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## IGNITION COIL ASSEMBLY P/N 5005712 INSTALLATION INSTRUCTIONS FOR 2002, 2003, 2004 (SN, SR, ST) **EVINRUDE 90° MODELS**

For safety reasons, this kit must be installed by an authorized *Evinrude/Johnson* dealer. These installation instructions contain information that can help prevent personal injury and damage to equipment. Understand the following symbols before proceeding:

	<b>DANGER</b>	
<b>Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.</b>		

	<b>WARNING</b>	
<b>Indicates a potentially hazardous situation which, if not avoided, CAN result in severe injury or death.</b>		

	<b>CAUTION</b>	
<b>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.</b>		

### TO THE OWNER

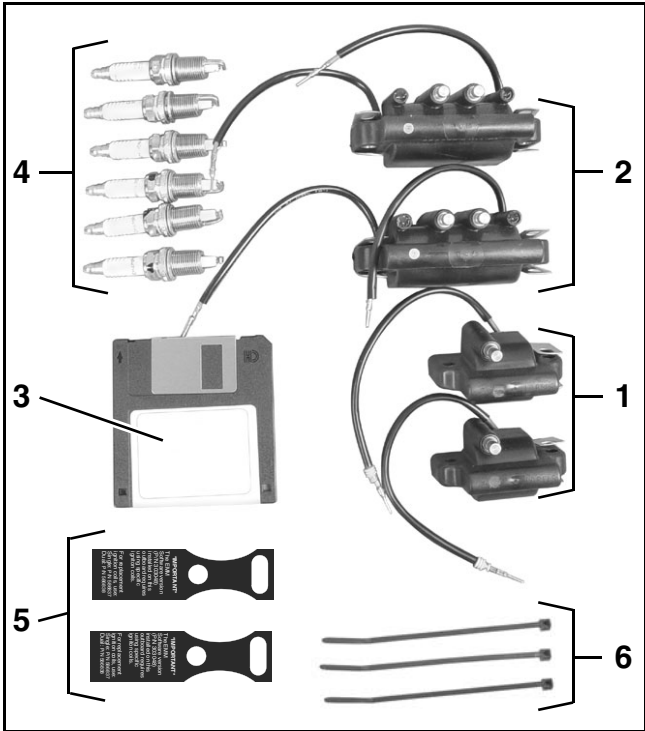
The assembly procedures outlined in this sheet should be performed by a skilled technician. If you have questions, see your DEALER. Save these instructions in your owner's kit. This sheet contains information important to the future use and maintenance of your engine.

### TO THE INSTALLER

Give this sheet to the owner. Advise the owner of any special operation or maintenance information contained in the instructions. This kit is designed for specific applicable models only. It is not recommended for units other than those for which it was sold.



CONTENTS OF KIT



Ref	P/N	Name of Part	Qty
1	586837	COIL AY, IGN – Single	2
2	586838	COIL AY, IGN – Dual	2
3	3030348	DISK, EMM	1
4	5001866	SPARK PLUG (Champion QC12PEP)	6
5	351401	TAG	2
6	317893	TIE STRAP	3

REMOVAL

**WARNING**

To prevent accidental starting while servicing, disconnect battery cables at the battery.

Gasoline is extremely flammable and highly explosive under certain conditions. Use caution when working on any part of the fuel system.

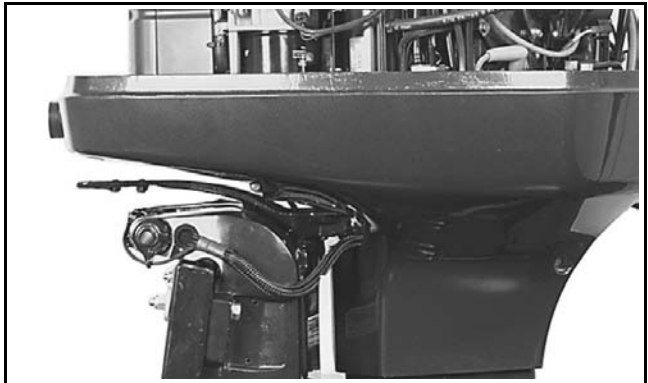
Protect against hazardous fuel spray. Before starting any fuel system service, carefully relieve fuel system pressure. Refer to Relieving Fuel System Pressure on page 172 of *Evinrude Service Manual*, P/N 5005259.

Always work in a well ventilated area and wipe off any fuel spillage.

DO NOT smoke and make certain no open flames or ignition sources exist.

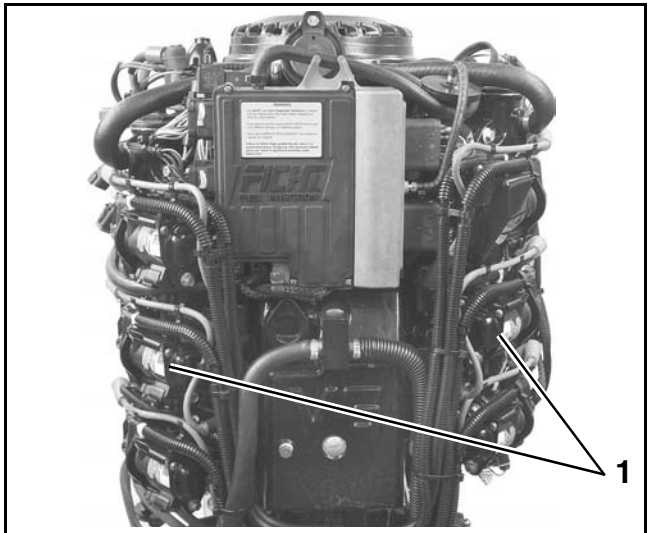
Remove the engine cover. Disconnect power trim/tilt switch on the lower engine cover.

Loosen the lower engine cover retaining screws. Remove one lower cover half at a time.



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**IMPORTANT:** Only the **two (2) center** fuel injectors will be removed to access all four ignition coils.

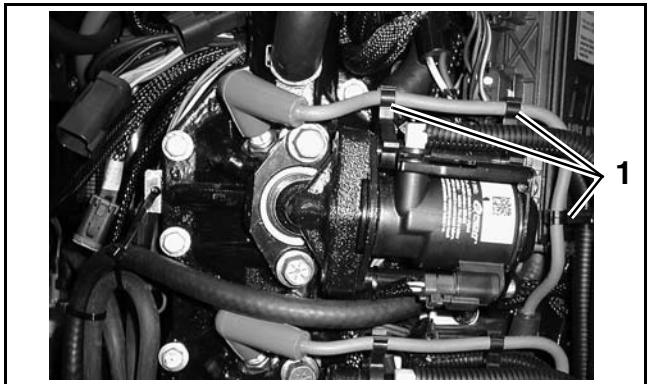


1. Center fuel injectors

00518

**IMPORTANT:** Closely observe the routings of the spark plug leads to ensure proper reinstallation.

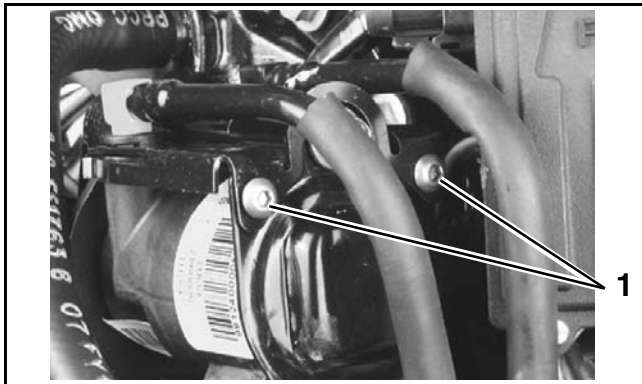
Remove high tension spark plug leads from all six (6) spark plugs and ignition coil terminals. Remove spark plugs. Also, remove the spark plug lead retainers from the **two center** fuel injector ports.



1. Retainers

000202

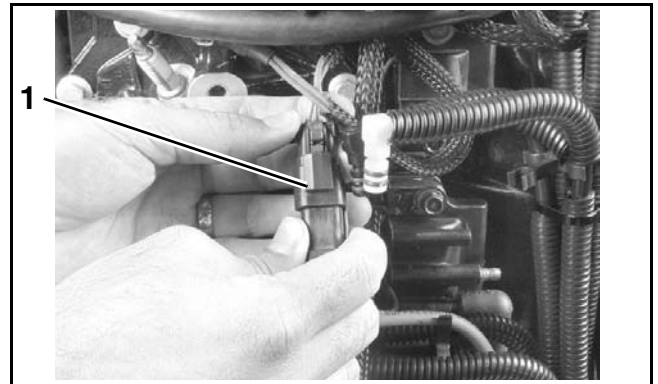
Remove fuel manifold retainer screws and remove retainer from the **two center** fuel injector ports.



1. Retainer screws

DP0779

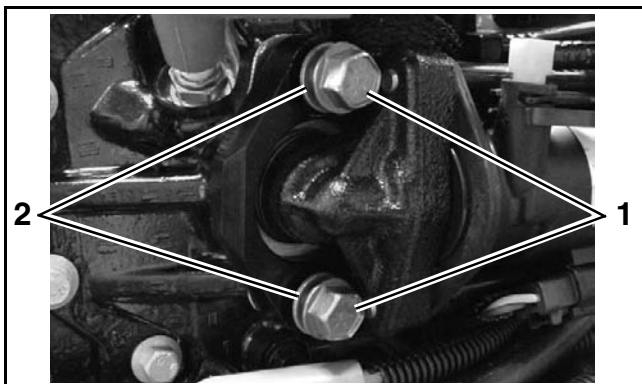
Disconnect the ignition coil *Deutsch*<sup>†</sup> connector from the two center injectors.



1. Deutsch connector

002239

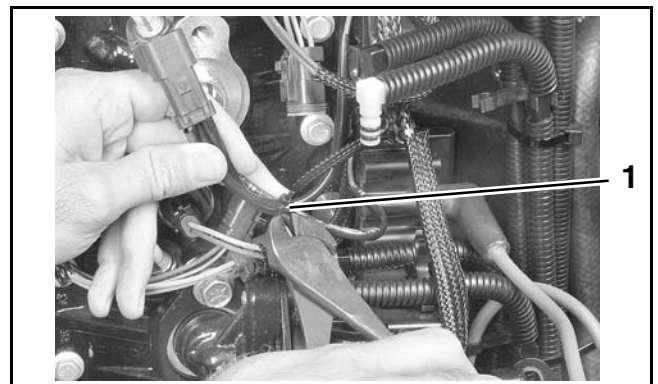
Remove screws and washers from mounting flange of **two center** injectors **ONLY**.



1. Screws  
2. Washers

000018

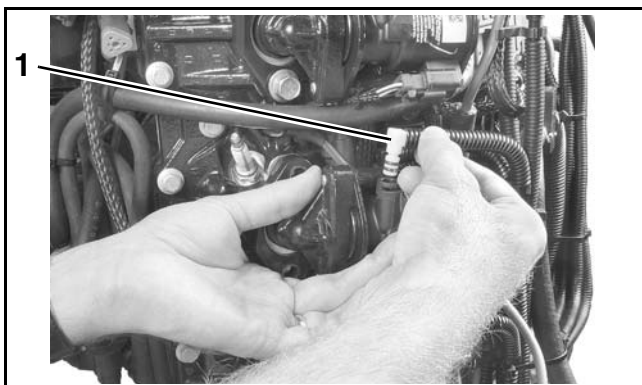
Cut the tie strap securing the coil terminal wires of the two center injectors.



1. Tie strap

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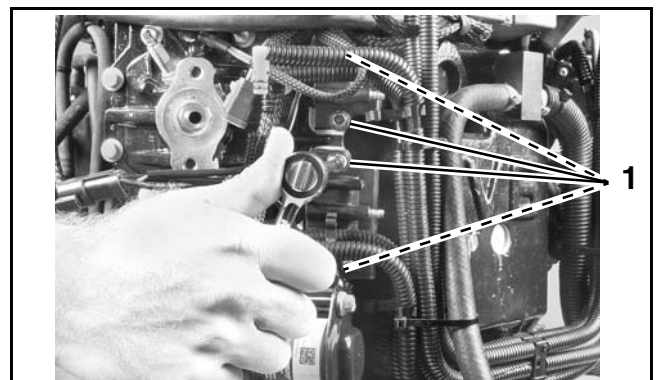
Remove fuel manifold fittings from two center injectors.



1. Fuel manifold fittings

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Remove the four (4) ignition coil mounting screws and remove the ignition coils from the two center injectors.



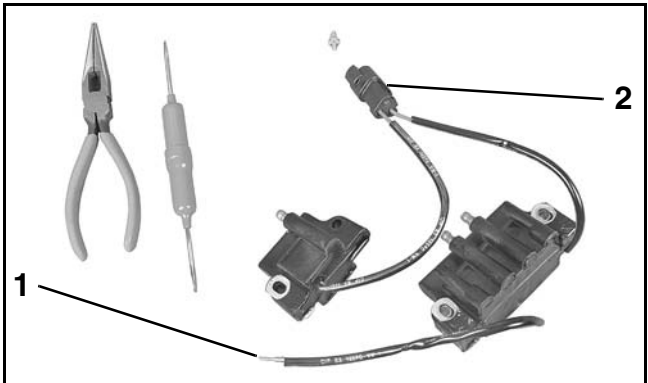
1. Screws

002240

ASSEMBLY

**IMPORTANT:** The *Deutsch* pins of the new ignition coils must be installed correctly. Refer to the **Coil Positions** chart below for proper color and placement in the *Deutsch* connector.

Refer to **DEUTSCH CONNECTOR SERVICING** on page 155 of the 2002/2003 *Evinrude* Service Manual (P/N 5005259).

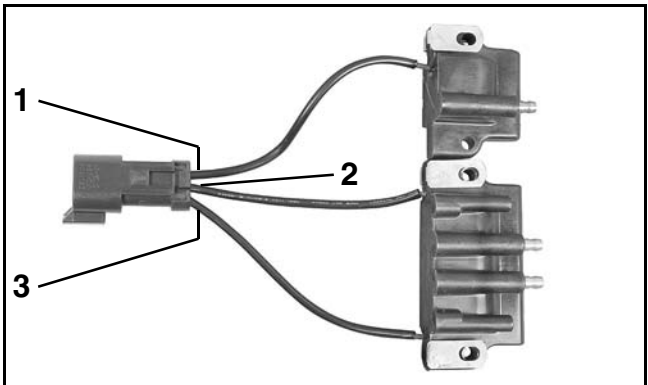


1. Deutsch pin  
2. Deutsch connector

002233

Coil Positions

Pin	Color	Ignition Coil
A	Orange/Blue	Single
B	Orange/Purple	Dual (upper terminal)
C	Orange/Green	Dual (lower terminal)

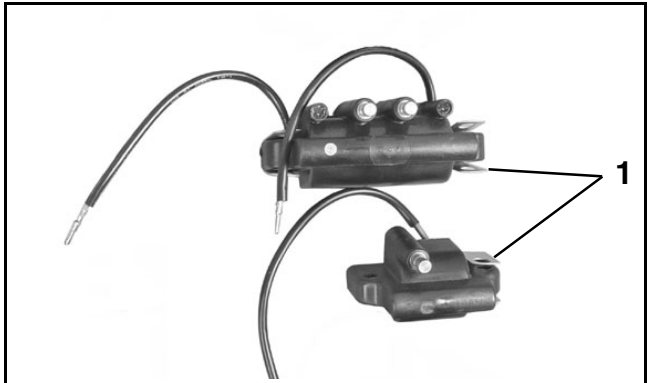


1. Pin A – Single coil  
2. Pin B – Dual coil (upper terminal)  
3. Pin C – Dual coil (lower terminal)

002347

INSTALLATION

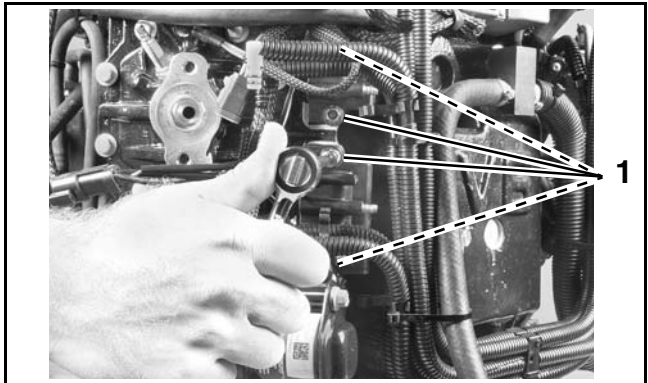
The single coil has one ground strap; the dual coil has two ground straps.



1. Ground straps

002247

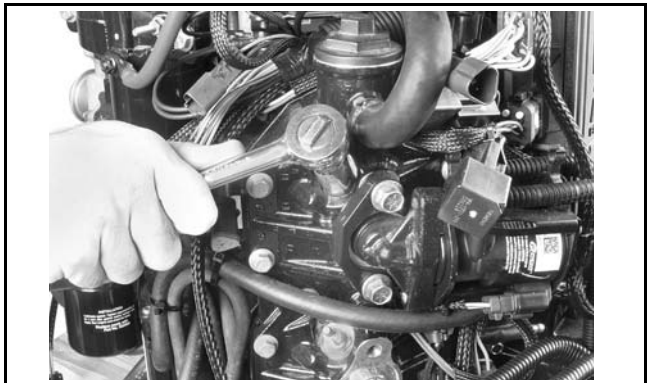
Install new ignition coils with mounting screws, making sure a starwasher is in place between each ground strap and the engine block. Torque to 60 to 84 in. lbs. (6.8 to 9.5 N·m).



1. Screws

002240

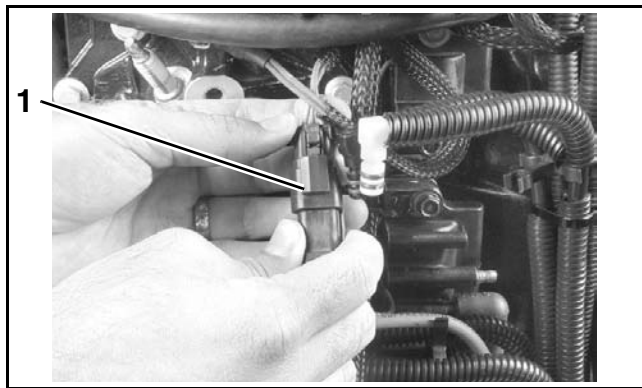
Install six (6) spark plugs and torque to 15 ft. lbs. (20 N·m). Refer to **SPARK PLUG INDEXING** on page 146 of the 2002/2003 *Evinrude* Service Manual.



002238



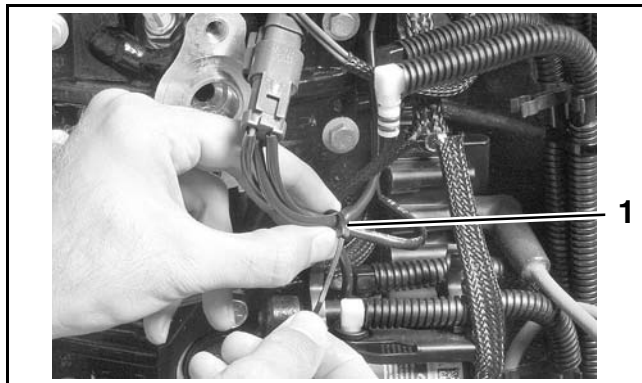
Reconnect the *Deutsch* connector.



1. Deutsch connector

002239

Secure coil terminal wires with new tie strap, cutting off excess.

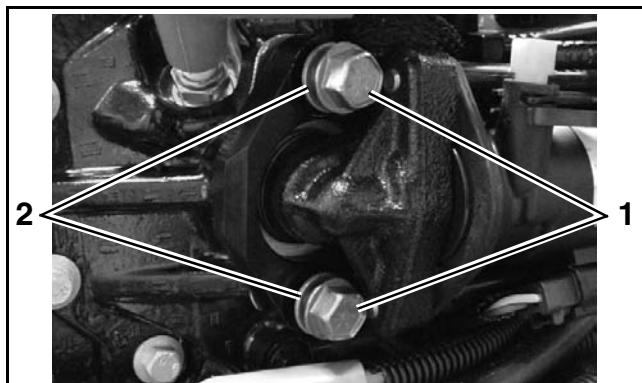


1. Tie strap

002346

Apply *Triple-Guard*® grease to washers. Install washers (one per screw) on injector screws. Apply *Lockquic Primer*† and *Nut Lock*™ to screws. Position injector next to cylinder head.

Install screws and washers through mounting flange of injector and thread into cylinder head.



1. Screws  
2. Washers

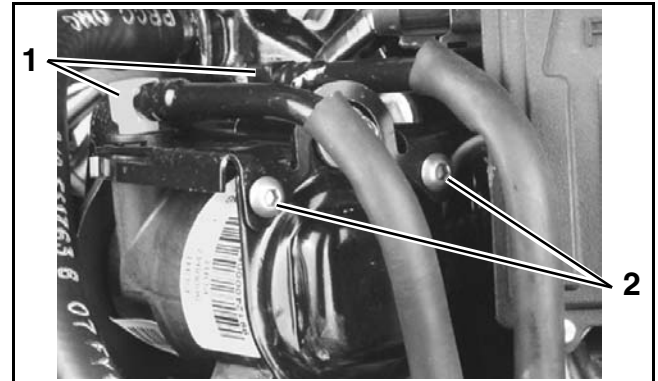
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Tighten screws in stages, starting with the lower screw. Torque screws to 10 ft. lbs. (13.6 N·m) and then to a final torque of 32 to 35 ft. lbs. (43 to 47 N·m).

Reattach fuel manifold fittings. Install fuel manifold retainer flanges into the grooves of the injector ports.

**IMPORTANT:** The retainer flanges must engage the outer groove of the manifold fittings.

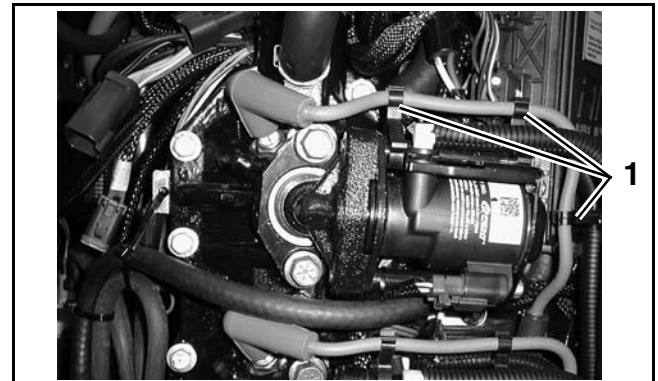
Install retainer screws. Torque to 25 to 30 in. lbs. (2.8 to 3.4 N·m).



1. Fuel manifold fittings  
2. Retainer screws

DP0779

Install the high tension spark plug leads on all six spark plugs and ignition coil terminals, being careful to correctly match coil terminal with the corresponding spark plug. Route the spark plug wires on the retainers.



1. Retainers

000202

Check for fuel leaks. Refer to **Pressure Test Procedure** on page 188 of the *Evinrude Service Manual*.

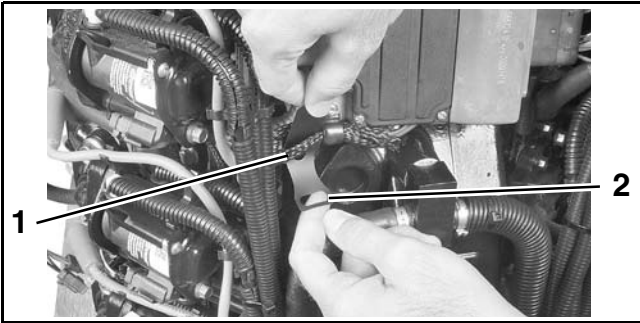
⚠
**WARNING**
⚠

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

Install lower covers.

## Tag Placement

Place a tag behind the lower *EMM* flexweave with the blank back of the tag facing out and the wide loophole at the bottom.



1. *EMM flexweave*  
2. *Wide loophole*

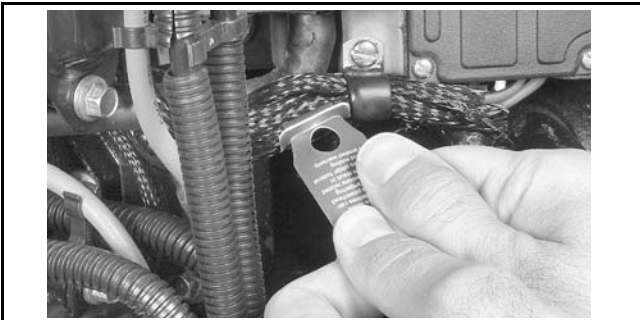
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Fold the tag down and feed it through the wide loophole. It may be necessary to fold the tag along its length to feed it through the loop.



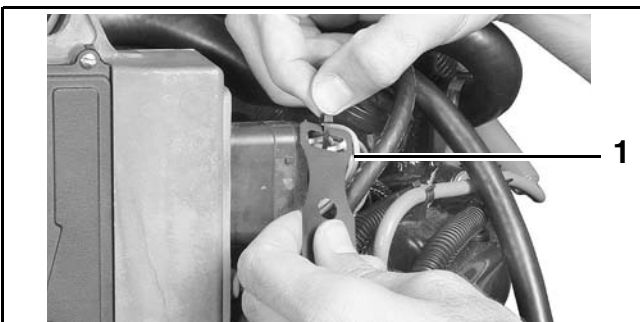
002350

Pull firmly on the tag to fasten it securely.



002351

Using tie strap, place second tag on the *EMM* connector of the engine wiring harness as shown.



1. *Wiring harness*

002352

## Coil Injector Software

Update coil injector information using *EMM* Diagnostic software disk, P/N 3030348.

Carefully follow these steps:

- 1) Connect the interface cable, P/N 437955, between your laptop and the outboard.
- 2) Turn ON the key switch.
- 3) Insert the disk into the 3½" floppy drive.
- 4) Turn ON your computer.
- 5) At the DOS prompt (A:\>) on the screen, type "go" and press the ENTER key.
- 6) Closely follow the on-screen prompts to install the new software program.
- 7) When the download procedure is complete, you will once again see the DOS prompt (A:\>).

**IMPORTANT:** Check the ignition timing whenever new software is downloaded and installed on the outboard. Use *Evinrude* Diagnostic Software to confirm timing.