

ServiceProtocol

Your Volvo Penta engine and its equipment are designed for maximum service life and reliability. They are built to withstand the marine environment, and to minimise their impact on it. Given regular maintenance, as in the schedule, these properties will be maintained and unnecessary malfunctions will be avoided.

Warranty inspection

During the first period of use, the specified warranty inspection, “First service inspection”, must be done at an authorised Volvo Penta workshop. Instructions about when and how this must be done are found in the Warranty and service instruction book.

Extended Protection

Volvo Penta offers an Extended Protection for your marine diesel engine, including transmission, if used for pleasure use only. To be valid a Extended Protection service has to be performed at the owners cost and expense by an authorized Volvo Penta distributor, dealer or workshop before the expiry of the 12 months Warranty Period. Further directions can be found in the **Warranty and Service Book**.

SERVICEPROTOCOL

⚠ Before you do any maintenance work, read the “Maintenance” chapter in the operator's manual carefully. This contains advice on doing the work in a safe and correct manner.

⚠ **IMPORTANT!** Maintenance points marked □ must be done by an authorised Volvo Penta workshop.

Daily, before first start:

- Engine and engine room. General inspection
- Engine oil. Checking the level
- Coolant. Checking the level

Every 14 days:

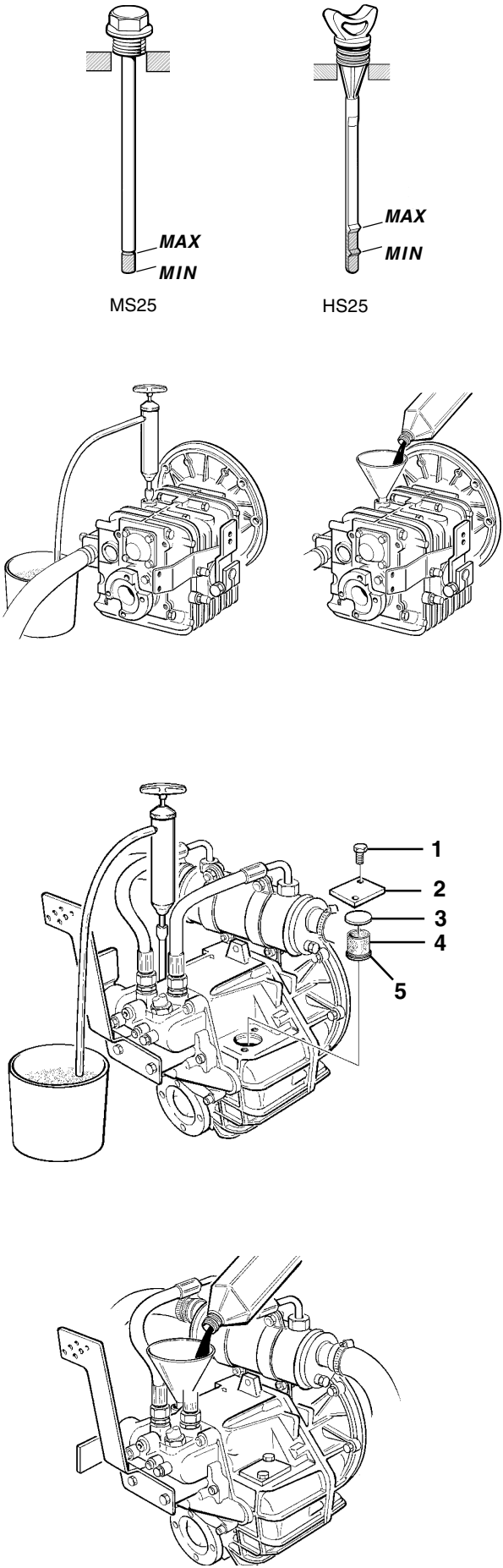
- Fuel filter/fuel pre-filter. Drain the water
- Drive belts. Check for wear. Change as necessary.
- Sea water filter. Cleaning.
- Battery. Checking the electrolyte level
- Reversing gear. Checking the oil level
- Drive. Checking the corrosion protection
- Power Trim pump. Checking the oil level
- Steering. Checking the oil level

Every 50 hours/at least once a year, included in extended protection

- Drive (SP, DP). Lubrication of the steering shaft bearings

Every 100 hours/at least once a year, included in extended protection

- Engine oil and oil filter. Change
- Compressor. Checking the oil level
- Drive (DP-S, DPX). Oil change



Oil level. Check

Remove the dipstick by turning counter-clockwise. Wipe the dipstick and reinsert it in the drive / reverse gear **without screwing it in**. Remove the dipstick and check the oil level. The correct oil level is between the MAX and MIN markings.

Top up the oil as required using the dip stick tube. For oil quality and capacity: See the chapter “Technical Data”.

⚠ **IMPORTANT!** Do not overfill under any circumstances. The oil level must always be within the recommended level.

Oil change. MS25

Remove the dipstick. Suck up oil using an oil pump through the hole for the dipstick. Measure out the correct amount of oil and fill up through the hole for the oil dipstick. For oil quality and capacity: See the chapter “Technical Data”.

⚠ **IMPORTANT!** Never overfill reverse gear. The oil level should always lie at the recommended level.

Oil change and filter cleaning. HS25

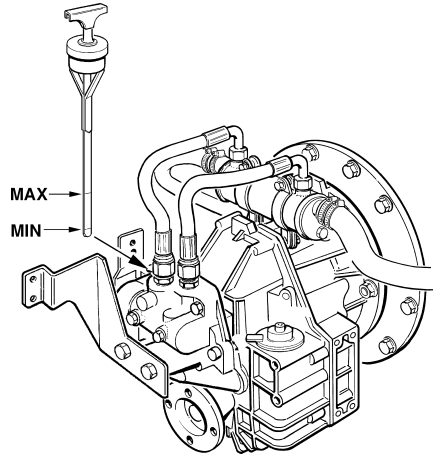
1. Clean around the cover (2) so that there is no risk of the dirt falling into the filter housing.
2. Undo the screws (1). Remove the cover (2) and gasket (3).
3. Carefully remove the filter (4). Clean the filter in kerosene (leave the gasket (5) in place). Clean the filter housing.
4. Suck up oil using an oil pump through the hole for the dipstick.
5. Measure out the correct amount of oil and fill up through the hole for the oil dipstick or filter housing. For oil quality and capacity: See the chapter “Technical Data”.

- ⚠ **IMPORTANT!** Never overfill reverse gear.
6. Reinstall the filter (4) with gasket (5) in the filter housing. Check that the filter bottoms correctly.
 - ⚠ **IMPORTANT!** If the filter does not sit flat there is a risk of breaking it when the cover (2) is installed.
 7. Center the gasket (3) above the filter. Install the cover.
 8. Move the control lever to the neutral position. Start engine and run at 1500 rpm for a few minutes so the reverse gear oil cooler is filled with oil.
 9. Stop engine and check oil level. Top up if required.

Reverse gear

The HSW630/HS63/45/25 reverse gear is hydraulic, which means that ahead/astern engagement and disengagement is hydraulically activated. The reverse gear lubrication system has an oil filter and oil cooler.

⚠ IMPORTANT! Volvo Penta recommends the installation of a seawater filter to guarantee the proper coolant water flow to the engine and reverse gear. Contaminants in the seawater will otherwise foul the reverse gear radiator and other cooling system components.

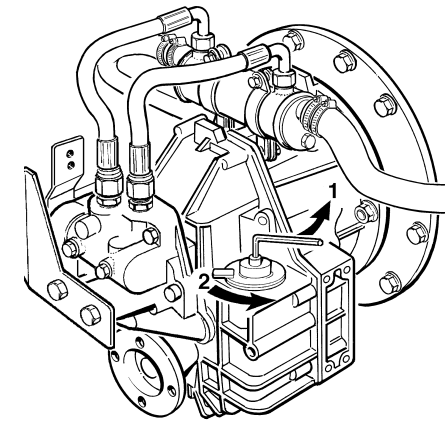


Oil level HS45 and HS63/HSW630HE

Remove the dipstick by turning/screwing it anti clock-wise. Dry off the dipstick and reinstall it in the reverse gear, **without screwing it into place**. Remove the oil dipstick again and check the oil level. The correct oil level is inside the marked area.

If necessary, top the oil up through the dipstick hole. Please refer to the “Technical Data” chapter for oil grades and volume.

⚠ IMPORTANT! Never over-fill the reversing gear. The oil level must always be inside or at the recommended levels.

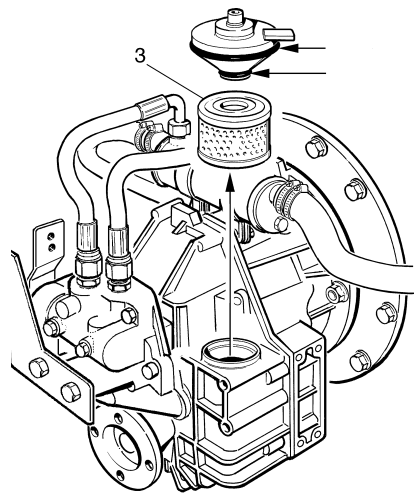


Oil change and filter change, HS45 and HS63/HSW630HE

1. Clean around the lid, so that there is no risk that dirt could fall down into the filter housing.
2. Undo screw (1) with a 6 mm Allen key. Remove lid (2). Replace and oil in the new O-rings in the lid.
3. Lift up the filter (3).
4. Suck up the oil with an oil drain pump, via the oil filter housing.
5. Measure up the correct quantity of oil and fill the reversing gear with the oil. Please refer to the “Technical Data” chapter for oil grades and volume.

⚠ IMPORTANT! Never over-fill the reversing gear.

6. Install the new filter (3) in the filter housing.
7. Install the lid. Tightening torque 5-8 Nm.
8. Put the control lever in neutral. Start and run the engine at 1500 rpm for a few minutes to ensure that the reversing gear oil cooler is filled with oil.
9. Stop the engine and check the oil level. Top up as necessary.



Every 200 hours/at least once a year, included in extended protection

- Air filter. Change
- Drive belts. Checking the belt tension
- Crankcase breather filter. Change
- Fuel filter/fuel pre-filter. Change
- Coolant. Change*
- Exhaust pipe. Check
- Sea water pump. Checking the impeller
- Reversing gear. Change oil, change filter
- Drive (SP, DP). Oil change
- Drive. Check the universal joint and exhaust bellows.
- Drive (SP, DP). Re-tighten the steering helm screws

Every 200 hours:

- ☐ Valve clearance. Adjustment
- ☐ Turbo. Check

Every two years:

- Coolant. Change
- ☐ Drive. Change the universal joint and exhaust bellows.

Every 500 hours/at least once every five years:

- Drive belt, compressor (32,43). Change
- Drive belt, circulation pump (32,43). Change
- ☐ Reversing gear. Change the propeller seal

* If the fresh water system is filled with a rust-prevention mixture, this must be changed every year. On the other hand, if it is filled with an anti-freeze mixture (glycol mixture), this must be changed every second year.