



EVINRUDE
Johnson

ELECTRIC START KIT, P/N 5005580 INSTALLATION INSTRUCTIONS

APPLICATION

This kit is designed for use on **2004 and newer Evinrude® E-TEC™ rope start outboards**.
DO NOT install on any other models.

SAFETY INFORMATION

For safety reasons, this kit should be installed by an authorized *Evinrude®/Johnson®* dealer. This instruction sheet is not a substitute for work experience. Additional helpful information may be found in other service literature for your engine.

This instruction sheet uses the following signal words identifying important safety messages.



DANGER



Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



WARNING



Indicates a potentially hazardous situation which, if not avoided, **CAN** result in severe injury or death.



CAUTION



Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate personal injury or property damage. It also may be used to alert against unsafe practices.

IMPORTANT: Identifies information that will help prevent damage to machinery and appears next to information that controls correct assembly and operation of the product.

These safety alert signal words mean:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

Always follow common shop safety practices. If you have not had training related to common shop safety practices, you should do so to protect yourself, as well as the people around you.

It is understood that this instruction sheet may be translated into other languages. In the event of any discrepancy, the English version shall prevail.

DO NOT do any repairs until you have read the instructions and checked the pictures relating to the repairs.

Be careful, and never rush or guess a service procedure. Human error is caused by many factors: carelessness, fatigue, overload, preoccupation, unfamiliarity with the product, and drugs and alcohol use, to name a few. Damage to a boat and outboard can be fixed in a short period of time, but injury or death has a lasting effect.

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

Torque wrench tightening specifications must be strictly followed. Replace any locking fastener (locknut or patch screw) if its locking feature becomes weak. Definite resistance to turning must be felt when reusing a locking fastener. If replacement is specified or required because the locking fastener has become weak, use only authorized *Evinrude/Johnson Genuine Parts*.

If you use procedures or service tools that are not recommended in this instruction sheet, **YOU ALONE** must decide if your actions might injure people or damage the outboard.

TO THE INSTALLER: Give this sheet to the owner. Advise the owner of any special operation or maintenance information contained in the instructions.

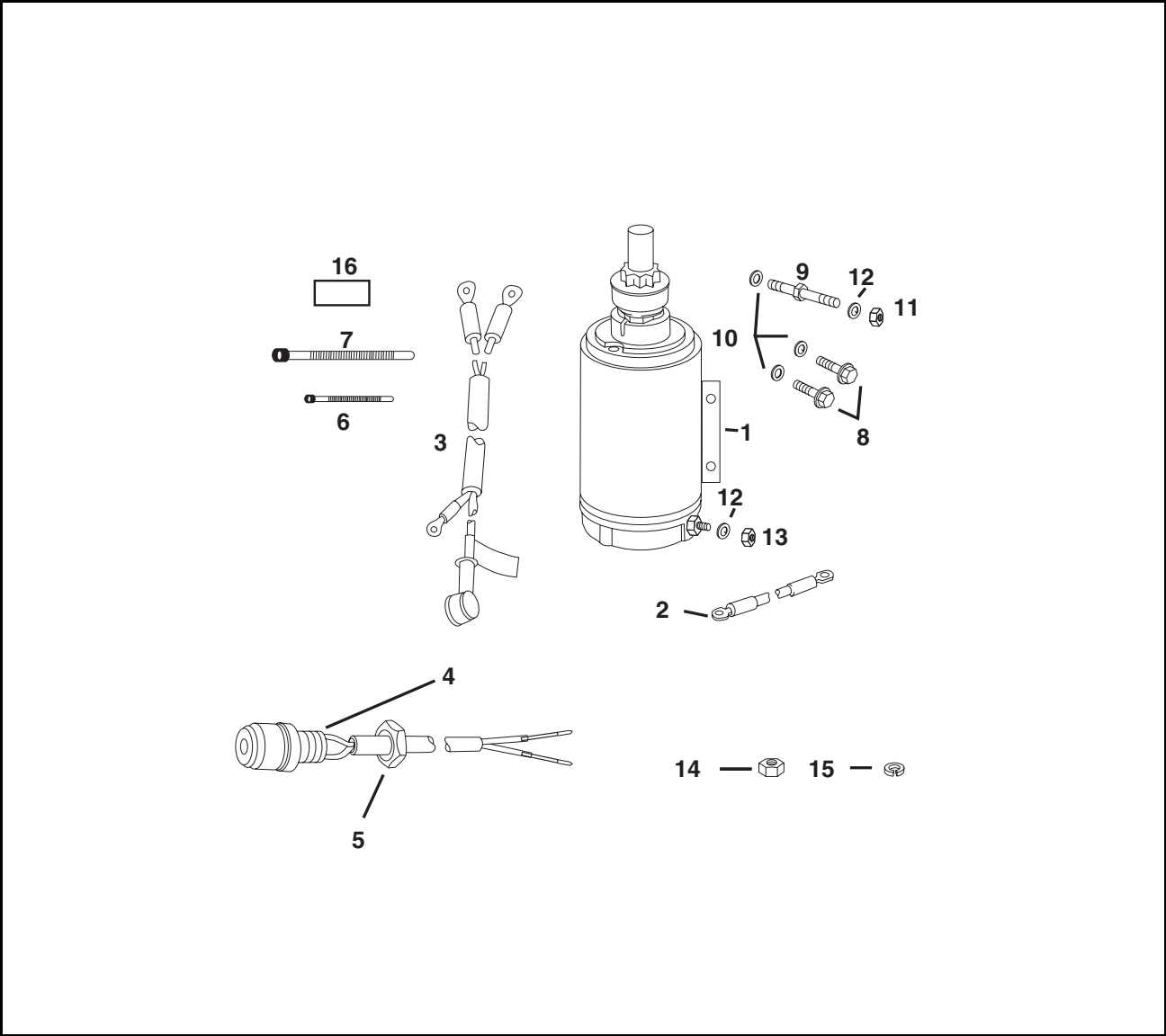
TO THE OWNER: Save these instructions in your owner's kit. This sheet contains information important to the future use and maintenance of your engine.



DESCRIPTION

This kit adds electric starting capability to rope start models with the installation of a starter motor, cables, and switch. A 12 Volt battery with a minimum of 640 CCA (800 MCA) is required for this system.

ELECTRIC START KIT COMPONENTS



| Ref | P/N | Name of Part | Qty | Ref | P/N | Name of Part | Qty |
|-----|--------|-------------------------|-----|-----|--------|----------------------------------|-----|
| 1 | 586768 | MOTOR AY, STARTER | 1 | 9 | 351827 | BOLT, DOUBLE ENDED | 1 |
| 2 | 394925 | CABLE AY, 6 GA | 1 | 10 | 321465 | WASHER, Starter Mounting | 3 |
| 3 | 584348 | CABLE AY, BATT-10' | 1 | 11 | 328740 | NUT, Ground Stud | 1 |
| 4 | 586827 | SWITCH AY, START | 1 | 12 | 328701 | WASHER, Ground Stud, Starter Nut | 2 |
| 5 | 328169 | NUT, Switch Mounting | 1 | 13 | 335778 | NUT, Starter | 1 |
| 6 | 317893 | TIE STRAP | 2 | 14 | 321472 | NUT, Solenoid | 2 |
| 7 | 320107 | TIE STRAP | 1 | 15 | 331259 | WASHER, Solenoid | 2 |
| 8 | 351839 | SCREW, Starter Mounting | 2 | 16 | 123739 | DECAL, Start | 1 |

INSTALLATION PROCEDURE

Starter Mounting

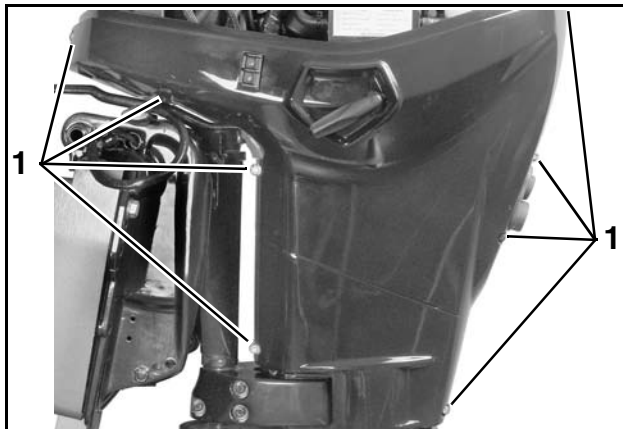


WARNING



To prevent accidental starting while servicing, twist and remove spark plug leads.

Remove lower motor covers. Refer to appropriate service manual.



1. Cover screws

002168

Remove air silencer.



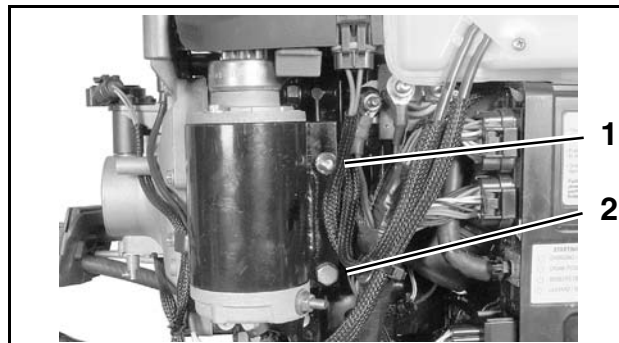
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Apply a liberal amount of outboard lubricant to the threads of two starter mounting screws and double ended bolt.

Place starter motor into position.

IMPORTANT: Make sure oil recirculation check valve is not wedged between starter and crankcase.

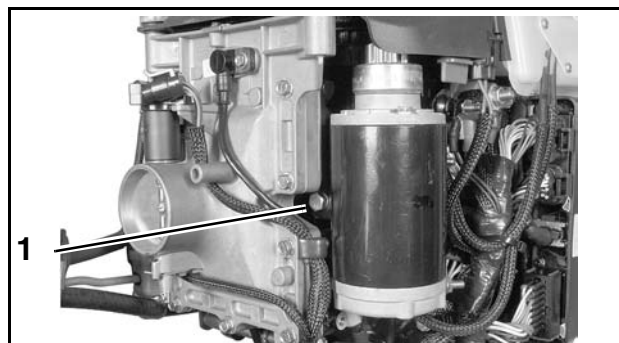
Hand start double-ended bolt and both screws, with flat washers, before torquing to 168 to 192 in. lbs. (19 to 21 N·m).



1. Double-ended bolt

2. Starter mounting screw

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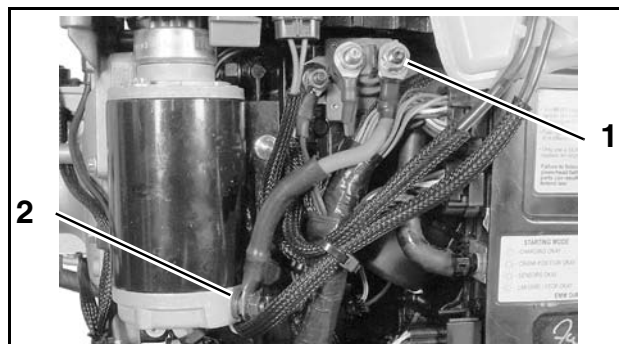
1. Starter mounting screw

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Cable Connections

Attach one end of the 6 gauge starter cable to the large solenoid terminal toward the rear of the outboard. Secure with lock washer and nut.

Attach the other end of the 6 gauge starter cable to the starter positive (+) post with lock washer and nut. Tighten securely.



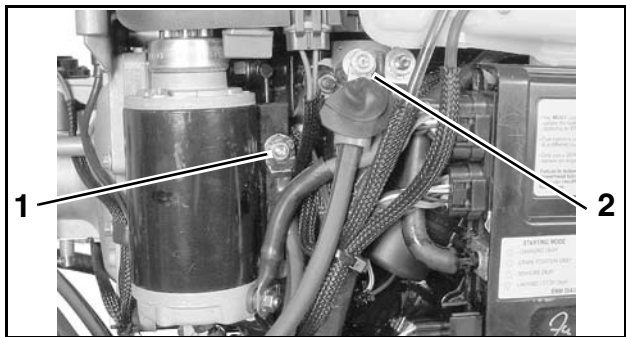
1. Rear solenoid terminal

2. Starter positive (+) post

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Attach the battery negative (–) cable to the double-ended bolt on the starter frame. Secure with lock washer and nut.

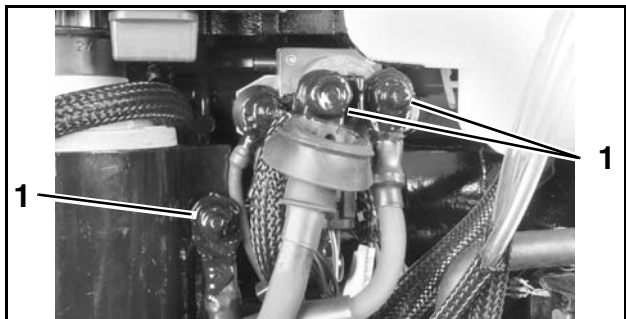
Attach the battery positive (+) cable to the large solenoid terminal toward the front of the out-board. Secure with lock washer and nut.



1. Battery negative (-) cable
2. Battery positive (+) cable

002620

Coat all electrical connections with *Black Neoprene Dip*.



1. Black Neoprene Dip

002292

Trim the material covering the battery cable slot in lower motor cover grommet.



Grommet

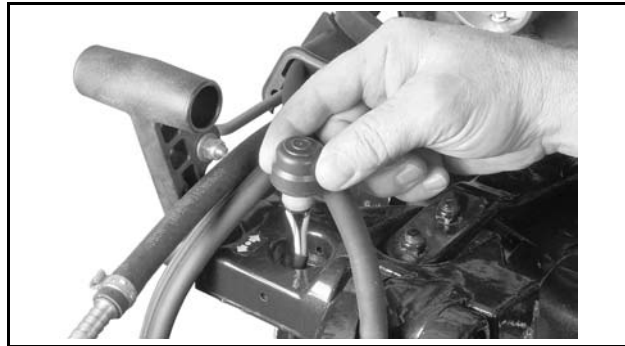
Route battery cable under the intake manifold and through grommet.



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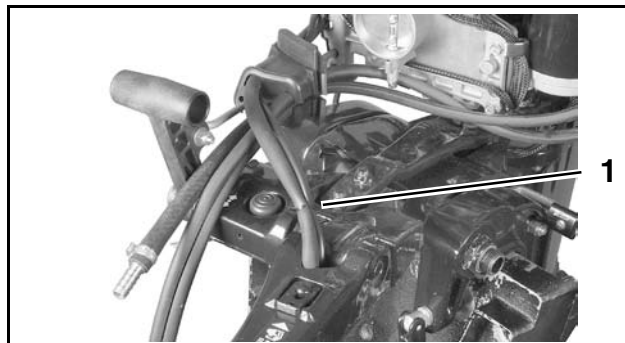
Start Switch Installation

Insert start switch through hole in tiller arm bracket. Secure with nut.



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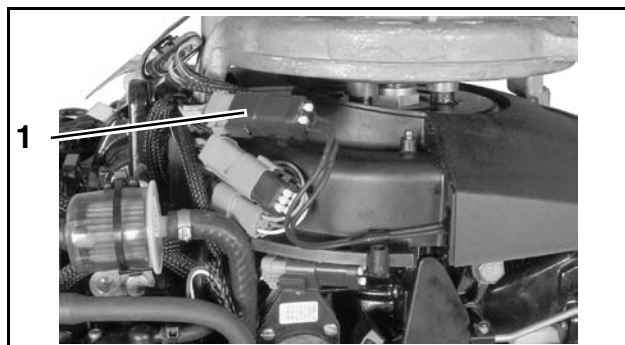
Route cable with stop switch wire through tiller arm bracket and motor cover grommet. Secure to existing cables with small tie strap.



1. Tie strap location

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Remove electrical cover and disconnect six pin *Deutsch*[†] connector from stop switch.

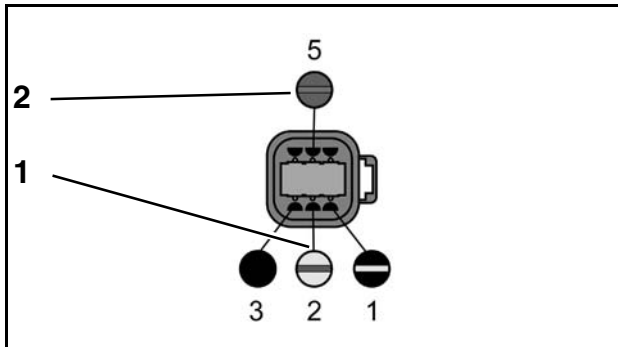


1. Six pin connector

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[†] *Deutsch* is a registered trademark of The Deutsch Company.

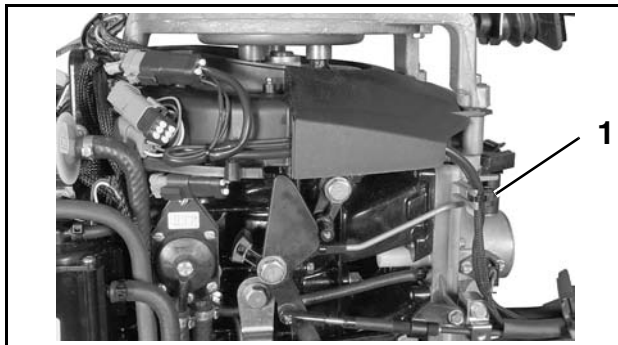
Install yellow/red wire pin in connector position 2. Install red wire pin in connector position 5. Refer to appropriate service manual for *Deutsch* connector servicing.



1. Yellow/red wire
2. Red wire

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Reconnect *Deutsch* connector to engine wiring harness. Route cables through recess in fly-wheel cover, and secure to intake manifold bracket with large tie strap.

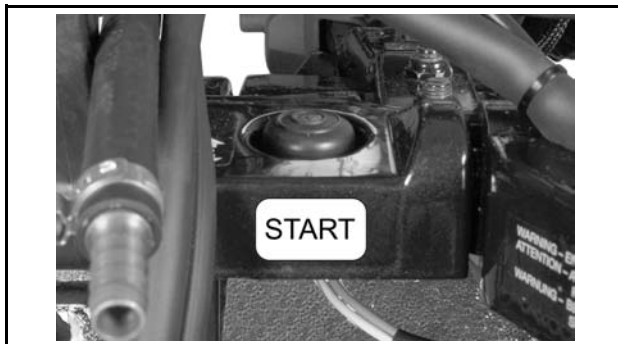


1. Tie strap

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Reinstall electrical cover.

Place "START" decal on tiller handle bracket.



Decal

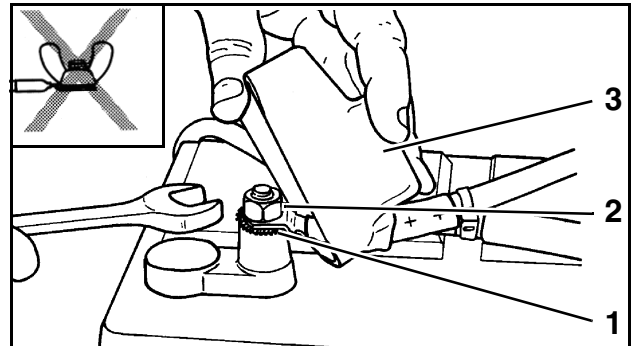
Reinstall lower motor covers.

Battery Connections

- Select a battery that meets or exceeds 640 CCA (800 MCA).
- Secure battery in protected location.
- Place battery as close to the outboard as possible.
- Battery location must provide access for periodic maintenance.
- Use battery mounting trays or battery boxes on all battery installations.
- Connections and terminals must be insulated.
- Battery connections must be clean and free from corrosion. Apply *Triple-Guard®* grease to prevent connections from corroding.
- Read and understand the safety information supplied with battery before installation.

IMPORTANT: Connect the battery positive (+) cable to the battery positive (+) post FIRST. Connect the battery negative (-) cable to the battery negative (-) post LAST.

Install a starwasher on the threaded battery post. Stack cables from the outboard, then cables from accessories. Finish this connection with a hex nut.



Marine Style Battery Post

1. Starwasher
2. Hex nut
3. Terminal insulator

DR5103

IMPORTANT: Do not use wing nuts to fasten ANY battery cables. Wing nuts can loosen and cause electrical system damage not covered under warranty.



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 protective covers. Check often to see that connections stay clean and tight.