



EVINRUDE
Johnson

BATTERY CHARGING KIT, P/N 5034658 INSTALLATION INSTRUCTIONS

APPLICATION

This kit is designed for use on **2003 and newer Johnson® 4 and 5 HP, 4-stroke 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.

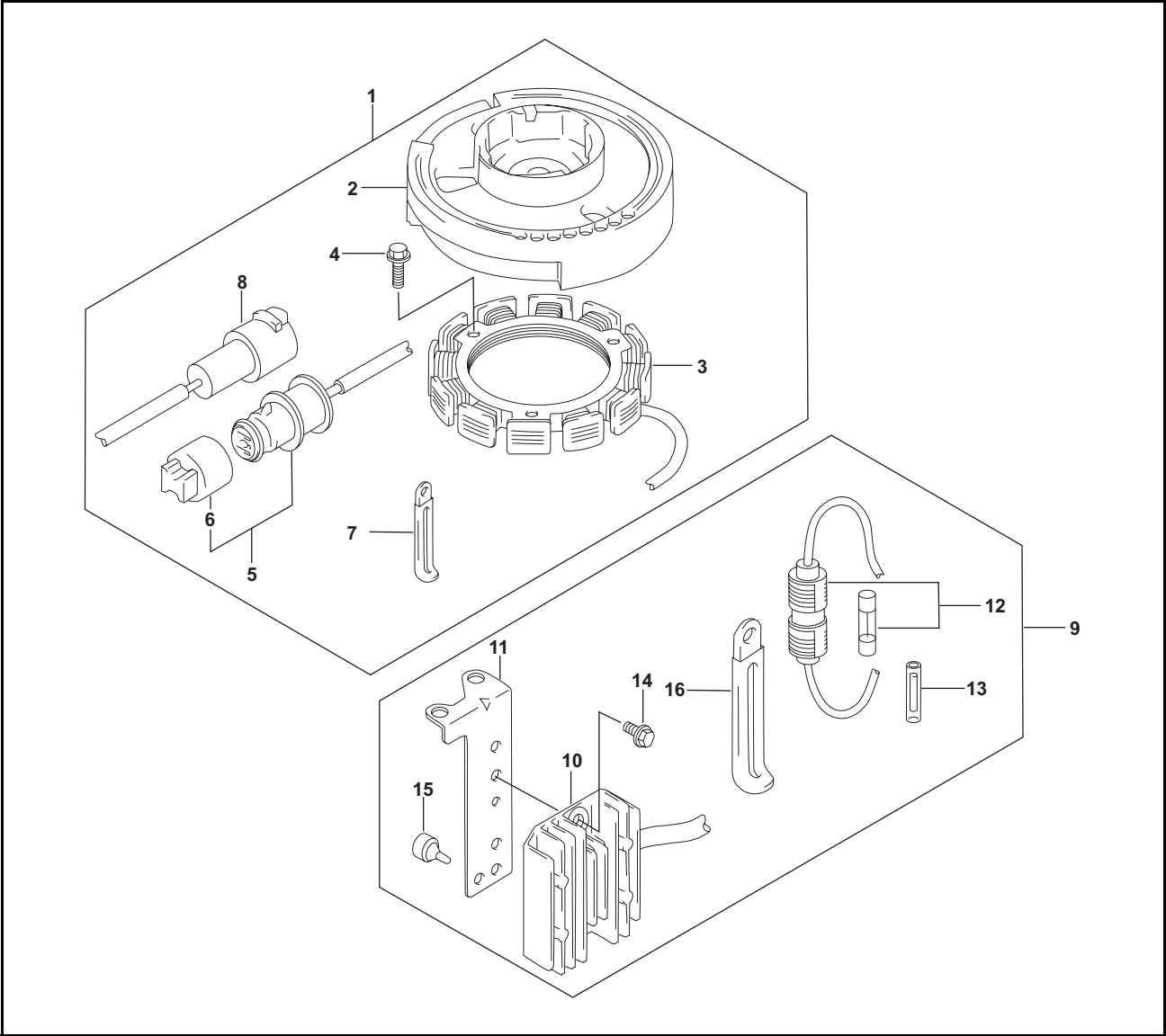
TO THE OWNER: Save these instructions in your owner's kit. This sheet contains information important to the future use and maintenance of your engine.



DESCRIPTION

Regulated battery charging (or auxiliary lighting, if desired) is achieved with the addition of a lighting coil and a rectifier/regulator. A maximum output of 6 amperes can be obtained.

BATTERY CHARGING KIT COMPONENTS



Ref	P/N	Name of Part	Qty	Ref	P/N	Name of Part	Qty
1	5034652	KIT ASSY, LIGHTING RECEPTACLE	1	9	5034655	KIT ASSY, RECTIFIER / REGULATOR	1
2	5034736	*FLYWHEEL, Magneto	1	10	5034255	*RECTIFIER/REGULATOR Assy	1
3	5034653	*COIL, Lighting	1	11	5034656	*BRACKET, Rectifier/Regulator	1
4	5030028	*BOLT, 6 x 20	3	12	5030359	*CASE ASSY, Fuse (20 Amp)	1
5	5034257	*RECEPTACLE, Lighting	1	13	5030362	*CONNECTOR, Lead wire	2
6	5034258	**CAP, Lighting receptacle	1	14	5030988	*BOLT, Rectifier/Regulator	2
7	5034654	*CLAMP, Coil lead	1	15	5034657	*CUSHION, Rectifier/Regulator	1
8	5034259	*PLUG, Lighting	1	16	5031904	*CLAMP (L:135 mm)	1

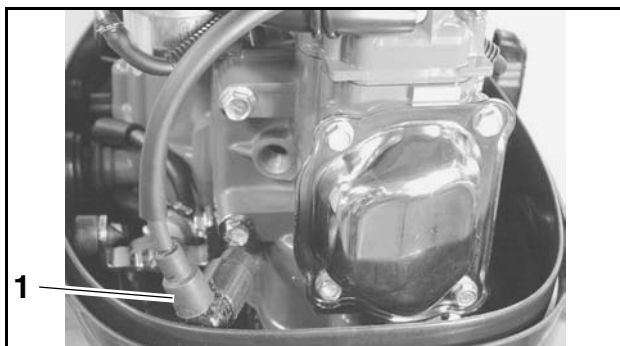
INSTALLATION PROCEDURE

Removing Manual Starter

**WARNING**

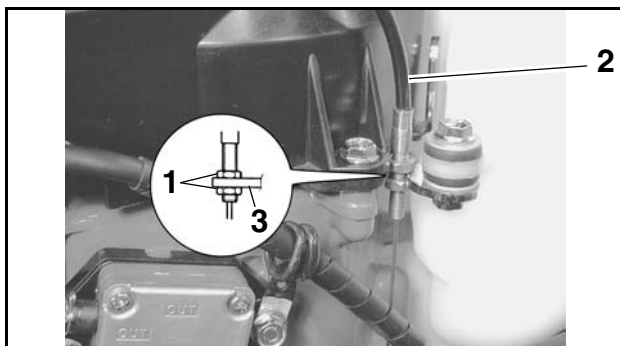
To prevent accidental starting while servicing, twist and remove spark plug lead.

Remove spark plug lead.



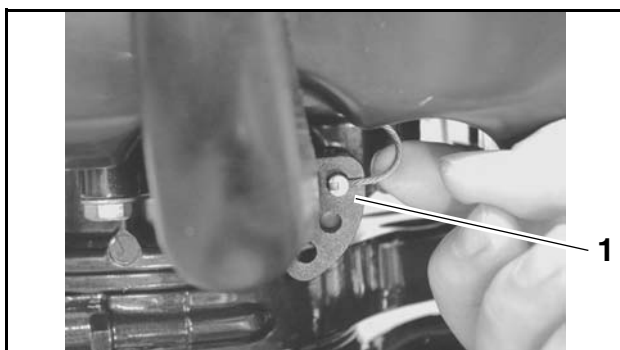
1. Spark plug lead

Loosen locknuts and remove starter lockout cable from bracket.





1. Locknuts (2)
2. Starter lockout cable
3. Bracket

Remove starter lockout cable from clutch notch plate.

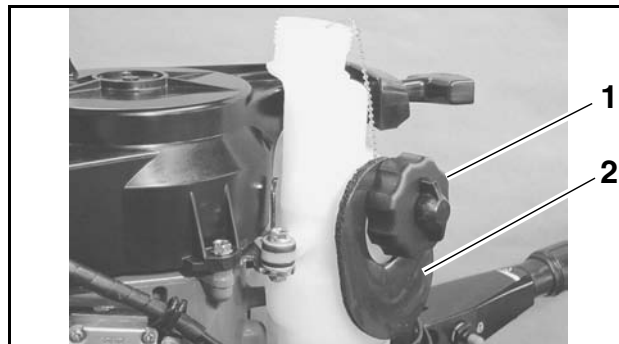


1. Clutch notch plate

**WARNING**

Gasoline is extremely flammable and highly explosive under certain conditions. 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.

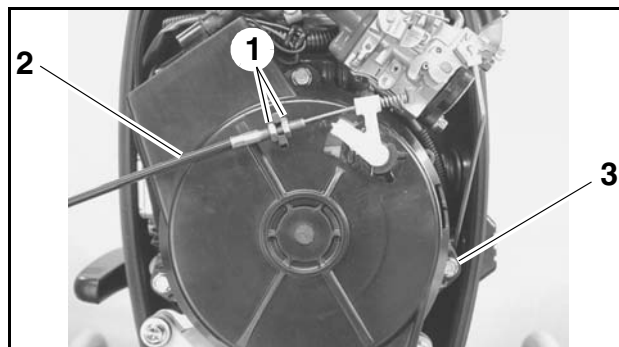
Unscrew fuel tank cap and detach cushion plate.



1. Fuel tank cap
2. Cushion plate

Loosen locknuts and remove starter lockout cable from manual starter.

Remove three (3) bolts and manual starter assembly. Install cushion plate and fuel tank cap.



1. Locknuts (2)
2. Starter lockout cable
3. Bolts (3)

Removing Flywheel Components

Remove two (2) bolts securing CDI and coil unit to powerhead. Remove CDI and coil unit.



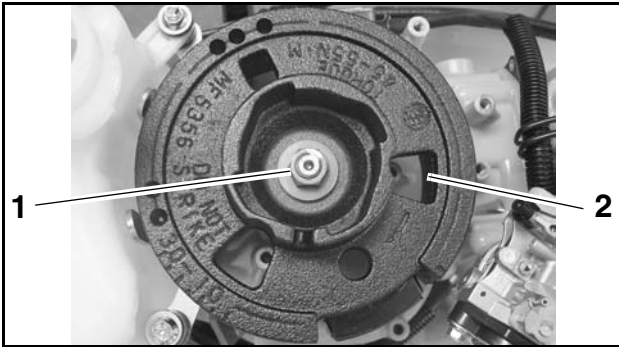
1. Bolts (2)
2. CDI and coil unit

Disconnect Blue/Red lead wire from CDI and coil unit.



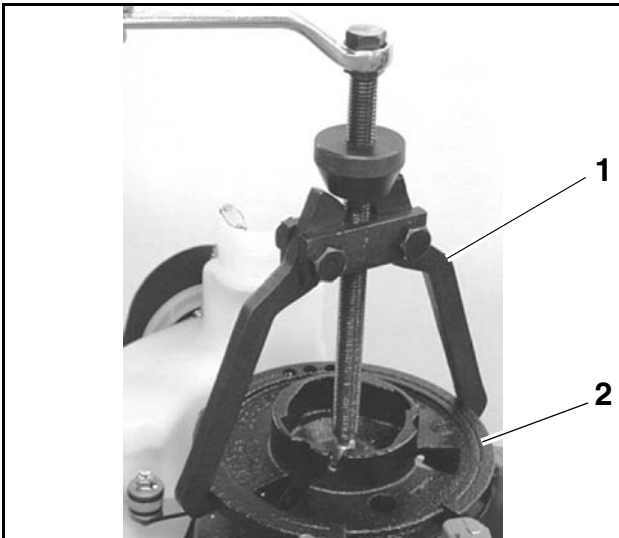
1. Blue/Red lead wire

Remove flywheel nut. Insert 1/2 inch breaker bar in rectangular slot to keep flywheel from turning.



1. Flywheel nut
2. Rectangular slot

Use flywheel remover to remove flywheel from crankshaft.

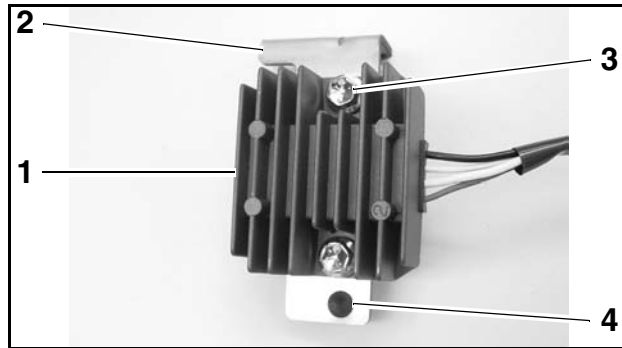


1. Flywheel remover
2. Flywheel

Installing Battery Charging Kit

Apply *Nut Lock™* to threads of two (2) rectifier/regulator bolts and secure rectifier/regulator to bracket. Torque bolts to 71 in. lbs. (8 N·m).

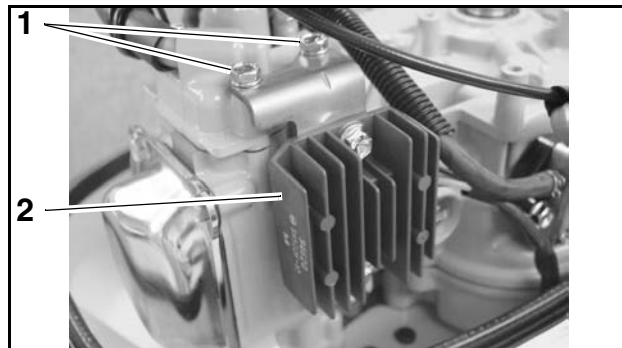
Insert cushion in bottom hole of bracket.



1. Rectifier/regulator
2. Bracket
3. Bolts (2)
4. Cushion

Remove two (2) intake manifold mounting bolts and washers.

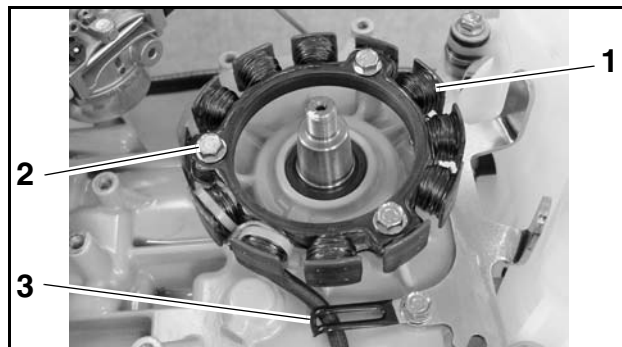
Secure rectifier/regulator assembly to intake manifold using two (2) washers and intake manifold mounting bolts. Torque bolts to 89 in. lbs. (10 N·m).



1. Intake manifold mounting bolts (2)
2. Rectifier/regulator assembly

Install lighting coil using three (3) bolts. Make sure wiring is oriented to starboard side, as shown. Torque bolts to 89 in. lbs. (10 N·m).

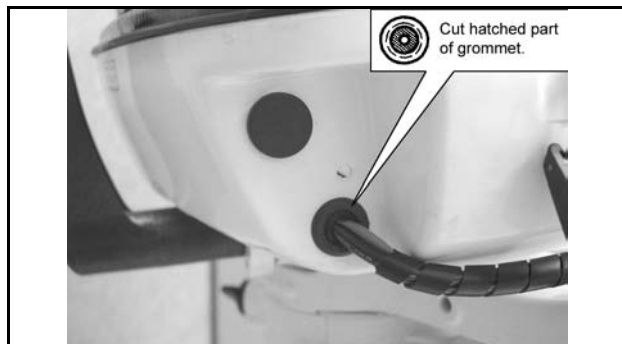
Install clamp to secure lighting coil wiring.



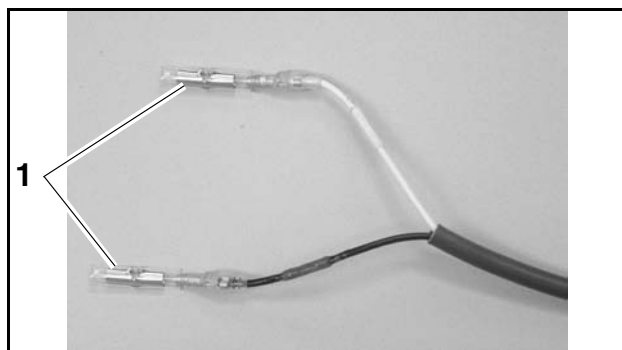
1. Lighting coil
2. Bolts (3)
3. Clamp

To accommodate additional wiring, opening in grommet must be widened by cutting away material from center of grommet.

Route lighting receptacle through grommet.



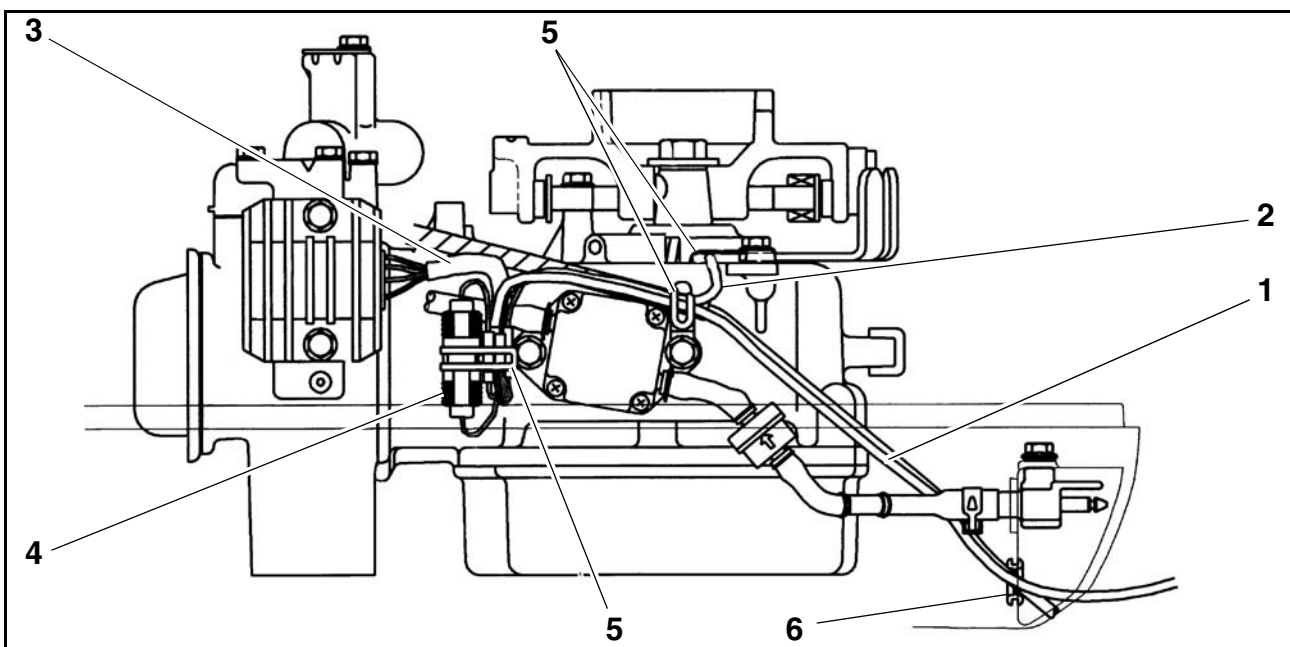
Install connectors on ends of both lighting receptacle lead wires.



1. Connectors (2)

IMPORTANT: Make sure fuse is in fuse case.

Wire Routing



1. Lighting receptacle
2. Lighting coil wiring
3. Rectifier/regulator wiring

4. Fuse case
5. Clamp
6. Grommet

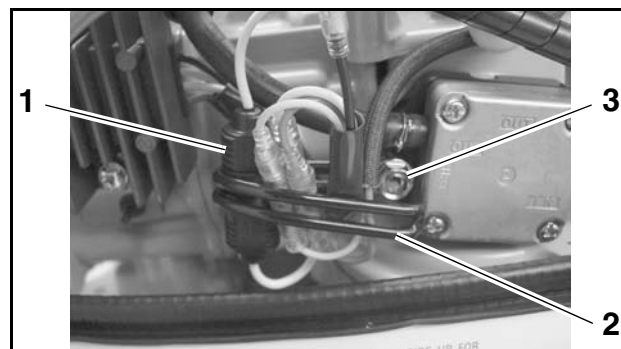
Connect lead wires as follows:

- Yellow lighting coil wire to yellow rectifier/regulator wire
- Red lighting coil wire to red rectifier/regulator wire
- White rectifier/regulator wire to shorter white fuse case wire
- Longer white fuse case wire to white lighting receptacle wire
- Black rectifier/regulator wire to black lighting receptacle wire

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

Install clamp under fuel pump mounting bolt. Torque bolt to 71 in. lbs. (8 N·m).

Bend clamp over to secure fuse case and lead wires.



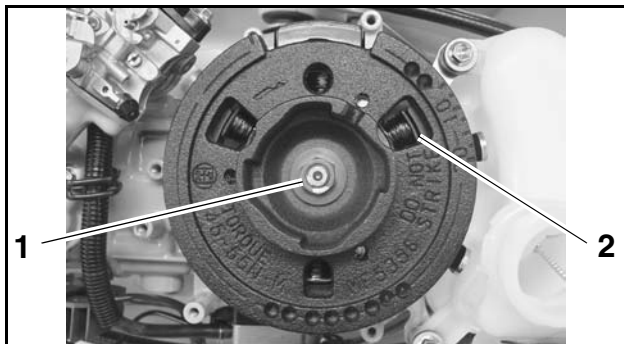
1. Fuse case
2. Clamp
3. Fuel pump mounting bolt

Installing Flywheel Components

IMPORTANT: Flywheel, P/N 5034736, is specially machined on inside rim to function properly with lighting coil. DO NOT use original flywheel.

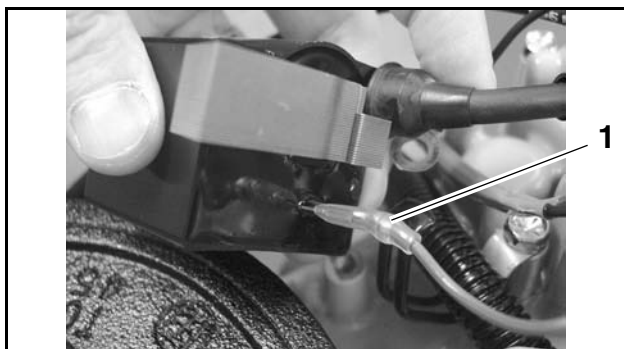
Make sure key is installed on crankshaft. Install **new** flywheel included with kit. Use holes in flywheel to visually check for clearance between flywheel magnets and lighting coil.

Torque flywheel nut to 36 ft. lbs. (50 N·m).



1. Flywheel nut
2. Flywheel magnet/lighting coil clearance

Connect Blue/Red lead wire to CDI and coil unit.

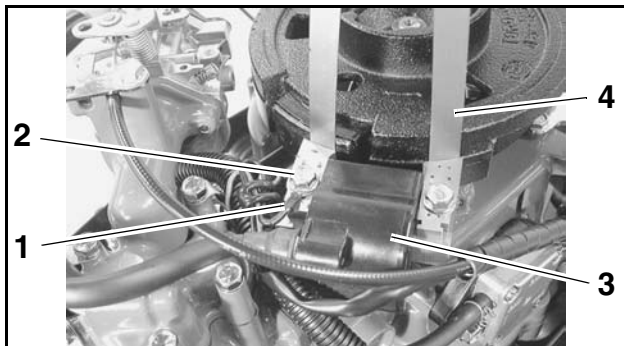


1. Blue/Red lead wire

Install ground wire under bolt. Install CDI and coil unit. Tighten two (2) bolts finger tight.

Use thickness gauge to verify air gap of 0.02 in (0.5 mm) between each core end of CDI and coil unit and machined part of flywheel.

Torque bolts to 89 in. lbs. (10 N·m).



1. Ground wire
2. Bolts (2)
3. CDI and coil unit
4. Thickness gauge

Installing Manual Starter

Perform removal procedure on page 3 in reverse order, but DO NOT connect spark plug lead. Adjust starter lockout cable as follows:

⚠
WARNING
⚠

If starter lockout cable is removed or not adjusted correctly, there is a risk of losing one's balance or being thrown overboard if outboard starts in gear.

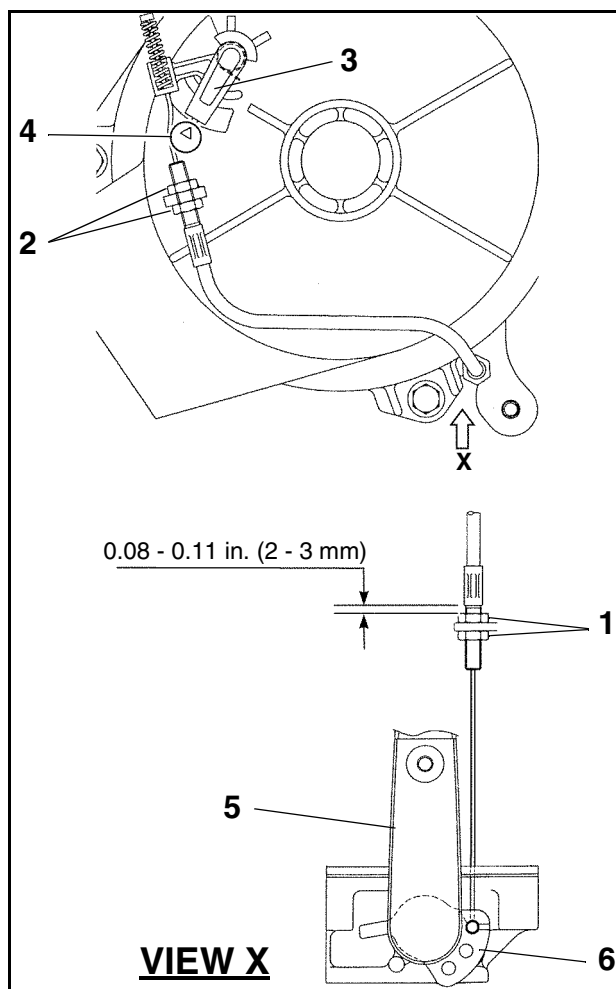
Shift outboard into Neutral.

Adjust lower adjustment nuts to achieve dimension indicated in diagram. Tighten nuts.

Adjust upper adjustment nuts so center of reel stopper is aligned with arrow mark on manual starter assembly cover. Tighten nuts.

Pull rope to make sure starter does not function when shift lever is in Forward or Reverse.

Apply *Triple-Guard®* grease to reel stopper, clutch notch plate, and both ends of inner cable.



1. Lower adjustment nuts
2. Upper adjustment nuts
3. Reel stopper
4. Arrow mark
5. Shift lever
6. Clutch notch plate

Connecting Battery

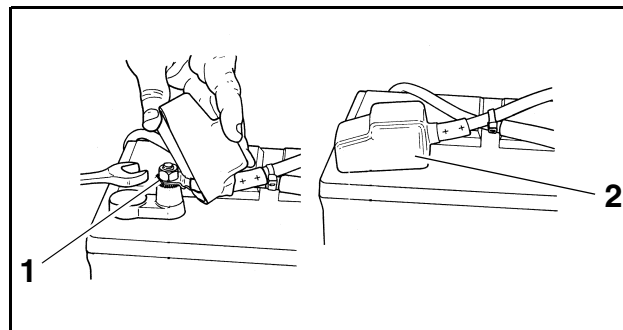
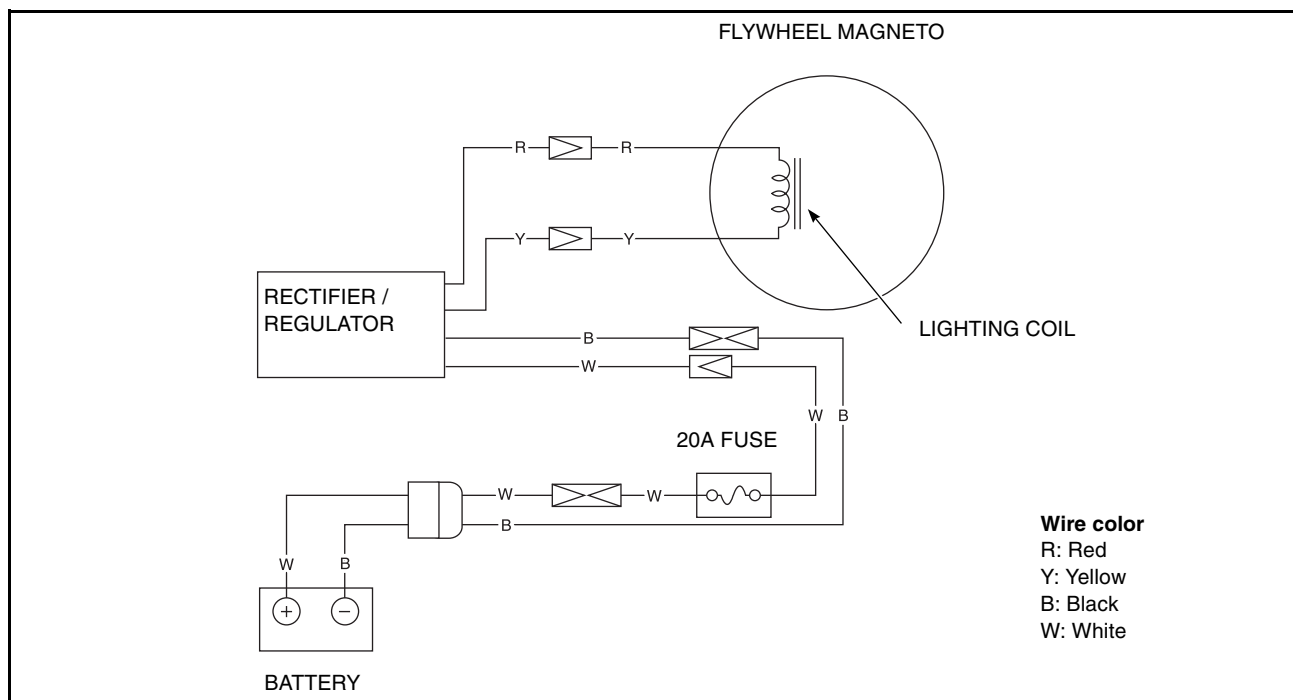
- Secure all batteries in protected locations.
- Position battery as close to outboard as possible.
- Battery location must provide access for periodic maintenance.
- Use battery mounting trays or battery boxes on all battery installations.
- Connections and terminals must be insulated.
- Battery connections must be clean and free from corrosion. Apply *Triple-Guard* grease to prevent connections from corroding.
- Read and understand safety information supplied with battery before beginning installation.

⚠
WARNING
⚠

Keep the battery connections clean, tight, and insulated to prevent 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.

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

Wiring Diagram

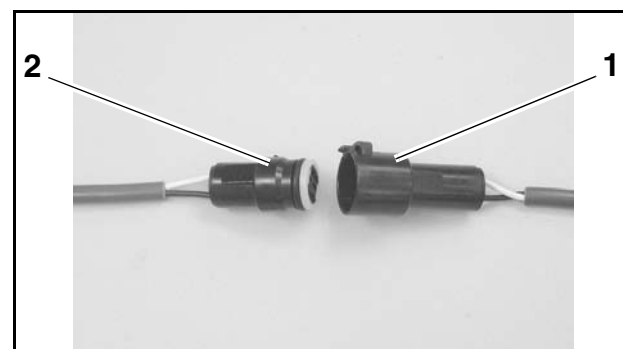


1. Connection
2. Insulator

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Connect white wire of lighting plug to positive (+) battery terminal. Then connect black wire to negative (-) battery terminal.

Remove cap from lighting receptacle. Connect lighting plug to lighting receptacle.



1. Lighting plug
2. Lighting receptacle