

## REPLACEMENT POWERHEAD SEAL KIT INSTALLATION INSTRUCTIONS

### APPLICATION

This kit is used for **Evinrude E-TEC 3.3 liter 90°V6** models. Later model outboards do not require all components supplied. Older models must be updated with oil manifold and hoses

### SAFETY INFORMATION

For safety reasons, this kit should be installed by an authorized *Evinrude<sup>®</sup>/Johnson<sup>®</sup>* 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.

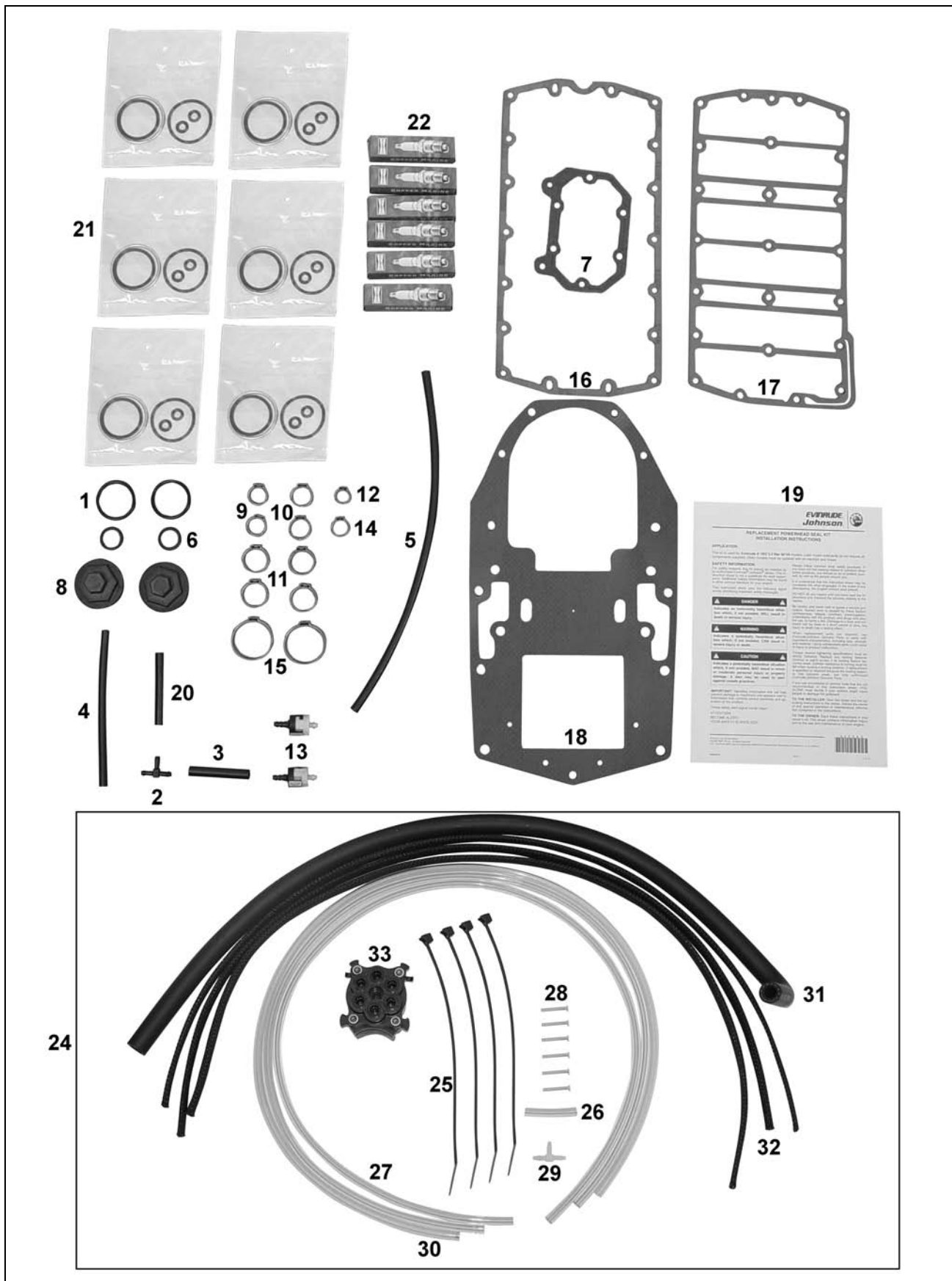
Torque wrench tightening specifications must be strictly followed. Replace any locking fastener (locknut or patch screw) if its locking feature becomes weak. Definite resistance to turning must be felt when reusing a locking fastener. If replacement is specified or required because the locking fastener 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 and the operating instructions 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 use and maintenance of your engine.





Refer to **HOSE ROUTINGS** on the next pages and in 2008 and newer *Evinrude E-TEC* 200-250HP service manuals as needed for additional assembly information.

Ref	P/N	Name of Part	KIT P/N 5007791	KIT P/N 5006298
			Qty	Qty
1	301917	O-RING	2	2
2	313537	FITTING,TEE 5/32" OD (Black)	1	1
3	772571	HOSE, 2.5" cut from roll 5/32 ID" (.140/332721)	1	1
4	772569	HOSE, 6.5" cut from roll 3/32 ID" (.093/335803)	1	1
5	772569	HOSE, 15" cut from roll 3/32 ID" (.109/338591)	1	1
6	339299	SEAL,THERMOSTAT	2	2
7	344472	GASKET REG/RECT	1	1
8	344771	COVER,THERMOSTAT	2	2
9	346150	CLAMP,EAR-18.5MM	2	2
10	346151	CLAMP,EAR-21MM	2	2
11	346152	CLAMP,EAR-25.6MM	4	4
12	346785	CLAMP,EAR-14.5MM	1	1
13	348478	VALVE, CHECK	2	2
14	348839	CLAMP,EAR-17.0MM	1	1
15	349729	CLAMP,EAR-41.0MM	2	2
16	350933	GASKET TB to REED plate	1	1
17	350934	GASKET REED to CC	1	1
18	351535	GASKET CC to ADAPTOR	1	1
19	352280	SHEET,INSTRUCTION	1	1
20	352941	HOSE, 3" x 7/64 ID" (.109)	1	1
21	5007017	KIT AY,INJECTOR	6	6
22	5007419	SPARK PLUG AY, QC10WEP	—	6
23	5007597	SPARK PLUG AY, QC8WEP	6	—
24	5007653	REAR OIL MANIFOLD KIT	1	1
25	320107	*TIE STRAP, 7"	4	4
26	345359	*HOSE, 1.5" BLUE TUBING	1	1
27	348513	*HOSE, 32" BLUE TUBING	2	2
28	349898	*HOSE SUPPORT, brass	6	6
29	352336	*FITTING,TEE 1/8" OD (White)	1	1
30	352949	*SUPPLY HOSE, 32" CLEAR TUBING	1	1
31	353233	*HOSE Fuel supply hose	1	1
32	600905	*SLEEVE,BRAIDED 3/16" 28 " length	3	3
33	5007639	*MANIFOLD AY,OIL	1	1



**IMPORTANT:** The supply hose (clear tubing) to the rear oil manifold must be installed in the center fitting of the oil injection pump. This hose DOES NOT use brass supports. The rear oil distribution hoses (blue tubing) can be installed in any of the rear manifold fittings.

Index all spark plugs. Refer to "Spark Plug Indexing" in service manual for proper spark plug installation procedures. Set timing pointer and ignition timing. Refer to "Timing Adjustments" in service manual.

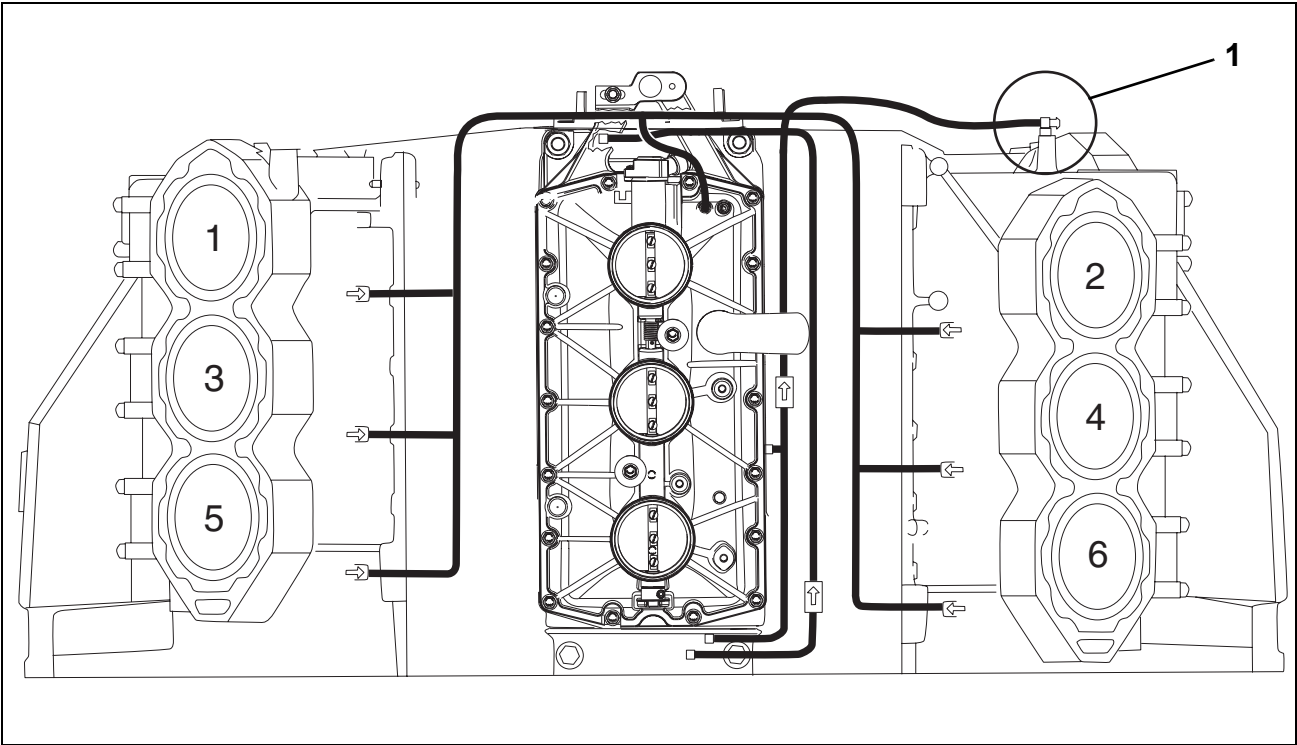
Update *EMM* software to the latest version based on the model number displayed in the *Evinrude Diagnostics* software. Log on to *DealerPort*® to access software updates.

Use the *Evinrude Diagnostics* software to start powerhead break-in oiling. Prime oiling system. Refer to "Powerhead Break-In" and "Oil System Priming" in service manual. XD-100 oil with TCW setting is recommended.

Prime fuel system. Fuel supply must be clean and fresh. Refer to "Fuel System Priming" in service manual.

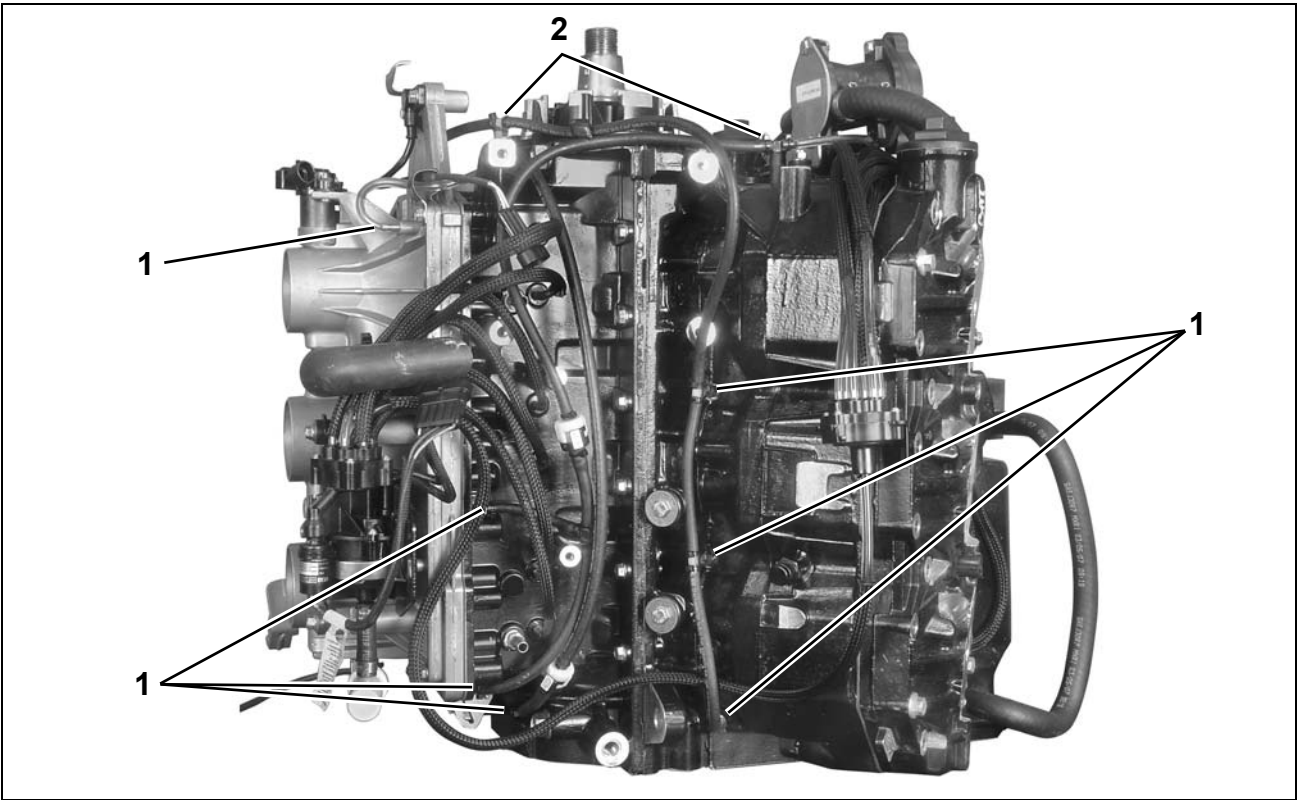
	<b>CAUTION</b>	
<p><b>Position fuel and oil hoses to prevent hoses from being pinched during assembly. Pinched or damaged hoses can restrict fuel or oil flow and result in powerhead failure.</b></p>		

HOSE ROUTINGS



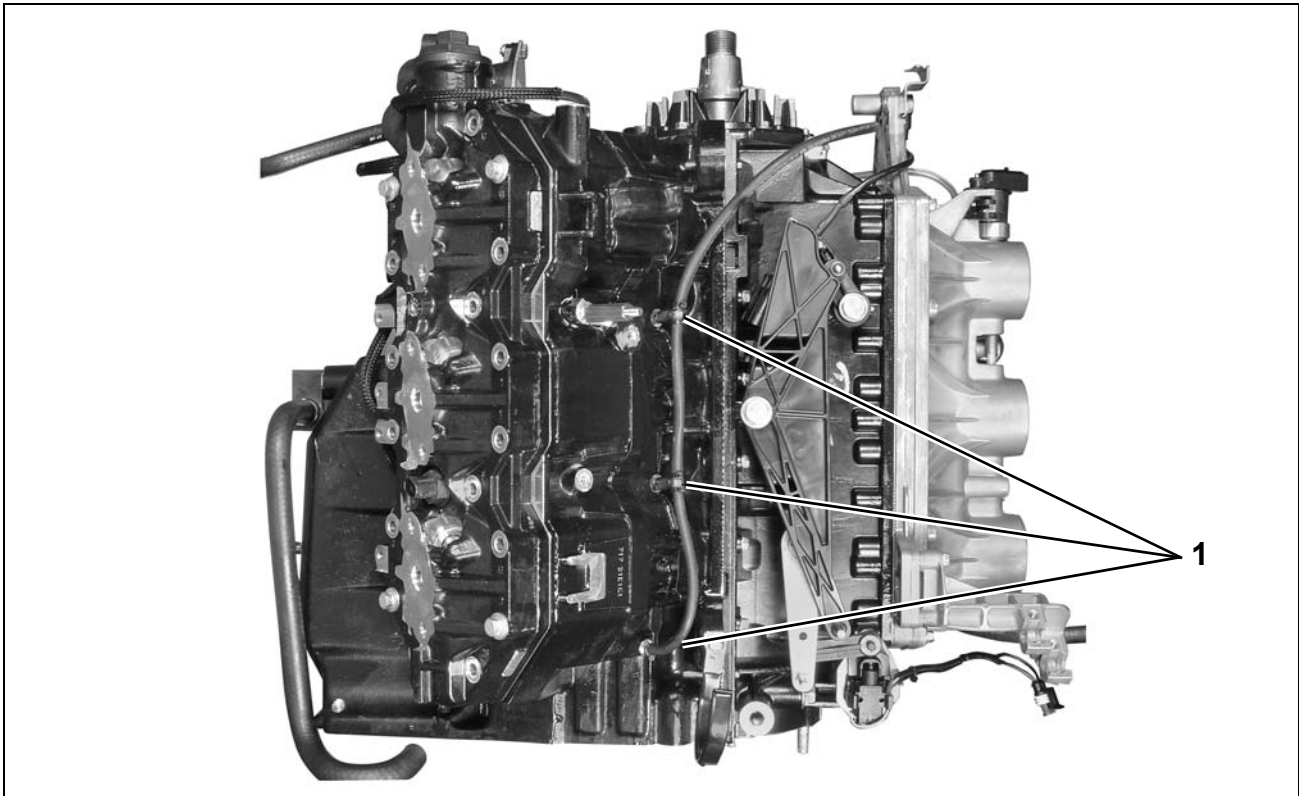
Recirculation hose routing  
1. Cylinder #2 rear oil injection fitting

004111



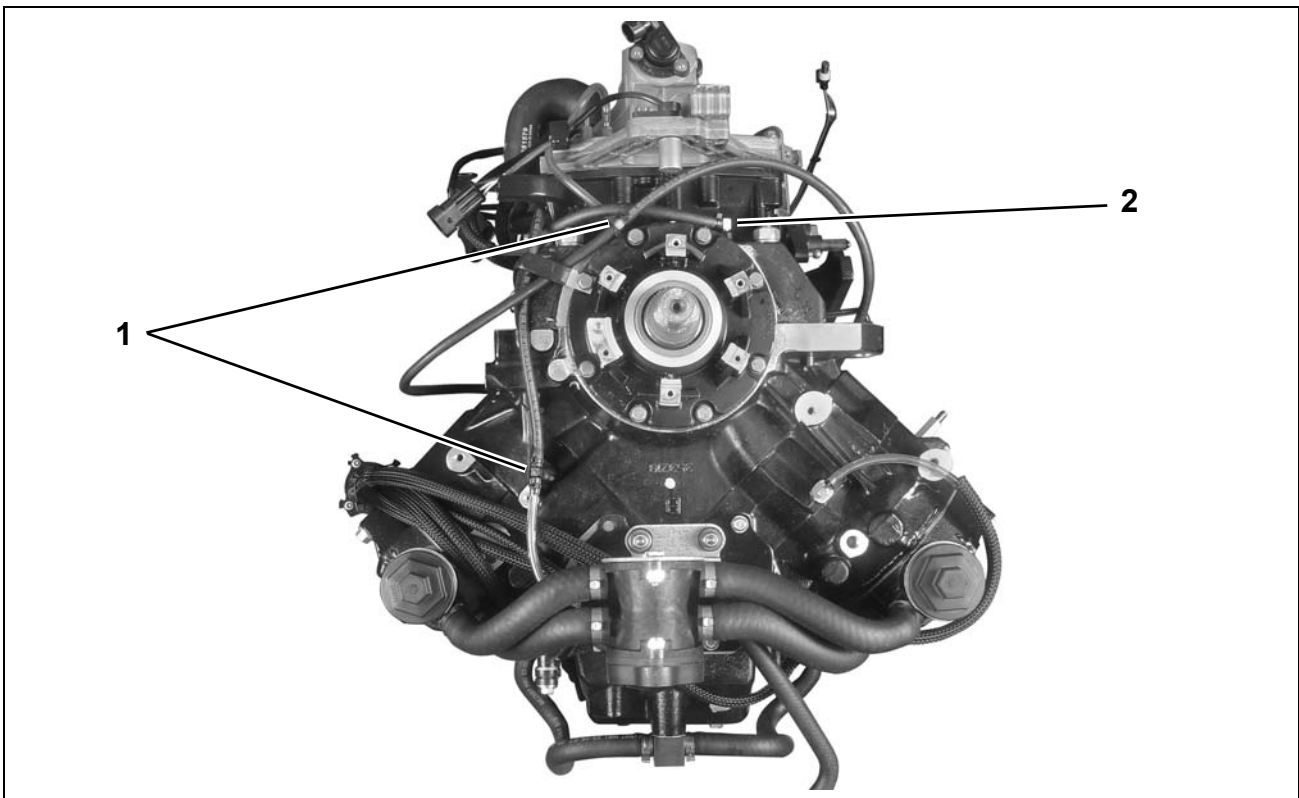
1. Recirculation fitting  
2. Recirculation tee fitting

006951



1. *Recirculation fitting*

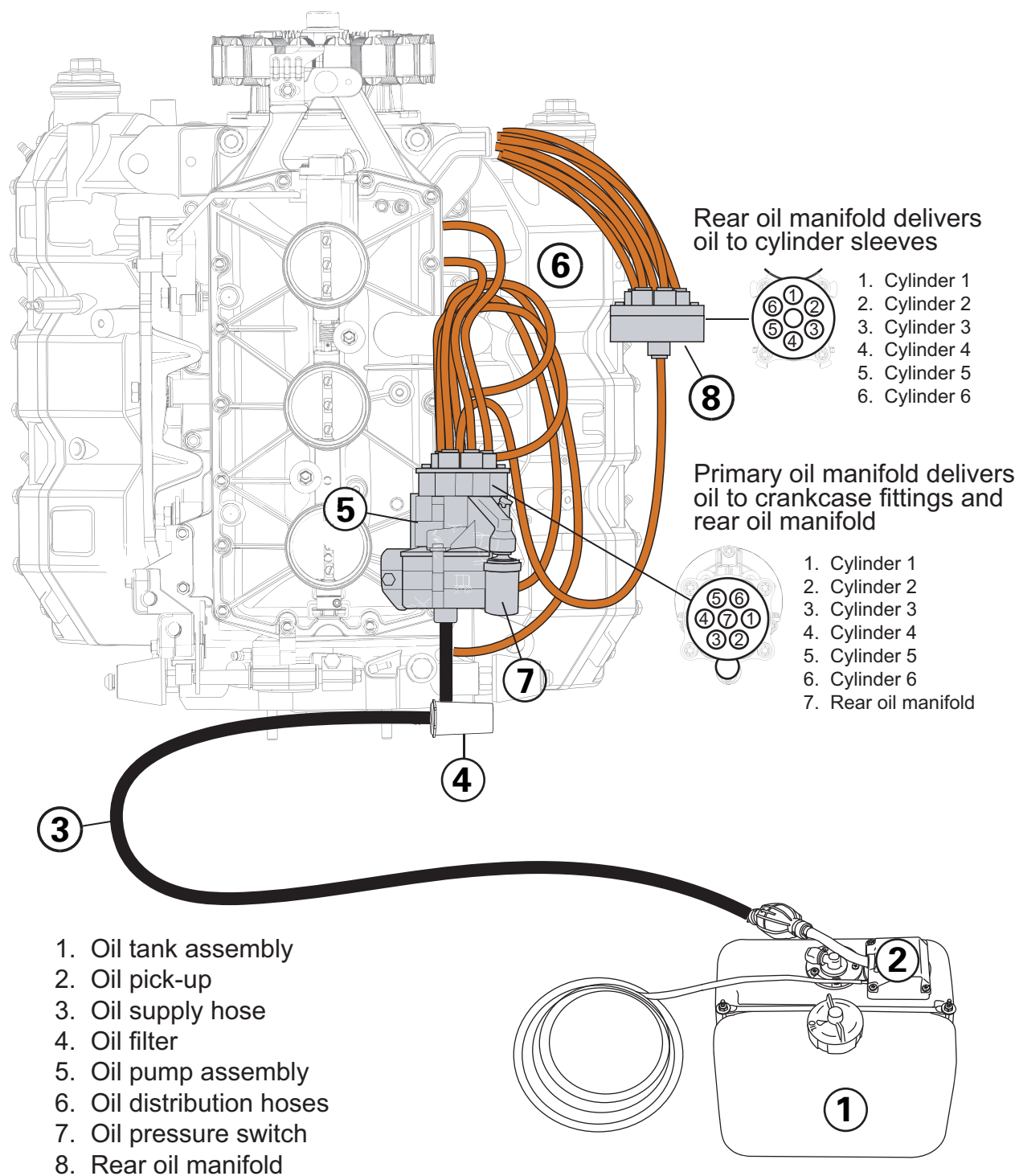
006952



1. *Recirculation tee fitting*  
2. *Recirculation fitting*

006602

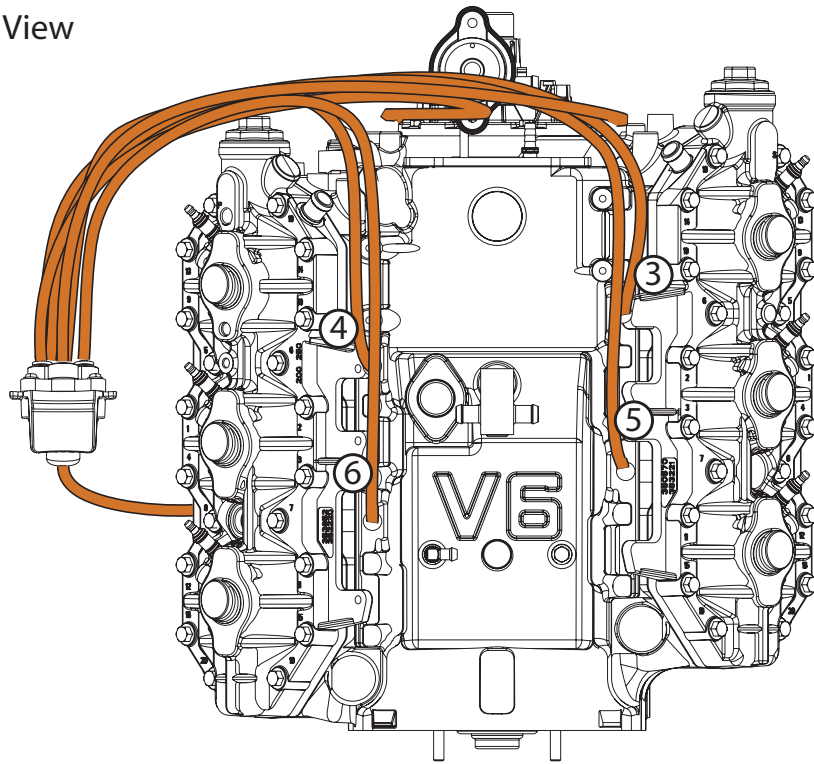
# Oil Injector / Hose Routing Diagram 200-300HP/90°V6- Evinrude E-TEC



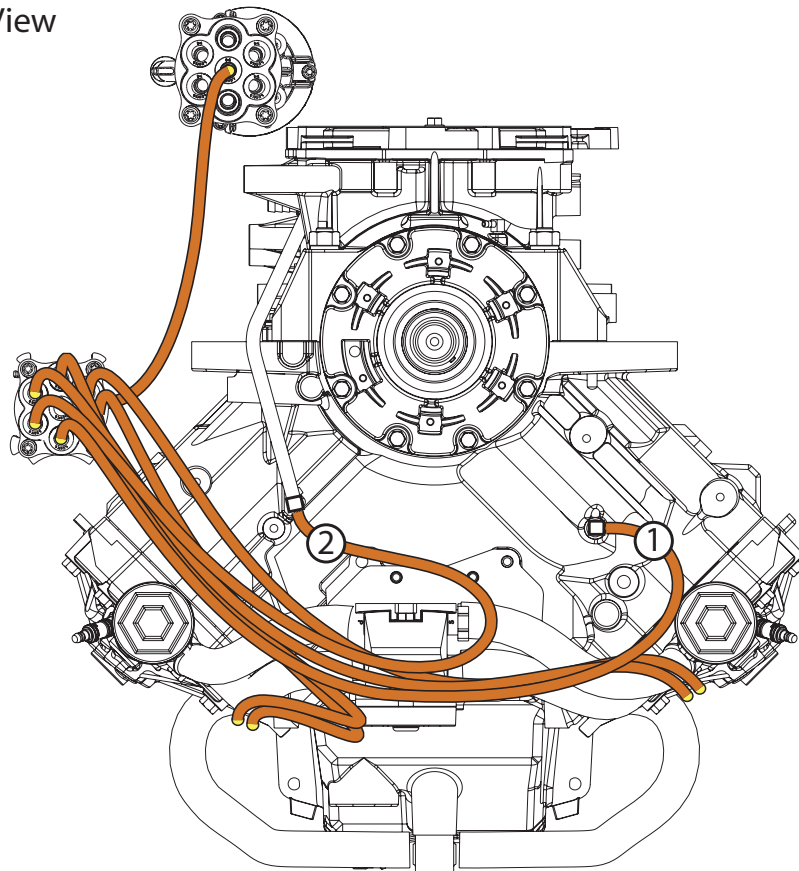
006867

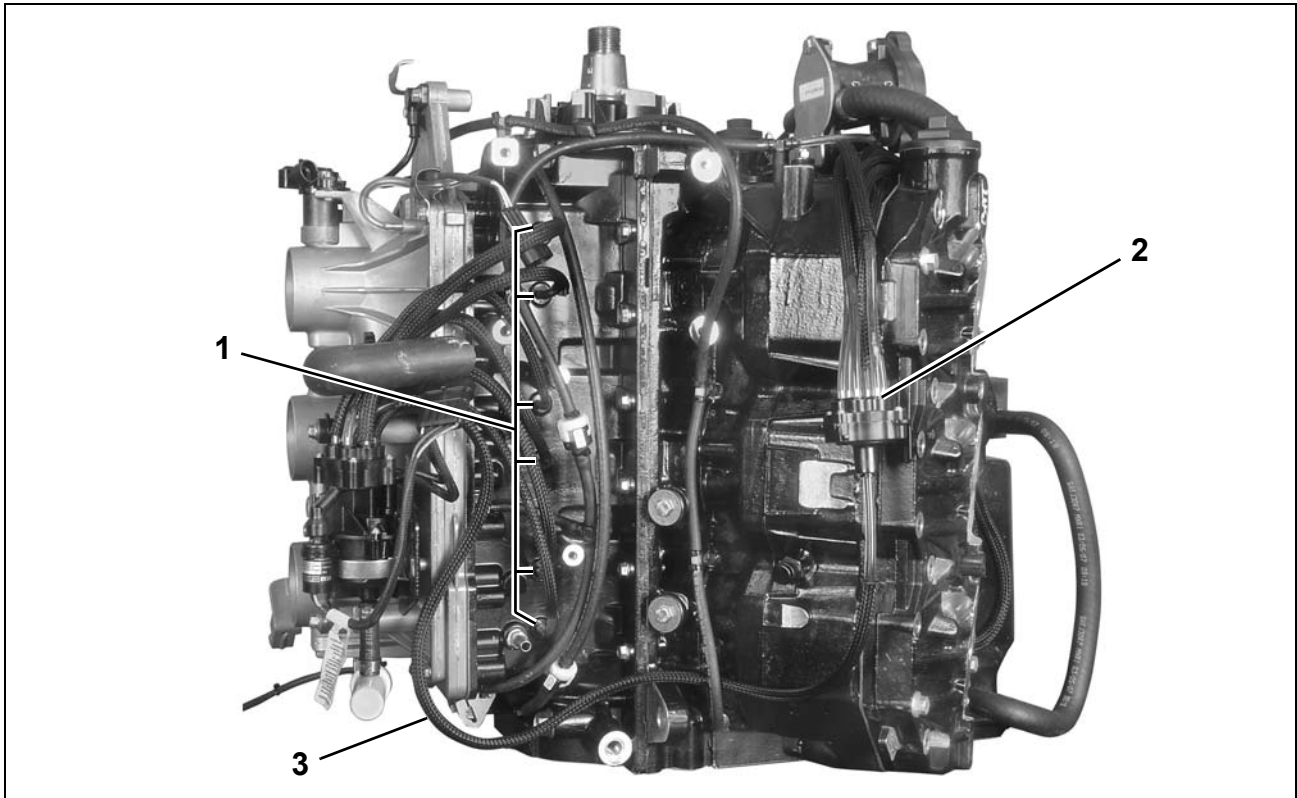


Rear View



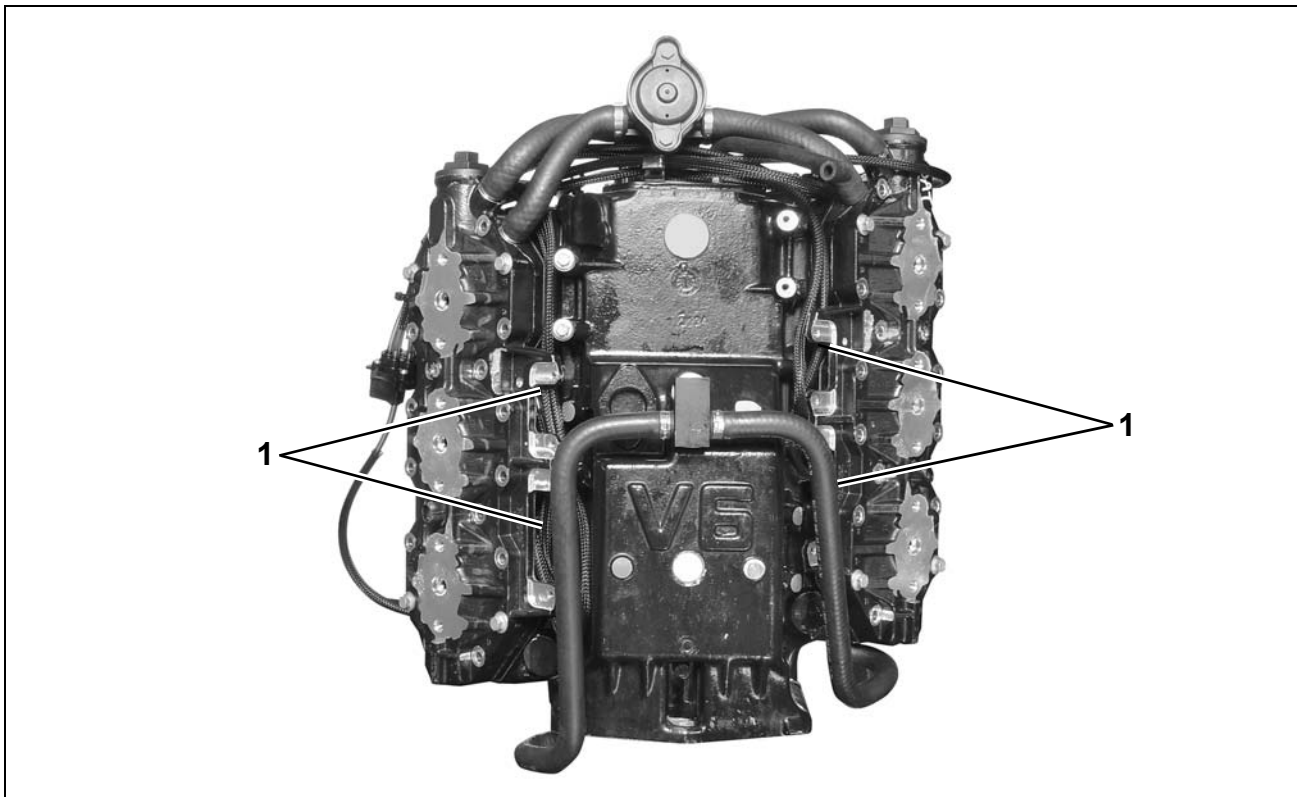
Top View





1. *Front oil injection fittings*
2. *Rear oil manifold*
3. *Rear oil manifold oil supply hose with protective sleeve*

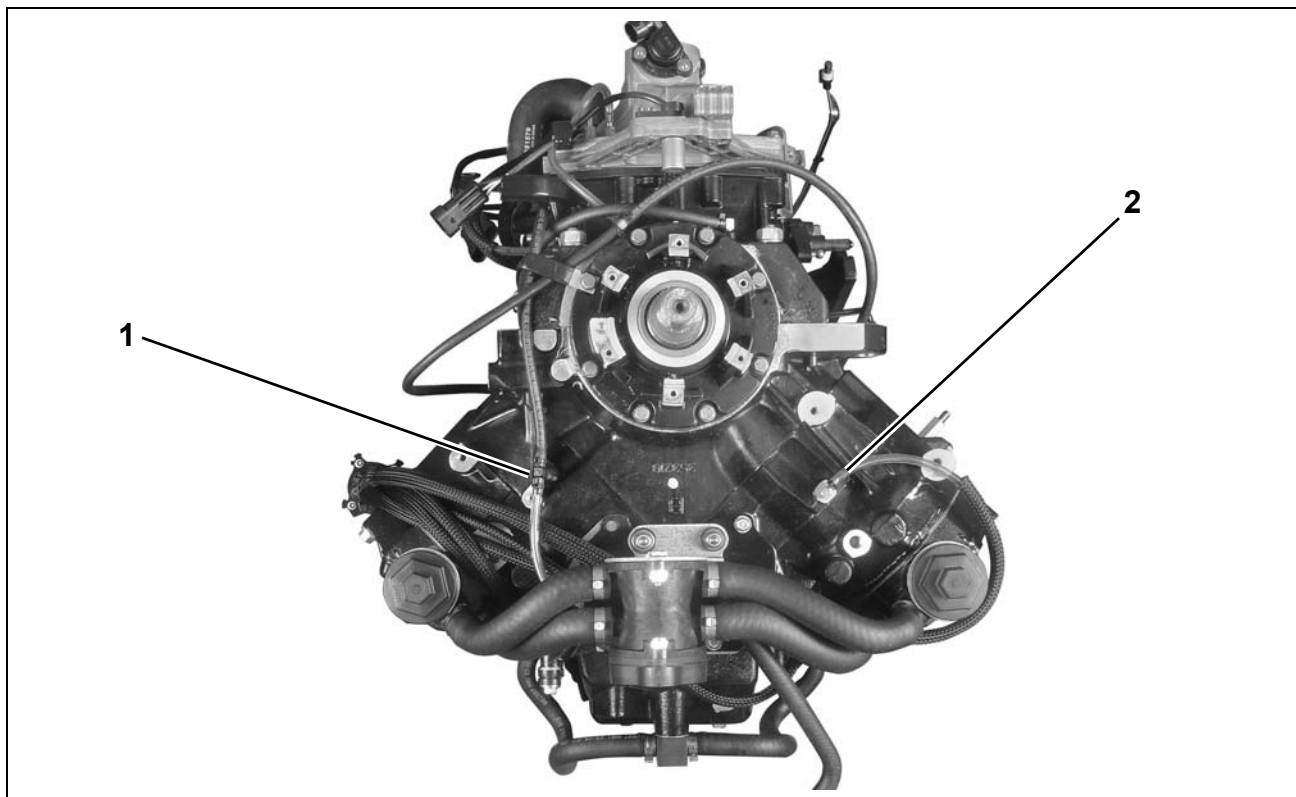
006951



1. *Rear oil injection fittings*

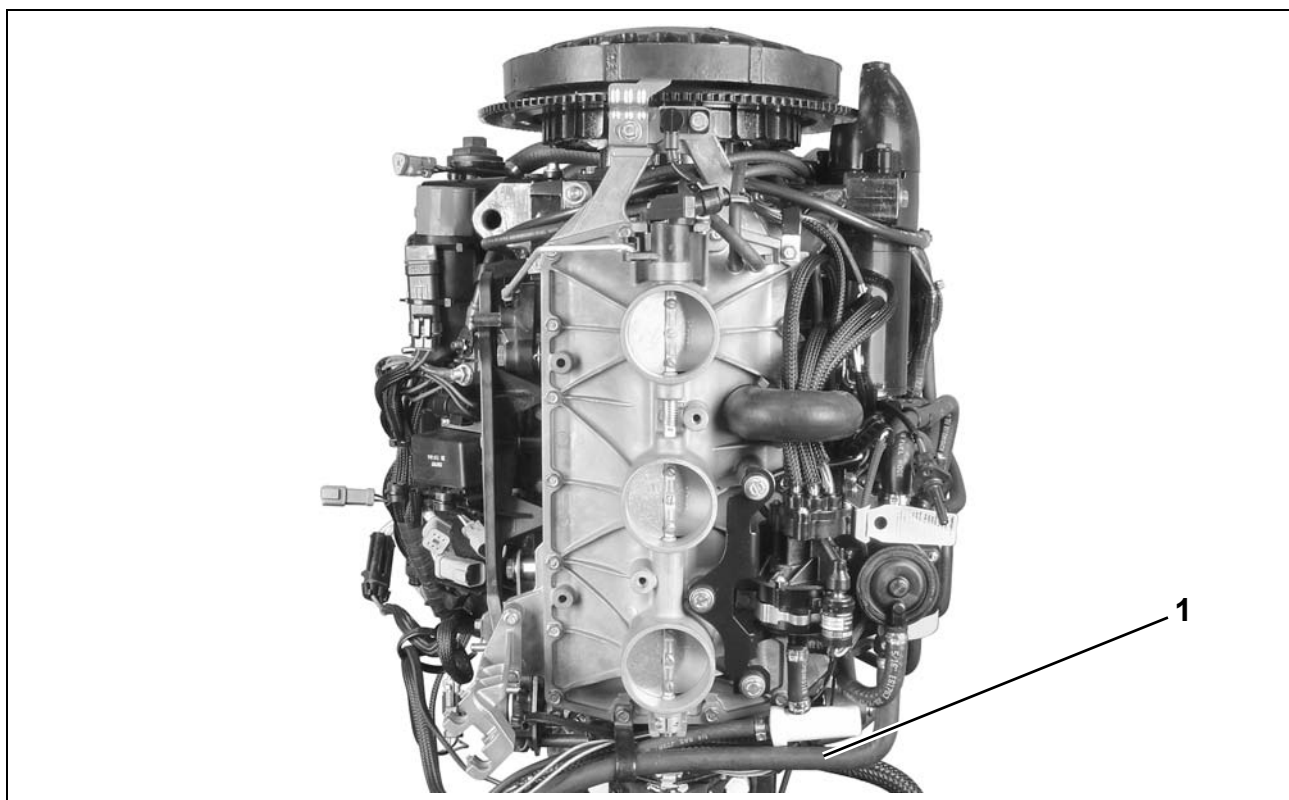
006601





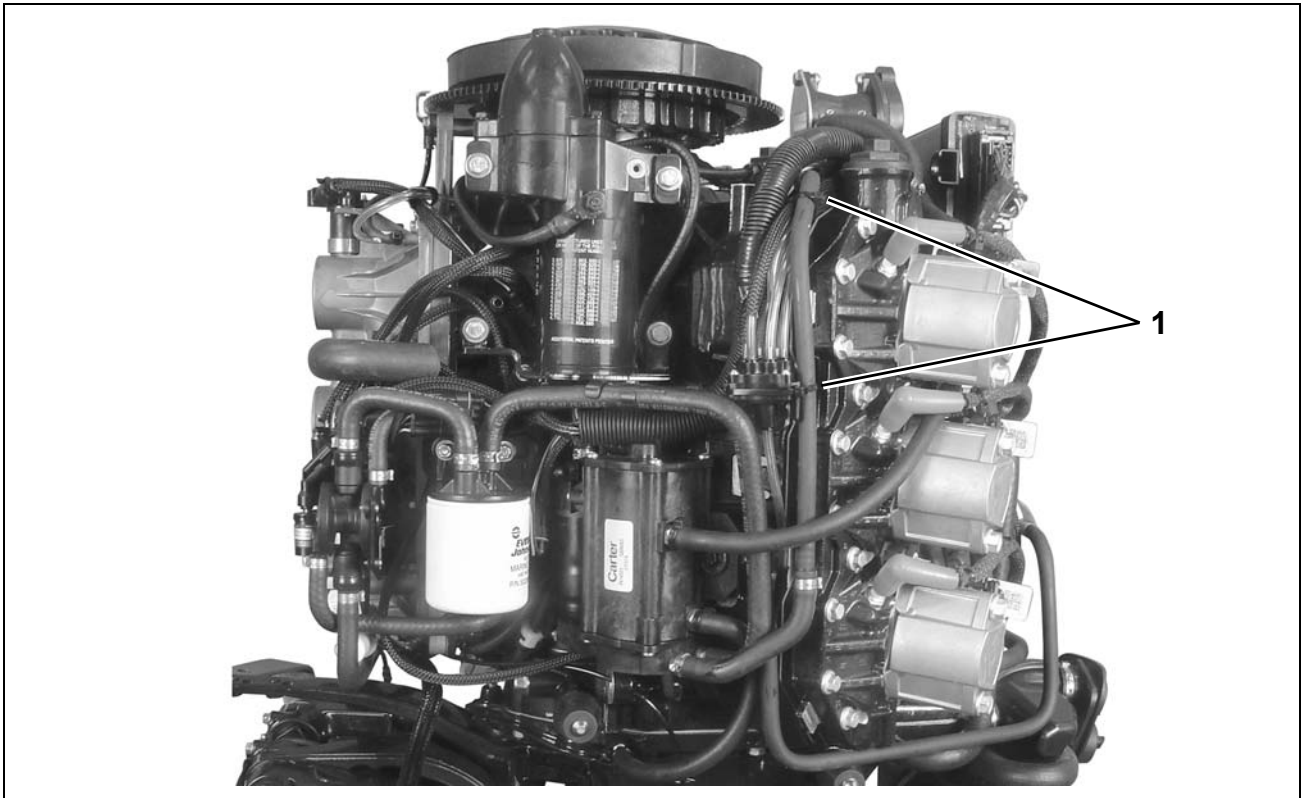
1. Cylinder #1 rear oil injection fitting
2. Cylinder #2 rear oil injection fitting

006602



1. Fuel inlet hose (no oil-to-fuel fitting)

006603



1. Tie strap manifold and hoses to fuel rail

006953