Installation Reference, Volvo Penta IPS Propulsion Unit and Engine

### 1. Installation kit

- **D4 engines**
- Water inlet valve and bypass valves
- Exhaust bends and hoses
- Transom anode kit
- Propeller attachment parts
- Engine chassis no.

### 2. Chassis no. identification

**IMPORTANT!** Engine chassis no. and propulsion unit (SUS) chassis no. are identical.

### 3-6. Installing the propulsion unit

- Clean (wipe) hull inserts.

### 7. Installing the water inlet and bypass valves

**NOTE!** Water bypass is not used on D4 IPS application.

- Water inlet valve
- Exhaust bends
- Water bypass hose

**NOTE!** Use lifting eyes when lifting the engine.

### 8. Installing the engine

**WARNING!** Always use both lifting points when lifting the engine.

- Install engine on port and starboard mounts by measuring distance H.
- Check:
  - Equal loading will cause engine vibrations. See also SF

### 9. Connecting the drive shaft

**IMPORTANT!** Ensure there is play between drive shaft coupling and gear box housing.

- Check:
  - Aligning of axis
  - Drive shaft flange-to-flangedistance. Adjust engine if needed.

**NOTE!** Apply grease, part no. 3817243 in area between clamp ring and gear housing.

### 10. Installing the oil cooler

- Hose clamp tightening torque: 5–6 Nm (3.7–4.4 lb.ft)

### 11. Mounting the protective anode. Installing the exhaust line and the water inlet and bypass hoses

- Apply corrosion protection, part no. 9510227 on all power supply connections.
- Clean (wipe) hull inserts.

### 12. Power supply

Connect positive (+) to SGK automatic fuse. Tightening torque: 10–12 Nm (7.4–9.0 lb.ft)

### 13. Calibration

Calibrate the propulsion unit positions by using the parallel alignment tool, special tool 3808507 and the VODIA tool 383619 in combination with the switch box, special tool 3887101.

**WARNING!** Make sure all safety precautions are made prior to lifting to avoid personal injuries and equipment.

**IMPORTANT!** Before installing propulsion unit and engine, make sure that the rest of the installation work in the engine compartment has been completed. In addition, all cables and hoses must be correctly located and clamped.
Installation Reference, Volvo Penta IPS
Jack shaft mounting

1. Jack shaft installation kits

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2. IPS Hull and Engine foundation

NOTE! Read the Installation Manual D4/D5 Aquamatic DPH/DPR, Volvo Penta IPS, Inboard before the installation work of IPS propulsion unit and engine is started.

3. Connecting the drive shaft, front end (engine side)

4. Mounting the front end protective casing

5. Connecting the drive shaft, rear end (propulsion unit)

6. Mounting the rear end catch (D6 installation is shown)

7. Installing the oil cooler

8. Installing new oil hoses to gear box and oil cooler

9. Installing new hoses to gear box and oil cooler

10. Installing exhaust elbow and exhaust riser

11. Installing the exhaust hose

12. Water inlet hose and water bypass hose

13. Connecting: Shift cables, steering cables and power supply cables to the SUS

14. Calibration