



Raw Water Drain Locations for Winterization

PCM

HO303 / EX343 Direct Drive Raw Water Cooled
HO303 / EX343 Vee Drive Raw Water Cooled
HO303 / EX343 Direct Drive Half System
HO303 / EX343 Vee Drive Half System
HO303 CES / EX343 CES Direct Drive Raw Water Cooled
HO303 CES / EX343 CES Vee Drive Raw Water Cooled

ZR409 Direct Drive
ZR409 Vee Drive
ZR409 CES / ZR450 CES Direct Drive Full Fresh Cooled
ZR409 CES / ZR450 CES Vee Drive Full Fresh Cooled
ZR409 CES / ZR450 CES Direct Drive Partial Fresh Cooled
ZR409 CES / ZR450 CES Vee Drive Partial Fresh Cooled

ZR550 Vee Drive Partial Fresh Cooled

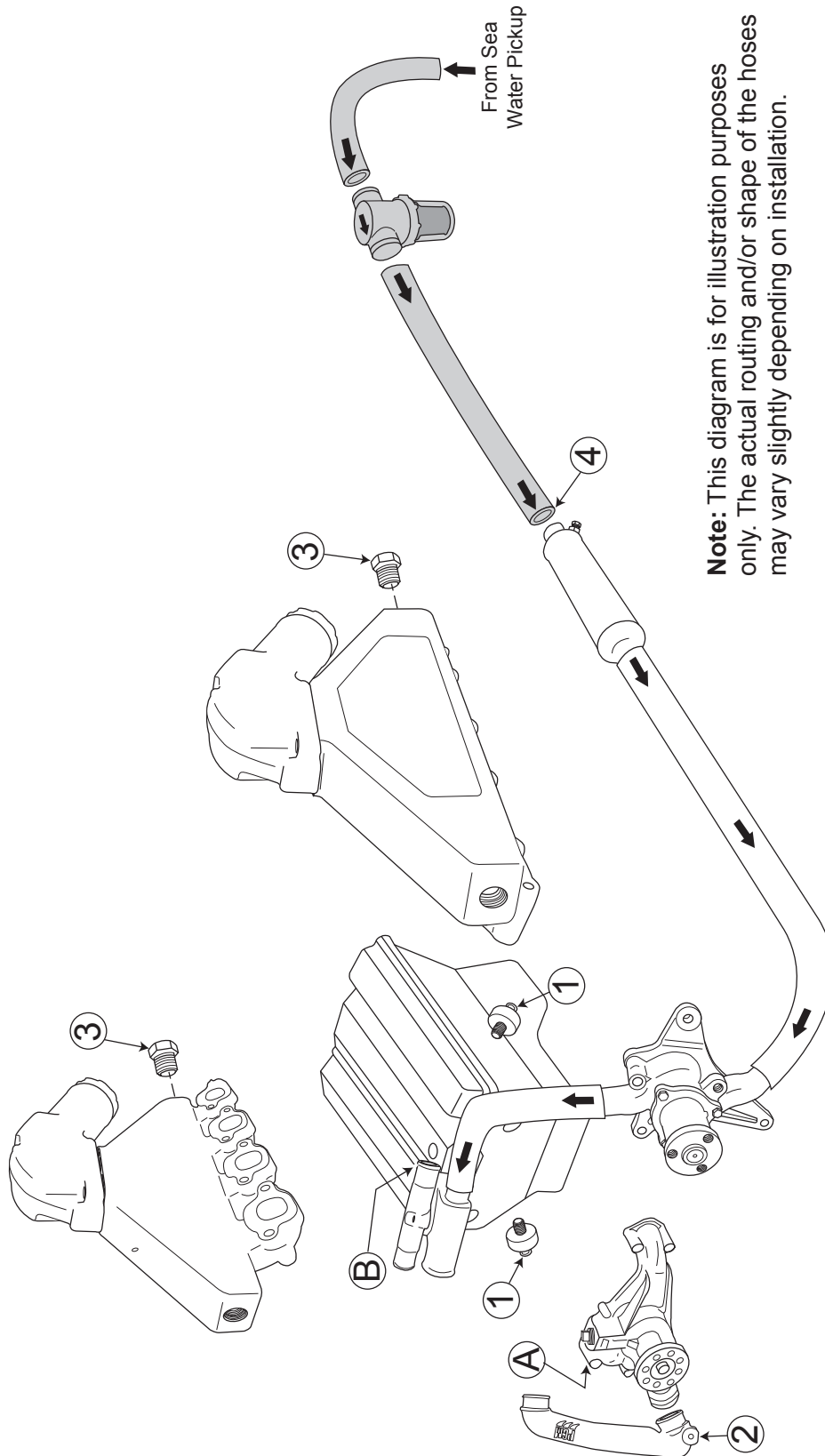
Crusader Watersports Series

EX343 CES CWS Direct Drive Fresh Water Cooled
EX343 CES CWS Vee Drive Fresh Water Cooled

ZR409 CWS Direct Drive Fresh Water Cooled
ZR409 CWS Vee Drive Fresh Water Cooled
ZR409 CES / ZR450 CES Direct Drive Fresh Water Cooled
ZR409 CES / ZR450 CES Vee Drive Fresh Water Cooled



Direct Drive Raw-Water Cooling System HO303 / EX343



Drain Locations

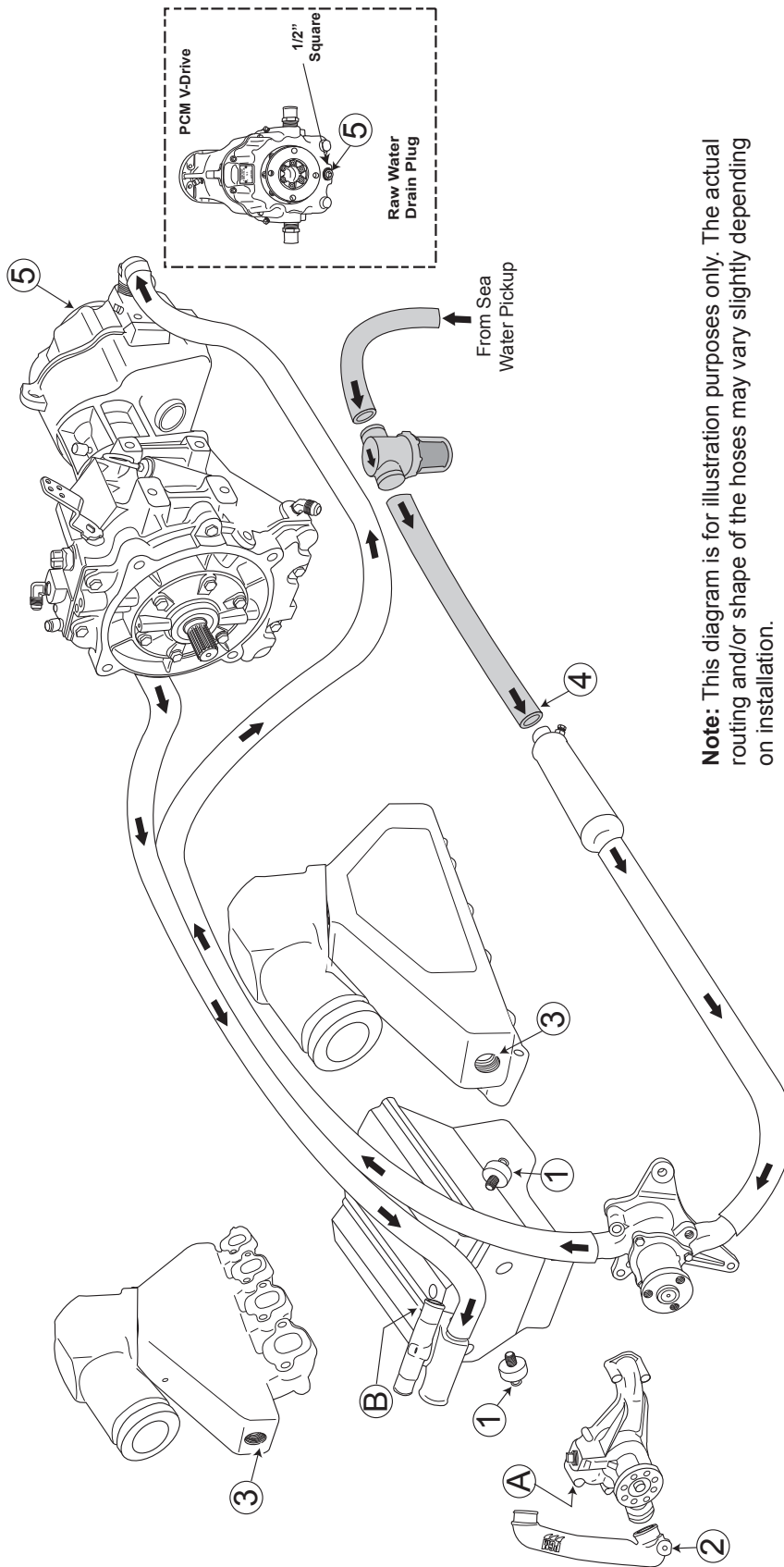
- ① Engine Block Drains - Remove Knock Sensors
- ② Engine Circulating Water Pump Pipe - Remove Drain Plug
- ③ Exhaust Manifolds - Remove Drain Plugs
- ④ Transmission Cooler - Remove Inlet Hose

NOTE: (If Equipped) Remove heater hoses from locations A and B.

CAUTION: If compressed air is used to purge Heater, use no more than 10psi. The heater core can be damaged from excessive air pressure.



Vee Drive Raw-Water Cooling System HO303 / EX343



Note: This diagram is for illustration purposes only. The actual routing and/or shape of the hoses may vary slightly depending on installation.

Drain Locations

- ① Engine Block Drains - Remove Knock Sensors
- ② Engine Circulating Water Pump Pipe - Remove Drain Plug
- ③ Exhaust Manifolds - Remove Drain Plugs
- ④ Transmission Cooler - Remove Inlet Hose
- ⑤ VDrive - Remove Drain Plug

NOTE: (If Equipped) Remove heater hoses from locations A and B.

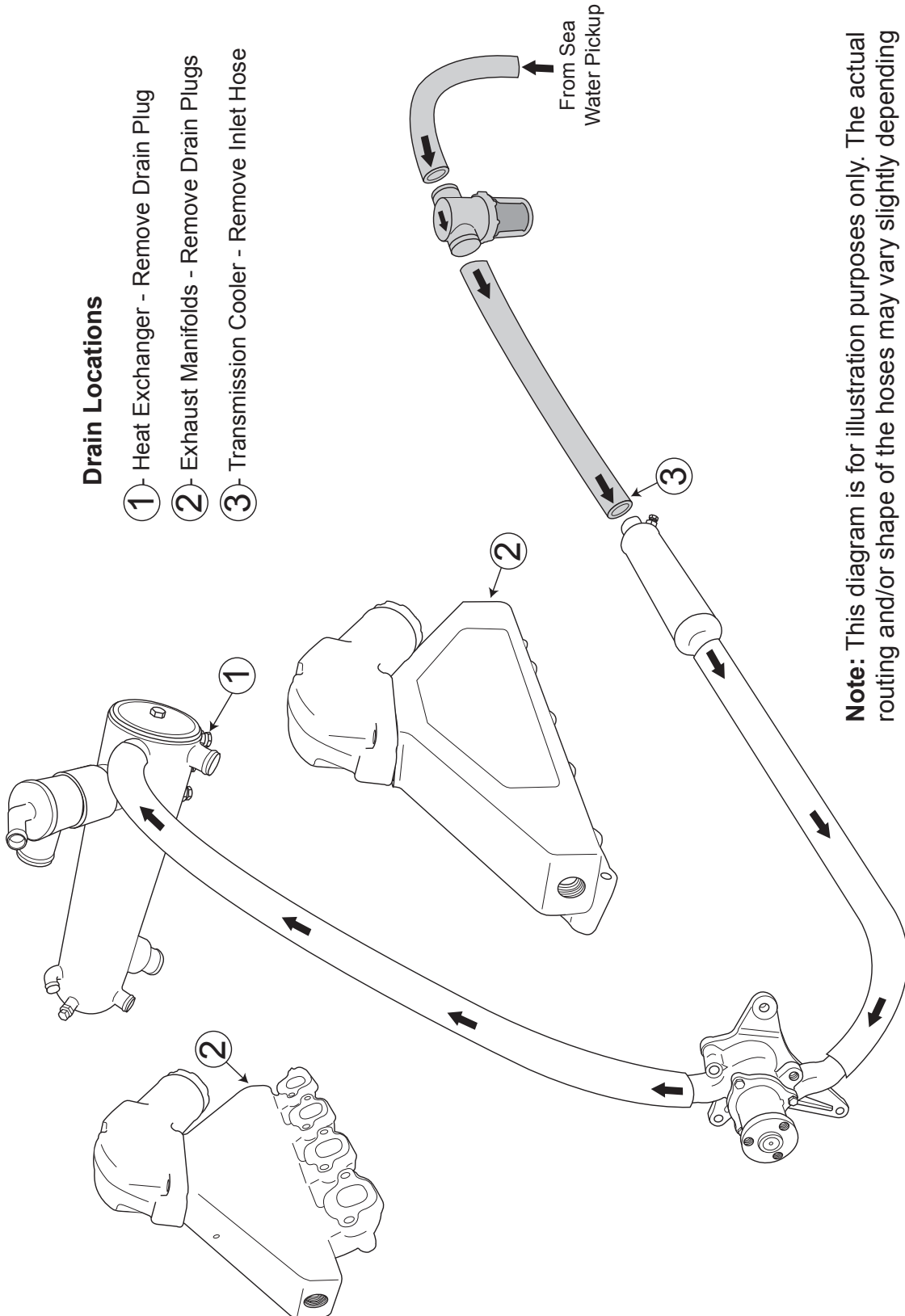
CAUTION: If compressed air is used to purge Heater, use no more than 10psi. The heater core can be damaged from excessive air pressure.



Direct Drive Half-System HO303 / EX343

Drain Locations

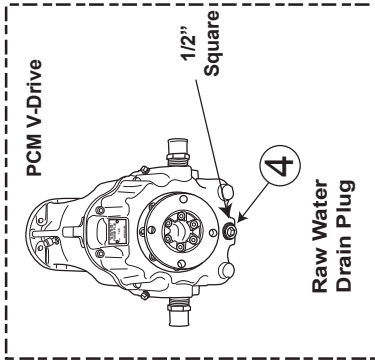
- ① Heat Exchanger - Remove Drain Plug
- ② Exhaust Manifolds - Remove Drain Plugs
- ③ Transmission Cooler - Remove Inlet Hose



Note: This diagram is for illustration purposes only. The actual routing and/or shape of the hoses may vary slightly depending on installation.

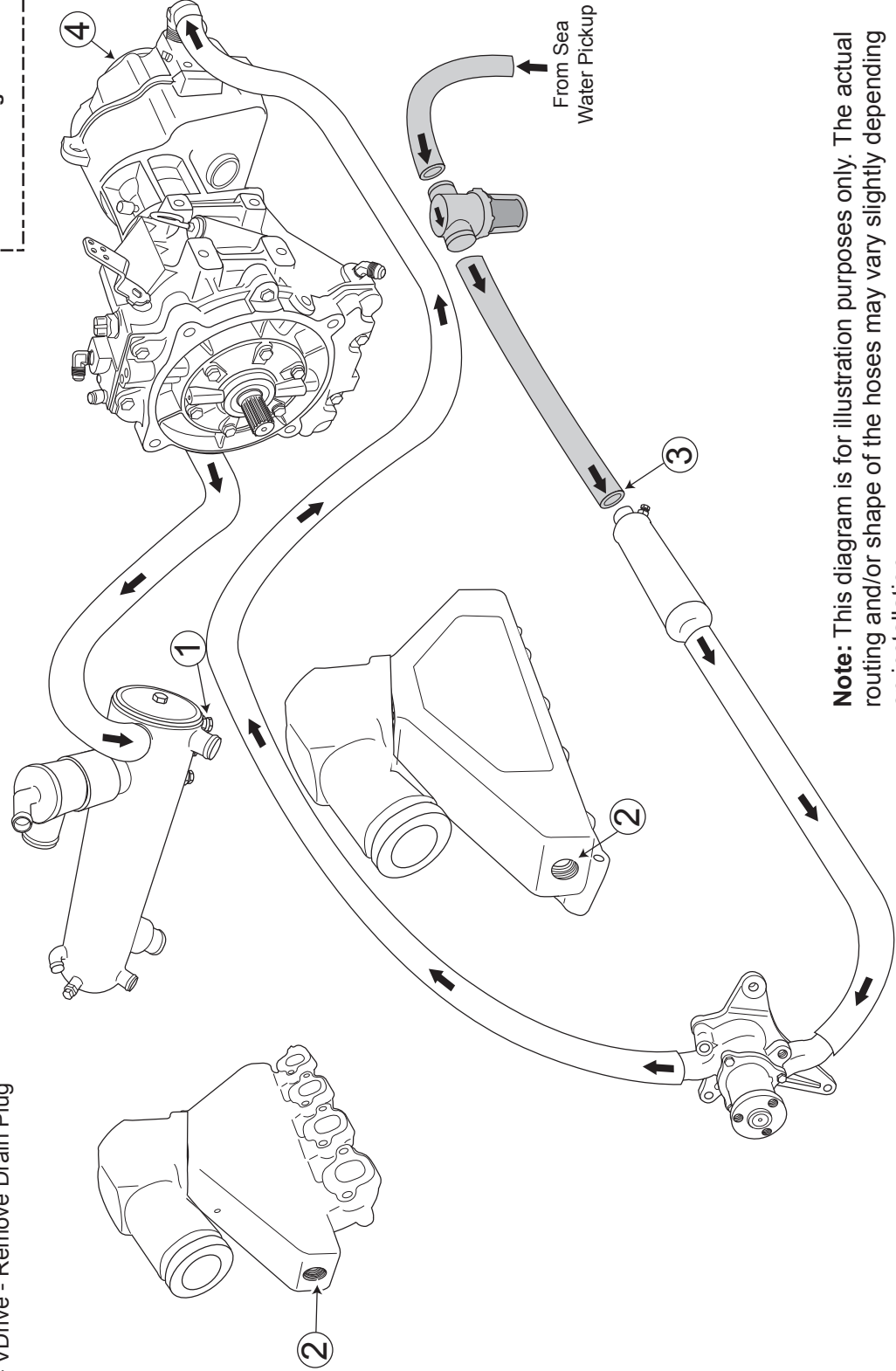


Vee Drive Half-System HO303 / EX343



Drain Locations

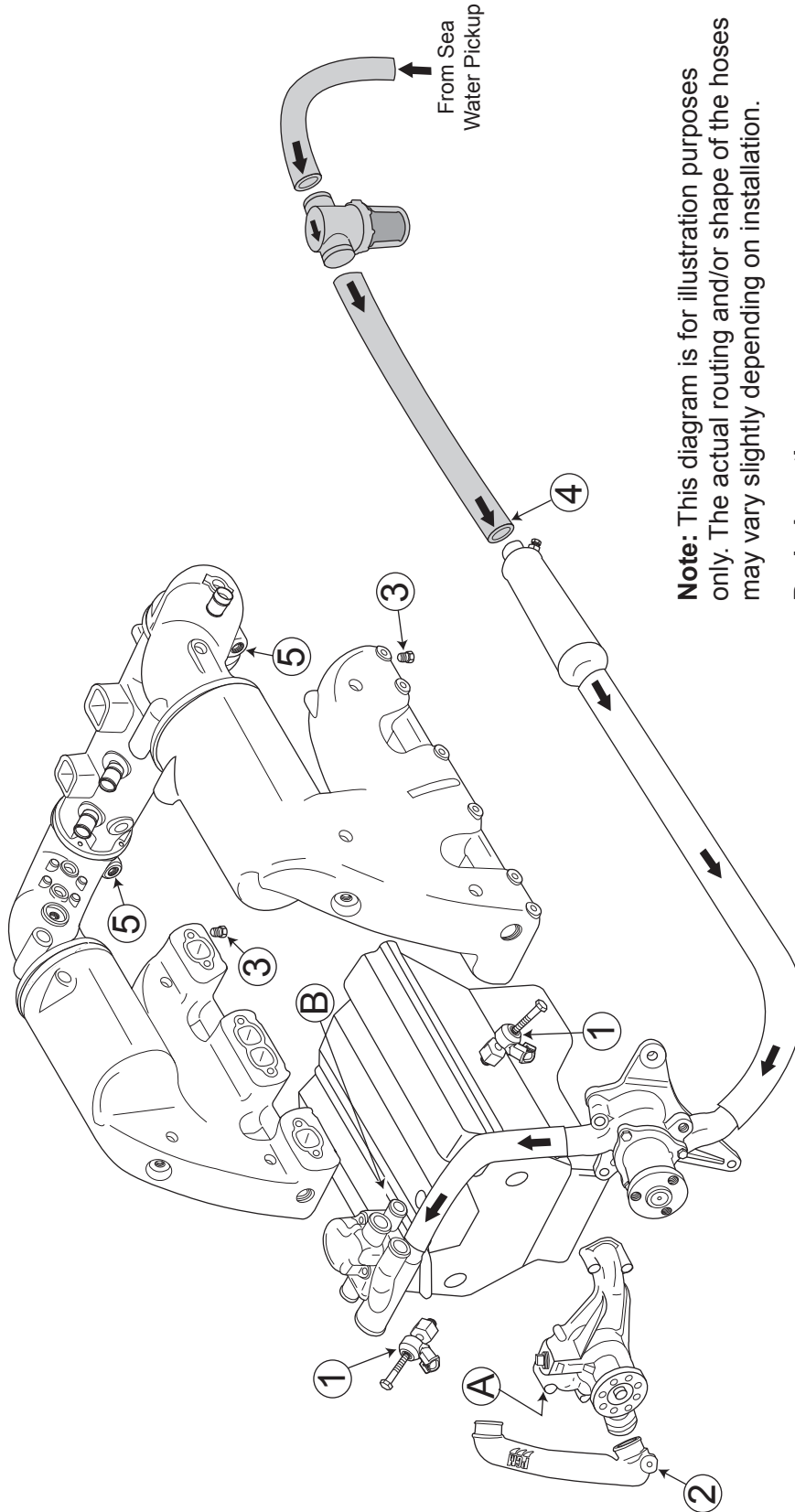
- ① Heat Exchanger - Remove Drain Plug
- ② Exhaust Manifolds - Remove Drain Plugs
- ③ Transmission Cooler - Remove Inlet Hose
- ④ VDrive - Remove Drain Plug



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Direct Drive CES HO303 / EX343



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Drain Locations

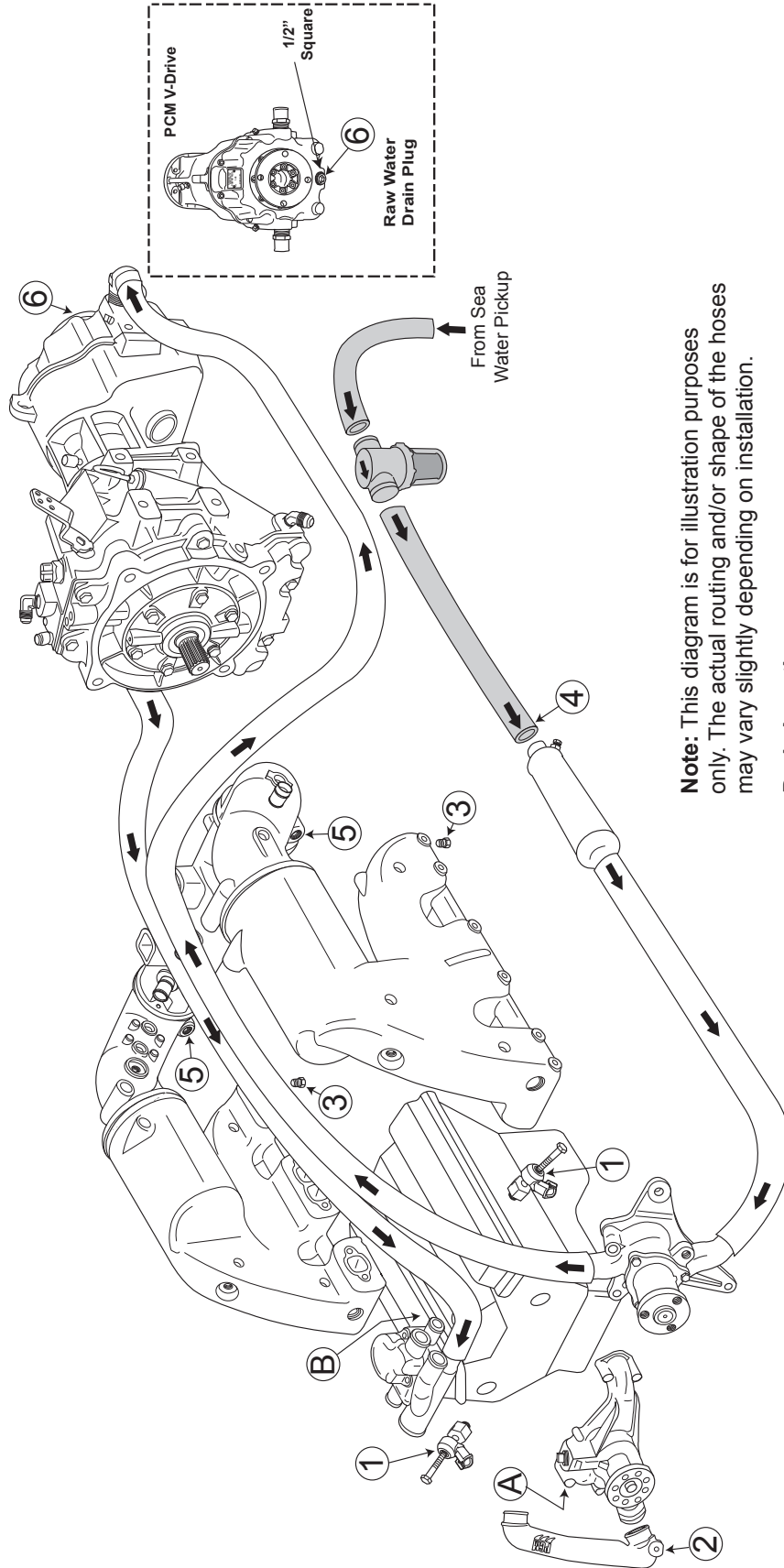
- ① - Engine Block Drains - Remove Knock Sensors
- ② - Engine Circulating Water Pump Pipe - Remove Drain Plug
- ③ - Exhaust Manifolds - Remove Drain Plugs
- ④ - Transmission Cooler - Remove Inlet Hose
- ⑤ - Exhaust System Corners - Remove Drain Plugs

NOTE: (If Equipped) Remove heater hoses from locations A and B.

CAUTION: If compressed air is used to purge Heater, use no more than 10psi. The heater core can be damaged from excessive air pressure.



Vee Drive CES HO303 / EX343



Note: This diagram is for illustration purposes only. The actual routing and/or shape of the hoses may vary slightly depending on installation.

Drain Locations

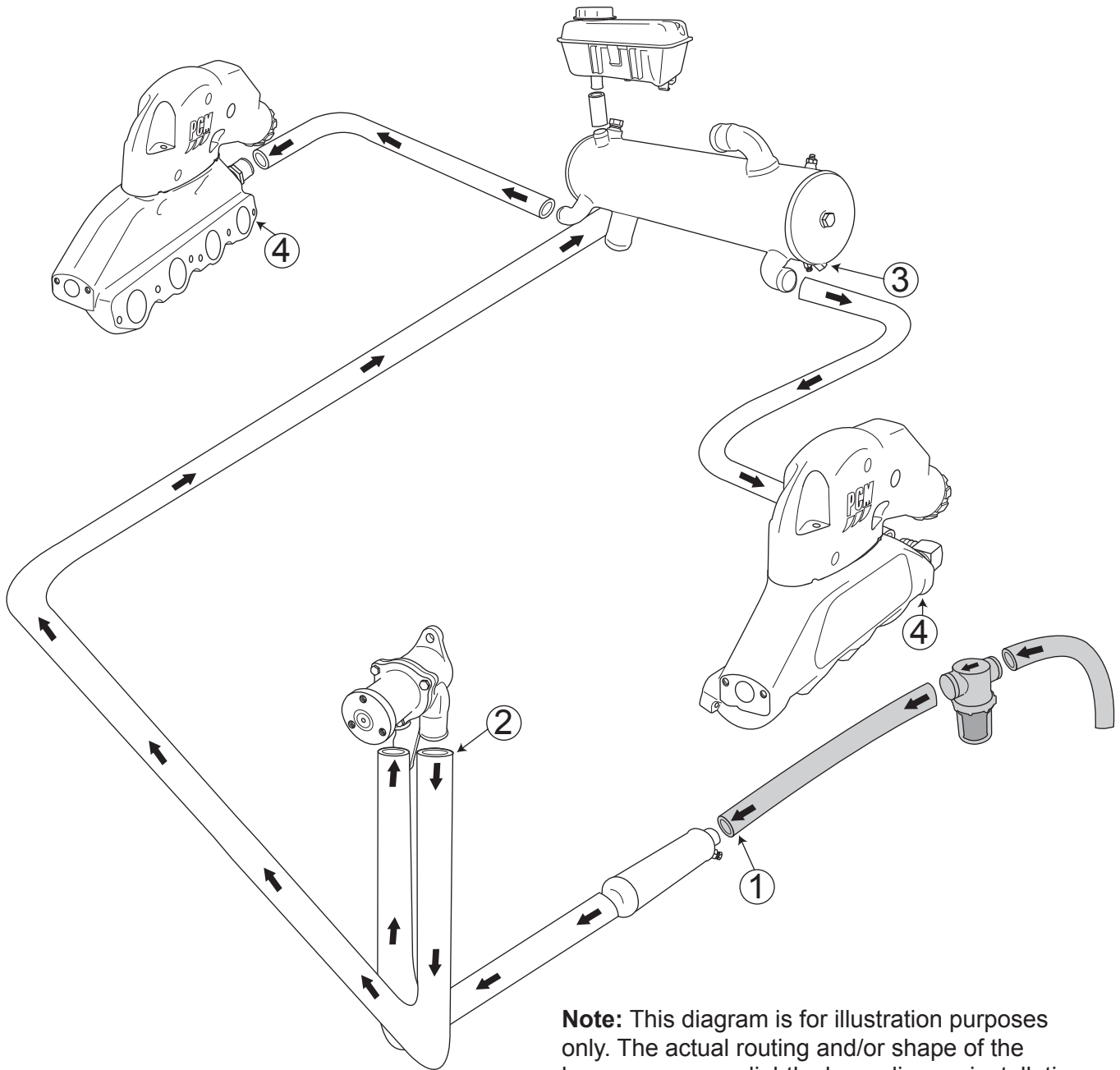
- ① Engine Block Drains - Remove Knock Sensors
- ② Engine Circulating Water Pump Pipe - Remove Drain Plug
- ③ Exhaust Manifolds - Remove Drain Plugs
- ④ Transmission Cooler - Remove Inlet Hose
- ⑤ Exhaust System Corners - Remove Drain Plugs
- ⑥ VDrive - Remove Drain Plug

NOTE: (If Equipped) Remove heater hoses from locations A and B.

CAUTION: If compressed air is used to purge Heater, use no more than 10psi. The heater core can be damaged from excessive air pressure.



Direct Drive Fresh-Water Cooling System ZR409



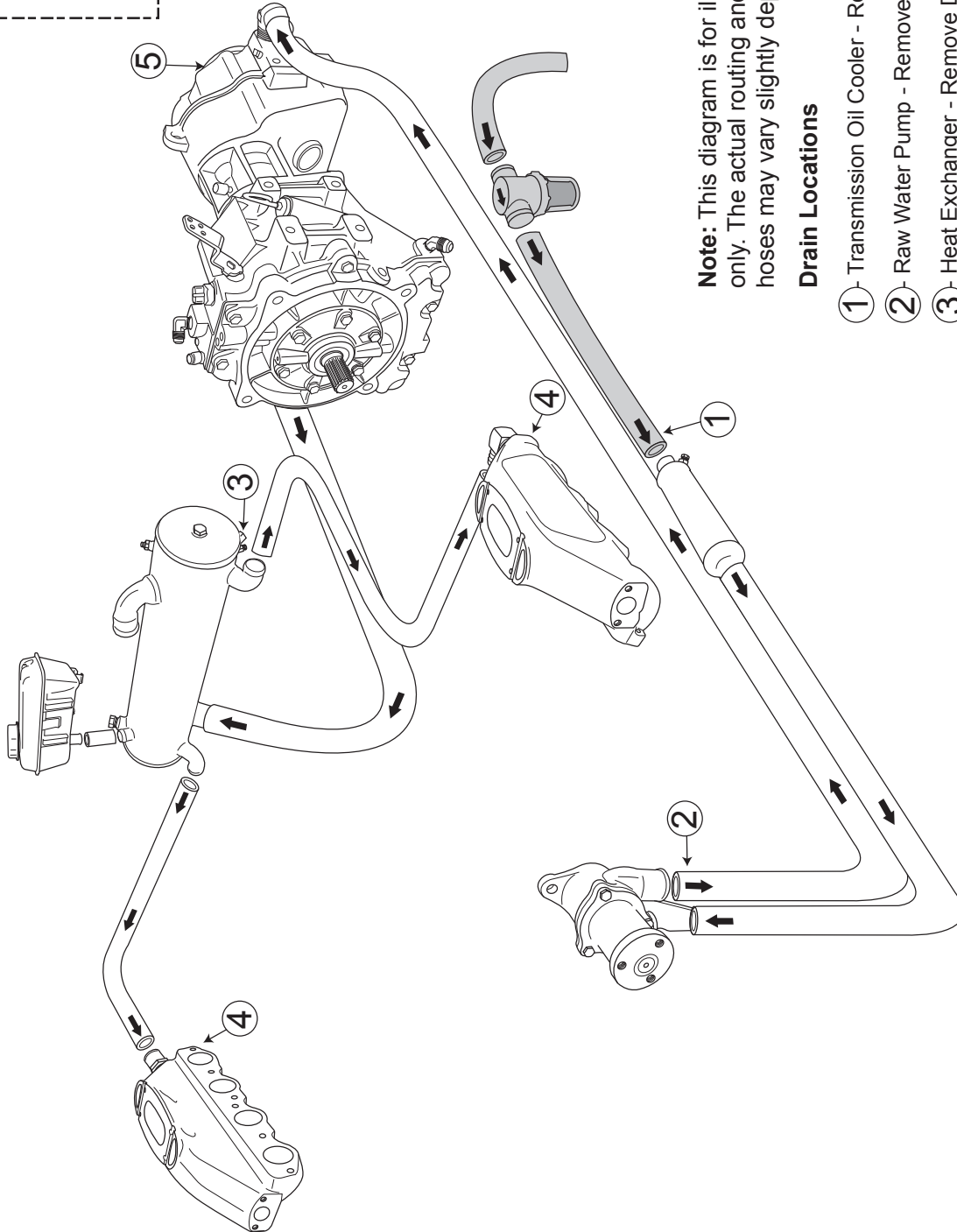
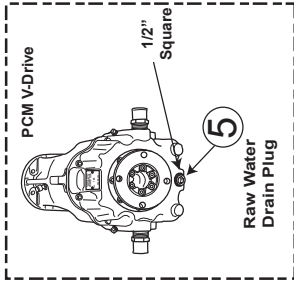
Note: This diagram is for illustration purposes only. The actual routing and/or shape of the hoses may vary slightly depending on installation.

Drain Locations

- ① - Transmission Cooler - Remove Inlet Hose
- ② - Raw Water Pump - Remove Outlet Hose
- ③ - Heat Exchanger - Remove Drain Plug/Zinc Anode
- ④ - Exhaust Manifolds - Remove Drain Plugs



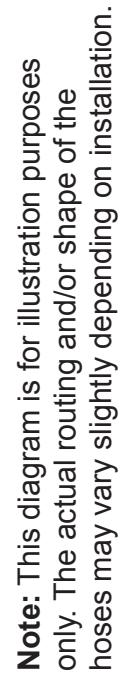
Vee Drive Fresh Water Cooling System ZR409



Note: This diagram is for illustration purposes only. The actual routing and/or shape of the hoses may vary slightly depending on installation.

Drain Locations

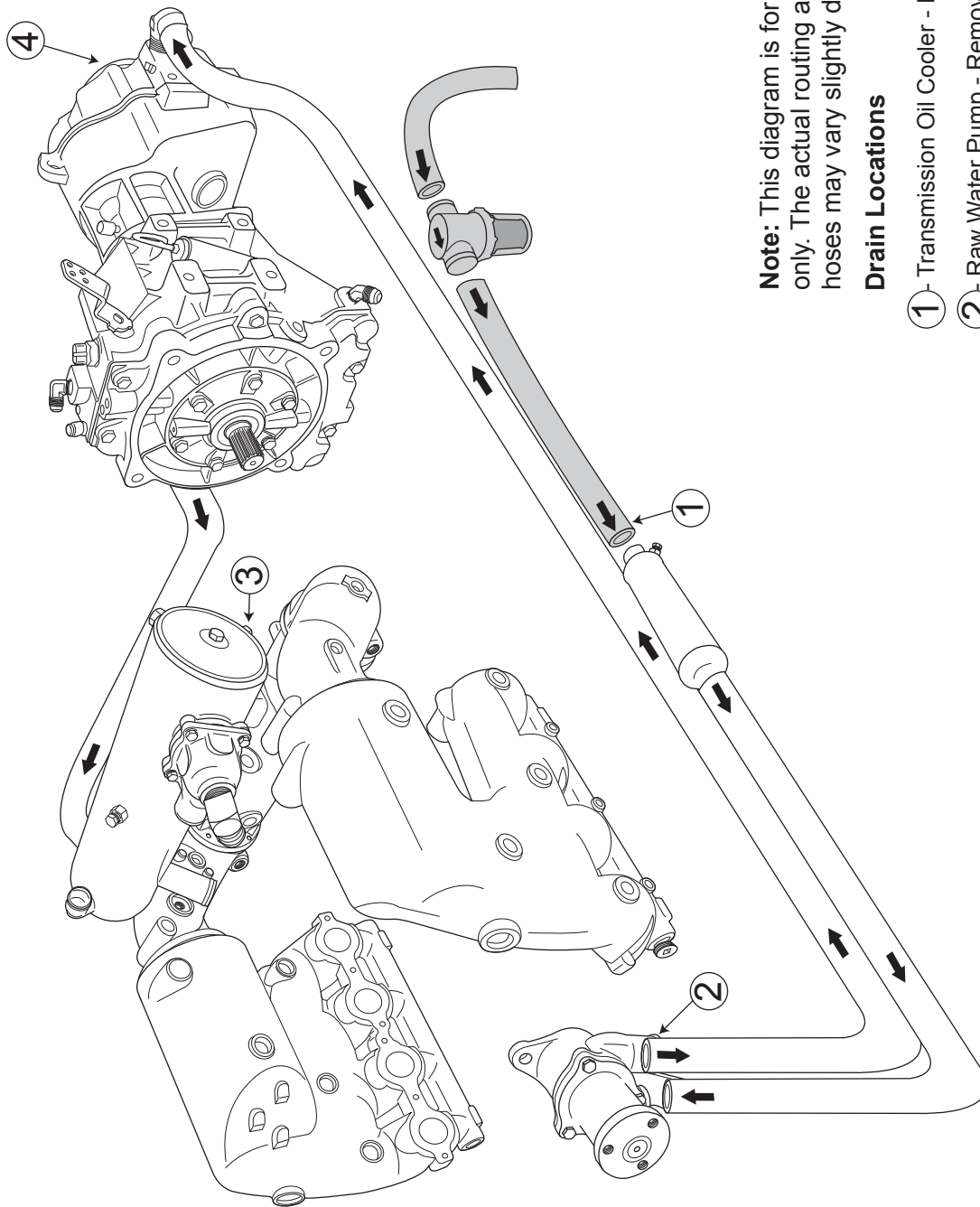
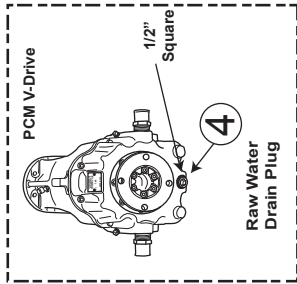
- ①- Transmission Oil Cooler - Remove Inlet Hose
- ②- Raw Water Pump - Remove Outlet Hose
- ③- Heat Exchanger - Remove Drain Plug/Zinc Anode
- ④- Exhaust Manifolds - Remove Drain Plugs
- ⑤- VDrive - Remove Drain Plug



- ①- Transmission Cooler - Remove Inlet Hose
- ②- Raw Water Pump - Remove Outlet Hose
- ③- Heat Exchanger - Remove Drain Plug/Zinc Anode



Vee Drive Full-Fresh ZR409 CES (prior to S/N 516315) / ZR450 CES (prior to S/N 515397)



Note: This diagram is for illustration purposes only. The actual routing and/or shape of the hoses may vary slightly depending on installation.

Drain Locations

- ① - Transmission Oil Cooler - Remove Inlet Hose
- ② - Raw Water Pump - Remove Outlet Hose
- ③ - Heat Exchanger - Remove Drain Plug/Zinc Anode
- ④ - VDrive - Remove Drain Plug



Direct Drive Partial Full-System ZR409 CES (S/N 516315 and greater) / ZR450 CES (S/N 515397 and greater))

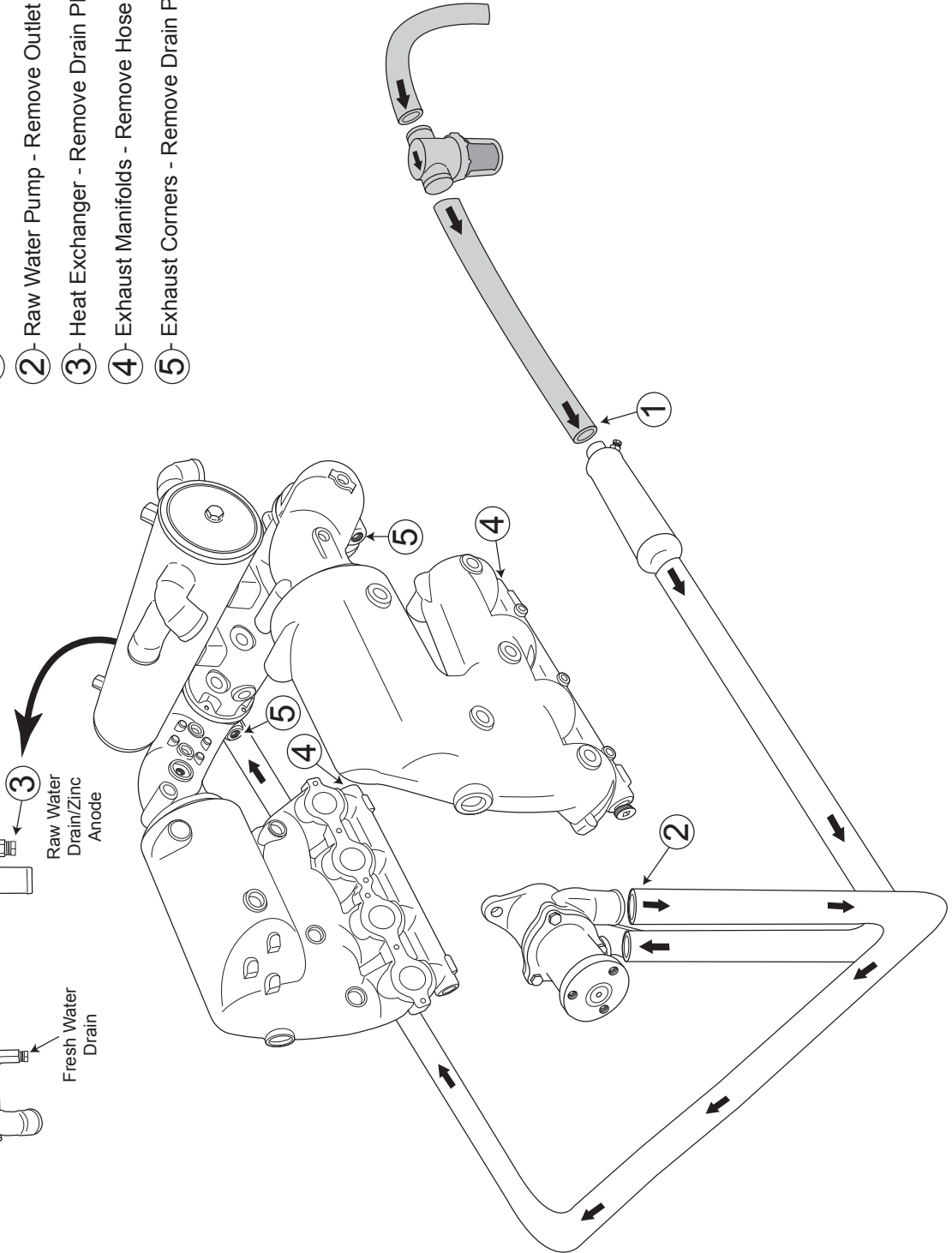
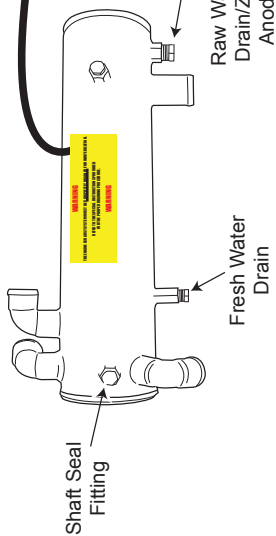
Note: This diagram is for illustration purposes only. The actual routing and/or shape of the hoses may vary slightly depending on installation.

Drain Locations

- ① Transmission Cooler - Remove Inlet Hose
- ② Raw Water Pump - Remove Outlet Hose
- ③ Heat Exchanger - Remove Drain Plug/Zinc Anode
- ④ Exhaust Manifolds - Remove Hose
- ⑤ Exhaust Corners - Remove Drain Plugs

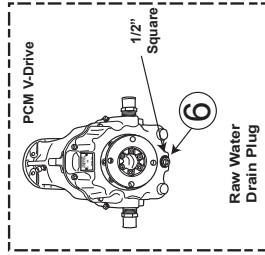
WARNING
THE ENGINE EXHAUST SYSTEM MUST BE COMPLETELY DRAINED FOR WINTERIZATION.
REFER TO THE SPECIAL INSTRUCTIONS PROVIDED FOR THE PROPER DRAINING PROCEDURE.

Heat Exchanger - Rear View



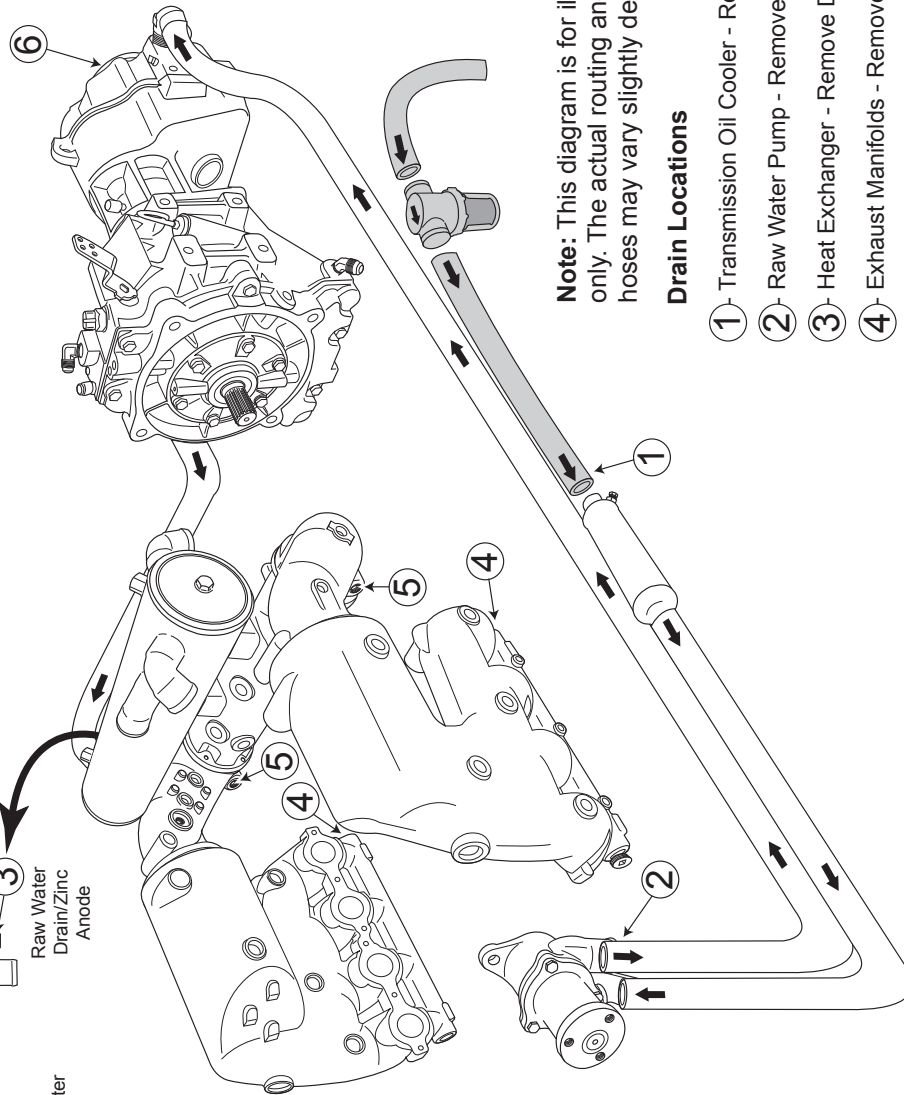
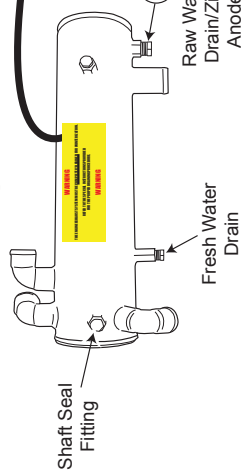


Vee Drive Partial Full-System ZR409 CES (S/N 516315 and greater) / ZR450 CES (S/N 515397 and greater))



WARNING
THE ENGINE EXHAUST SYSTEM MUST BE COMPLETELY DRAINED FOR WINTERIZATION.
REFER TO THE SPECIAL INSTRUCTIONS PROVIDED FOR THE PROPER DRAINING PROCEDURE.
WARNING

Heat Exchanger - Rear View



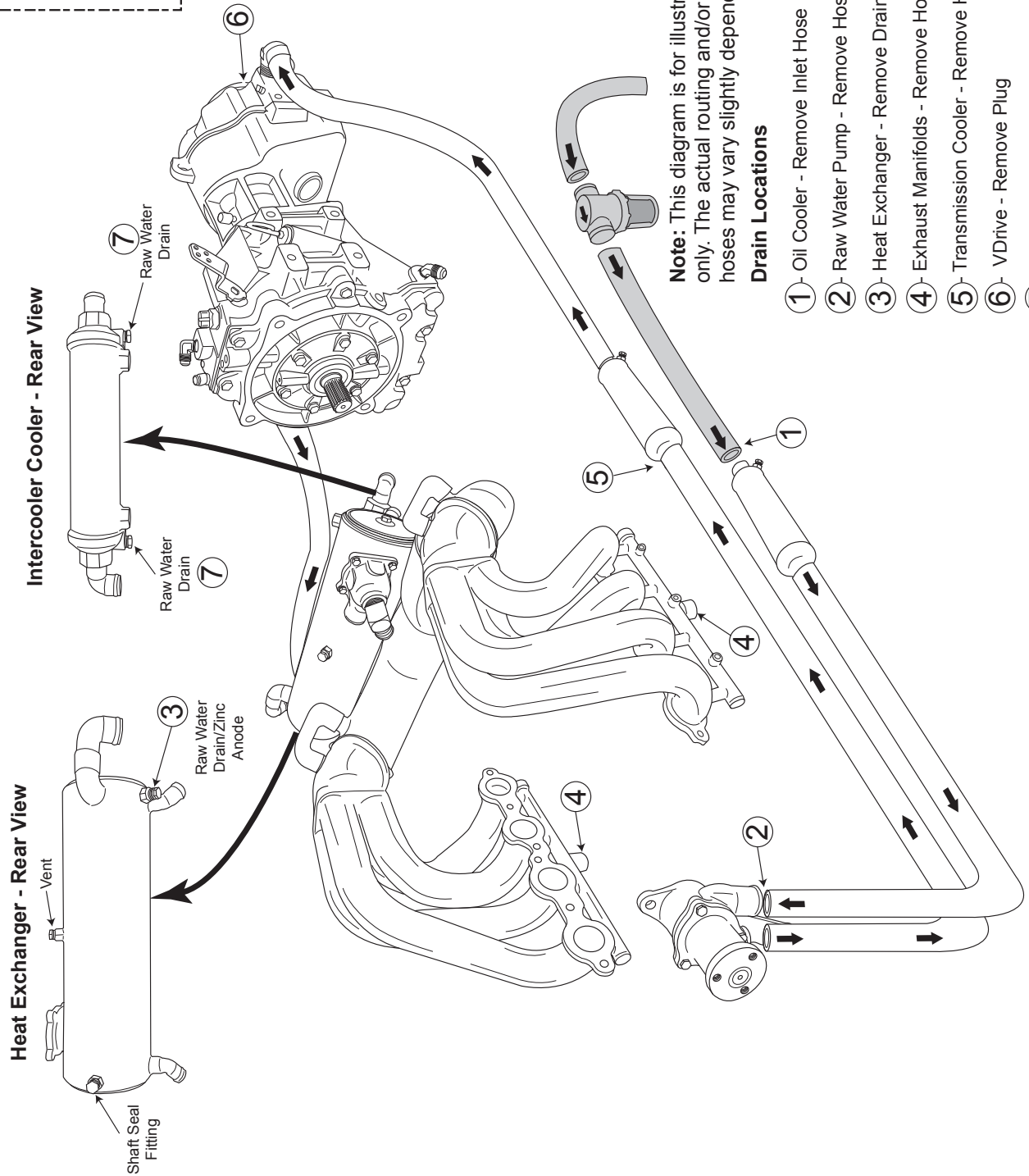
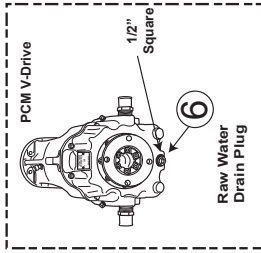
Note: This diagram is for illustration purposes only. The actual routing and/or shape of the hoses may vary slightly depending on installation.

Drain Locations

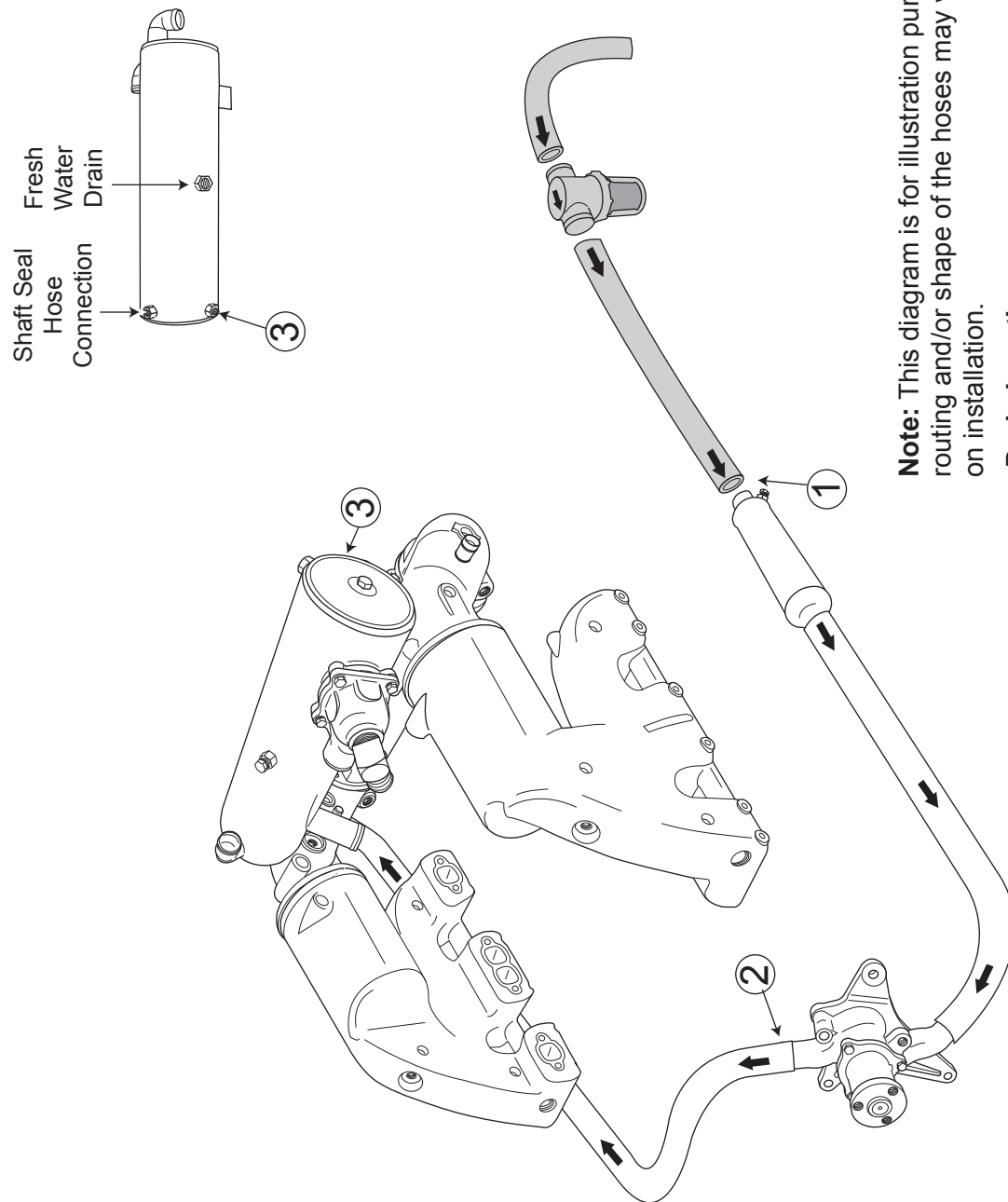
- ① Transmission Oil Cooler - Remove Inlet Hose
- ② Raw Water Pump - Remove Outlet Hose
- ③ Heat Exchanger - Remove Drain Plug/Zinc Anode
- ④ Exhaust Manifolds - Remove Hose
- ⑤ Exhaust Corners - Remove Drain Plugs
- ⑥ VDrive - Remove Drain Plug



Vee Drive ZR550



Direct Drive EX343 CES CWS

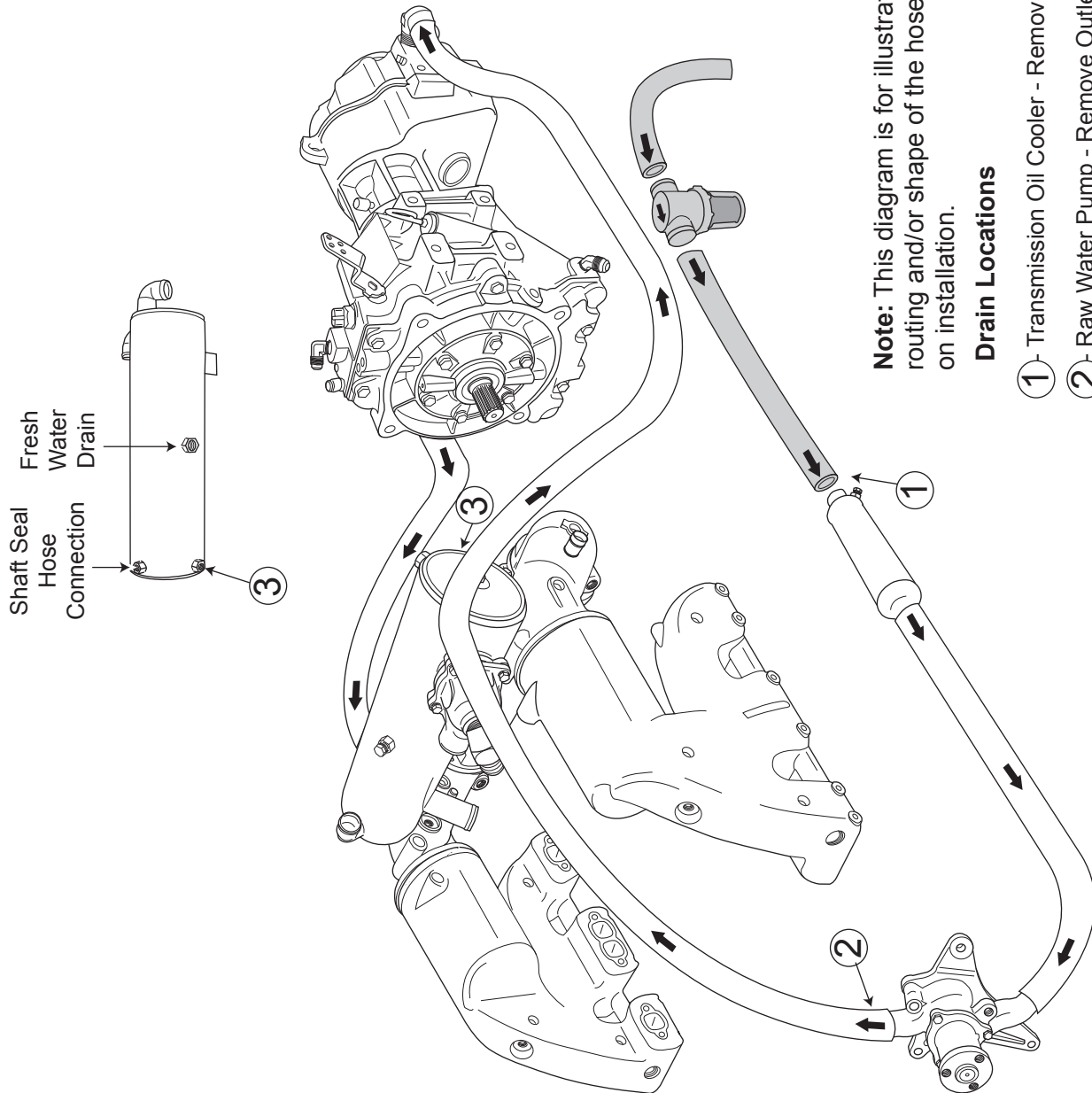
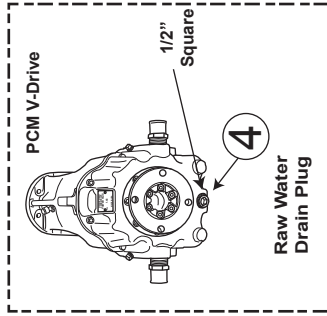


Note: This diagram is for illustration purposes only. The actual routing and/or shape of the hoses may vary slightly depending on installation.

Drain Locations

- ①- Transmission Oil Cooler - Remove Inlet Hose
- ②- Raw Water Pump - Remove Outlet Hose
- ③- Heat Exchanger - Remove Drain Plug/Zinc Anode

Vee Drive EX343 CES CWS

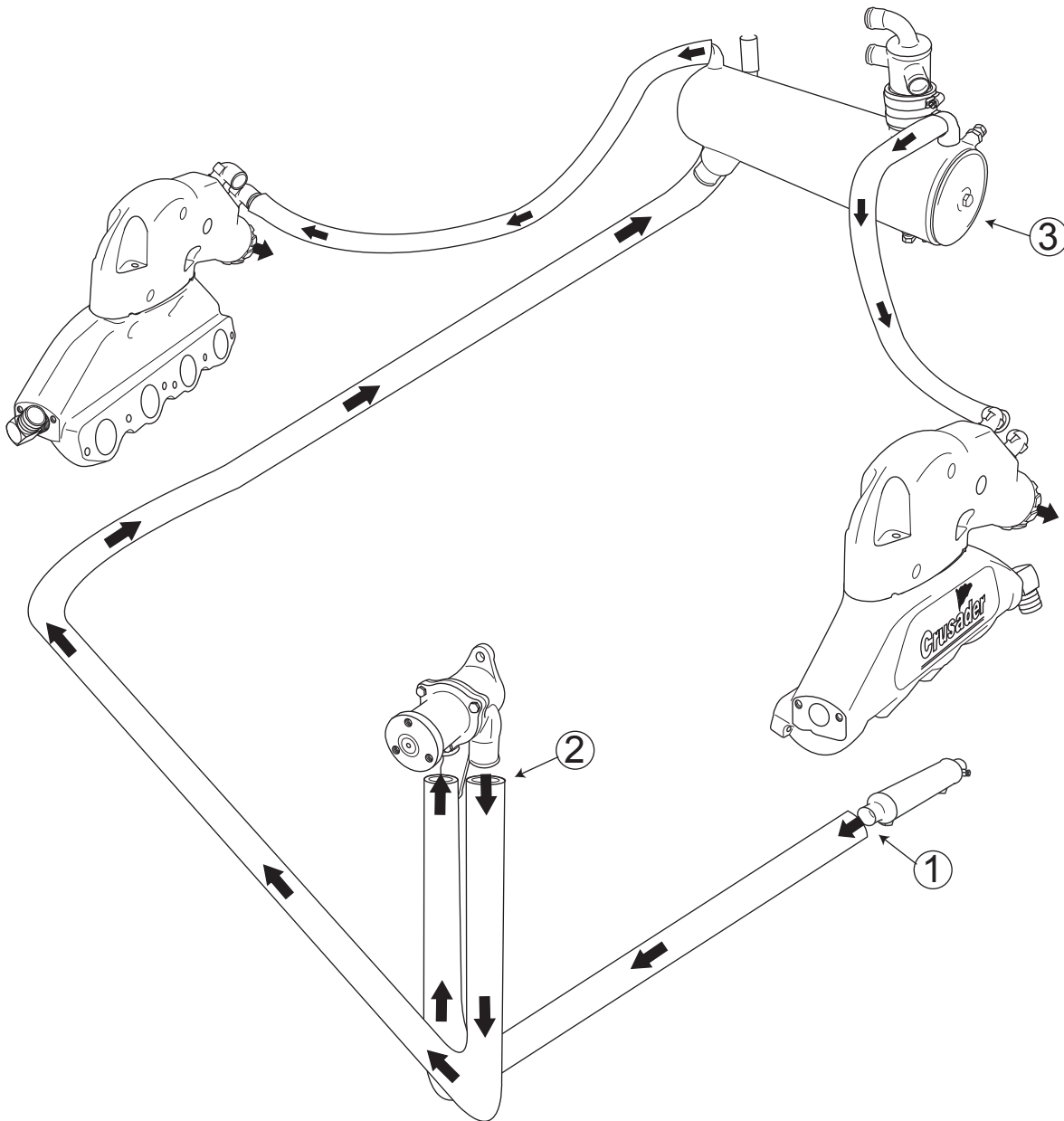


Note: This diagram is for illustration purposes only. The actual routing and/or shape of the hoses may vary slightly depending on installation.

Drain Locations

- ① - Transmission Oil Cooler - Remove Inlet Hose
- ② - Raw Water Pump - Remove Outlet Hose
- ③ - Heat Exchanger - Remove Drain Plug/Zinc Anode
- ④ - VDrive - Remove Drain Plug

Direct Drive ZR409 CWS

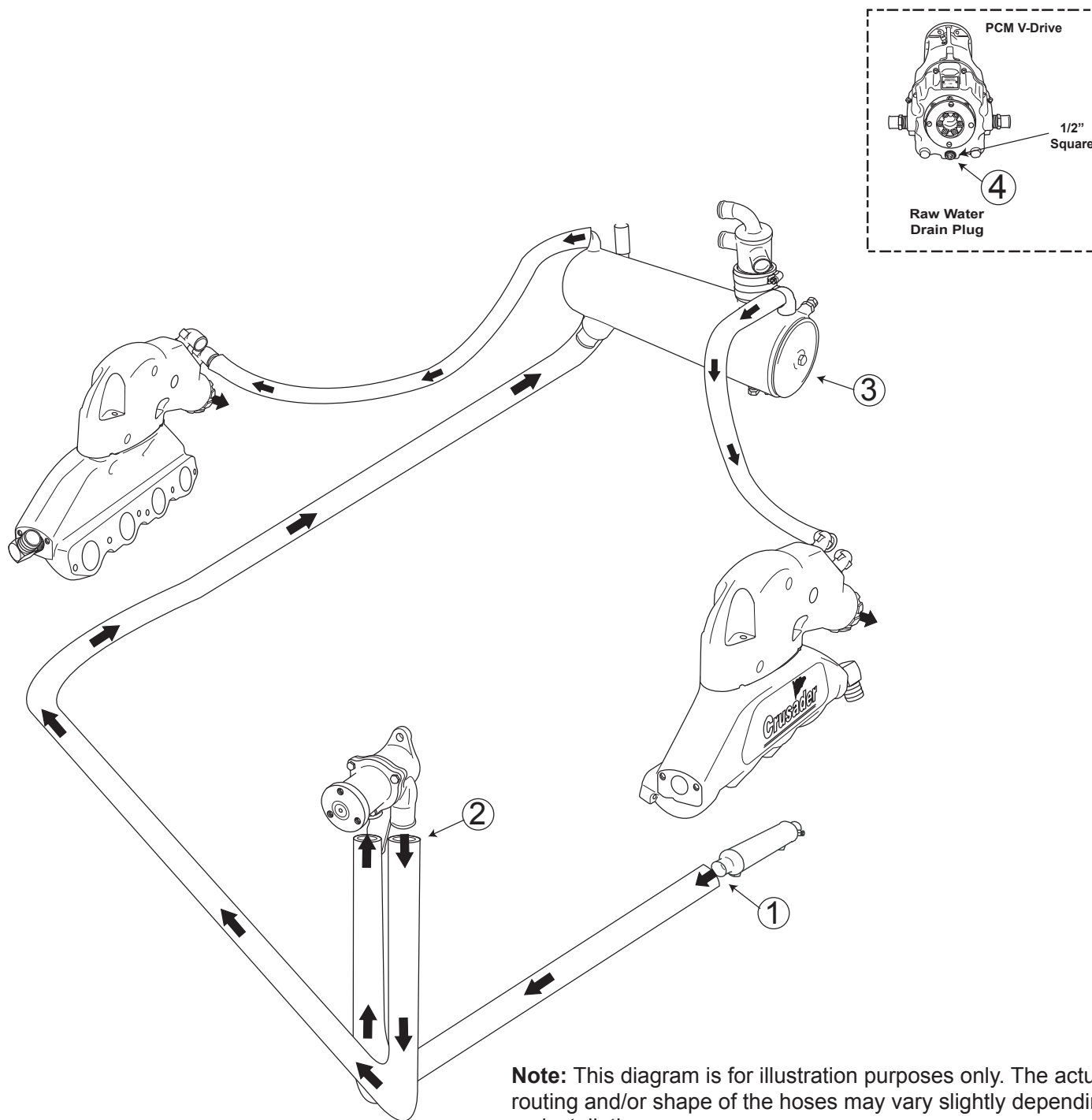


Note: This diagram is for illustration purposes only. The actual routing and/or shape of the hoses may vary slightly depending on installation.

Drain Locations

- ① - Transmission Oil Cooler - Remove Inlet Hose
- ② - Raw Water Pump - Remove Outlet Hose
- ③ - Heat Exchanger - Remove Drain Plug/Zinc Anode

Vee Drive ZR409 CWS

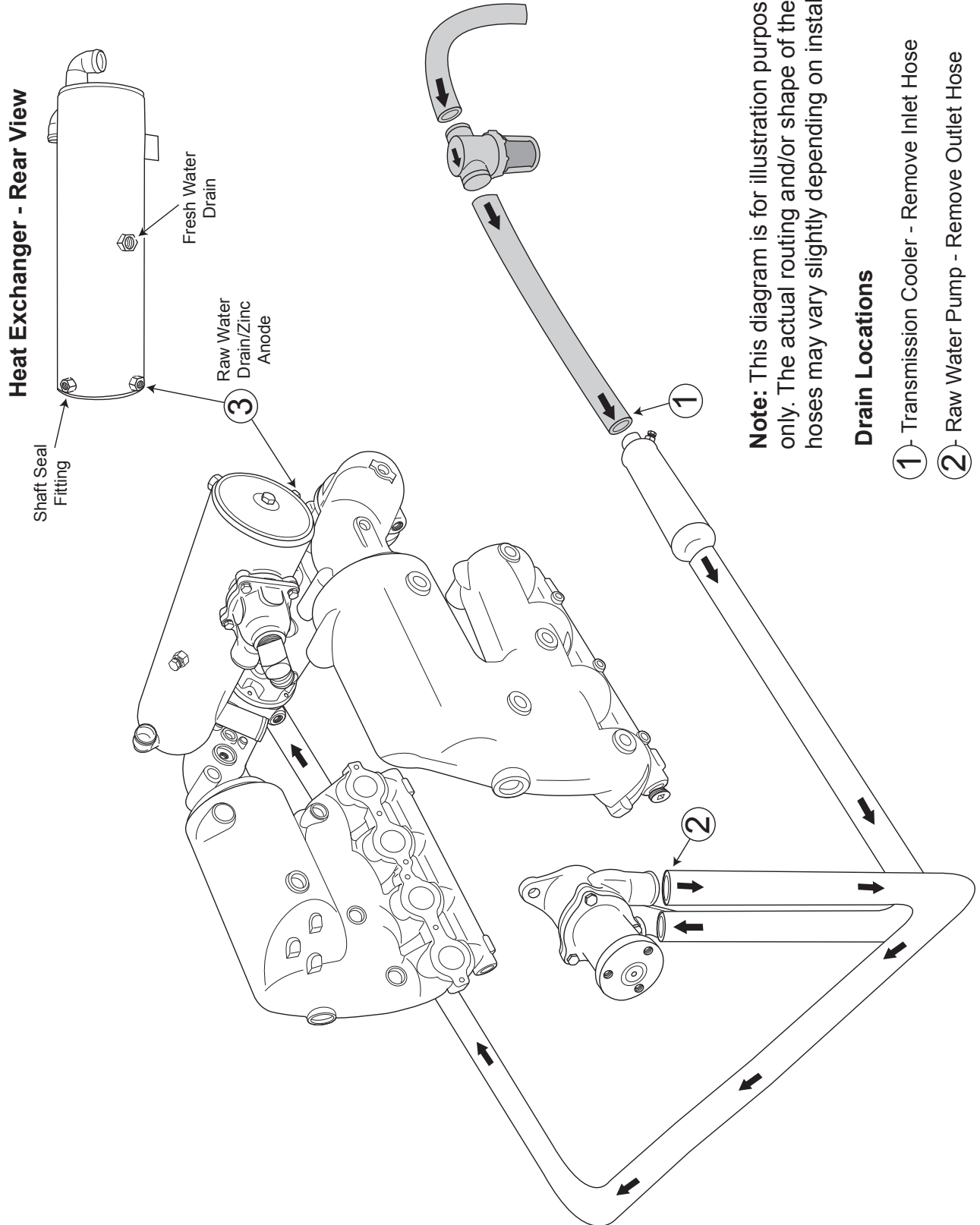


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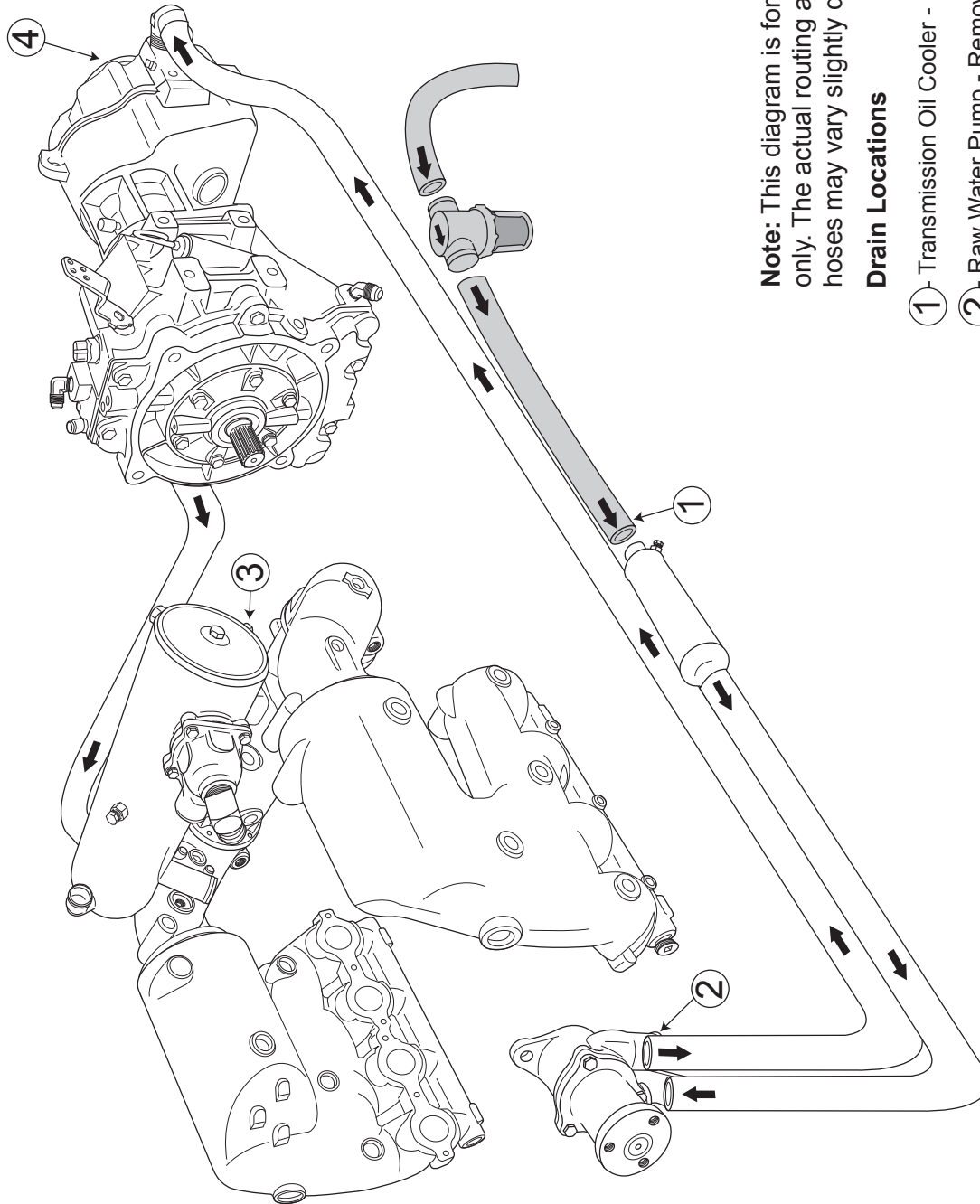
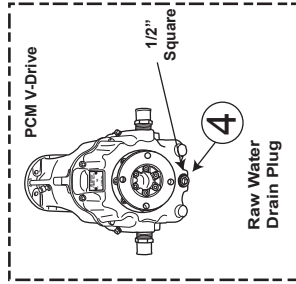
Drain Locations

- ①- Transmission Oil Cooler - Remove Inlet Hose
- ②- Raw Water Pump - Remove Outlet Hose
- ③- Heat Exchanger - Remove Drain Plug/Zinc Anode
- ④- VDrive - Remove Drain Plug

Direct Drive ZR409 CES CWS / ZR450 CES CWS



Vee Drive ZR409 CES CWS / ZR450 CES CWS



Note: This diagram is for illustration purposes only. The actual routing and/or shape of the hoses may vary slightly depending on installation.

Drain Locations

- ①- Transmission Oil Cooler - Remove Inlet Hose
- ②- Raw Water Pump - Remove Outlet Hose
- ③- Heat Exchanger - Remove Drain Plug/Zinc Anode
- ④- V-Drive - Remove Drain Plug