



## INSTALLATION INSTRUCTIONS

### Evinrude® E-TEC™ 90°V6 EXHAUST AND PROPELLER HUB COOLING KIT

#### APPLICATION

This instruction sheet is a guide for proper installation of components supplied in this kit. These components are designed for use on *Evinrude E-TEC* 90°V6 outboards. Refer to service manual and installation guides for additional assembly information.

#### 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*.

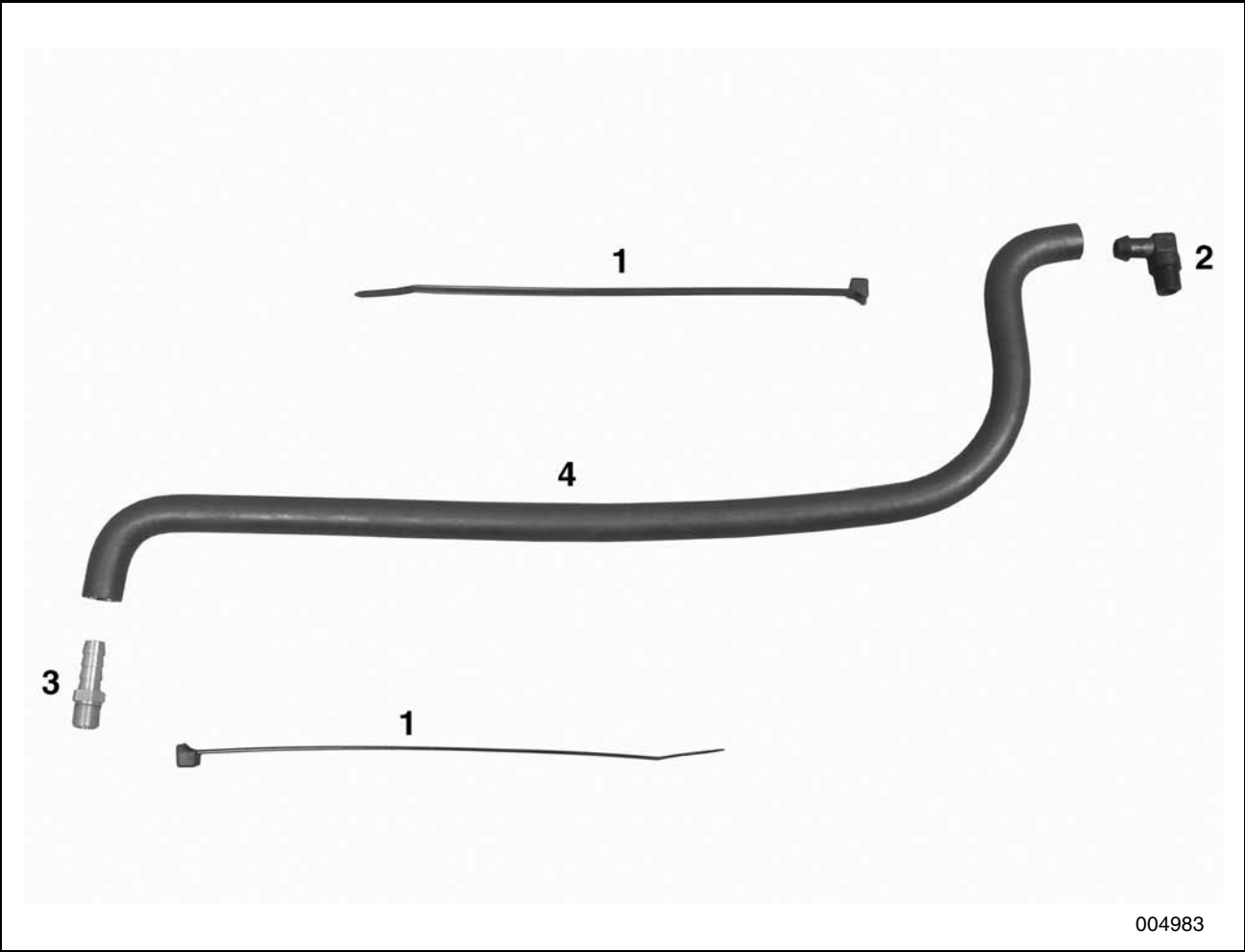
If you use procedures or service tools that are not recommended in this instruction sheet, **YOU ALONE** must decide if your actions might injure people or damage the outboard.

**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.



EXHAUST AND PROPELLER HUB COOLING KIT, P/N 5007020

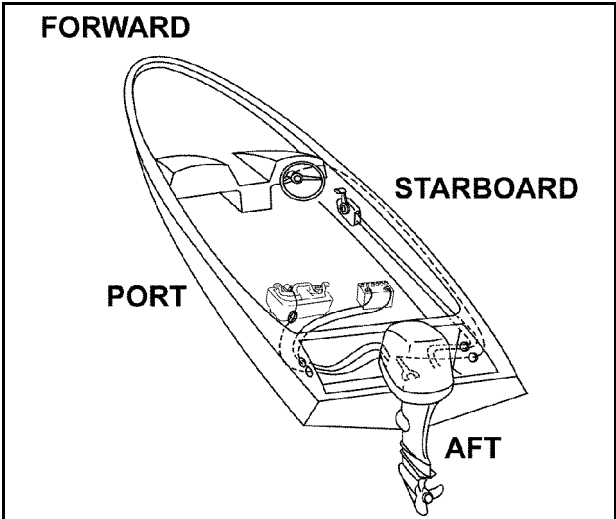


Ref	P/N	Name of Part	Qty
1	320107	TIE STRAP	2
2	331894	ELBOW	1
3	345702	FITTING	1
4	347034	HOSE	1

**WARNING**

Improper installation of cooling system components could result in engine damage or water ingestion by outboard. Verify operation and inspect for water leaks prior to returning outboard to customer.

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



Nautical Orientation

## INSPECTION

Check outboard for signs of overheating. Check water pressure gauge installation. Identify water port on back of exhaust housing.

Visually inspect propeller hub and propeller shaft bearing housing for damage or signs of excessive heat.

**IMPORTANT:** Prior to starting installation, perform the following:

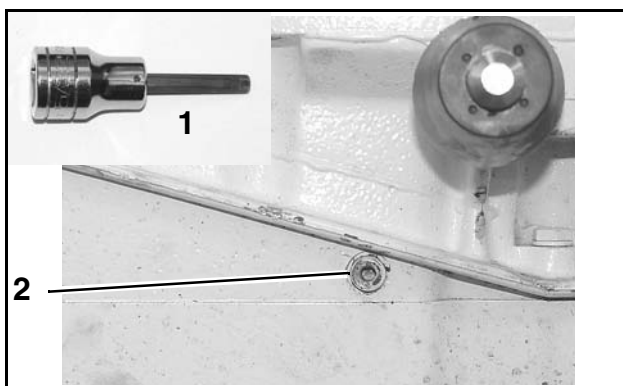
- Stop the engine.
- Disconnect battery cables from outboard.
- Remove propeller and inspect.
- Make sure the engine is sufficiently cooled.

## INSTALLATION

Remove upper and lower port engine covers.

**IMPORTANT:** Carefully apply heat to the area around the emissions port plug for approximately two minutes to aid removal.

Use a 5/32 in. allen (hex) bit to remove plug from emissions port on port side of adaptor housing.

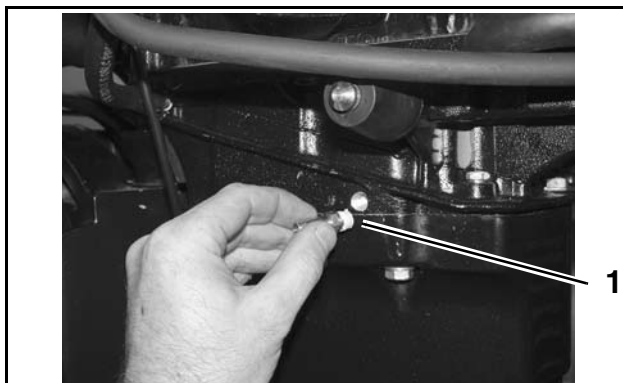


1. 5/32 in. allen (hex) bit  
2. Plug, emissions port

004993  
004984

**IMPORTANT:** If hex drive of emissions port plug strips out during removal, drill a 3/16 in. hole completely through plug and use appropriate extraction tool to remove plug.

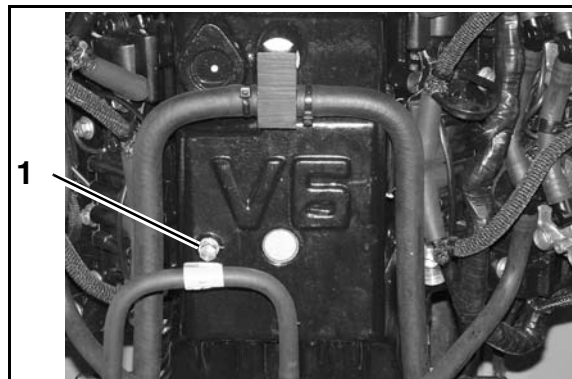
Apply *Pipe Sealant with Teflon* to threads of hose fitting and install in adaptor.



1. Fitting

004985

Remove existing exhaust housing water port plug if **no** water pressure gauge hose fitting is installed.



1. Plug

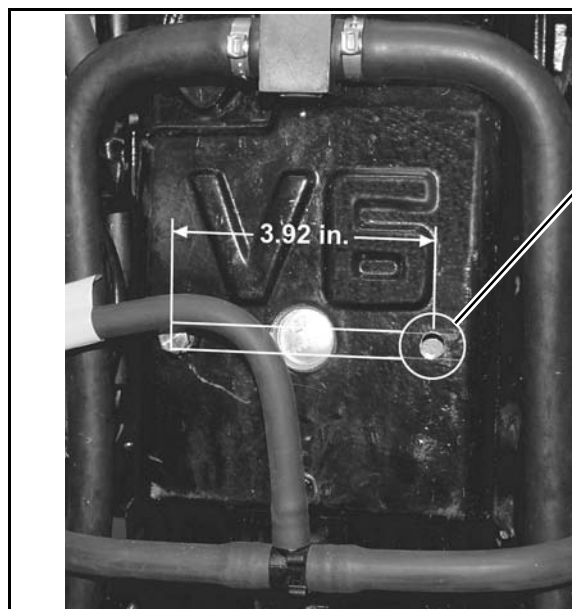
004986

**IMPORTANT:** Drill hole in exhaust housing if additional water port is required.

Carefully measure and drill rear outer exhaust housing. Drill through outer wall of exhaust housing only. **DO NOT** drill into inner exhaust housing.

Drill the hole parallel to existing water port as shown. Drill a "R" size hole at location 3.92 in. from existing port.

**Drill bit size:** R letter size (0.339 in.)

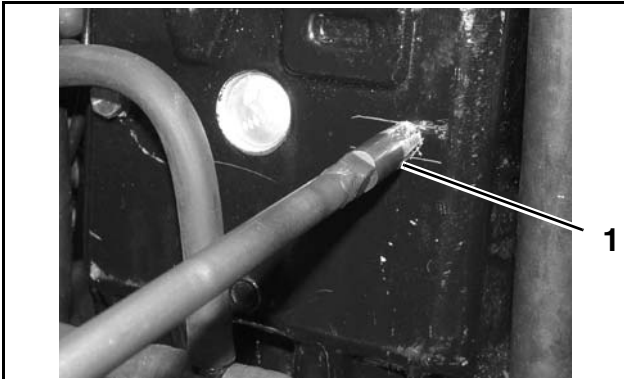


1. Location

004987

Use 1/8 NPT tap to thread hole.

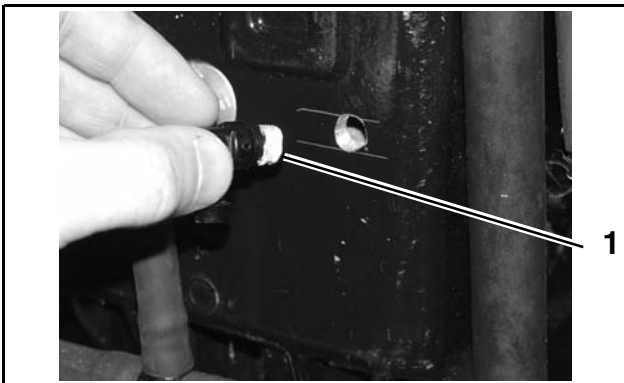
**Tap size:** 1/8 in. x 27 threads per inch (1/8 NPT)



1. Tap

004988

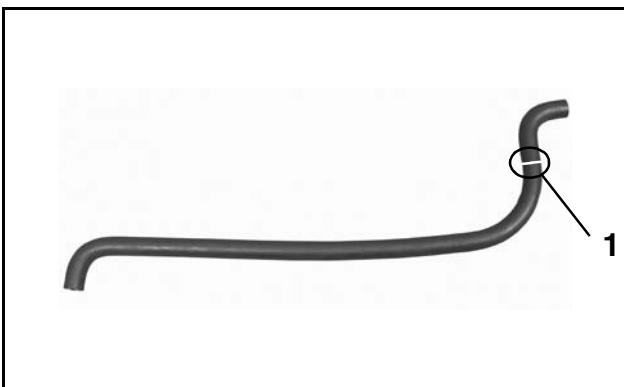
Coat the threads of elbow, P/N 331894, with *Pipe Sealant with Teflon* and install elbow into exhaust housing.



1. Elbow

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**IMPORTANT:** Cut water hose as shown for installation on **existing** port of exhaust housing.

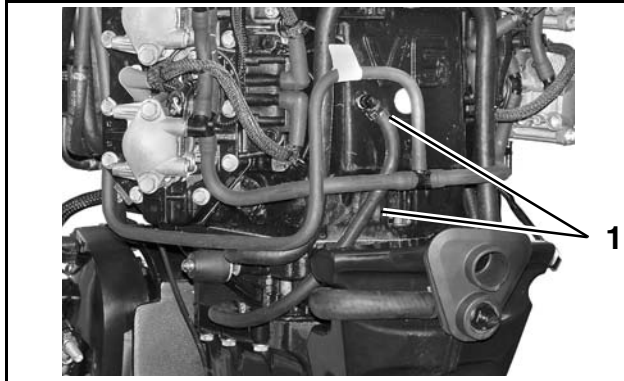


1. Hose modification

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**IMPORTANT:** Route and position hose to prevent abrasion on metal components.

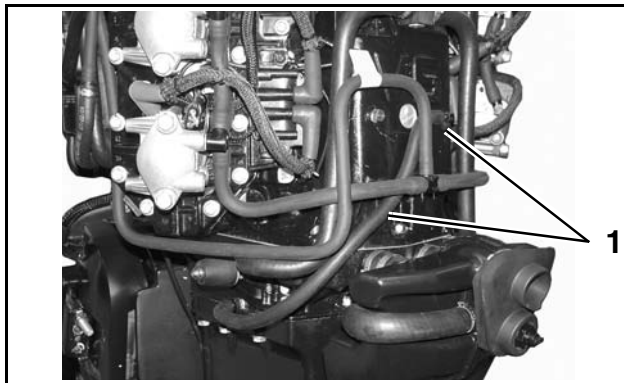
Route and install water hose as shown. Secure to fittings with tie straps provided.



Hose (modified) routed to existing port on exhaust housing

004990

1. Hose



Hose routed to drilled hole in starboard side of exhaust housing

004992

1. Hose

Start and run outboard. Inspect for water leaks. Repair all leaks.

Reinstall engine covers and propeller.