

V"OLV"OPENT.A

Volvo Penta of the Americas
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 USA

Parts Bulletin

Group	Number	Version
P-18-4	4	1

Coolant Recommendations for Gas Engines

Gas engines 4.3, Gas engines 5.0, Gas engines 5.7, Gas engines 8.1

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P0012890

Numerous types of coolant (anti-freeze) are available in the aftermarket for use in engine cooling systems. Volvo Penta gas engines, if equipped with freshwater cooling systems, currently use a silicate based ethylene glycol coolant (typically green in color). Do not use other coolant types in these engines.



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&WARNINGI

Ethylene Glycol coolant is poisonous to humans and animals if ingested.

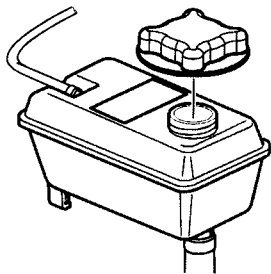
Children and animals are especially susceptible to accidental ingestion of coolant. Carefully control all coolant removed from the engine, quickly clean up all spilled coolant, and dispose of coolant and absorbent materials according to local environmental regulations.



P0012896

&CAUTIONI

Ethylene glycol coolant is an eye irritant. Wear eye protection when working with coolant.



P0012891

To prevent deterioration of the protective qualities of the factory coolant, other types of coolants must not be mixed with Volvo coolant or used in Volvo Penta gas engines. It is recommended that Volvo coolant be used whenever replacing or topping off the coolant in a freshwater cooled engine. Use of the genuine Volvo coolant insures the correct coolant type is used in the engine.

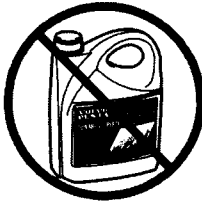
Volvo coolant contains glycol, which prevents the coolant mixture from freezing. Volvo coolant also contains inhibitors, which protect the cooling system against corrosion and deposits. The inhibitors are matched with all the various materials in the engine to prevent unwanted reactions between the coolant and the metals and seals in the cooling system.

Part Numbers:

North America

Part No.	description
381081	6 x 1gal.
3810287	55 gal.
AS Volvo Penta and other markets	
1141645	1 L
1141646	5L
1141647	210 L Barrel
1141674	ready mix 1) 5L
1161990	ready mix 1) 210 L Barrel

1) Ready mix protects down to -28° C (-18° F), not available in NA



P0012892



P0012893



P0012897

Volvo "VCS" Coolant

"VCS" coolant (yellow color), while also ethylene glycol based, contains different inhibitors and additives, and must not be mixed with the Volvo Penta green coolant. The "VCS" yellow coolant is used in some Volvo Penta diesel engines and is sold by Volvo Penta Parts. However this yellow coolant can not be used in gas engines.

Propylene Glycol

Do not use propylene glycol in engines with ethylene glycol coolant.

Between 1998 and July 2004, gas engines were produced with propylene glycol coolant. Any of these earlier engines still using propylene glycol should continue with this coolant. Volvo Penta does not sell this coolant.

Starting with serial number 4012133180 the gas engines used ethylene glycol.

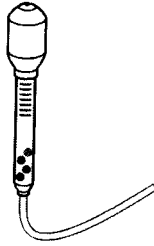
OAT, HOAT Coolants

OAT = Organic Acid Technology

HOAT = Hybrid Organic Acid Technology

Do not use either of these new coolant types in Volvo Penta gas engines.

In general, a gas engine should be maintained on the same coolant type as the original fill from the factory. When changing coolant it is difficult to completely remove all the old coolant from the engine. When adding a different coolant, some portion of the original coolant remains in the engine. If the two coolant types are not compatible (example: silicate and OAT), the coolant mixture will break down and the coolant will not have the corrosion protection properties needed by the engine. Engine damage could occur!



P0012894

Winterization or Other Storage

As part of winterization (specified in both the service and operator's manuals), Volvo Penta highly recommends that the coolant be checked for the correct freeze protection level.. Use a coolant test kit (hydrometer) to check a sample of the coolant. The temperature indicated by the hydrometer should be at least 10° F lower than the lowest expected temperature for the area where the engine will be stored. Check the coolant at ambient temperature, do not check hot coolant (safety and inaccurate reading concerns).

NOTE! Propylene glycol coolants require testing equipment designed specifically for that coolant type.

The coolant can be strengthened to protect at lower temperatures by draining half a gallon (two liters) of coolant from the engine and replacing with a half gallon of full strength anti-freeze. Run engine for 10 minutes to ensure proper mixing of solution and recheck for level of temperature protection. Repeat, if necessary until the desired temperature is obtained on the hydrometer.

Distilled Water

Volvo Penta recommends the use of distilled water for diluting coolant or full-strength anti-freeze. Water from public water systems, wells or other sources may contain high amounts of minerals or chemicals, these may cause problems with the inhibitors in the anti-freeze ..