

MODULAR WIRING SYSTEM (MWS) HARNESS KIT, P/N 586853 INSTALLATION INSTRUCTIONS

APPLICATION

This kit is designed for use on **2004 (SR) and newer Evinrude® E-TEC™ outboards equipped with tiller handles**. 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*.

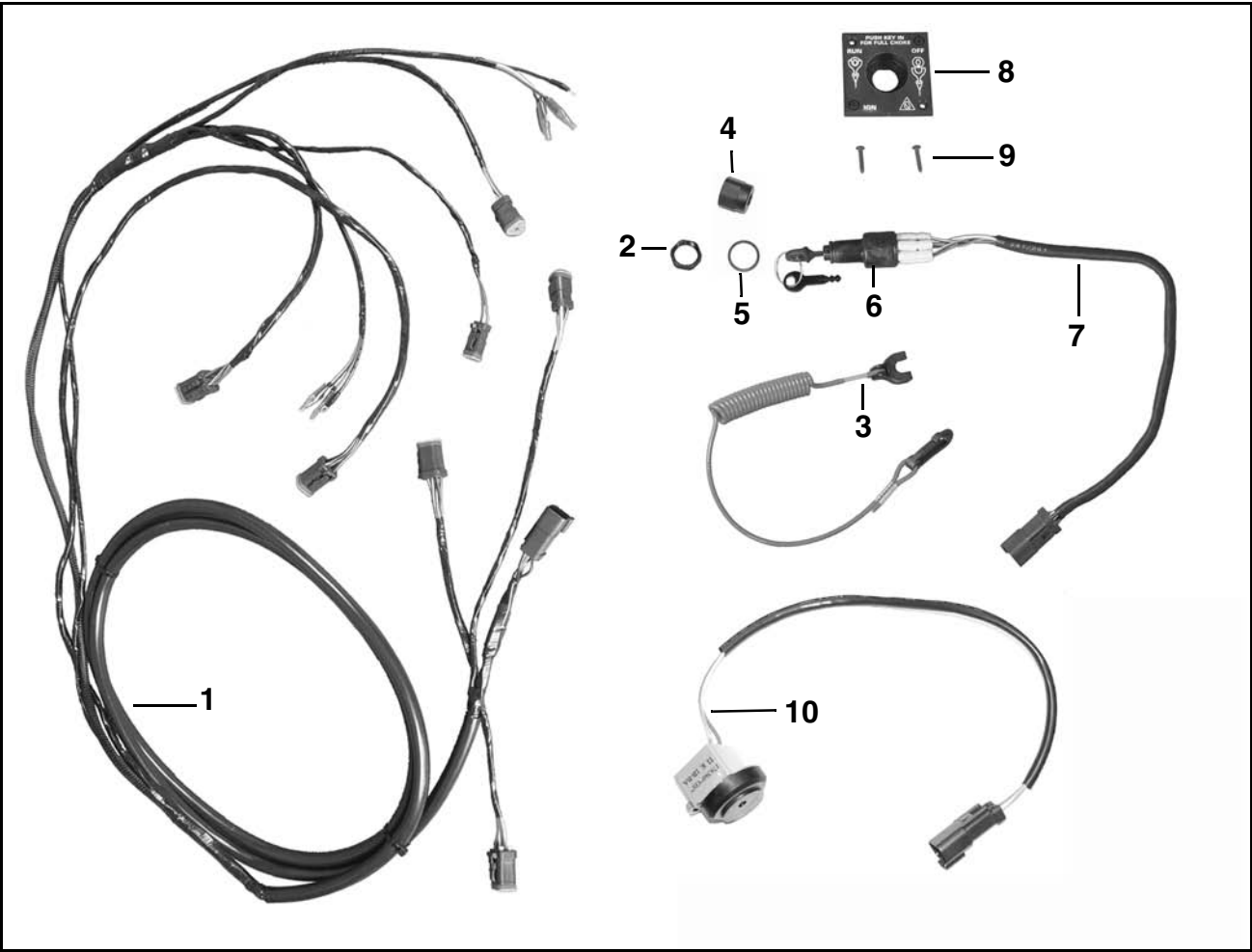
If you use procedures or service tools that are not recommended in this instruction sheet, **YOU ALONE** must decide if your actions might injure people or damage the outboard.

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.



KIT COMPONENTS





Ref	P/N	Name of Part	Qty	Ref	P/N	Name of Part	Qty
	586853	MWS HARNESS KIT	1	6	5005800	*KEY SWITCH	1
1	586843	*HARNESS Assy	1	7	586262	*HARNESS, Key Switch	1
2	127274	*NUT, Key Switch	1	8	127083	*BEZEL	1
3	176288	*LANYARD	1	9	125308	*SCREW, Bezel	2
4	127237	*CAP NUT, Key switch	1	10	176361	*HORN Assy	1
5	127251	*SPACER, bezel to key switch	1				

DESCRIPTION

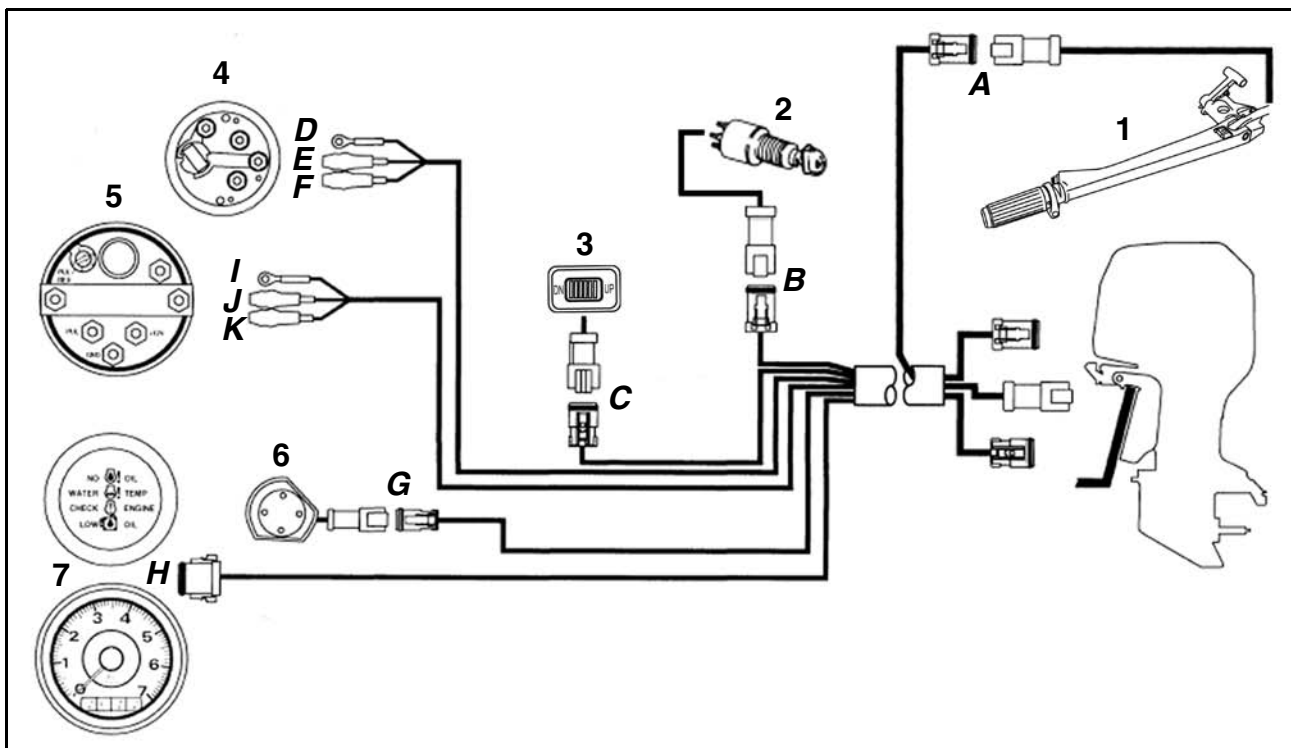
Installing this kit on an *Evinrude E-TEC* outboard equipped with a tiller handle provides remote connections for the following options:

- Remote key switch (included in kit)
- *SystemCheck™* engine monitor and warning horn
- Remote tilt/trim switch and gauge

**CAUTION**

DO NOT use this key switch harness in any other application. It does not provide neutral safety switch connections required for start-in-gear protection on other models.

IMPORTANT: The key switch harness included in this kit is specially designed for use on tiller outboards fitted with a neutral safety switch. DO NOT use in any other application.



MWS Harness Installation Diagram

DR5822a

1. Tiller handle
2. Key switch
3. Tilt / trim switch
4. Trim gauge
5. Standard tachometer
6. Warning horn
7. SystemCheck gauge / tachometer

- A. 6-pin plug to tiller handle receptacle
- B. 6-pin plug to key switch receptacle
- C. 3-pin plug to tilt / trim switch receptacle
- D. Black lead to trim gauge "G" terminal
- E. White / tan lead to trim gauge "S" terminal
- F. Purple lead to trim gauge "I" terminal
- G. 2-pin plug to warning horn
- H. 8-pin plug to SystemCheck gauge
- I. Black lead to tachometer "GND" terminal
- J. Purple lead to tachometer "+12V" terminal
- K. Gray lead to tachometer "PUL" terminal

INSTALLATION

⚠
WARNING
⚠

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

To prevent injury from contact with a rotating propeller, remove propeller before servicing.

If any ring terminals are left disconnected, insulate them to prevent arcing. Arcing could cause a fire.

Refer to Predelivery and Installation Guide or Service Manual for outboard installation procedures.

IMPORTANT: Before joining waterproof electrical connectors, apply a light coat of *Electrical Grease* around the connector seal. Align and push the connectors together until locked.

Connect the engine-end connectors of the MWS harness to the connectors on the engine. Route harness through lower motor cover grommet. Use soapy water to aid grommet installation.



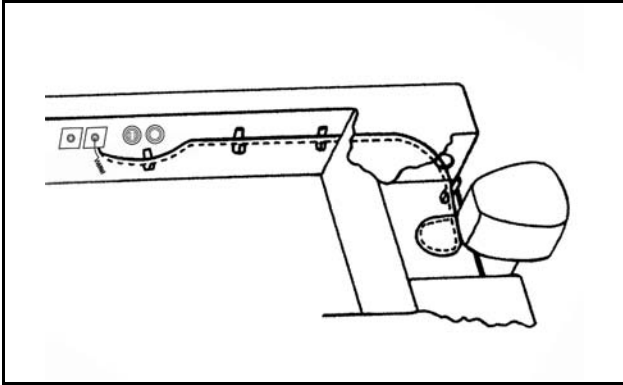
TYPICAL

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Route harness to appropriate location in boat.

IMPORTANT: Interference can damage harnesses and restrict steering and tilting. Route all electrical harnesses carefully to prevent interference to the dash, in the boat, and on the outboard. Turn the outboard from lock to lock at all running angles to check for wiring interference or restriction of outboard movement.

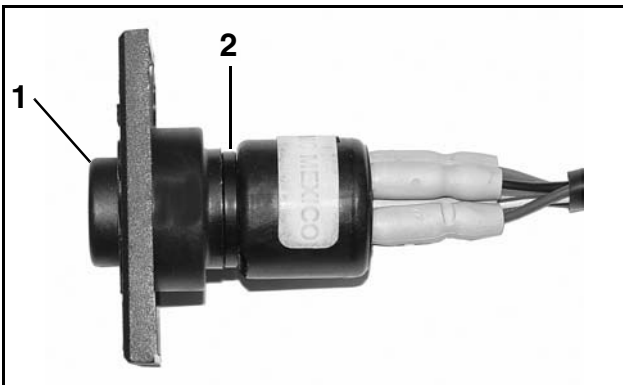
Install tie straps or clamps (not included in kit) every 18 in. (46 cm) to position and support the MWS harness.



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IMPORTANT: Mount key switch in a dry, protected area. Install in a vertical position as shown.

Install key switch into bezel using spacer, P/N 127251, and cap nut, P/N 127237. Install key switch in appropriate location. Orient bezel and key switch properly. Refer to instruction sheet included with key switch.



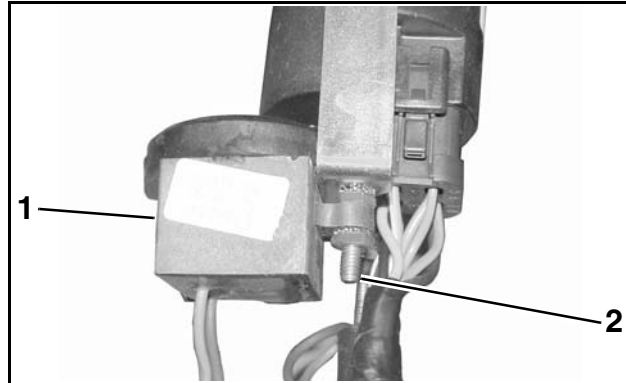
Key Switch Assembly

1. Cap nut
2. Spacer

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Lanyard, P/N 176288, and nut, P/N 127274, can be used if key switch mounted emergency stop switch is needed (optional).

Install *SystemCheck* gauge and warning horn in appropriate location. Refer to installation instructions included with gauge and horn. Secure horn to wiring harness with tie strap or fasten to gauge as shown.

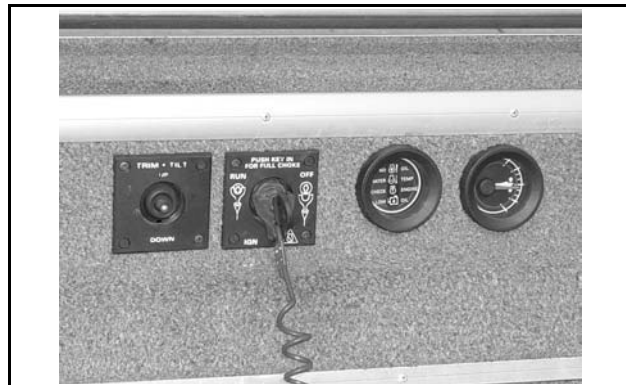


1. Horn

2. Mounting stud, SystemCheck gauge

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Install tilt/trim switch in appropriate location. Refer to installation instructions included with switch.



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Operation

Install lanyard on emergency stop switch.

Use key switch or starter switch to activate starter motor. Refer to operators guide for outboard starting procedures.

Turn key switch to the off position when outboard is not in use.

Refer to Installation instructions of tiller kit for complete "tiller electric" outboard operating instructions.