

Lubrication System

Engine/crankcase oil

To obtain the best engine performance and engine life, Volvo Penta recommends DuraPlus™. Premium engine oil labeled for Service CE/SG, or you may use an engine oil with the recommended quality and viscosity. Engine oils are specified by API service, letter designations and SAE viscosity numbers. Refer to oil identification symbol on the container.

Initial factory fill is a high quality motor oil for API Service CE/SG. During the break-in period (20 hours), frequently check the oil level. Somewhat higher oil consumption is normal until piston rings are seated. The oil level should be maintained between the *ADD* and *FULL* marks on the dipstick. The space between the marks represents approximately one quart (one liter). For oil level dipstick location, refer to the photographs on "Features" pages.

See the *Specifications* and the *Maintenance Schedule* for oil filter type and service intervals.

When you add or change engine oil, use Volvo Penta engine oils for gasoline engines. Use the viscosity chart to select the SAE viscosity that matches the temperature range in which you expect to operate.

***Recommended** - SAE 30 Volvo Penta DuraPlus Synthetic Motor

Oil (P/N 3851230-7 U.S. and Canada). If the recommended oil is not available, use **pure synthetic** multiviscosity oil.

The 3.0GS-B, may use a mineral base oil at first service change interval. However, switching between mineral based oils and synthetic based oils is not recommended and may cause engine damage.

Use single viscosity oils in markets where available. The use of multi-viscosity oils such as 10W-30, 10W-40 is not recommended unless single viscosity oils are not available.

At the end of the break-in period (20 hours), change the crankcase oil and replace the oil filter. Refer to the *Maintenance Schedule* for recommended oil change intervals.

WARNING!

Use only parts that are U.S.C.G. approved for marine use. Substituting automotive or generally supplied parts and hardware may result in product malfunction and possible injury to the operator and/or passengers. Never use parts of unknown quality.

Temperature	Viscosity
32° F (0° C) +	SAE 30* SAE 20W/50 SAE 15W/50
0° F (-18° C) – 32° F (0° C)	SAE 20W-20
Below -0° F (-18° C)	SAE 10W



Drive components

The drive unit is filled at the factory with Volvo Penta Dura-Plus™ GL 5 Synthetic Gear Oil.

Drive unit lubrication SX

Lubricating the drive unit

Checking lubricant

Every week check the oil level in the drive unit (if possible, without removing the boat from the water).

CAUTION!

Fully thread the oil dipstick into the oil level hole in the drive unit to properly check the oil level. An improper oil level may result in serious drive unit damage.

Fully thread the dipstick into the hole, then remove and check the oil level.

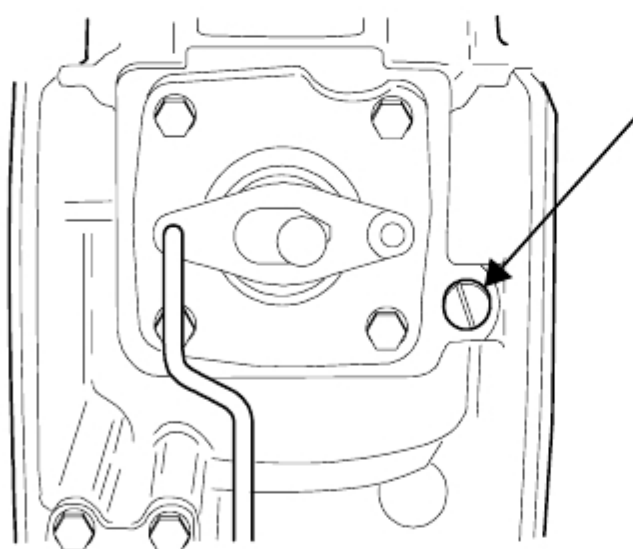
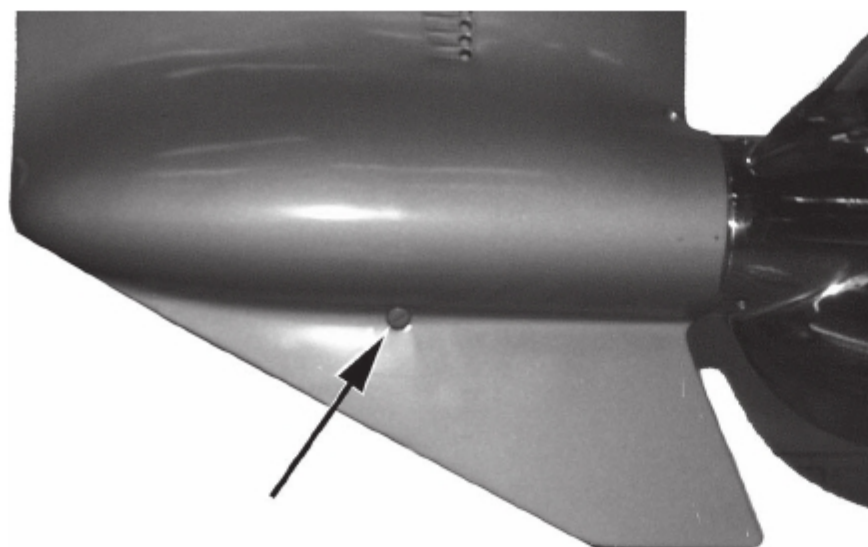
Make sure that the oil level comes to the top of the flattened portion of the dipstick.

- The oil should be amber-colored.
- The oil will appear milky if any moisture is present.
- No metal flakes should appear in the oil.

If moisture or metal flakes appear in the drive unit oil, take the boat to your Volvo Penta dealer.

If the oil level is low, add only enough lubricant to bring the oil level within the full range of the dipstick.

You should completely drain and refill the drive unit at least once per season.



Draining the drive unit (SX)

1. Place the drive unit in the *run* (down) position. Put a container under the drive unit to catch the draining oil.
2. Remove the oil drain plug and the oil level dipstick.
3. Allow the drive unit to drain completely. Dispose of used oil according to applicable environmental regulations.

Filling the drive unit (SX)

1. Remove the three screws securing the rear cover to access the oil level plug.
2. Remove the oil level plug.
3. Fill the drive unit with Volvo Penta DuraPlus GL 5 Synthetic Gear Oil. Fill through the oil drain plug location. Fill slowly to purge air. The drive unit is properly filled when the oil appears at the oil level plug hole.
4. When filled to the proper level, install the oil level dipstick and oil level plug first (to prevent excessive oil loss), then the oil drain plug.
5. Tighten oil level and drain plugs securely.
6. Install the rear cover and tighten screws securely.

If you cannot fill the drive unit through the oil drain plug, you can fill the drive by trimming it up a few degrees and filling it through the oil level plug. Reinstall the oil level plug, and place the drive in the *run* (down) position. Remove the dipstick and check the oil level. Reinstall the dipstick and tighten securely. Check the oil level with the dipstick (oil must appear on the full range of the dipstick). Add oil if required through the dipstick hole. Refer to *Specifications* pages drive unit oil capacity.

If the drive unit was filled through the oil level plug, wait 15 minutes before checking the oil level with the dipstick. Leave the dipstick loose during the waiting period. This will help ensure all air is purged from the oil cavity.



Lubricating the drive unit (DP-S)

The drive unit is filled at the factory with Volvo Penta DuraPlus GL5 Synthetic gearcase lubricant. This lubricant must be used when adding lubricant or refilling the drive unit.

Adding lubricant

⚠ CAUTION!

Fully thread the oil dipstick into the oil level hole in the drive unit to properly check the oil level. An improper oil level may result in serious drive unit damage.

Each week, check the oil level in the drive unit (if possible, without removing the boat from the water).

Make sure that the oil level comes to the top of the flattened portion of the dipstick.

- The oil should be amber-colored.
- The oil will appear milky if any moisture is present.
- No metal flakes should appear in the oil.

If moisture or metal flakes appear in the drive unit oil, take the boat to your Volvo Penta dealer.

If the oil level is low, add only enough lubricant to bring the oil level within the full range of the dipstick. Improper oil level may result in serious damage to the drive unit.

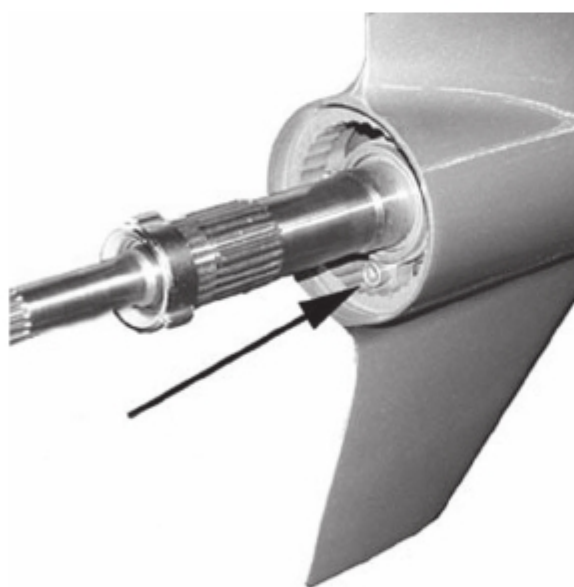
You should completely drain and refill the drive unit at least once per season.

Draining the drive unit (DP-S)

1. Place drive unit in the run (down) position.
2. Remove propellers and mounting hardware.

NOTE! Special tools are required to remove Duoprop propellers. Refer to Propeller care found elsewhere in this manual.

3. Remove the oil drain plug (1) and the oil level dipstick.
4. Allow the drive unit to drain completely. Dispose of used oil according to applicable environmental regulations.





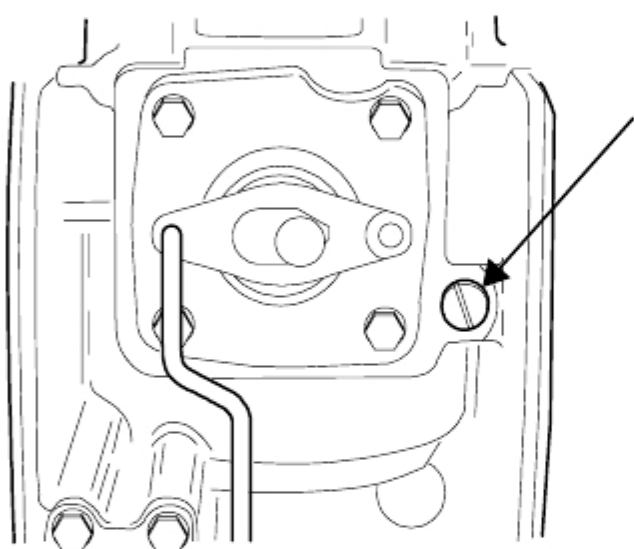
Filling the drive unit (DP-S)

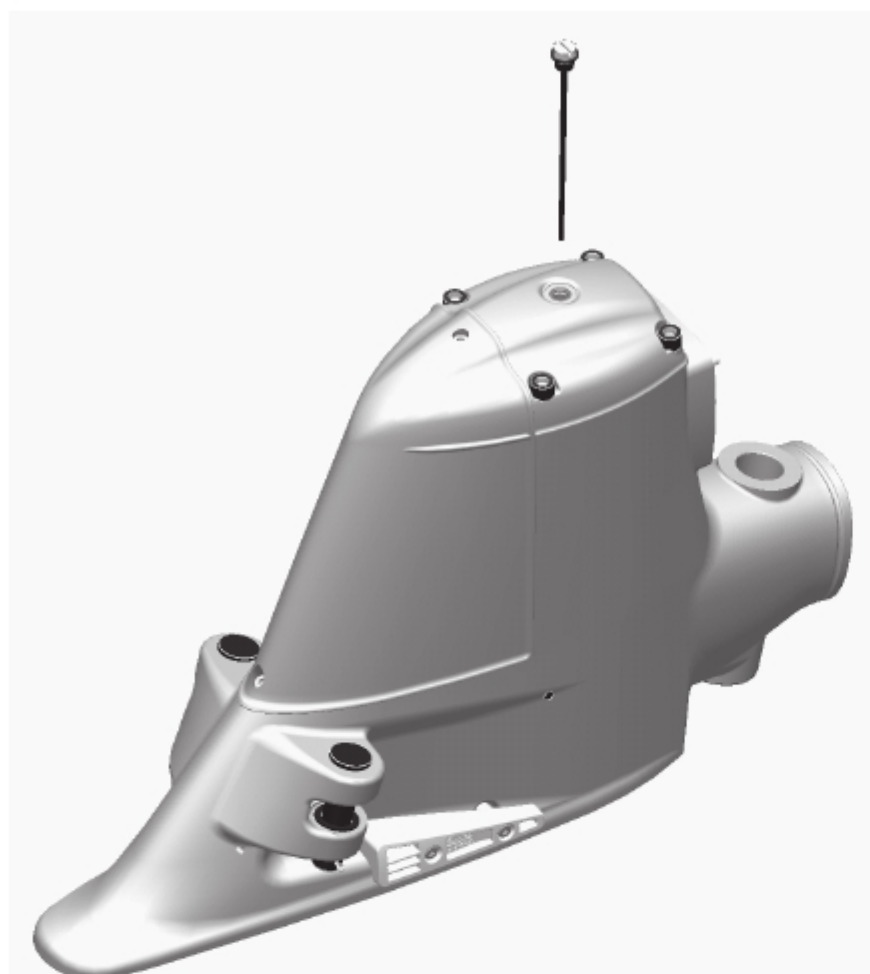
1. Remove the three screws (2) securing the rear cover to access the oil level plug.
2. Remove the oil level plug.
3. Fill the drive unit with Volvo Penta DuraPlus GL 5 Synthetic Gear Oil. Fill through the oil drain plug location. Fill slowly to purge air. The drive unit is properly filled when the oil appears at the oil level plug hole.
4. When filled to the proper level, install the oil level dipstick and oil level plug first to prevent excessive oil loss, then the oil drain plug.
5. Tighten the oil level and drain plugs securely.

NOTE! If unable to fill the drive unit through oil drain plug, fill the drive trimming it up a few degrees and filling through the oil level plug.

6. Reinstall the oil level plug, and place the drive in the run (down) position. Remove the dipstick and check the oil level. Reinstall the dipstick and tighten securely.
7. Install the propellers (refer to *Propeller care*).
8. Install the rear cover and tighten screws securely.
9. Check the oil level with the dipstick (oil must appear on the full range of dipstick). Add oil, if required, through the dipstick hole. Refer to *Specifications* pages for drive unit lubricant capacity.

NOTE! If the drive unit was filled through the oil level plug, wait 15 minutes before checking oil with the dipstick. This will help ensure all air is purged from the oil cavity. Leave the dipstick loose during the waiting period.





Lubricating the drive unit (DPX)

The drive unit is filled at the factory with Volvo Penta DuraPlus GL5 Synthetic gearcase lubricant. This lubricant must be used when adding lubricant or refilling the drive unit.

Adding lubricant

Each week, check the oil level in the drive unit (if possible, without removing the boat from the water).

⚠ CAUTION!

Fully thread the oil dipstick into the oil level hole in the drive unit to properly check the oil level. An improper oil level may result in serious drive unit damage.

Make sure that the oil level comes to the top of the flattened portion of the dipstick.

- The oil should be amber-colored.
- The oil will appear milky if any moisture is present.
- No metal flakes should appear in the oil.

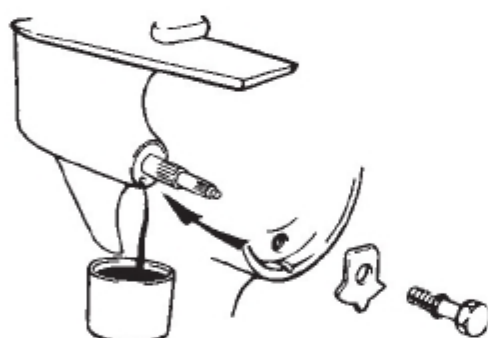
If moisture or metal flakes appear in the drive unit oil, take the boat to your Volvo Penta dealer.

If the oil level is low, add only enough lubricant to bring the oil level within the full range of the dipstick. Improper oil level may result in serious damage to the drive unit.

You should completely drain and refill the drive unit at least once per season.

Draining the drive unit (DPX)

1. Place the drive unit in the run (down) position and remove the dipstick.
2. Remove the propellers.
3. Remove the oil drain plug at the bottom of the propeller gear housing.
4. Allow the drive unit to drain completely, then replace the drain plug. If the oil shows signs of water, contact your Volvo Penta dealer for service assistance.
5. Dispose of used oil according to any applicable environmental regulations.



Filling the drive unit (DPX)

6. To fill the drive unit, remove the rear cover and the oil fill plug. (Refer to *Specifications* on pages for drive unit oil capacity.)
7. Tilt the drive unit up.
8. Fill the drive with Volvo Penta DuraPlus GL5 Synthetic gearcase lubricant.
9. When filled to the proper level, install the oil fill plug and tighten it securely.
10. Lower the drive and check the oil level with the dipstick.
11. If necessary, add oil through the dipstick hole.
12. Make sure the fill and drain plug seals are not leaking.
13. Install the rear cover and tighten screws securely.

