outing, inspect clip and tether cord for cuts, breaks, or wear. Replace worn or damaged parts.

Snap the tether cord to a **secure** place on the operator's clothing or life vest — not where it

Using Your Evinrude E-TEC Outboard

might tear away instead of activating the engine cut-off switch.



Disconnecting the clip and tether cord will stop the engine and prevent the boat from becoming a runaway if the driver moves beyond the range of the tether cord. If the tether cord is too long, it can be shortened by knotting or looping it. **DO NOT** cut and retie the tether cord.

⚠ WARNING

Avoid knocking or pulling the clip off the engine cut-off switch during normal boating. Avoid bumping the key if operating without the clip on the switch. The resulting unexpected loss of forward motion can throw occupants forward, causing injury.

Keep the tether cord free from obstructions and entanglements.

At each outing, test the system's operation. With the engine running, remove the clip from the switch by pulling the tether cord. If the engine does not stop running, see the Service Note on page 64.

NOTICE

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

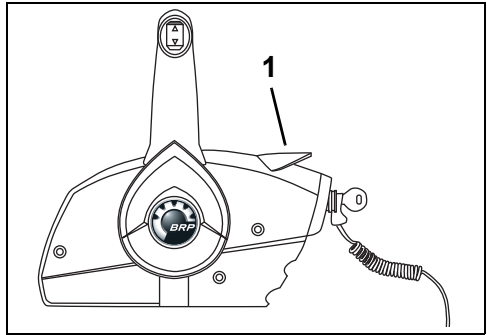
If the following directions are not suitable for your boat's control, see the **Service Note** on page 64.

Move the remote control handle to **NEUTRAL**.

⚠ WARNING

If you are using a remote control that does not have start-in-gear prevention, the outboard can be started while it is in gear. Always shift to NEUTRAL before starting the outboard to prevent sudden boat movement, which can cause injury.

Set control to **SLOWEST** speed position.



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, the outboard will be in a safety mode.

It will not respond to throttle until the throttle is returned to slowest **IDLE** position

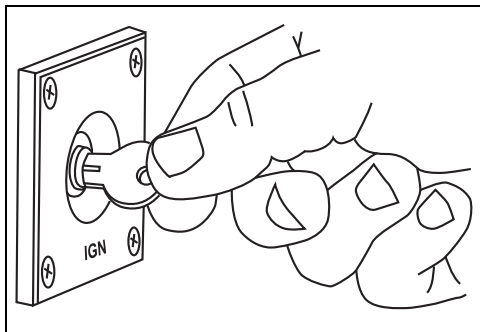
After the engine starts, the engine management module (*EMM*) automatically increases idle speed slightly. Idle speed will decrease as the engine warms up.

Engine Starting

Turn the key switch fully clockwise to the START position.

NOTICE

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



007015

Upon start-up, release the key.

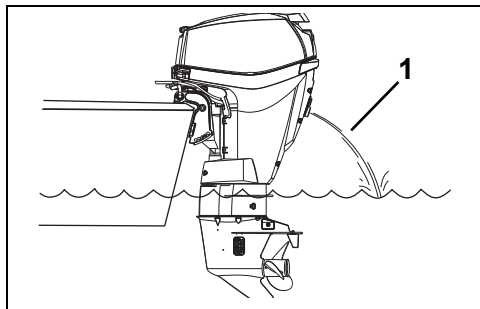
If the engine did not start, release the key momentarily, then try again.

Each time the key switch is turned from OFF to ON, the warning system will self-test. Refer to **Engine Monitoring** on page 42. If the warning system fails to self-test during start-up, see the **Service Note** on page 64.

If your outboard does not react normally to this starting procedure or if it fails to start, refer to **Troubleshooting** on page 63.

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 **Troubleshooting** on page 63.



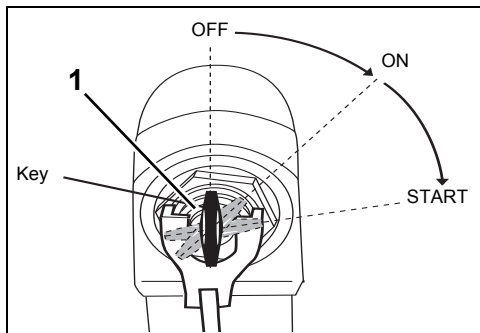
1. Water pump indicator

007016

Engine Stopping

Move control handle to NEUTRAL.

Turn key switch counterclockwise to the OFF position.



1. Key switch, OFF position

007072

Remove the key when the boat will be unattended.

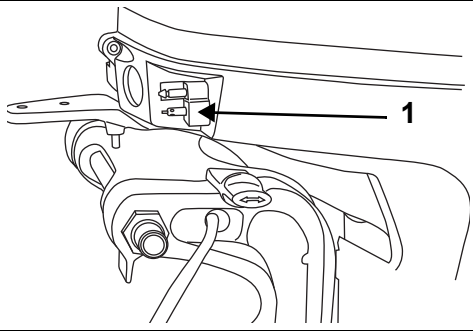
Using Your Evinrude E-TEC Outboard

Disconnecting the Fuel Hose

Disconnect the fuel hose from the fuel connector.

⚠ WARNING

A small amount of fuel may be released when the fuel connector is disconnected. Always wipe off any fuel spillage.



1. Fuel connector

007004

If equipped, close vent screw on fuel tank cap.

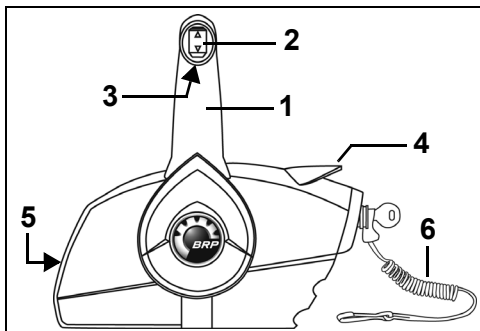
Remote Controls - *Evinrude* (BRP) Controls

⚠ WARNING

If you choose a non-Evinrude remote control, it must have a start-in-gear prevention feature. This feature can prevent injuries resulting from unexpected boat movement when the engine starts.

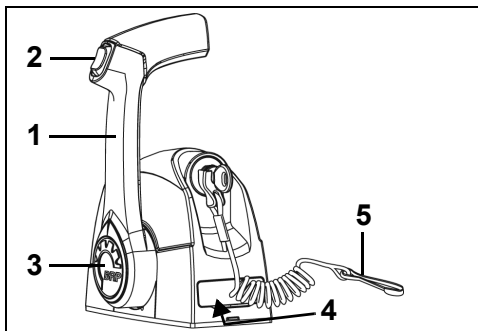
IMPORTANT: When selecting the remote control system for your boat, specify *Evinrude* components. *Evinrude* controls deliver the cable stroke your outboard needs for positive shift and throttle control, and they incorporate such safety and convenience features as:

- Start-in-gear prevention
- Plug-in compatibility with *Evinrude* Modular Wiring System (MWS)



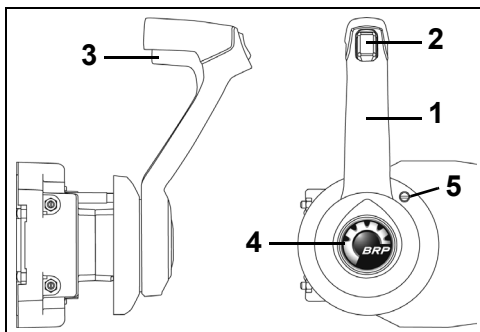
Side Mount Control 006448

1. Handle – shift and throttle
2. Trim/tilt switch (where equipped)
3. Neutral lock lever
4. Fast idle lever (warm-up)
5. Throttle friction adjusting screw
6. Engine cut-off switch clip and tether cord



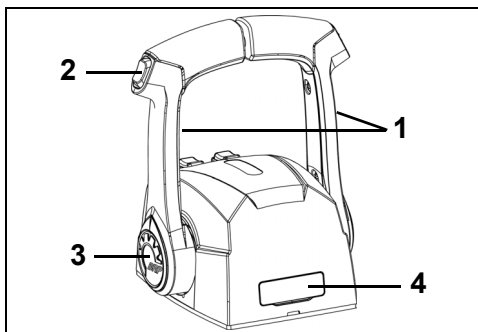
Single Lever Binnacle Mount Control 006446

1. Handle – shift and throttle
2. Trim/tilt switch (where equipped)
3. Fast idle button (warm-up)
4. Throttle friction adjusting screw (under cover)
5. Engine cut-off switch clip and tether cord



Concealed Side Mount Control 006447

1. Handle – shift and throttle
2. Trim/tilt switch (where equipped)
3. Neutral lock lever
4. Fast idle button (warm-up)
5. Throttle friction adjusting screw



Dual Lever Binnacle Mount Control 006445

1. Handle – shift and throttle
2. Trim/tilt switch (where equipped)
3. Fast idle button (warm-up)
4. Throttle friction adjusting screw (under cover)

Using Your Evinrude E-TEC Outboard

Shifting

NOTICE

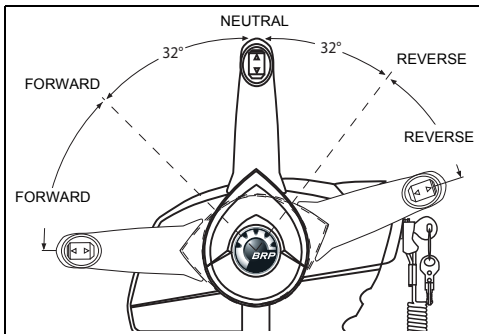
When shifting from FORWARD to REVERSE or from REVERSE to FORWARD, pause at NEUTRAL until the engine is at idle speed and the boat has slowed.

If the following directions are not suitable for your boat's control, see the **Service Note** on page 64 before proceeding.

With engine running and control handle in NEUTRAL:

Side Mount Controls

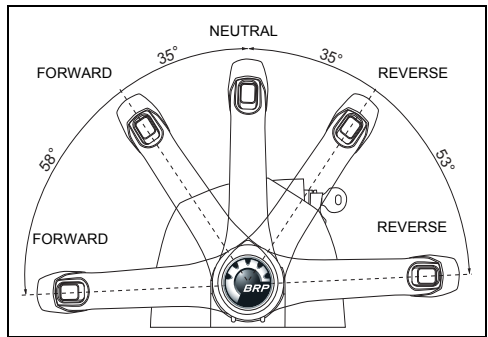
Unlock the control handle by lifting the neutral lock lever on the hand grip. Move the control handle with a firm, quick motion, forward or aft until it engages the forward or reverse gear detent.



004854

Binnacle Mount Controls

Move the control handle with a firm, quick motion, forward or aft until it engages the forward or reverse gear detent.



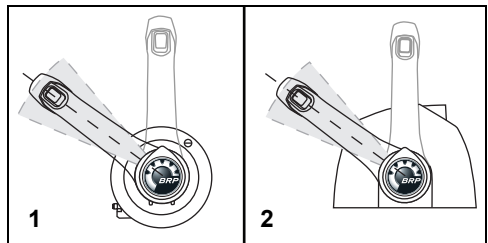
005502

Speed Control

After gear engagement, move the control handle slowly in the same direction to increase speed.

Fuel Economy

Fuel economy can vary depending on boat load, hull design, and throttle setting. When boat reaches top speed, throttle back from FULL SPEED to a lower throttle setting. You will save fuel with a minimal loss of speed.



Typical Fuel Economy Throttle Range

008490

1. Side mount control
2. Binnacle mount control

Tilting and Trim

Manual Tilt Models

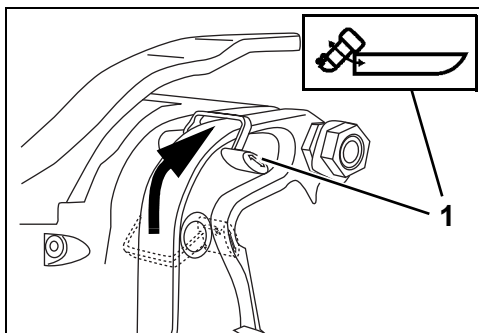
IMPORTANT: Use the tilt grip to tilt your outboard. Do not use the tiller handle as a lever.

Tilt UP

⚠ WARNING

Leave tilt/run lever in the TILT position while outboard is tilted. If the tilt/run lever is moved to the RUN position, the tilt support bracket can release and the outboard could drop down unexpectedly.

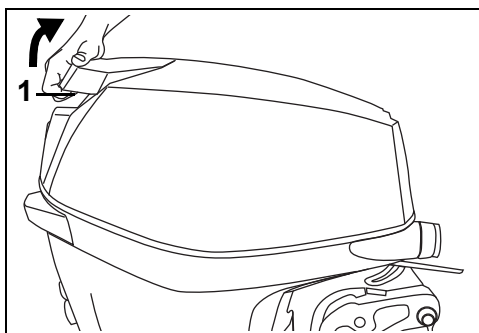
Move the tilt/run lever to TILT position.



1. TILT position

007022

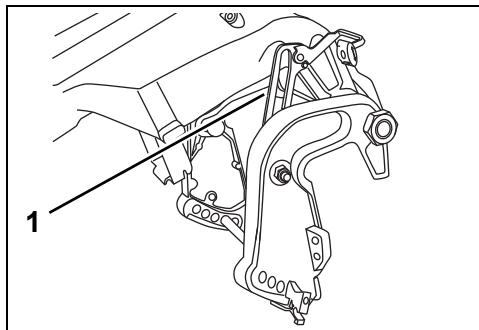
Grasp the tilt grip on engine cover and tilt outboard to the full tilt position.



1. Tilt grip

007023

The tilt support bracket will automatically engage.



1. Tilt support bracket

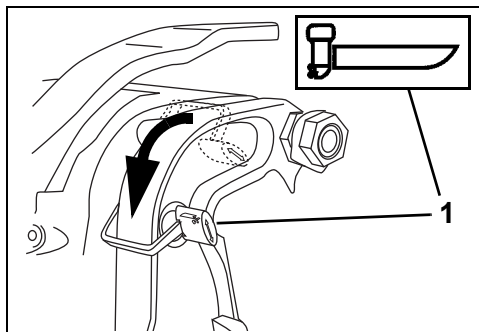
007025

Tilt DOWN

NOTICE

Operate outboard in normal operating position with tilt/run lever in the RUN position.

Move tilt/run lever to RUN position.



1. RUN position

007024

Grasp the tilt grip on engine cover and raise outboard slightly. The tilt support will automatically disengage. Slowly lower outboard to its normal operating (RUN) position.

Using Your Evinrude E-TEC Outboard

Trim Angle Adjustment

⚠ WARNING

Boat stability and steering torque can vary due to changing water conditions. If any adverse conditions occur, reduce throttle and/or adjust tilt angle to maintain control. If you experience boat instability and/or high steering torque, see the Service Note on page 64. to correct these conditions.

If the bow of the boat plows the water at high speeds, the boat may bow steer or spin suddenly, possibly ejecting or otherwise seriously injuring occupants.

Trim angle adjustment is accomplished by changing the location of the tilt pin.

Run the boat in the water to determine the best trim angle.

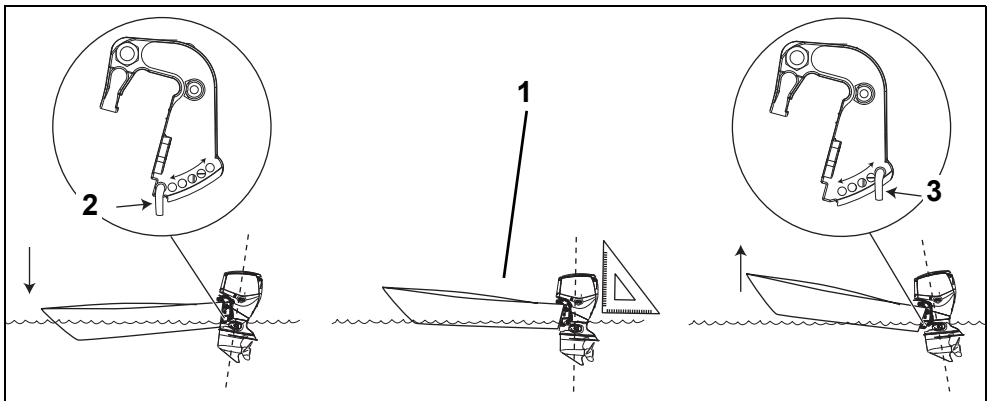
IMPORTANT: Weight distribution can affect the performance of the boat. Distribute weight evenly in the boat before adjusting trim angle.

The boat should accelerate quickly, plane easily, and run parallel to the surface of the water at high speeds.

If tilt pin is positioned too LOW the front of boat will be DOWN and push water.

If tilt pin is positioned too HIGH the front of boat will be UP and bounce.

To adjust the trim angle, refer to **Tilt Pin** on page 37.



1. Parallel to the surface of the water
2. Tilt pin – LOW position
3. Tilt pin – HIGH position

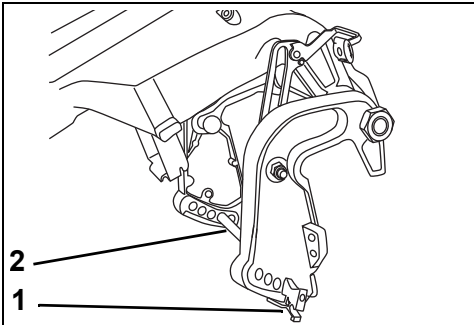
007026

Tilt Pin

To adjust the trim angle:

Place the outboard in full TILT position. Refer to **Tilt UP** on page 35.

- Grasp the tilt pin retainer and squeeze to release. Slide tilt pin all the way out.
- Insert tilt pin in desire position. Make sure the trim angle adjustment rod passes through both stern brackets.
- Push in against retainer to lock in place. Make sure the tilt pin is locked on the stern bracket.



1. Tilt pin retainer
2. Tilt pin

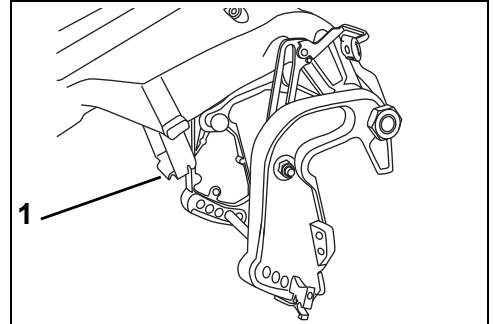
007025

Engaging Shallow Water Drive

Slow the engine and shift to NEUTRAL before engaging or disengaging shallow-water drive. Move tilt/run lever to TILT position.

Grasp tilt grip on engine cover and tilt outboard until shallow water drive link engages tilt pin.

Relocate the tilt pin if necessary. Refer to **Tilt Pin** on page 37.



1. Shallow water drive link

007025

Shallow Water Drive

⚠ WARNING

When in shallow water drive, your motor has no protection from the effects of underwater impact.

Operate the motor in FORWARD and ONLY at slow speed. The motor can tilt up forcibly and drop suddenly if it hits an underwater object or if you shift to REVERSE and apply throttle. You could lose control.

Tilt the outboard to any position within the tilt range for shallow water operation.

NOTICE

When operating a tilted outboard, do not run above idle speed. Keep the water intakes submerged at all times to prevent the engine from overheating.

Disengaging Shallow Water Drive

Move tilt/run lever to RUN position.

Grasp tilt grip on engine cover and raise outboard slightly.

The shallow water drive link will automatically disengage.

Slowly lower outboard to its normal operating position.

Using Your Evinrude E-TEC Outboard

Power Trim and Tilt Models

⚠ WARNING

Any malfunction of the power trim and tilt unit could result in loss of shock absorber protection if an underwater obstruction is hit. Malfunction can also result in loss of reverse thrust capability.

Correct fluid level must be maintained to ensure operation of the impact protection on this unit.

When operating in rough water or crossing a wake, excessive bow-up trim may result in the boat's bow suddenly rising skyward, possibly ejecting or otherwise seriously injuring occupants.

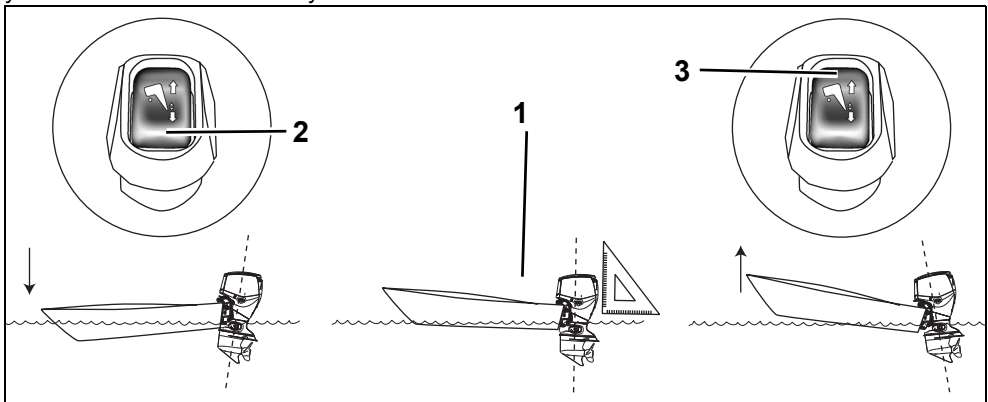
Some boat/outboard/propeller combinations may encounter boat instability and/or high steering torque when operated at high speed at or near the outboard's trim range limits (full bow-up or bow-down). Boat stability and steering torque can also vary due to changing water conditions. If any adverse conditions occur, reduce throttle and/or adjust trim angle to maintain control. If you experience boat instability and/or high steering torque, see the Service Note on page 64 and correct these conditions.

⚠ WARNING

If the bow of the boat plows the water at high speeds, the boat may bow steer or spin suddenly, possibly ejecting or otherwise seriously injuring occupants.

Some boats plow, or are difficult to plane, when operated in the trims lowest position. If your boat handles unsuitably when trimmed

fully bow-down, adjust transom angle or limit the travel of the power trim.



1. Parallel to the surface of the water
2. Trim switch, DOWN
3. Trim switch, UP

007027

Trim Angle Adjustment

Use the trim/tilt switch to adjust the outboard position in the tilt range or trim range.

Run the boat in the water to determine the best trim angle.

IMPORTANT: Weight distribution can affect the performance of the boat. Distribute weight evenly in the boat.

The boat should accelerate quickly, plane easily, and run parallel to the surface of the water at high speeds.

If trim position is too LOW the front of boat will be DOWN and push water.

If trim position is too HIGH the front of boat will be UP and bounce.

Tilt

The tilt range allows the operator to tilt the outboard for clearance when beaching, mooring, launching, or trailering.

Trim

In most operating conditions, it is recommended to **trim** the outboard to the full down position when accelerating. Once on plane, trim the outboard up for best performance.

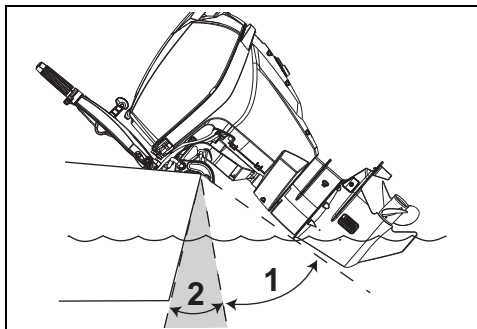
Over-trimming increases engine RPM while decreasing speed. The best trim setting is when the highest speed is achieved with the lowest engine RPM.

Shallow Water Drive

NOTICE

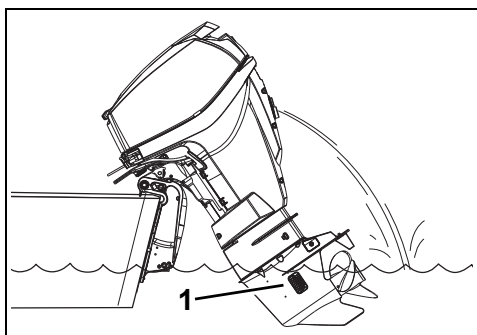
When operating a tilted outboard, do not run above idle speed. Keep the water intakes submerged at all times to prevent the engine from overheating.

Adjust the outboard position within the tilt range for shallow water operation.



1. Tilt range
2. Trim range

007028



1. Water intakes

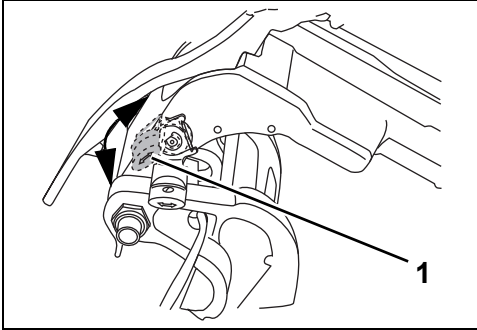
007069

Using Your Evinrude E-TEC Outboard

Tilt Support Lever

If you intend to leave the outboard tilted for a period of time, engage the tilt support lever:

- 1) Tilt the outboard UP using the trailing tilt switch.
- 2) Flip the tilt support lever down.
- 3) Lower the outboard until the tilt support lever rests solidly on the stern brackets.



1. Tilt support lever

007029

When you are finished tilting the outboard, disengage the tilt support lever:

- 1) Tilt the outboard UP.
- 2) Flip the tilt support lever up.
- 3) Lower the outboard to operating position.

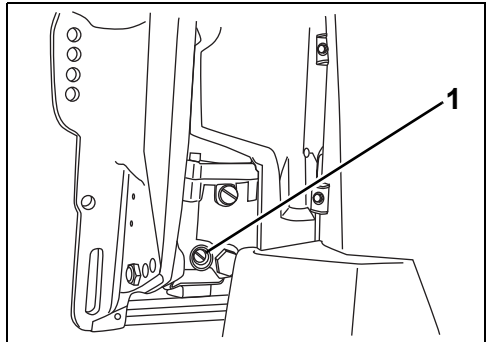
Manual Release Valve

WARNING

Keep everyone clear of a tilted outboard when backing out the manual release screw. The outboard could drop suddenly and forcibly. Be sure to tighten the manual release screw after manually repositioning the outboard. Tightening the screw also reactivates the outboard's impact protection and reverse thrust capability.

If needed, the outboard will tilt up or down manually, using the manual release valve.

- 1) Turn the manual release screw counter-clockwise, slowly (about 3 1/2 turns), until it **lightly** contacts its retaining ring.
- 2) Reposition the outboard.
- 3) Tighten the manual release valve to hold the outboard in its new position.
- 4) Thrust rod is normally in the lowest position, position 1.



1. Manual release screw

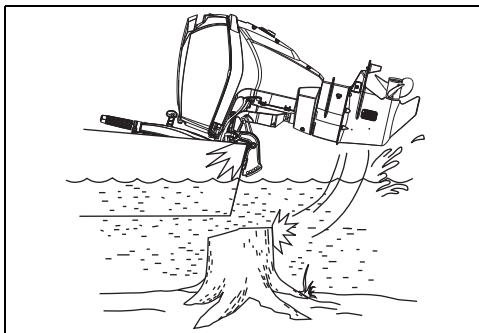
007030

Impact Damage Protection

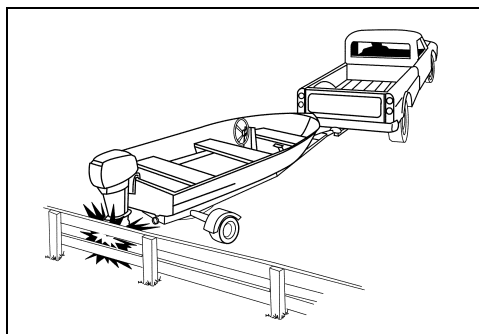
Your outboard has a shock absorption system designed to help withstand damage from impact with underwater objects at low to moderate speeds. High speed impacts with rigid underwater objects like pilings or boulders can be beyond the capability of the absorption system. Such impacts can result in serious damage to your outboard and injury to boat occupants from the outboard or its parts entering the boat. Occupants can also be ejected or injured by falling against portions of the boat as a result of rapid deceleration following impacts.

When boating in unfamiliar, shallow, or debris-laden waters, seek information on safe boating areas and navigation hazards from a reliable local source. Reduce your speed and keep a sharp lookout!

IMPORTANT: Impact damage is NOT covered by the outboard warranty.



007021



DR4412

If you hit any object:

- STOP immediately and examine the outboard for loosening of attaching hardware.
- INSPECT for damage to swivel and stern brackets, and steering components.
- EXAMINE the boat for structural damage.
- TIGHTEN any loosened hardware.

If the collision occurred in the water, proceed slowly to harbor. Before boating again, have your service technician thoroughly inspect all components.

⚠ WARNING

Failure to inspect for damage after an accident or striking an object could result in sudden, unexpected component failure, loss of boat control, and personal injury. Unrepaired damage could reduce your boat and outboard's ability to resist future impacts.

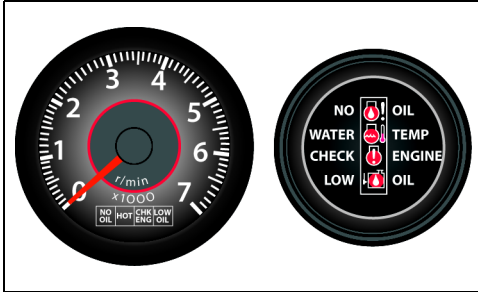
NOTICE

The outboard's shock absorption system does not work while operating in reverse. If you back into an object, either in the water or while trailering, your boat and outboard can be seriously damaged.

Engine Monitoring

Engine Monitoring System

Evinrude outboards equipped with remote controls use the *SystemCheck* engine monitoring system.



Typical *SystemCheck* Gauges

007384

Self-Test

During engine start-up, pause with the key switch in the ON position. The *SystemCheck* gauge self-tests by turning the indicator lights on simultaneously, then off in sequence. If equipped with an OPTIONAL warning horn, the *SystemCheck* monitor sounds a beep.

IMPORTANT: If the self-test does not happen as stated, see your service technician.

Engine Monitor Warnings

Engine monitor system warnings activate the appropriate warning indicator for a minimum of 30 seconds. If the abnormal operating condition continues, the warning indicator remains ON until the key is turned OFF or the failure is corrected.

The warning will reoccur at the next startup if the problem is not corrected.

IMPORTANT: Evinrude E-TEC 15–30 HP models provide LOW OIL warning ONLY.

For all other warnings, refer to **Diagnostic LEDs** on page 43.

LOW OIL

⚠ WARNING

Do not run the engine in a low oil condition for a long period of time. If run in excess of 4 hours, the engine will shut down and will not restart. See your service technician if engine shuts down.

The LOW OIL warning indicates the oil in the oil tank is at the reserve level (about 1/4 full). The *EMM* will:

- activate the LOW OIL indicator

Fill the oil tank with recommended outboard oil as soon as practical to avoid emptying the tank. See **Filling the Oil Tank** on page 19.

Speed Adjusting Failsafe Electronics (S.A.F.E.)

If the *EMM* senses a problem could cause permanent engine damage, it will limit engine speed to 1200 RPM. This additional protection feature is referred to as S.A.F.E. (Speed Adjusting Failsafe Electronics).

If the engine was running faster than 1200 RPM when the S.A.F.E. mode activated, it will shake noticeably.

Under certain operating conditions the *EMM* will shut OFF the engine.

⚠ WARNING

In the S.A.F.E. mode, the engine speed is limited. Under certain conditions, the engine's limited speed may reduce maneuverability of your boat.

If the S.A.F.E. mode is activated and you are unable to correct the problem, seek assistance and/or return to safe harbor. Serious engine damage, engine shutoff, and/or reduced maneuverability may be imminent.

The *EMM* activates S.A.F.E. mode for:

- NO OIL warning
- OVERHEAT warning
- FAULT warning

Refer to **Diagnostic LEDs** on page 43.

NO OIL

The NO OIL warning indicates there is an oil delivery problem. The *EMM* will initiate the following failsafe actions:

- activate the LED 4 indicator
- activate *S.A.F.E.* mode

If the oil tank is empty, add the recommended oil. If the oil tank is not empty, seek assistance and/or return to safe harbor.

Your outboard is designed to run in *S.A.F.E.* mode at reduced speed for up to 5 hours in the event you run out of oil. Refill the oil tank. Prime oil system. See **Priming the Oil System** on page 19.

TEMP or HOT

The TEMP warning indicates the engine is overheating. Depending on the severity of the overheating, the *EMM* may initiate one or more of the following failsafe actions:

- activate the LED 4 indicator
- activate *S.A.F.E.* mode
- activate shut down

If the TEMP warning activates, see **Troubleshooting** on page 63.

CHECK ENGINE

The CHECK ENGINE warning indicates an abnormal engine condition. Depending on the severity of the condition, the *EMM* may initiate any of the following failsafe actions:

- activate the LED 4 indicator
- activate *S.A.F.E.* mode
- activate shut down

If the CHECK ENGINE warning activates, see **Troubleshooting** on page 63.

Diagnostic LEDs

The Engine Management Module (*EMM*) has four LED indicators located on the top corner of the circuit board.

The LEDs provide quick reference to the status of several outboard systems.

The LEDs can be used to identify specific warning functions of *S.A.F.E.* mode activation without ending a day on the water.

IMPORTANT: LED 1 is closest to the center of the *EMM*.

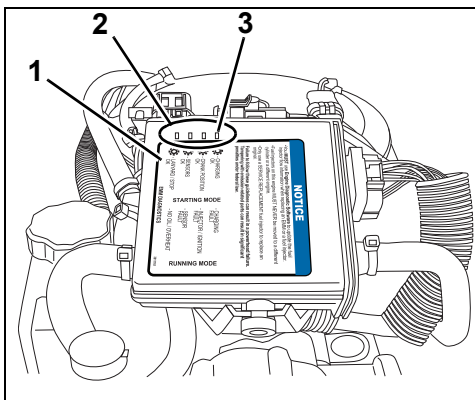
To view the LEDs the engine cover must be removed. Refer to **Filling the Oil Tank** on

page 19.

⚠ WARNING

The engine cover and flywheel guard are machinery guards. Use caution when the engine is running.

DO NOT wear jewelry or loose clothing. Keep hair, hands and clothing away from rotating parts.



1. *EMM*
2. LEDs
3. LED 1

007056

The LEDs identify system functions in two modes, Start Mode and Running Mode.

As the outboard is being started, all four LEDs should light and then go OFF in sequence.

When the outboard is running, all LEDs should be OFF.

Running Mode

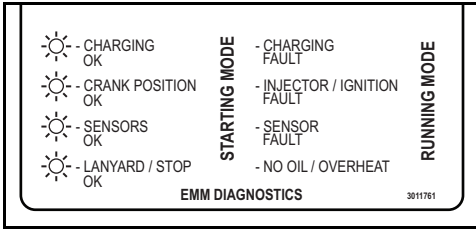
If any LED is ON while the outboard is running, it may indicate a system problem. Refer to *EMM* Diagnostics Label.

LED 1, 2, or 3 ON, return to port as soon as practical to avoid operational difficulties. See your service technician.

LED 4 ON indicates:

- *EMM* temp. ABOVE range, refer to **Troubleshooting** on page 63.
- Engine temp. ABOVE range, refer to **Troubleshooting** on page 63.
- Low / No Oil condition. Refer to **Filling the Oil Tank** and **Priming the Oil System** on page 19.

Using Your Evinrude E-TEC Outboard



EMM Diagnostics Label

008539

Start Mode

WARNING

If the outboard shuts OFF and the “LED 3” indicator is flashing, the outboard cannot be restarted. A hazardous fuel condition may exist.

Seek assistance to return to port. Seek service from an authorized *Evinrude* dealer, repair shop, or person of your own choosing for maintenance, repair, or replacement.

If any of the LEDs does NOT light during starting, it may indicate an engine problem. Refer to *EMM* Diagnostics Label.

LED 1, 2, or 3 OFF, seek assistance to return to port. See your service technician.

LED 3 flashing indicates a hazardous fuel condition may exist. Seek assistance to return to port. See your service technician.

LED 4 OFF indicates the stop circuit is activated, make sure the engine cut-off switch tether cord is attached.

LED 4 flashing indicates engine shut down:

- *EMM* temp. OVER range, refer to **Troubleshooting** on page 63.
- Engine temp. OVER range, refer to **Troubleshooting** on page 63.
- Excessive No Oil condition. Seek assistance to return to port.

Special Operating Conditions

Auxiliary Outboard Operation

Place the outboard in the full TILT position when not in use.

NOTICE

Shift the outboard to FORWARD or REVERSE when not in use and tilted up. Propeller spinning while not in use may damage the outboard.

Cold and Freezing Weather

NOTICE

When operating in conditions under 32°F (0°C), Evinrude XD100 oil, must be used.

During operation in freezing weather, keep the gearcase submerged at all times.

Upon removing your outboard from the water, leave it in a vertical position until its cooling system is drained. Store the outboard vertically.

If the outboard's gearcase is equipped with an integral speedometer pickup, all water must be cleared from the hose to prevent gearcase damage. Refer to **Transporting / Storage** on page 47.

NOTICE

Water remaining in the gearcase, cooling system or other components can freeze, causing serious engine damage.

Multiple Outboard Operation

When in reverse above slow speed, be sure all outboards are running, even if one is in NEUTRAL.

If it is necessary to return to harbor with one outboard not running, tilt the inoperative outboard high enough to keep its propeller out of the water.

High Altitude

Your outboard's *EMM* will automatically compensate for changes in altitude. However, if you boat above 3000 ft. (900 m), you will experience a slight loss of power due to reduced air density.

If your engine drops below the recommended RPM operating range at full throttle, select a lower pitch propeller.

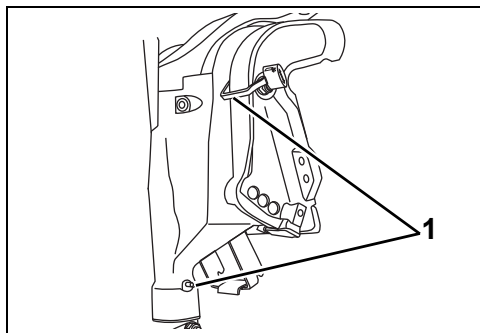
If you return to sea level, install the original propeller and verify correct RPM operating range.

Salt Water

Anode protection for the outboard has been provided for use in salt or brackish water.

Upon removal from salt water, leave outboard in a vertical position until its cooling system has drained. During long periods of mooring, tilt the gearcase out of the water, except in freezing temperatures. Flush the outboard, if desired. Refer to **Flushing** on page 55.

Salt Water Lubrication Points



1. Tilt lever and swivel bracket lubrication points (annually)

007032

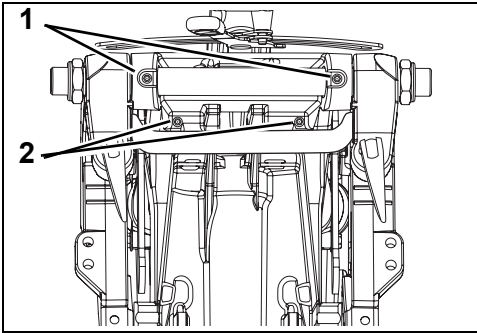
Using Your Evinrude E-TEC Outboard

Weedy Water

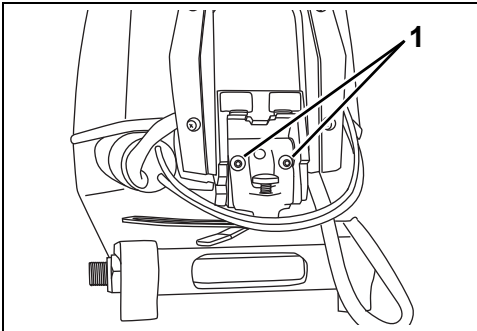
Weeds block water intakes and may cause your outboard to overheat. Weeds on the propeller create vibration and reduce boat speed.

When operating in weedy water, run at slow speeds and in REVERSE frequently to clear weeds from the propeller and water intakes. Check the water pump indicator often.

If REVERSE operation does not clear away weeds, SHUT OFF the engine. Remove weeds from propeller area and water intakes before operating at higher speed.



1. Tilt tube lubrication points (annually) 007033
2. Tilt lever shaft (annually)



1. Tiller handle lubrication points (annually) 007020

Shallow Water

Gearcase damage can occur if the gearcase is allowed to drag on the waterway bottom. Use caution when operating in shallow water.

IMPORTANT: Impact damage is NOT covered by the outboard warranty.

Under Tow

Should you require a tow from another boat:

- Shift the outboard to FORWARD or REVERSE
- Tilt its gearcase out of the water;
- Off-load all persons into another boat; and
- Keep speed slower than planing speed.

Transporting the Outboard

⚠ WARNING

If engine is equipped with a quick-disconnect fuel hose, you **MUST** disconnect the fuel hose from the engine and the fuel tank to prevent fuel leaks:

- Whenever the engine is **NOT** being used
- Whenever the engine is being trailered
- Whenever the engine is in storage

A small amount of fuel may be released when the fuel connector is disconnected.

Always wipe off any fuel spillage.

Store portable fuel tanks in well-ventilated areas, away from heat sources and open flames. Close the vent screw of the fuel tank cap, if equipped, to prevent escape of fuel or fuel vapors which could accidentally ignite. Do not allow disconnected fuel hoses to leak fuel.

Trailer

Trailer your boat with the outboard in a vertical position. If your trailer does not provide adequate road clearance, tilt the outboard as needed and support the outboard with an accessory trailering bracket.

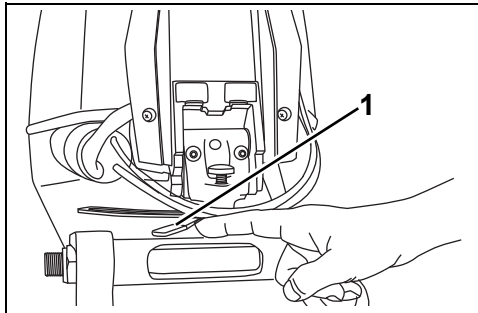
NOTICE

Shift the outboard to **FORWARD** or **REVERSE** when trailering. Propeller spinning during transport may damage the outboard.

The outboard must be restrained when trailering. Bouncing during transport may damage the outboard and the boat's transom.

Use of the tilt support bracket or tilt lock lever when trailering may cause damage to the outboard.

Use of the steering friction lever to position the outboard for trailering may cause damage to the outboard.



1. Steering friction lever

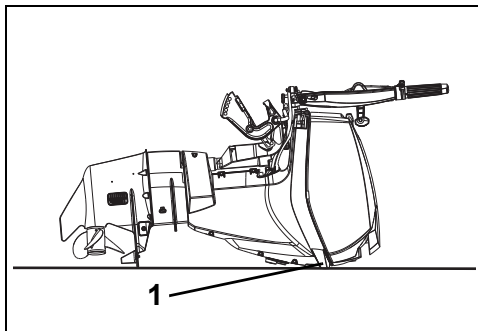
007042

Transporting / Storage

If the outboard is laid down for transportation or storage it should be laid on its back.

IMPORTANT: The oiling system must be primed before reusing the outboard. Refer to **Priming the Oil System** on page 19.

If the engine is transported laying on its side, protect the motor covers, by laying it on an old blanket or other soft cloth.



1. Transport outboard resting on bumpers

007043

Pre-Ride Inspection

WARNING

Always perform a pre-ride inspection before operating the boat. Check the proper operation of critical controls, safety features and mechanical components. Correct any problems BEFORE leaving the dock. Make sure all safety equipment required by local law is onboard.

WARNING

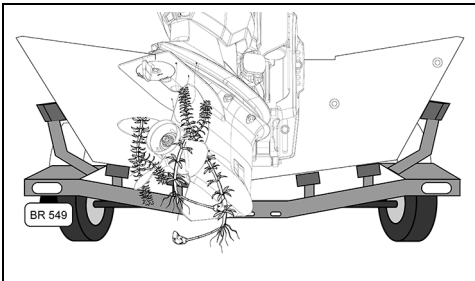
The engine(s) should be OFF and the tether cord must always be removed from the engine cut-off switch before verifying any of the following. Only start the engine(s) after all items have been checked and operate properly.

ITEM	OPERATION	✓
Hull	Inspect.	
Propeller	Inspect condition of propeller. Repair or replace damaged propeller.	
Cooling system	Inspect water intake screens.	
Safety equipment	Ensure safety equipment is onboard.	
Oil level	Check. Refill as needed.	
Bilge	Drain. Ensure drain plug(s) are securely installed.	
Battery	Check battery connections are clean, tight, and insulated. Ensure battery/battery box are secure.	
Fuel level	Check. Refill as needed.	
Navigation lights	Check operation.	
Steering system	Check operation.	
Boat systems (horn, pumps, radio)	Check operation.	
Engine cut-off tether cord	Inspect condition. Attach tether cord to key switch (remote control) or engine cut-off switch (tiller control).	
Operator's Guide	Confirm this Operator's Guide is onboard and readily accessible.	
Engine Start switch (tiller control)	Test operation.	
Engine cut-off switch (tiller control)	Test operation.	
Key switch (remote control)	Test operation.	
Engine cut-off switch/ tether cord	Test operation. Reattach tether cord to key switch (remote control) or engine cut-off switch (tiller control).	
Shift and Throttle	Check operation.	
Cooling system	Confirm operation (water pump indicator).	

Aquatic Invasive Species (AIS)

Aquatic Invasive Species (AIS) are non-native plant or animal species that threaten the diversity or abundance of the native species. They also threaten the natural ecology of the body of water they infest. AIS almost always have a negative impact on the waterway, its native species, and recreational or commercial activities on the waterway.

Common examples of AIS are; Eurasian watermilfoil, hydrilla, sea lampreys, zebra mussels, Asian carp, and gobies. Many other examples of AIS exist throughout the world's waterways.



AIS on Outboard

010615

A typical factor in AIS infestations is that the non-native species are introduced by human activity. Some AIS are introduced by commercial operations; however AIS can be introduced through recreational boating activities. The transportation of recreational boats and water sports equipment between waterways can be a major factor in the spread of AIS.

Small pieces of plants or animals hanging from a propeller, trailer or wakeboard can transfer enough biological material to establish an AIS in a new waterway. The early reproductive stages of many AIS are microscopic; small amounts of water in a bilge, live well, cooler or trapped in a compartment can contain enough organisms to establish an infestation.

As responsible boat owners we **MUST** do our part to prevent the spread of these aquatic hitchhikers. Check your boat each time you leave the water! In many cases it is required by law, be sure to check the local regulations for the waterways where you boat.

Clean, Drain & Dry – Everything, Every Time!

Before you leave a waterway, follow the procedure below to help prevent the spread of AIS.

Clean

Inspect and remove any visible mud, aquatic plants, fish or animals from the boat, trailer and any water sports equipment before transporting your equipment.

Drain

Remove all water from the boat, including ballast, bilge, livewell, engine and gearcase. Dispose of unwanted live bait in the trash.

Dry

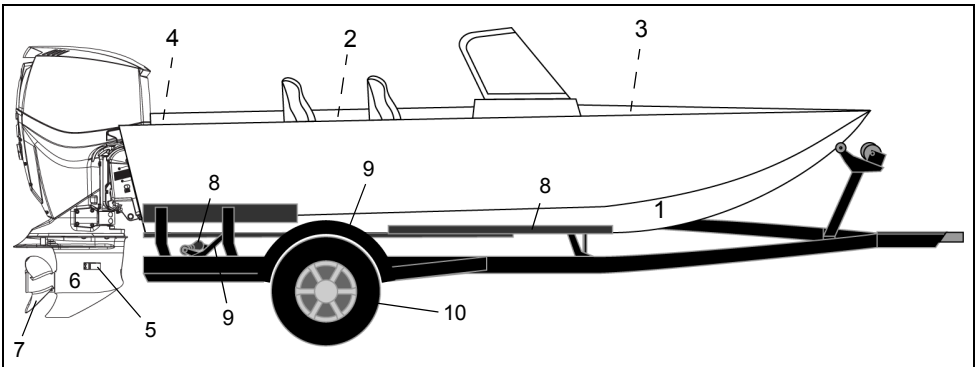
Allow the boat to completely dry before visiting any other bodies of water.

Using Your Evinrude E-TEC Outboard

AIS Inspection Checklist

Use the following checklist as a guide when inspecting for AIS.

Inspection Items			✓
Boat	1	Inspect hull.	
	2	Inspect floor.	
	3	Inspect live well.	
	4	Inspect transom well.	
		Inspect water inlet & outlet fittings.	
		Inspect anchors and lines.	
		Inspect boarding ladder.	
		Inspect transducers or other attachments to the hull.	
Accessories		Inspect fishing tackle and fishing lines.	
		Inspect bait buckets.	
		Inspect landing nets.	
		Inspect water sports equipment (skis, wakeboards etc.).	
		Inspect tow ropes.	
Outboard(s)	5	Inspect water intake screens.	
	6	Inspect gearcase.	
	7	Inspect propeller.	
Trailer	8	Inspect bunks and/or rollers.	
	9	Inspect fenders & frame.	
	10	Inspect tires & wheels (including spare tire)	
		Inspect license plate & brackets.	
		Inspect lights and wiring.	



Maintenance

Engine Emissions Installation Information

A repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems. These instructions do not require components or service by BRP or authorized *Evinrude* dealers. Although an authorized Evinrude dealer has the in-depth technical knowledge and tools to service *Evinrude* outboard engines, the emission-related warranty is not conditioned on the use of an authorized *Evinrude* dealer or any other establishment with which BRP has a commercial relationship.

For emission-related warranty claims, BRP is limiting the diagnosis and repair of emission-related parts to authorized *Evinrude* dealers. For more information, please refer to the US EPA EMISSION-RELATED WARRANTY contained herein. Proper maintenance is the owner's responsibility. A warranty claim may be denied if, among other things, the owner or operator caused the problem through improper maintenance or use.

You must follow the instructions for fuel requirements in the **FUEL REQUIREMENTS** section of this manual. Even if gasoline containing greater than ten volume percent ethanol is readily available, the US EPA has issued a prohibition against the use of gasoline containing greater than 10 vol% ethanol that applies to this engine. The use of gasoline containing greater than 10 vol% ethanol with this engine may harm the emission control system.

Manufacturer's Responsibility

Beginning with 1999 model year outboards, manufacturers of marine engines must determine the exhaust emission levels for each engine horsepower family and certify these outboards with the United States of America Environmental Protection Agency (EPA). An emissions control information label, showing emission levels and engine specifications, must be placed on each outboard at the time of manufacture.

Dealer's Responsibility

When performing service on all 1999 and more recent *Evinrude* outboards that carry an emissions control information label, adjustments must be kept within published factory specifications.

Replacement or repair of any emission related component must be executed in a manner that maintains emission levels within the prescribed certification standards.

Dealers are not to modify the outboard in any manner that would alter the horsepower or allow emission levels to exceed their predetermined factory specifications.

Exceptions include manufacturer's prescribed changes, such as altitude adjustments, for example.

Owner Responsibility

The owner/operator is required to have engine maintenance performed to maintain emission levels within prescribed certification standards.

The owner/operator is not to, and should not allow anyone to, modify the engine in any manner that would alter the horsepower or allow emissions levels to exceed their predetermined factory specifications.

Tampering with the fuel system to change horsepower or modify emission levels beyond factory settings or specifications will void the product warranty.

EPA Emission Regulations

All new 1999 and more recent *Evinrude* outboards manufactured by BRP are certified to the EPA as conforming to the requirements of the regulations for the control of air pollution from new watercraft marine spark ignition engines. This certification is contingent on certain adjustments being set to factory standards. For this reason, the factory procedure for servicing the product must be strictly followed and, whenever practicable, returned to the original intent of the design. The responsibilities listed above are general and in no way a complete listing of the rules and regulations pertaining to the EPA requirements on exhaust emissions for marine products. For more detailed information on this subject, you may contact the following locations:

U. S. Environmental Protection Agency
Office of Transportation and Air Quality
Certification Division
Gasoline Engine Compliance Center
2000 Traverwood Drive
Ann Arbor, MI 48105

EPA Internet Web Site:

www.epa.gov/otaq

Maintenance Schedule

Routine inspection and maintenance is necessary to prolong outboard life. The following chart provides guidelines for inspection and maintenance to be performed by an authorized Dealer, repair shop, or person of your own choosing.

IMPORTANT: Outboards used in rental, commercial, or other high hour applications require more frequent inspections and maintenance. Adjust schedule for operating and environmental conditions.

Description	Dealer Maintenance Every 300 Hours or 3 Years ⁽¹⁾		
	Customer Inspections Every 100 Hours or Annually ⁽¹⁾		
	Action	Engine Care Product	
Anodes (corrosion protection)	Check condition ^{(1), (2)}		✓ ✓
Covers	Wash and wax, repair scratches		✓
Electrical and ignition wires	Inspect for wear or chafing		✓
Engine to transom mounting hardware	Inspect, re-torque		✓
Fasteners	Inspect for loosened components		✓
Fuel and oil system	Inspect		✓
Fuel filter ⁽⁴⁾	Replace		✓
Gearcase lubricant	Replace	A	✓
Grease fittings ⁽²⁾	Lubricate	C	✓
Muffler foam	Inspect, replace if necessary (40–90 HP models)		✓
Oil Filter	Replace (V4 & V6 models)		✓
Power trim & tilt system	Check fluid level		✓
Propeller shaft splines ⁽²⁾	Inspect and lubricate	B	✓
Service codes	Access EMM, check for and resolve any codes		✓
Spark plugs ⁽³⁾	Replace ⁽³⁾		✓
Starter pinion shaft	Inspect and lubricate (electric start models)	D	✓
Steering system	Inspect and lubricate	C	✓
Thermostat and pressure valve ⁽³⁾	Inspect ⁽³⁾		✓
Throttle and shift cables	Inspect		✓
Water pump	Replace		✓

(1) Whichever comes first. Certain conditions may require more frequent inspection and maintenance.

(2) Annually in salt water applications – Refer to **Service** on page 55.

(3) Emission-related component. Refer to **Owner Responsibility** on page 52, **Product**

- A. HPF Pro Gearcase Lubricant in high performance or commercial applications
- B. *Evinrude* Biodegradable TNT Fluid
- C. *Triple-Guard* Grease
- D. Starter Bendix Lube ONLY, P/N 337016

Warranty Information on page 73 and, if applicable, **California Emission Control Warranty Statement** on page 80.

(4) Replace boat-mounted fuel filter annually. Refer to **Boat-Mounted Fuel Filters** on page 68.

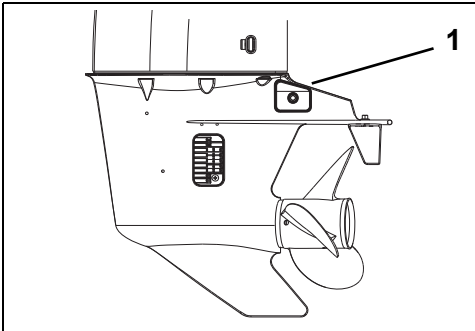
Service

Anti-Corrosion Anodes

NOTICE

NEVER paint the anode, its fasteners, or its mounting surface. Painting will reduce its corrosion protection.

Your outboard is equipped with one or more anodes that protect it from galvanic corrosion. Disintegration of the anode is normal and indicates it is working. Check each anode periodically. Replace anodes smaller than 2/3 their original size. See your service center for replacements.



1. Anti-corrosion anode

007035

Galvanic corrosion destroys underwater metal parts and can occur in fresh or salt water; however, salt, brackish, and polluted waters will accelerate corrosion.

Metal-based anti-fouling paint on the boat or outboard and the use of improperly installed shore power in the area of your moored boat will also accelerate corrosion.

Flushing

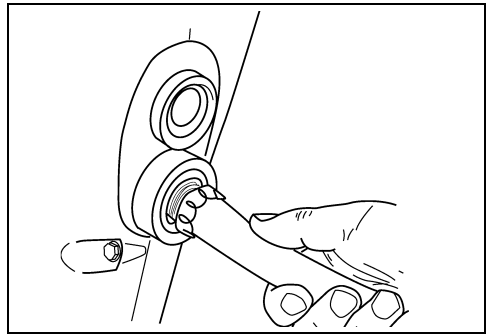
NOTICE

If you cannot store the outboard in the recommended vertical position, be sure the cooling system is drained completely. Never place the gearcase higher than the powerhead. Any water remaining in the exhaust passages can run into the cylinders and cause serious damage.

Flush the outboard with fresh water following use in brackish, salt or polluted water to minimize the accumulation of scale and silt deposits in cooling system passages. The outboard can be flushed on the trailer or at dockside. Place outboard in vertical (down) position in a well ventilated area.

Using Lower Engine Cover Flushing Port

- 1) Place the outboard in an area with good drainage.
- 2) Connect garden hose to flushing port.
- 3) Turn on the water. It is **not** necessary to run the engine for a good flushing.



002024

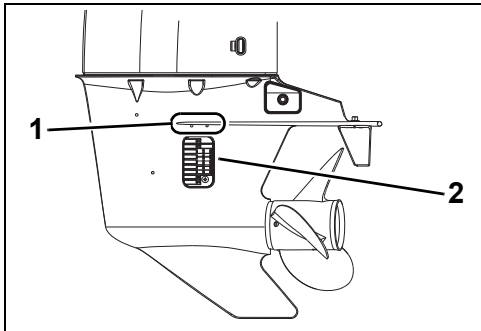
- 4) Leave the outboard in vertical position long enough to completely drain the powerhead.

Using Gearcase Flushing Device

- 1) Place the outboard in an area with good drainage.
- 2) Temporarily cover the two small auxiliary water inlet holes on each side of the gearcase with heavy tape to insure enough water travels to the powerhead from the water intakes. Water can drain from auxiliary inlets, resulting in engine overheat. Remem-

Maintenance

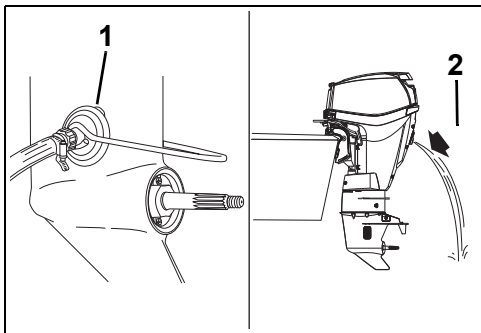
ber to uncover the holes after flushing the engine.



1. Auxiliary water inlet holes
2. Water intakes

007035

- 3) Remove propeller and place the shift lever in NEUTRAL position.
- 4) Connect garden hose to flushing device and install flushing device on gearcase.
- 5) Turn on the water. Keep the water pressure between 20 and 40 psi (140 to 300kPa).
- 6) Start the engine and RUN AT IDLE SPEED. Flush engine for at least five minutes. A steady stream of water must flow from exhaust relief port of outboard.



1. Flushing device
2. Stream of water

008032

- 7) Turn engine OFF. Leave the outboard in vertical position long enough to completely drain the powerhead.

Fuse

On outboards equipped with an accessory electric starter, a blown fuse will not allow the engine to start. Replace it with a fuse of the same rating. A spare fuse is provided.

Repeated fuse failures indicate a potentially serious problem. Do not replace it with higher rated fuse; see your Dealer for service.

In an emergency, the engine may be rope-started and run, this will not harm the engine.

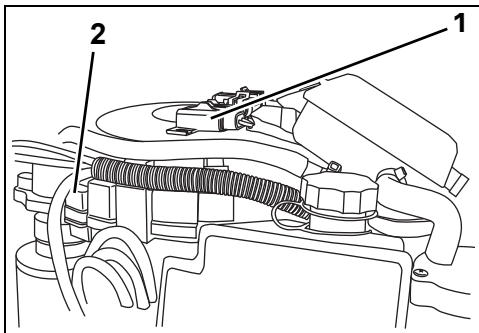
Fuse Replacement

NOTICE

Use only fuses of the same rating. Your Evinrude E-TEC outboard uses 10-amp fuses.

Failure to install cover securely may cause electrical problems.

Remove engine cover. Install spare fuse in place of failed fuse.



1. Fuse
2. Spare fuse

007034

Hull Finish

The condition of your boat's bottom affects performance. Marine growth or bottom painting may reduce speed and fuel efficiency.

For maximum performance, keep the boat's running surface clean by rinsing it with fresh water and wiping it dry. Apply *Evinrude* anti-corrosion spray to any surface subject to corrosion, but avoid the anti-corrosion anode(s).

Outboard External Finish

NOTICE

When trailering your outboard, **DO NOT** cover the engine with canvas—it will dull the finish of the outboard's engine covers.

Your outboard's upper and lower engine covers use molded-in color technology, providing a deep, durable gloss with maximum ultraviolet (sunlight) protection.

The high gloss finish will show polish marks when viewed closely in certain light conditions. This glossing is **NORMAL**.

Periodically, wash the entire boat and outboard with soapy water and apply a coat of automotive wax. Leave the engine cover in place when washing the outboard.

Scratch Repair

IMPORTANT: Your Dealer has the professional materials to properly repair scratches. Do not attempt to paint over marks or scratches in the composite material. See your Dealer to repair any deep scratches or gouges.

Surface scratches on the upper and lower engine covers can be polished out with buffing compound.

Treat affected areas using these steps:

- 1) Sand the affected area with 800-grit sandpaper.
- 2) Wet sand the area with 1200-grit sandpaper.
- 3) Using a composite material buffing compound, polish the area, closely following the product directions.

Spark Plugs

⚠ CAUTION

The ignition system presents a serious shock hazard. Use caution to avoid injury from shock or injury resulting from your reaction to shock. Do not handle primary or secondary ignition components while the engine is cranking or running.

NOTICE

Replacement spark plugs **MUST** be indexed correctly. Incorrect spark plug maintenance can lead to engine damage.

Marine Engine Duty Cycles

The International Council of Marine Industry Associations (ICOMIA) Standard No. 36-88 specifies a marine engine duty cycle based on documented studies. A duty cycle is a profile of engine running and usage. This duty cycle is used to determine average spark plug longevity and maintenance requirements.

ICOMIA Marine Engine Duty Cycle

Engine Speed as Percentage of Rated Speed (RPM)	Time at Specified RPM (Percentage of total engine running time)
IDLE	40%
40%	25%
60%	15%
80%	14%
100%	6%

NOTICE

Some running profiles and conditions can lead to spark plug wear sooner than expected. Depending on your specific usage, the spark plug maintenance schedule may require adjustment.

Submerged Outboard

If your outboard has been under water, **have it serviced immediately upon recovery**. If immediate service is unavailable, resubmerge it in fresh water to avoid prolonged exposure to the atmosphere.

After submersion, all boat and engine electrical, fuel, and oiling systems must be inspected for signs of water intrusion. Your service technician should perform this service.

Storage

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.

NOTICE

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. Refer to **Long-Term Storage (Winterization)** on page 59.

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

Use *Evinrude 2+4 Fuel Conditioner* to prevent gum and varnish deposits from forming in fuel system components. Refer to **Operation** on page 23.

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.

WARNING

If engine is equipped with a quick-disconnect fuel hose, you **MUST** disconnect the fuel hose from the engine and the fuel tank to prevent fuel leaks:

- Whenever the engine is **NOT** being used
- Whenever the engine is being trailered
- Whenever the engine is in storage

NOTE: A small amount of fuel may be released when the fuel connector is disconnected.

Store fuel tanks in well-ventilated areas, away from heat sources and open flames.

Prevent escape of fuel or fuel vapors which could accidentally ignite.

Close the vent screw of the fuel tank cap (if equipped).

Do not allow disconnected fuel hoses to leak fuel.

If the outboard is laid down for transportation or storage, the oiling system must be primed before reusing the outboard. Refer to **Priming the Oil System** on page 19.

Short-Term Storage

If you must tilt the outboard to remove it from the water, lower it and allow the cooling system to drain completely as soon as you clear the launch area. Between uses, store your outboard in a vertical position.

Long-Term Storage (Winterization)

⚠ 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.

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.

Note: The Long-Term Storage procedure can be used to prime the oiling system.

Winterization requires a specific process of steps.

Closely follow the applicable winterization procedure for your outboard:

- Remote control
- Tiller control
- Remote control with foot throttle

If you are unsure which procedure is right for you, contact your service technician for assistance.

You can confirm your outboard enters winterization mode when the engine runs at fast idle.

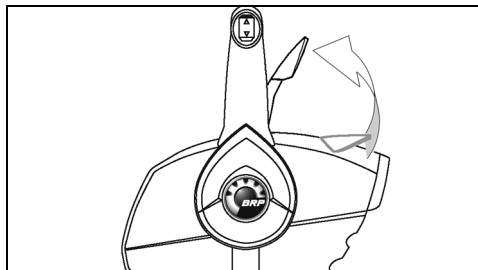
Preparation

Your outboard can be winterized in the water. **If winterizing in water**, make sure the water intake screens are completely submerged.

- 1) Stabilize the engine’s fuel supply. Add 2+4 *Fuel Conditioner* following instructions on container. Fill fuel tank.
- 2) **If winterizing on a trailer**, remove the propeller. Attach a garden hose to flushing port and turn on the water. Refer to **Flush** on page 55.
- 3) Outboard **must** be in NEUTRAL, and remote control and shift linkage must be in NEUTRAL position at all times during winterization procedure.

Remote Control Outboards

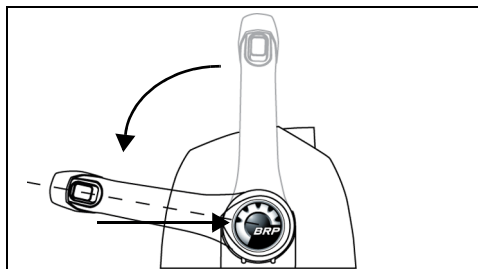
- 1) **For side mount controls**, fully lift the fast idle lever. Start the outboard. Outboard runs at slow idle speed.



Side Mount Control – Typical

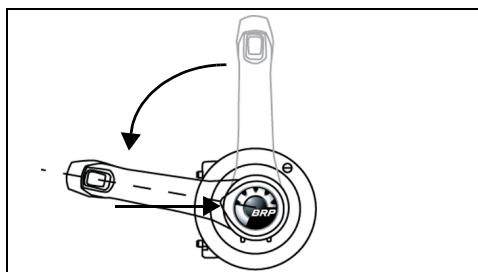
006455A

- For binnacle or concealed side mount controls**, press fast idle button and fully advance throttle handle. Start the outboard. Outboard runs at slow idle speed.



Binnacle Control – Typical

006456



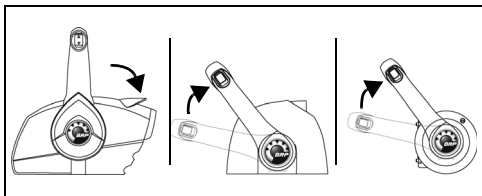
Concealed Side Mount Control – Typical

006457

- 2) After outboard runs for at least 15 seconds:
 - For side mount controls**, lower fast idle lever.
 - For binnacle or concealed side mount controls**, return throttle handle to IDLE position.

Maintenance

Outboard continues to run at slow idle speed.



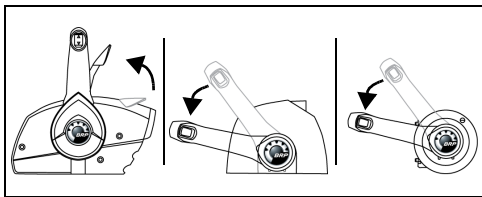
006458

- 3) After outboard runs for another 15 seconds:

For side mount controls, fully raise the fast idle lever again.

For binnacle or concealed side mount controls, fully advance throttle handle again.

Outboard will accelerate to fast idle speed and fog itself.



006459

- 4) Allow outboard to run until it shuts itself OFF automatically (one to two minutes).

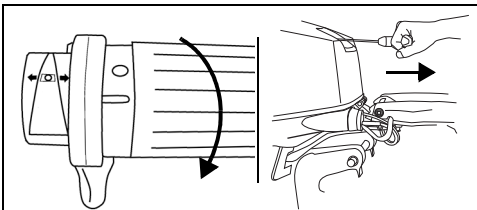
Winterization is complete when outboard shuts itself off.

- **If the outboard DOES NOT shut itself off**, you may not have used the fast idle lever or button and the outboard was shifted into gear.
- **If the engine exceeds 3000 RPM**, the outboard may have been shifted into gear.

In either event, immediately turn the key switch OFF and re-start the procedure.

Tiller Control Outboards

- 1) Fully advance throttle grip. Start the outboard. Outboard runs at slow idle speed.

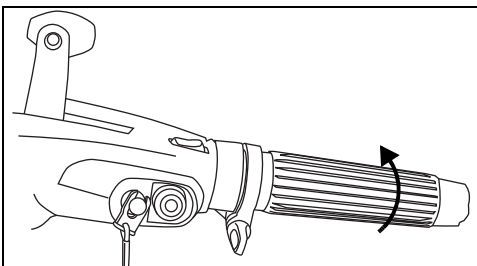


Tiller Control – Typical

007036

007037

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



007038

- 3) After outboard runs for another 15 seconds, fully advance the throttle grip again. Outboard will accelerate to fast idle speed and fog itself.

- 4) Allow outboard to run until it shuts itself OFF automatically (one to two minutes).

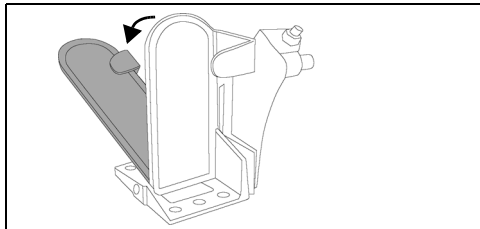
Winterization is complete when outboard shuts itself off.

- **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 the engine cut-off switch to turn outboard OFF and re-start the procedure.

Remote Control Outboards with Foot Throttle

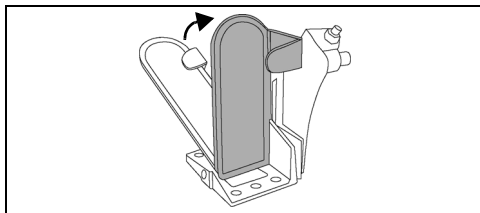
- 1) Fully advance the foot throttle. Start the outboard. Outboard runs at slow idle speed.



Foot Throttle – Typical

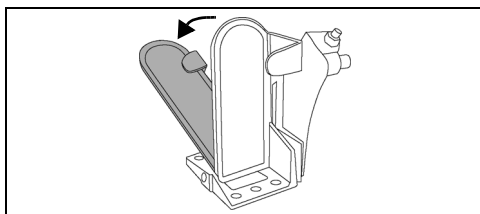
006454

- 2) After outboard runs for at least 15 seconds, remove foot from foot throttle and allow throttle to return to IDLE position. Outboard continues to run at slow idle speed.



006466

- 3) After outboard runs for another 15 seconds, fully advance the foot throttle again. Outboard will accelerate to fast idle speed and fog itself.



006454

- 4) Allow outboard to run until it shuts itself OFF automatically (one to two minutes).

Winterization is complete when outboard shuts itself off.

- **If the outboard DOES NOT shut itself off**, you may not have allowed enough running time at a throttle position.
- **If the engine exceeds 3000 RPM**, the outboard may have been shifted into gear.

In either event, immediately turn the key switch OFF and re-start the procedure.

After Winterization – All Outboards

- 1) After the outboard shuts itself off, turn key switch OFF. (For tiller models, remove engine cut-off 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.

NOTICE

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. Reconnect speedometer pickup after all the water has been removed.

- 3) Top off oil tank.

Extra engine oil is used during the winterization procedure. Some excess 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.

Maintenance

Pre-Season Check

Remove your outboard from storage and prepare it for a season of reliable service by performing a general check and a few preventive maintenance procedures.

Examine all loosened or removed hardware. Replace damaged or missing parts with *Evinrude Genuine Parts* or equivalent. Check the gearcase for leakage. If leakage is evident, the gearcase seals should be replaced. See your service technician.

IMPORTANT: Gearcase lubricant is **thick and clear**. Do not confuse this with engine oil, which may normally appear on the skeg after performing the long-term (winterization) storage procedure.

Anticorrosion anodes — Check condition. Refer to **Anti-Corrosion Anodes** on page 55.

Battery — Charge fully. Refer to **Battery - Electric Start Models** on page 68.

WARNING

Do not use a booster battery and jumper cables to start the outboard. Gasoline fumes can cause explosion and fire, resulting in property damage, personal injury or death.

Review your outboard's warning system self-test routine. During your pre-season start-up, make sure the warning system self-tests properly. If it does not, see your service technician.

NOTICE

Do not run your outboard—even for a brief start-up—without supplying water to it.

Following **Engine Starting / Stopping - Tiller Models** on page 23 or **Engine Starting / Stopping - Remote Control Models** on page 29, start the outboard. If the outboard was auto-winterized, it will emit a puff of smoke on the first start of the season.

Let engine idle while you:

Observe running quality. If poor, refer to **Troubleshooting** on page 63 or see your service technician.

Confirm water pump operation. Water must flow from the water pump indicator in a steady stream. If it does not, shut off the outboard and investigate. Refer to **Troubleshooting** on page 63.

Stop the outboard and check the fuel system for leaks.

WARNING

Failure to check for fuel leakage could allow a leak to go undetected, resulting in fire or explosion.

Troubleshooting

SYMPTOM	POSSIBLE CAUSE
Warning system activates the TEMP warning	<p>S.A.F.E. protection mode activated with a continuous indicator — The <i>EMM</i> has identified an overheating condition.</p> <ul style="list-style-type: none"> • Check the water pump indicator for a steady stream of water. Shut OFF the engine. • Clear the water intake screens of any debris. If the overheat condition still exists, the engine will operate in “get home” mode. Return to harbor immediately. • See S.A.F.E. Reset on page 64. <p>S.A.F.E. protection mode activated with a flashing indicator — The <i>EMM</i> has identified a damaging overheating condition. The engine will not operate.</p> <ul style="list-style-type: none"> • Allow the engine to cool for 20 minutes and return to harbor immediately. • See S.A.F.E. Reset on page 64. • See the Service Note on page 64.
Warning system activates the CHECK ENGINE warning	<p>S.A.F.E. protection mode activated with a continuous indicator — The <i>EMM</i> has identified a problem with the outboard.</p> <ul style="list-style-type: none"> • Seek assistance and/or return to harbor. • See the Service Note on page 64. <p>A continuous indicator without S.A.F.E. mode — The <i>EMM</i> has identified a problem that should be addressed as soon as practical to avoid operational difficulties. See the Service Note on page 64.</p> <p>Shut-down mode activated with a flashing indicator — The <i>EMM</i> has identified an abnormal operating condition related to the fuel system.</p> <ul style="list-style-type: none"> • The engine will shut OFF and cannot be restarted. • Seek assistance and/or return to harbor. • See the Service Note on page 64.
Starter motor will not operate	<ul style="list-style-type: none"> • Shift handle not in NEUTRAL. • Fuse blown. • Battery is dead.
Engine will not start	<ul style="list-style-type: none"> • Not following starting instructions. Refer to Engine Starting / Stopping - Remote Control Models on page 29. • Fuel system not primed after running out of fuel. Refer to Operation on page 23. • Fuel tank empty. • Fuel hose kinked. • Fuel system contaminated with water or dirt. • Fuel filter obstructed. • Spark plugs incorrect. Refer to Service on page 55. • Spark plugs improperly gapped, carboned, burned, or wet.

Maintenance

SYMPTOM	POSSIBLE CAUSE
Engine will not idle properly	<ul style="list-style-type: none"> • Debris on propeller. • Spark plugs damaged or incorrect. Refer to Service on page 55. • Fuel system contaminated with water or dirt.
Engine loses power	<ul style="list-style-type: none"> • S.A.F.E. protection mode activated. Refer to Engine Monitoring on page 42. • Water intakes obstructed and cooling system not operating correctly. Refer to Special Operating Conditions on page 45. • Spark plugs damaged or incorrect. Refer to Service on page 55. • Fuel filter obstructed. • Fuel system contaminated with water or dirt. • Oiling system malfunction.
Engine runs, but makes little or no progress	<ul style="list-style-type: none"> • Throttle needs to be reset, refer to Refer to Operation on page 23. • Propeller hub loose, slipping. • Propeller blades bent or missing. • Propeller shaft bent. • Propeller debris.

S.A.F.E. Reset

In the event of an engine overheat, it may be possible to reset the S.A.F.E. system and restore normal operation:

- The engine must be shut off and the cooling temperature restored.

IF the S.A.F.E. mode activates and water pressure becomes intermittent or stops, reduce speed to idle and:

- 1) Shift to NEUTRAL.
- 2) SHUT OFF the engine.
- 3) Tilt the outboard up.
- 4) Clean the water intake screens of any blockage.
- 5) Clean the water pump indicator of any blockage.
- 6) Lower the outboard.
- 7) Restart the engine and run at idle.

IF cleaning the screens and indicator *does not* restore the water pump indicator's steady discharge, the engine will operate only in S.A.F.E. mode. Return to harbor immediately. See the **Service Note** on page 64.

IF cleaning the screens and indicator *does* restore the water pump indicator's steady discharge, you might have to run for two minutes in NEUTRAL to allow the engine to cool and the warning indicator to turn OFF.

IMPORTANT: If cooling is not restored, the *EMM* will identify a progressive overheating condition and shut off the engine. The "LED 4" indicator will flash. The engine will not restart until the engine is allowed to cool.

After any overheat causing engine shutdown, The following items should be inspected:

- Inspection of the water pump for excessive wear or damage.
- Inspection of the thermostats.
- See the **Service Note** on page 64.

NOTICE

Although the S.A.F.E. mode can help prevent engine damage, it does not guarantee you can run your engine indefinitely without engine damage.

Service Note

Seek service from an authorized *Evinrude* dealer, repair shop, or person of your own choosing for maintenance, repair, or replacement. Please refer to the US EPA EMISSION-RELATED WARRANTY contained herein for information about warranty claims.

Product Information

Installation

⚠ WARNING

Your outboard must not exceed the maximum horsepower indicated on the boat's capacity plate. Such overpowering can cause loss of control. Contact your Dealer or the boat's manufacturer if your boat lacks a capacity plate.

Boats designed for remote-steered outboards might be overpowered by a tiller-steered outboard of the maximum rated horsepower. Ask your Dealer or boat manufacturer if you are unsure about your boat's suitability.

Incorrectly matched boat and outboard transom heights can cause boat instability and loss of control. Refer to Transom Height.

Prevent lateral movement and possible outboard loss by using the mounting hardware supplied or hardware of sufficient size, strength, and quality. Refer to Installing the Outboard on page 65.

A mounting surface that is damaged or too thin to support your outboard while underway might fail during operation, causing a loss of control. Be sure the boat's transom or mounting bracket is structurally sound and between 1 5/8 in. (41 mm) and 2 3/4 in. (70 mm) in thickness.

NOTICE

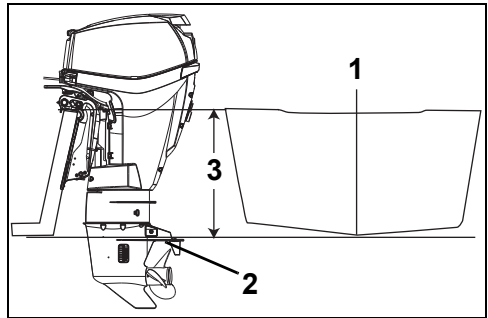
Use an appropriate hoist to lift the engine. Refer to Specifications on page 72 for engine weight.

Transom Height

Make sure the transom height matches the length of the outboard to be installed.

- A 19 to 21 in. (48.3 to 53.3 cm) transom height uses a 20 in. (50.8 cm) shaft outboard.
- The shaft length of the outboard being installed should come close to matching the transom height of the boat.
- Refer to **Specifications** on page 72 for transom height.

Determine transom height by measuring from the top edge of the transom, along the centerline.



1. Centerline
 2. Anti-ventilation plate
 3. Transom Height
- 007039

Boat performance depends on outboard mounting height.

Generally, the anti-ventilation plate of the gearcase should align with the bottom of the hull. Conventional V-hulls often perform well with the anti-ventilation plate approximately 1 in. (25 mm) above the bottom of the hull.

The anti-ventilation plate should NOT extend more than 2 in. (5 cm) BELOW the bottom of the hull.

Test outboard and boat performance at different heights until the best performance is achieved.

IMPORTANT: Be sure that outboard water pressure is not adversely affected by the mounting height of the outboard.

Installing the Outboard

⚠ WARNING

The outboard must be correctly installed. Failure to correctly install the outboard could result in serious injury, death or property damage. We strongly recommend that your Dealer install your outboard to ensure proper installation.

IMPORTANT: Follow all directions carefully. The outboard's warranty will not cover prod-

uct damage or failure that results from incorrect outboard installation.

Refer to **Priming the Oil System** on page 19.

Mounting DH, DR, DRL, HP and HT Models

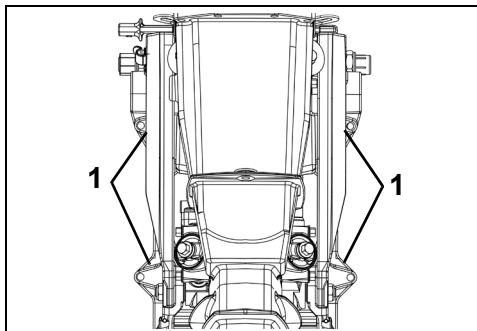
⚠ WARNING

Even if equipped with clamp screws, your outboard must be bolted to the boat to prevent it from “working off the transom” during operation.

Center the outboard on the transom (or mounting bracket) and tighten clamp screws by hand.

Use the outboard stern brackets as a template for location and size of holes to drill in the transom.

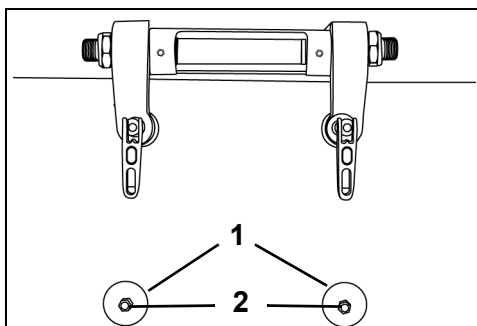
Use each stern bracket’s mounting holes as a guide to drill 5/16 in. (7.9 mm) holes through the transom. Drill two (2) mounting holes on 25 / 30 HP models and (4) mounting holes on 15 H O models



15 DH, HP & HT Models 007999

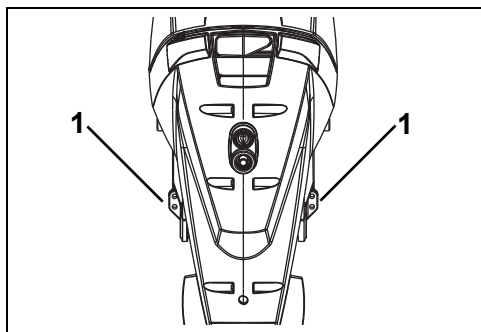
- 1. Drilled transom holes

Install the mounting bolts through the stern brackets and transom. Install large washers and locknuts onto bolts and tighten securely.



18961

- 1. Large washers
- 2. Bolts



25 / 30 DR & DRL Models 007040

- 1. Drilled transom holes

⚠ WARNING

When replacing bolts, screws, or other fasteners, use Evinrude parts or parts of equivalent strength and material.

Product Information

Boat-Mounted Fuel Filters

Boat-mounted fuel filters and water-separating fuel filter assemblies must meet the following requirements:

- **Fuel flow** – 0.4 in. Hg maximum pressure drop at 20 gph (76 l/hr) flow.
- **Filter area** – 150 in.² (1290 cm²) of filter area.

The filter must be mounted to a rigid surface above the full level of the fuel tank and accessible for servicing.

Fuel Filter Assembly, P/N 174176, meets all requirements for a water-separating fuel filter.

If equipped, replace the boat-mounted fuel filter annually. See your service center for replacement Fuel Filter (25 micron), P/N 502905.

Ask your Dealer about your outboard's requirements before installing longer battery cables or a battery switch.

Installation

⚠ WARNING

Read and understand the safety information supplied with your battery **BEFORE** you begin installation.

NOTICE

Make sure all components are clean and free of corrosion. Connect the **RED (+)** cable to the positive (+) battery post first. Connect the **BLACK (-)** cable to the negative (-) battery post last.

NOTICE

DO NOT use wing nuts on battery connections even if they came with the battery. Wing nuts can loosen and cause errant warning signals or electrical system damage.

Marine Battery Posts — install each main cable on the post with a star washer below it.



1. Main cable
2. Starwasher
3. Terminal insulator

009166

Battery - Electric Start Models

⚠ WARNING

Battery electrolyte is acidic — handle with care. If electrolyte contacts any part of the body, immediately flush with water and seek medical attention.

Do not use a booster battery and jumper cables to start the outboard. Gasoline fumes can cause explosion and fire, resulting in property damage, personal injury or death.

⚠ WARNING

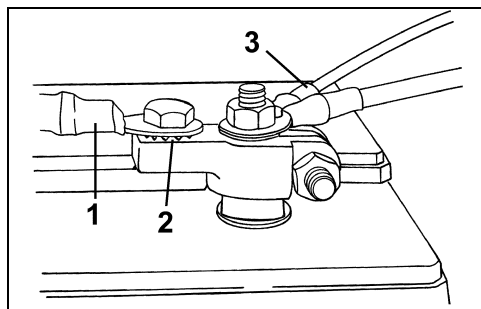
Keep the battery connections clean, tight, and insulated to prevent their shorting or arcing and causing an explosion. If the battery mounting system does not cover the connections, install covers. Check often to see that connections stay clean and tight.

Requirements

- 12-volt, heavy-duty, designated for "marine" use;
- Vented/refillable or maintenance-free; and
- Rated according to the minimum requirements in **Specifications** on page 72.

Deep-cycle batteries are suitable **IF** they meet or exceed the minimum CCA requirements.

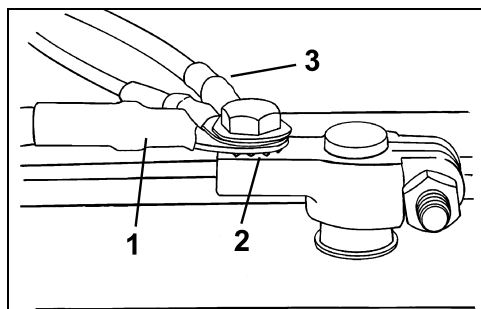
Battery Terminal Adapter Kit, P/N 385407 — install the main cable on the adapter with a star washer below it. Install wires from accessories on the threaded portion of the post.



1. Main cable
2. Starwasher
3. Accessory wires

DR6495

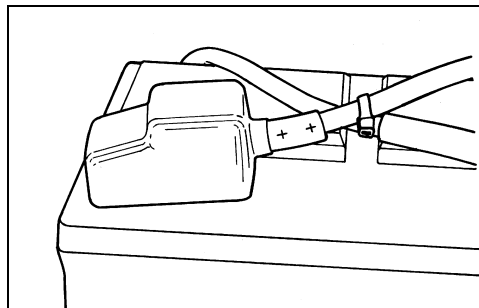
Automotive Type Battery Posts — Use Battery Terminal Adapter Kit, P/N 385407. Place a star washer on the adapter first, then the main cable. Install wires from the accessories on the main cable.



1. Main cable
2. Starwasher
3. Accessory wires

DR6496

Tighten all connections securely and coat the installation with *Triple-Guard* grease.



DR5104

Service

NOTICE

Service electrical components only while the outboard is NOT running. Be careful when identifying positive and negative battery cables and posts.

Before servicing the battery or the outboard, remove both battery cables from the battery, battery negative (-) cable first. Keep metal objects from contacting either battery post.

Product Information

Propeller

Propeller Selection

To select the correct propeller for your boating application, your boat and outboard **MUST** be water tested. See your Dealer for assistance.

IMPORTANT: The correct propeller for your boat, under normal load conditions, will allow the engine to run near the midpoint of the RPM operating range at full throttle. Refer to **Specifications** on page 72.

⚠ WARNING

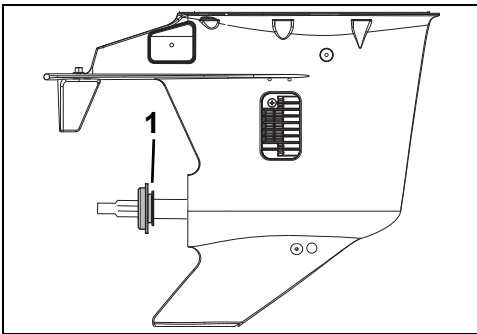
When servicing the propeller, always shift the outboard to **NEUTRAL** position, turn the key switch **OFF**, and twist and remove all spark plug wires so the outboard cannot be started accidentally.

Installation

NOTICE

Apply *Triple-Guard* grease to the entire propeller shaft before installing the propeller. At least annually, remove the propeller and check for debris. Clean the shaft and re-grease it before reinstalling a propeller.

Slide thrust washer onto shaft with fishline trap groove facing forward.

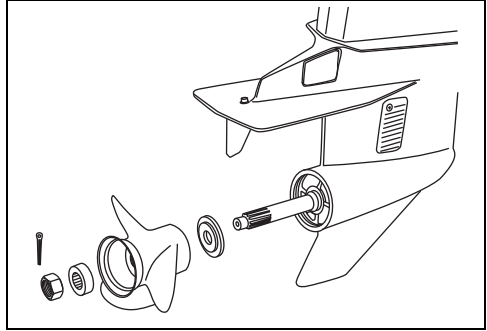


1. Groove

007054

Slide propeller onto shaft, engaging the splines and seating it on the thrust bushing.

Slide spacer onto the shaft and engage the propeller shaft splines.



007055

Wedge a block of wood between the propeller blade and the anti-ventilation plate.

Install propeller nut and tighten to a torque of 120-144 in. lbs. (13.6-16.3 N·m).

IMPORTANT: If cotter pin holes in the propeller nut and propeller shaft are not aligned, tighten the nut until they are in line. Do not loosen.

Install new cotter pin and bend ends to secure.

Remove block of wood. Make sure engine is in **NEUTRAL**; give propeller a spin. It must turn freely.

Repair

NOTICE

Avoid or limit operation using a damaged propeller. Carry a spare propeller.

If your propeller hits a solid object, the impact is partially absorbed by the bushing in the hub to help prevent damage to the outboard. A strong impact can damage the hub and propeller blades. Damage to blades can cause unusual and excessive vibration. Damage to the hub can cause excessive engine RPM with little forward movement.

Keep your propeller in good condition. Use a file to smooth slight damage to blade edges. See your Dealer for repair of serious damage.

Adjustments

Trim Tab

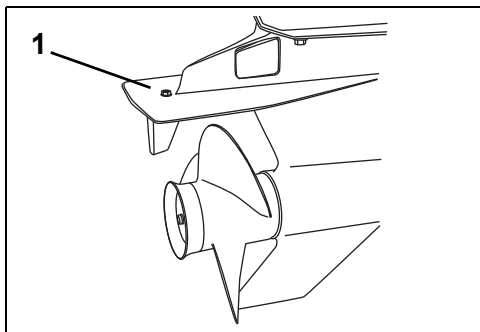
⚠ WARNING

Improper trim tab adjustment can cause difficult steering.

A propeller will generate steering torque when the propeller shaft is not running parallel to the water's surface. The trim tab is adjustable to compensate for this steering torque.

IMPORTANT: A single trim tab adjustment will relieve steering effort under only one set of speed, outboard angle and load conditions. No single adjustment can relieve steering effort under all speed, outboard angle and load conditions. If the boat pulls to the left or right when its load is evenly distributed, adjust the trim tab as follows:

With the outboard shut OFF, loosen the trim tab screw. If the boat pulled to the right, move the rear of the trim tab slightly to the right. If the boat pulled to the left, move the rear of the trim tab slightly to the left.



1. Trim tab screw

007044

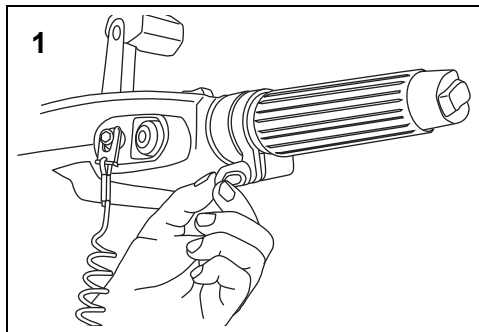
Tighten the trim tab screw to a torque of 60-84 in. lbs. (7-9 N·m).

Test the boat and, if needed, repeat the procedure until steering effort is as equal as possible.

High outboard installations — The trim tab might be above the water when the outboard is trimmed out. Steering effort might increase. Steering effort will be reduced if you trim the outboard in and submerge the trim tab.

Friction

Throttle Friction — Adjust until a slight drag is felt when accelerating or decelerating only. DO NOT overtighten.



1. Throttle friction screw

007041

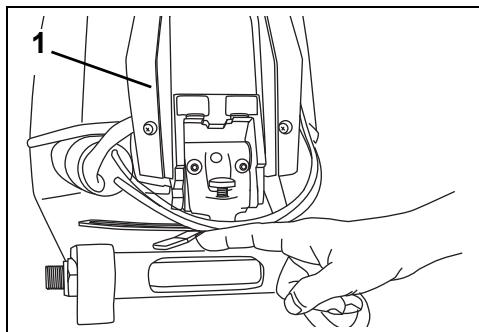
Steering Friction — The steering friction was set on your outboard at the factory. A slight drag should be felt when turning the outboard with the steering handle.

⚠ WARNING

DO NOT over-tighten for “hands-off” steering. Reduced steering control could result.

If adjustment is necessary, turn the adjustment screw:

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



1. Steering friction lever

007042

Specifications

15 HO, 25, 30 Models	
Displacement	35.1 cu. in. (576 cc)
Engine Type	In-line, 2 Cylinder, Two-Cycle, <i>E-TEC</i>
Full Throttle Operating Range	15 HP (HO) – 5000 to 5500 RPM 25, 30 HP – 5500 to 6000 RPM
Power ⁽¹⁾	15 HP (HO) – 15 HP (11.0 kw) @ 5500 RPM 25 HP – 25 HP (18.4 kw) @ 5500 RPM 30 HP – 30 HP (22.1 kw) @ 5500 RPM
Idle RPM in Neutral ⁽²⁾	750 ± 50
Ignition Timing ⁽²⁾	Not Adjustable
Emission Control System: per SAE J1930 ⁽²⁾	ECM, <i>E-TEC</i> (Engine Control Module, <i>E-TEC</i>)
Fuel Requirements ⁽²⁾	87 Pump Posted AKI (90 RON) – Refer to Fuel Requirements on page 20
Oil – Lubricant – Capacity	TC-W3 NMMA-certified oil or <i>Evinrude XD100</i> oil – Refer to 2- Stroke Engine Oil Requirements on page 18 1.5 qt. (1.4 l)
Warning Signals	Controlled by the outboard's <i>EMM</i>
Battery, Minimum ⁽³⁾	640 CCA (800 MCA) 12 volt or 800 CCA (1000 MCA) 12 volt below 32°F (0°C)
Spark Plug ⁽²⁾	Refer to Parts Catalog or engine ECI Label
Fuses	P/N 967545 – Refer to Fuse on page 56
Fuel Filter	In-line Replaceable
Battery Charging	15-Amp, Fully Regulated
Gearcase – Lubricant ⁽⁴⁾ – Capacity	<i>Evinrude HPF Pro</i> 11 fl. oz. (325 ml)
Power Trim/Tilt – Fluid Capacity	11.7 fl. oz. (345 ml)
Propeller	Refer to Propeller Selection on page 70
Weight	DR / DRL Models 150 /154 lbs. (68 / 70 Kg), DEL / DTE / DTEL Models 160 / 162 /166 lbs. (73 / 74 / 75 Kg), DPL / DHPL / HPSL Models 181 lbs. (82 Kg), DTL / DHTL / HTSL / HPSX Models 187 lbs. (85 Kg), HTSX Models 193 lbs. (88 Kg)
Sound at Drivers Ear (LpA) ICOMIA 39.94	76.8 dB(A)
Transom Height	DR / DTE Models – 14.5 to 15 in (368 to 381 mm) DRL / DTEL / DPL / DTL / DHTL / DHPL / HTSL / HPSL Models – 19.5 to 20 in (495 to 508 mm) HTSX / HPSX Models – 24.5 to 25 in (622 to 635 mm)

(1) Rated following the standards of ICOMIA 28.83, ISO 3046 and NMMA.

(2) Emission Control Information.

(3) Use a 800 CCA (1000 MCA) battery when operating in temperatures below 32°F (0°C).

(4) Use *Evinrude HPF Pro* Gearcase Lubricant for high performance outboards and commercial applications. *Evinrude HPF Pro* Gearcase Lubricant delivers exceptional durability and reliability and promotes long gearcase life in marine use.

Product Warranty Information

BRP US Inc. Limited Warranty For *Evinrude*® Outboard Engines

1. Scope Of The Limited Warranty

BRP US Inc.* ("BRP")* warrants its *Evinrude*® outboard engines (the "Product") sold by distributors or dealers authorized by BRP to distribute *Evinrude*® outboard engines (the "OE Distributor/Dealer") from defects in material or workmanship for the period and under the conditions described below.

All genuine *Evinrude*® parts and accessories, including but not limited to propellers, gauges, oil tanks, remote controls, wiring and key switches installed by an authorized OE Distributor/Dealer at the time of delivery of the Product bear the standard BRP limited warranty for *Evinrude*® genuine parts and accessories. See your authorized OE Distributor/Dealer for a full copy of such limited warranty.

This limited warranty will become null and void if:

(1) Product was used for racing or any other competitive activity, at any point, even by a previous owner; or (2) Product has been altered or modified in such a way so as to adversely affect its operation, performance or durability, or (3) the Product has been altered or modified to change its intended use, horsepower or emission levels.

2. Exclusions — The following are not warranted under any circumstances:

- Replacement of parts due to normal wear and tear;
- Outboard jet pumps that are added to outboards and parts contained there in;
- Routine maintenance parts and services including but not limited to: maintenance requirements, engine and lower unit oil changes, lubrication, valve and linkage adjustments and replacement of fuses, zinc anodes, thermostats, timing belts, filters, propellers;
- Damage caused by improper or lack of installation, maintenance, winterization and/or storage, failure to follow the procedures and recommendations in the Operator's Guide;
- Damage resulting from removal of parts, improper repairs, service, maintenance, or modification, or use of parts or accessories not manufactured or approved by BRP, which in its reasonable judgment, are either incompatible with Product or adversely affect its operation, performance, or durability, or resulting from repairs done by a person that is not an authorized OE Distributor/Dealer (as described below);
- Damage caused by abuse, misuse, abnormal use, neglect, racing, improper operation or operation of the Product in a manner inconsistent with the recommended operation described in the Operator's Guide;
- Damage resulting from external damage, accident, submersion, water ingestion, fire, theft, vandalism or any act of God;
- Operation without proper fuel, oil or lubrication, or with fuels, oils or lubricants which are not suitable for use with the Product (see the Operator's Guide);
- Damage resulting from rust;
- Damage resulting from corrosion (for G2™ engines - see *Evinrude*® *E-TEC*® G2™ Limited Corrosion Warranty);
- Damage caused from cooling system blockage by foreign material;
- Damage resulting from sand or debris in the water pump;
- Cosmetic or paint changes due to exposure to the elements;
- Incidental or consequential damages, or damages of any kind including without limitation expense for gasoline, expense for transporting Product to and from OE Distributor/Dealer, removal of Product from a boat and reinstallation, mechanic's travel time, in-and-out of water charges, slip or dock fees, trailering or towing, storage, telephone, cell phone, fax charges, rental of a like or replacement Product or boat during warranty services or down time, taxi, travel, lodging, loss of or damage to personal property, inconvenience, cost of insurance coverage, loan payments, loss of time, loss of income, revenue or profits, or loss of enjoyment or use of Product.

3. Limitations of Liability

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY IS EXPRESSLY GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESS LIMITED WARRANTY.

INCIDENTAL, AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS LIMITED WARRANTY.

SOME COUNTRIES, STATES, PROVINCES, OR JURISDICTIONS DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE. AS A RESULT, THEY MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH MAY VARY FROM COUNTRY TO COUNTRY, STATE TO STATE, OR PROVINCE TO PROVINCE. (FOR PRODUCTS PURCHASED IN AUSTRALIA SEE CLAUSE 4 BELOW).

Neither the OE Distributor /Dealer nor any other person has been authorized to make any affirmation, representation or warranty regarding the Product other than those contained in this limited warranty and, if made, shall not be enforceable against BRP. BRP reserves the right to modify this limited warranty at any time, being understood that such modification will not alter the warranty conditions applicable to the Products sold while this limited warranty is in effect. If a Product is purchased under a governmental contract, the terms of such contract supersede the terms stated herein.

4. Warranty Coverage Period

This limited warranty will be in effect (1) from the date of delivery to the first retail consumer or (2) the date the Product is first put to use, whichever occurs first, and for the applicable period below:

1. Private or recreational use: THIRTY-SIX (36) CONSECUTIVE MONTHS; or
2. Commercial use:

Products sold in Canada or United States: as agreed at the time of purchase at the OE Distributor/ Dealer and as registered by OE Distributor/Dealer in BOSSWeb, either:

(i) twelve (12) CONSECUTIVE MONTHS UNLIMITED HOURS; or

(ii) thirty-six (36) CONSECUTIVE MONTHS or 750 HOURS OF OPERATION as determined by Product Engine Management Module (EMM) whichever occurs (first).

Products sold outside Canada or United States: TWELVE (12) CONSECUTIVE MONTHS or 750 HOURS OF OPERATION as determined by Product Engine Management Module (EMM), whichever occurs first.

*Exceptions applicable to commercial use only:

(i) Exhaust emission-related components: SIXTY (60) CONSECUTIVE MONTHS or ONE HUNDRED SEVENTY FIVE (175) HOURS of engine use, whichever occurs first.; and

(ii) Evaporative emission related components: TWENTY-FOUR (24) CONSECUTIVE MONTHS.

The Product is used commercially when it is used in connection with any work or employment that generates income, during any part of the limited warranty period. The Product is also used commercially when, at any point during the limited warranty period, it is installed on a boat that has commercial tags or is licensed for commercial use. Please see your Authorized *Evinrude* Outboard Engine Distributor/Dealer for emission-related service. In cases where the delivery date is not established to BRP's satisfaction, the date of sale will be used to determine the warranty start date.

3. For emission-related components; please also refer to the US EPA EMISSION-RELATED WARRANTY contained herein.
4. For *Evinrude* outboard engines produced by BRP for sale in the State of California that are originally sold to a resident or subsequently warranty registered to a resident in the State of California, please also refer to the applicable California Emissions Control Warranty Statement contained herein

See your Dealer or your BRP Extended Service Terms (*B.E.S.T.*) contract for terms and conditions.

The repair or replacement of parts or the performance of service to Product under this limited warranty does not extend the life of this limited warranty beyond its original expiration date.

California residents who purchased or warranty-registered a Product in California should refer to BRP's California Emissions Control Warranty Statement.

Note that the duration and any other modalities of the warranty coverage are subject to the applicable national or local legislation in the customer's country.

FOR PRODUCTS SOLD IN AUSTRALIA ONLY

Nothing in these Warranty terms and conditions should be taken to exclude, restrict or modify the application of any condition, warranty, guarantee, right or remedy conferred or implied under the Competition and Consumer Act 2010 (Cth), including the Australian Consumer Law or any other law, where to do so would contravene that law, or cause any part of these terms and conditions to be void. The benefits given to you under this limited warranty are in addition to other rights and remedies that you have under Australian law.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

5. Conditions to Have Warranty Coverage

This limited warranty coverage is available only if each of the following conditions has been fulfilled:

The Product must be purchased as new and unused by its first owner from an OE Distributor/Dealer authorized to distribute *Evinrude* products in the country in which the sale occurred;

- The BRP specified pre-delivery inspection process must be completed, documented and signed by the purchaser and Distributor/Dealer;
- The Product must have undergone proper registration by an authorized OE Distributor/Dealer;
- The Product must be purchased in the country in which the purchaser resides; and
- Routine maintenance outlined in the Operator's Guide must be timely performed in order to maintain warranty coverage. BRP reserves the right to make warranty coverage contingent upon proof of proper maintenance as outlined in the maintenance schedule, proper service, pre-ride inspection and storage conditions.

BRP will not honor this limited warranty to any private use owner or commercial use owner if the preceding conditions have not been met. Such limitations are necessary in order to allow BRP to preserve both the safety of its products, and also that of its consumers and the general public.

6. What to do to Obtain Warranty Coverage

The customer must cease using the Product upon appearance of an anomaly.

The registered owner must notify an authorized servicing OE Distributor/ Dealer within two (2) days of the appearance of a defect. BRP is not responsible for damages caused by the use of a Product after the appearance of a defect. Owner must bring Product, including any defective part therein, to OE Distributor/ Dealer promptly after the appearance of the defect, and in any event, within the warranty period, and must provide OE Distributor/Dealer with reasonable opportunity to repair the defect. The expenses of transporting Product to and from OE Distributor/Dealer for warranty service are to be borne by the owner.

The owner may also be required to present proof of purchase to OE Distributor/Dealer and is required to sign the repair work order prior to the start of the repair in order to validate the warranty repair.

All parts replaced under this limited warranty become the property of BRP.

Note that the notification period is subject to the applicable national or local legislation in customer's country.

7. What BRP Will Do

To the extent permitted by law, BRP's obligations under this limited warranty are limited to, at its sole discretion, repairing or replacing parts of Product found to be defective in material or workmanship, in the reasonable judgment of BRP. Such repair or replacement of parts will be done without charge for parts and labor, at any authorized OE Distributor/Dealer. BRP's responsibility is limited to making the required repairs or replacements of parts with new or BRP-certified re-manufactured parts. No claim of breach of warranty shall be cause for cancellation or rescission of the sale of Product to owner.

In the event that warranty service is required outside of the country of original sale, the owner will bear responsibility for any additional charges due to local practices and conditions, such as, but not limited to, freight, insurance, taxes, license fees, import duties, and any and all other financial charges, including those levied by governments, states, territories and their respective agencies.

BRP reserves the right to improve, modify or change Products from time to time without assuming any obligation to modify Products previously manufactured.

8. Transfer

If the ownership of a Product is transferred during the limited warranty coverage period, this limited warranty, subject to its terms and conditions, shall also be transferred and be valid for the remaining coverage period provided that BRP or an authorized Distributor/Dealer receives a proof that the former owner agreed to the transfer of ownership, in addition to the co-ordinates of the new-owner.

9. Consumer Assistance

In the event of a controversy or dispute in connection with this BRP limited warranty, BRP recommends that you first try to resolve the issue at the dealership level by discussing the issue with OE Distributor/Dealer's service manager or owner;

If further assistance is required, please contact BRP US Inc., Attn: Consumer Support, P.O. Box 597, Sturtevant, WI 53177, 1-844-345-4277

For countries within European Economic Area, Middle East and Africa please contact our European office: BRP EUROPE N.V. Customer Assistance Center Skaldenstraat 125 9042 Gent Belgium Tel.: + 32 9 218 26 00.

For Scandinavian countries, please contact our Finland office: BRP FINLAND OY, Service department, Ahjotie 30, Fin-96320, Rovaniemi, Finland Tel.: +358 16 3208 111.

For all other countries, please contact your local Can-Am ATV Distributor/Dealer (visit our website at www.brp.com for contact information), or contact our North American office at: BOMBARDIER RECREATIONAL PRODUCTS INC. Customer Assistance Center 75, J.-A. Bombardier Street Sherbrooke QC J1L 1W3 Canada Tel.: + 1 819 566-3366.

In Canada, Products are distributed and serviced by Bombardier Recreational Products Inc. In the European Economic Area and elsewhere, Products are distributed and serviced by BRP European Distribution SA and other affiliates of Bombardier Recreational Products Inc.

® Registered trademark of Bombardier Recreational Products Inc. or its affiliates.

© 2016 BRP US Inc. All rights reserved.

Additional Terms and Conditions for France Only

The following terms and conditions are applicable to products sold in France only:

The seller shall deliver goods that are complying with the contract and shall be responsible for defects existing upon delivery. The seller shall also be responsible for defects resulting from packaging, assembling instructions or the installation when it is its responsibility per the contract or if accomplished under its responsibility. To be compliant with the contract, the good shall:

1. Be fit for normal use for goods similar thereto and, if applicable:

- Correspond to the description provided by the seller and have the qualities presented to the buyer though sample or model;

- Have the qualities that a buyer may legitimately expect considering the public declarations of the seller, the manufacturer of its representative, including in advertising or labeling; or

2. Have the characteristics mutually agreed upon as between the parties or be fit for the specific use intended by the buyer and brought to the attention of the seller and which accepted.

The action for failure to comply is prescribed after two years after delivery of the goods. The seller is responsible for the warranty for hidden defects of the good sold if such hidden defects are rendering the good unfit for the intended use, or if they diminish its use in such a way that the buyer would not have acquired the good or would have given a lesser price, had he known. The action for such hidden defects shall be taken by the buyer within 2 years of the discovery of the defect.

US EPA Emission-Related Warranty

BRP US Inc. ("BRP")* warrants to the ultimate purchaser and each subsequent purchaser that this new engine, including all parts of its exhaust emission control system and its evaporative emission control system, meets two conditions:

1. It is designed, built, and equipped so it conforms at the time of sale to the ultimate purchaser with the requirements of 40 CFR 1045 and 40 CFR 1060.
2. It is free from defects in materials and workmanship that may keep it from meeting the requirements of 40 CFR 1045 and 40 CFR 1060.

Where a warrantable condition exists, BRP will repair or replace, as it elects, any part or component with a defect in materials or workmanship that would increase the engine's emissions of any regulated pollutant within the stated warranty period at no cost to the owner, including expenses related to diagnosing and repairing or replacing emission-related parts. All defective parts replaced under this warranty become the property of BRP.

For all emission-related warranty claims, BRP is limiting the diagnosis and repair of emission-related parts to the authorized *Evinrude* dealers, unless for emergency repairs as required by item 2 of the following list.

As a certifying manufacturer, BRP will not deny emission-related warranty claims based on any of the following:

1. Maintenance or other service BRP or BRP's authorized facilities performed.
2. Engine/equipment repair work that an operator performed to correct an unsafe, emergency condition attributable to BRP as long as the operator tries to restore the engine/equipment to its proper configuration as soon as possible.
3. Any action or inaction by the operator unrelated to the warranty claim.
4. Maintenance that was performed more frequently than BRP specify.
5. Anything that is BRP fault or responsibility.
6. The use of any fuel that is commonly available where the equipment operates unless BRP written maintenance instructions state that this fuel would harm the equipment's emission control system and operators can readily find the proper fuel. See maintenance information section and fuel requirements section.

Emission Related Warranty Period

The emission-related warranty is valid for the following period whichever comes first:

	HOURS	MONTHS
Exhaust emission-related components	175	60
Evaporative emission-related components	N/A	24

Components Covered

The emission-related warranty covers all components whose failure would increase an engine's emissions of any regulated pollutant, including the following listed components:

1. For exhaust emissions, emission-related components include any engine parts related to the following systems:
 - Air-induction system
 - Fuel system
 - Ignition system
 - Exhaust gas recirculation systems
2. The following parts are also considered emission-related components for exhaust emissions:
 - After-treatment devices
 - Crankcase ventilation valves
 - Sensors
 - Electronic control units
3. The following parts are considered emission-related components for evaporative emissions:
 - Fuel tank
 - Fuel cap
 - Fuel line
 - Fuel line fittings
 - Clamps*
 - Pressure relief valves*
 - Control valves*
 - Control solenoids*
 - Electronic controls*
 - Vacuum control diaphragms*
 - Control cables*
 - Control linkages*
 - Purge valves
 - Vapor hoses
 - Liquid/vapor separator
 - Carbon canister
 - Canister mounting brackets
 - Carburetor purge port connector
4. Emission-related components also include any other part whose only purpose is to reduce emissions or whose failure will increase emissions without significantly degrading engine/equipment performance.

*As related to the evaporative emission control system

Limited Applicability

As a certifying manufacturer, BRP may deny emission-related warranty claims for failures that have been caused by the owner's or operator's improper maintenance or use, by accidents for which the manufacturer has no responsibility, or by acts of God. For example, an emission-related warranty claim need not be honored for failures that have been directly caused by the operator's abuse of the engine/equipment or the operator's use of the engine/equipment in a manner for which it was not designed and are not attributable to the manufacturer in anyway.

California Emission Control Warranty Statement

Your *Evinrude E-TEC G2* outboard has a special environmental label required by the California Air Resources Board. The label has one, two, three, or four stars. A hangtag, provided with your outboard, describes the meaning of the star rating system.

The Star Label Means Cleaner Marine Engines



The Symbol for Cleaner Marine Engines:

Cleaner Air and Water

For a healthier lifestyle and environment.

Better Fuel Economy

Burns up to 30 to 40 percent less gas and oil than conventional carbureted two-stroke engines, saving money and resources.

Longer Emission Warranty

Protects consumer for worry free operation.

One Star – Low Emission

The one-star label identifies Personal Watercraft, Outboard, Sterndrive and Inboard engines that meet the Air Resource Board's Personal Watercraft and Outboard marine engine 2001 exhaust emission standards. Engines meeting these standards have 75% lower emissions than conventional carbureted two-stroke engines. These engines are equivalent to the U.S. EPA's 2006 standards for marine engines.

Two Stars – Very Low Emission

The two-star label identifies Personal Watercraft, Outboard, Sterndrive and Inboard engines that meet the Air Resources Board's Personal Watercraft and Outboard marine engine 2004 exhaust emission standards. Engines meeting these standards have 20% lower emissions than One Star – Low Emission engines.

Three Stars – Ultra Low Emission

The three-star label identifies engines that meet the Air Resources Board's Personal Watercraft and Outboard marine engine 2008 exhaust emission standards or the Sterndrive and Inboard marine engine 2003 exhaust emission standards. Engines meeting these standards have 65% lower emissions than One Star – Low Emission engines.

Four Stars – Super Ultra Low Emission

The four-star label identifies engines that meet the Air Resources Board's Sterndrive and Inboard marine engine 2009 exhaust emission standards. Personal Watercraft and Outboard marine engines may also comply with these standards. Engines meeting these standards have 90% lower emission than One Star – Low Emission engines.

For more information: Cleaner Watercraft – Get the Facts

1-800-END-SMOG

www.arb.ca.gov

Your Emission Control Warranty Rights and Obligation

The California Air Resources Board and Bombardier Recreational Products ("BRP") are pleased to explain the emission control system warranty on your *Evinrude E-TEC G2* outboard. In California, new outboard engines must be designed, built, and equipped to meet the State's stringent anti-smog standards. BRP must warrant the emission control system on your outboard for the periods of time listed below provided there has been no abuse, neglect, or improper maintenance of your outboard.

Your emission control system may include parts such as the carburetor or fuel injection system, the ignition system, and catalytic converter. Also included may be hoses, belts, connectors, and other emission-related assemblies.

Where a warrantable condition exists, BRP will repair your outboard at no cost to you including diagnosis, parts, and labor provided that such work is performed by an authorized BRP dealer.

Manufacturer's Limited Warranty Coverage

This emission limited warranty covers *Evinrude* outboards certified and produced by BRP for sale in California, that are originally sold in California to a California resident, or subsequently warranty-registered to a California resident. The BRP U.S. and Canada limited warranty conditions for *Evinrude* outboards are still applicable to these models with the necessary modifications.

Select emission control parts of your *Evinrude E-TEC G2* outboard are warranted from the date of purchase by the first retail consumer or the date the product is first put to use, whichever occurs first, for a period of: 4 years, or for 250 hours of use, whichever occurs first.

However, warranty coverage based on the hourly period is only permitted for outboards equipped with the appropriate hour meters or their equivalent. If any emission-related part on your engine is defective under warranty, the part will be repaired or replaced by BRP.

Parts covered are:

1. Electrical System	4. Air Induction System
A. EMM (Engine Management Module)	A. Reed Valves
B. Spark Plugs and Wires	B. Throttle Body Assembly
C. Ignition Coils	C. Intake Manifold
D. Wiring Harness	
	5. Oil System
2. Exhaust System	A. Oil Injector
A. Inner Exhaust Housing	B. Oil Lines, Fittings, and Clamps
B. Adapter (Exhaust Manifold)	
C. Megaphone (Inner Exhaust)	6. Sensors
	A. Air Temperature Sensor
3. Fuel System	B. Crank Position Sensor
A. Fuel Lift Pump	C. Throttle Position Sensor
B. Fuel Supply Pump	D. Water Temperature Sensor
C. Fuel Injectors	E. Thermostat
D. Vapor Separator	
E. Fuel Lines, Fittings, and Clamps	7. Gaskets
	A. All Emission Component Gaskets

The emission warranty covers damage to other engine components that is caused by the failure of a warranted part.

The BRP Operator's Guide provided contains written instructions for the proper maintenance and use of your outboard. All emission warranty parts are warranted by BRP for the entire warranty period of the outboard, unless the part is scheduled for replacement as required maintenance in the Operator's Guide.

Emission warranty parts that are scheduled for replacement, as required maintenance, are warranted by BRP for the period of time before the first scheduled replacement date for that part. Emission warranty parts that are scheduled for regular inspection but not regular replacement are warranted by BRP for the entire warranty period of the outboard. Any emission warranty part repaired or replaced under the terms of this warranty statement is warranted by BRP for the remainder of the warranty period of the original part. All parts replaced under this limited warranty become the property of BRP.

Maintenance receipts and records should be transferred to each subsequent owner of the outboard.

Owner's Warranty Responsibilities

As the outboard owner, you are responsible for the performance of the required maintenance listed in your Operator's Guide. BRP recommends that you retain all receipts covering maintenance on your outboard, but BRP cannot deny warranty solely for the lack of receipts or your failure to ensure the performance of all scheduled maintenance.

As the outboard owner, you should however be aware that BRP may deny you warranty coverage if your outboard or a part has failed due to abuse, neglect, improper maintenance, or unapproved modifications.

You are responsible for presenting your outboard to an authorized BRP dealer as soon as a problem exists. The warranty repairs will be completed in a reasonable amount of time, not to exceed 30 days.

For any questions regarding your warranty rights and responsibilities or for the name and location of the nearest authorized BRP dealer, contact:

BRP US Inc. / Marine Propulsion Systems,
After Sales Support,
P.O Box 597,
Sturtevant, WI 53177,
1-844-345-4277

or visit www.evinrude.com.

Readiness Test

The Operator's Readiness Test...

1. Did you read this Guide from front cover to rear cover?
2. Are you ready to take responsibility for the safe operation of your boat and outboard?
3. Do you understand all the safety precautions and instructions contained in this Guide?
4. Do you understand that this Guide contains essential information to help prevent personal injury and damage to equipment?
5. Are you ready to follow the recommendations in this Guide and take a boating safety course before you operate your boat and outboard?
6. Do you know who to ask if you have any questions about your boat and outboard?
7. Do you know your local marine traffic laws?
8. Do you understand that human error can be caused by carelessness, fatigue, overload, preoccupation, unfamiliarity of operator with the product, drugs and alcohol, just to name a few?

WARNING

It is impossible for this Guide to cover every hazardous situation you may encounter; however, your understanding of and adherence to essential information contained in this Guide will build good judgment when boating. Always be alert and careful: a good foundation for safety.

EVINRUDE®
E-TEC®



Frequently Asked Questions

No dealer-scheduled maintenance for three years or 300 hours of normal recreational use? Really?

- Yes! BRP knows you want to spend your time out on the water, not servicing your *Evinrude E-TEC* outboard. There are no valves to adjust, belts to service, chains to replace, or oil to change. We do recommend pre-launch inspections of your outboard at each use and at regular intervals. Salt water applications require minimal additional inspections and lubrication.

What fuel octane is recommended for my Evinrude E-TEC outboard?

- *Evinrude E-TEC* outboards require a minimum octane of 87 (U.S.). Use of higher octane fuels is not harmful, but also not necessary.

What kind of oil does my Evinrude E-TEC outboard require?

- *Evinrude XD100 Direct Injection Oil* and *Evinrude XD50 2-Stroke Oil* are recommended for your *Evinrude E-TEC* outboard.

Do I need to mix oil into my fuel?

- No. *Evinrude E-TEC* outboards do not require any mixing of oil and fuel.

Can I order replacement parts and accessories for my Evinrude E-TEC outboard?

- Yes. When replacement parts are required, use *Evinrude Genuine Parts* or parts with equivalent characteristics, including type, strength, and material. Using substandard parts could result in injury or product malfunction. Your dealer can order the parts and accessories you desire.

Do I need to complete any paperwork when I move or sell my Evinrude E-TEC outboard?

- Yes. In order to maintain contact with you or the new *Evinrude E-TEC* owner, BRP requests you complete the form **Change of Address / Change of Ownership** on page 87. This will ensure you or the new owner is made aware of any product announcements and keep the warranty coverage up-to-date.

What do I need to do before storing my Evinrude E-TEC outboard for the winter?

- Winterization is minimal. Refer to the **Storage** section for step-by-step instructions to store your *Evinrude E-TEC* outboard for the off-season.

EVINRUDE®
E-TEC®



Change of Address / Change of Ownership

If your address has changed or if there has been a change of ownership, be sure to fill out and mail the form provided on this page.

This notification is necessary for your own safety even after expiration of the original warranty, since BRP will be in a position to contact you if correction to your outboard is required. Outside the U.S. and Canada, this card should be sent to the Bombardier Recreational Products division where the outboard was registered. Please contact your Dealer or Distributor.



Change of Address

Change of Ownership

Model number

Serial Number

Old Address / Previous Owner

Last name

First name **M.I.**

Address

City **State**

Zip code **Country**

Phone number

Signature _____ **Date** _____

New Address / New Owner

Type of Use **Recreational** **Commercial** **Government**

Last name

First name **M.I.**

Address

City **State**

Zip code **Country**

Phone number

Signature _____ **Date** _____

Dealer Information

Dealer name

Dealer number

Phone number

Contact name

In the U.S. or Canada, mail completed form to: BRP US Inc. / Marine Propulsion Systems
 After Sales Support
 P.O Box 597
 Sturtevant, WI 53177

EVINRUDE®
E-TEC®

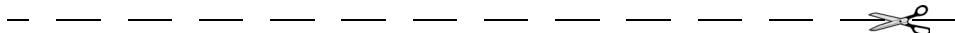


Confirmation of Receipt

Your Dealer

Name:	_____
Address:	_____

Upon delivery of your new *Evinrude* outboard, complete and sign the form below. Your Dealer will take receipt of the form for their records.



Receipt

Name:	_____
Address:	_____

Owner of Model No:	_____
Serial No:	_____
(To be completed by customer or selling Dealer)	
The Dealer named on this document has instructed me on the operation, maintenance, safety features and warranty policy, all of which I understand and agree to be bound with. I am also satisfied with the predelivery set-up and inspection of my <i>Evinrude</i> outboard. I have also received a copy of the Operator's Guide.	
Signature:	_____
Date:	_____

EVINRUDE®
E-TEC®

