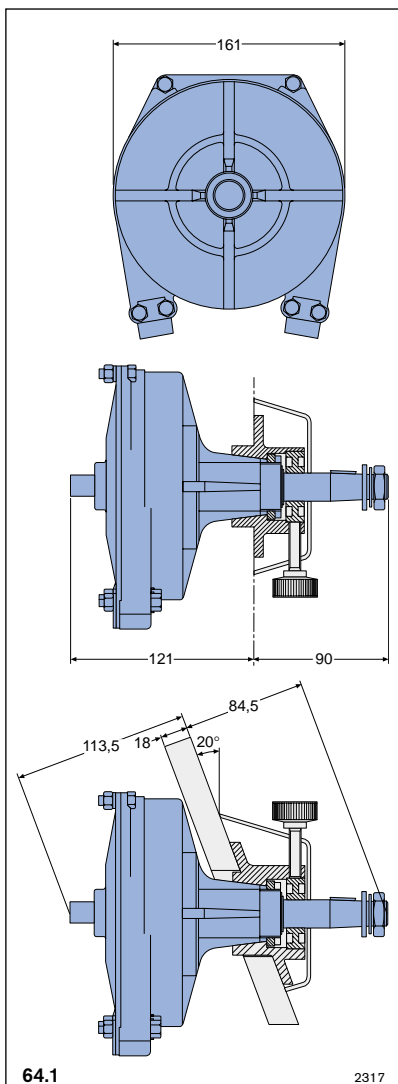


Volvo Penta steering systems include mechanical and hydraulic systems. Mechanical steering systems are based on the STS 330 steering gear – a planetary gear design which provides an optimum reduction ratio with a minimum of physical effort. Installation is extremely simple and requires no subsequent adjustment. Hydraulic steering systems include both components for servo-assisted steering of Aquamatic drives and hydraulic steering for inboard installations.

64.27
HARDWOOD SPORTS STEERING WHEEL



All Volvo Penta's steering wheels are specially adapted to marine conditions, which means that they are anti-magnetic and manufactured from corrosion resistant materials. All steering wheels are suitable for use with Volvo Penta steering systems.



64.1 2216

64.1 STS 330 STEERING GEAR
Part no. 853181-6. With a maximum of 3.3 turns from lock to lock. The force applied to the wheel is evenly distributed between the steering gear's three planetary gear wheels, which gives greater precision and less wear. Complies to ABYC and Nordic norms.



64.1 2217

64.2 INSTALLATION KIT 70°, WHITE COVER
Part no. 853183-2.

64.3 INSTALLATION KIT 70°, BLACK COVER
Part no. 1140024-9.

64.4 INSTALLATION KIT 90°, WHITE COVER
Part no. 853182-4.

64.5 INSTALLATION KIT 90°, BLACK COVER
Part no. 1140023-1.



64.2-3 2219

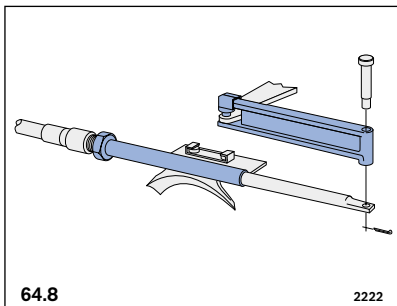


64.4-5 2218



64.7

2220



64.8

2222

64.7

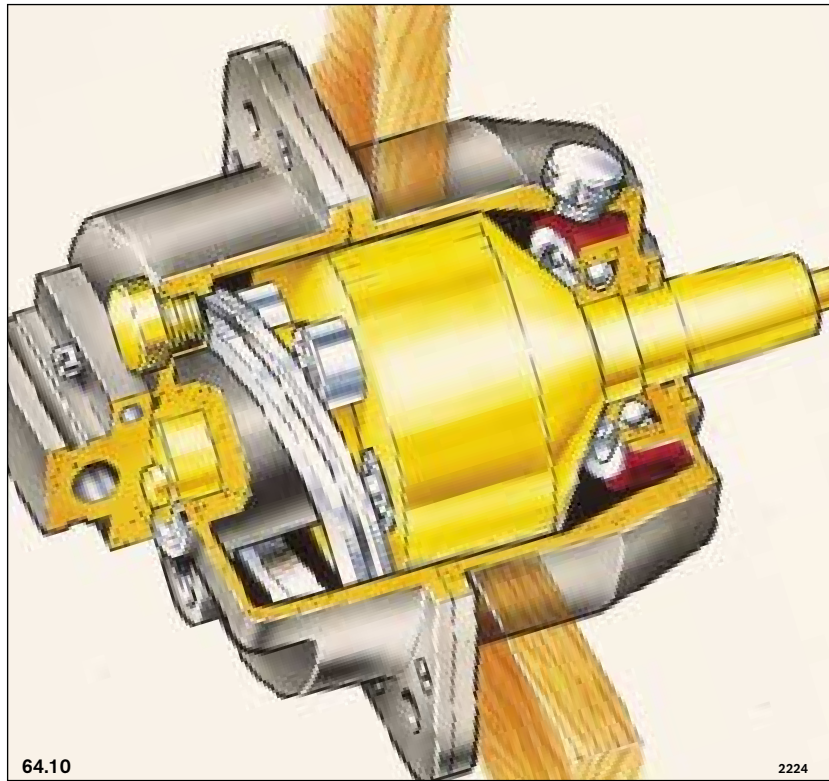
STEERING CABLE ATTACHMENT

Part no. 853290-5. The steering cable attachment is used for inboard and older AQ installations.

64.8

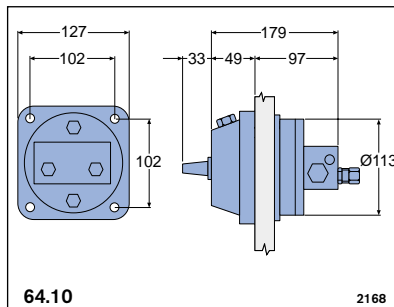
STEERING CABLE ATTACHMENT

Part no. 872388-4. This steering cable attachment is used to attach the steering cable on DP-E drives without power steering.



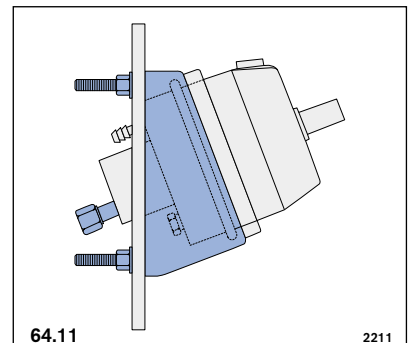
64.10

2224



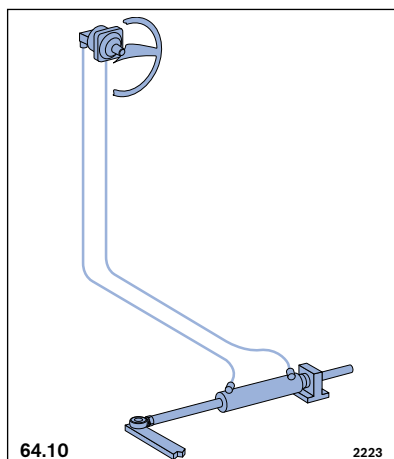
64.10

2168



64.11

2211



64.10

2223

64.10

HYDRAULIC STEERING PUMP

Part no. 1140580-0. Volvo Penta's hydraulic steering pump is a piston driven pump with 7 pistons that work against an oblique disc. When the steering wheel is turned, the pistons pump hydraulic fluid to the hydraulic cylinder at the drive/rudder – 35 cc per full turn of the steering wheel. The pump is either installed at an angle of 90 or 70 degrees to the steering wheel. In the latter case, an angled shim, (64.11) is also used. The bleed plug is located on the front of the pump, thus making the bleeding and filling of hydraulic fluid simple operations to perform.

64.11

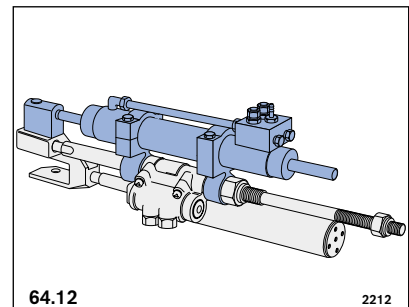
ANGLED SHIM, 70°

Part no. 1140582-6. Used to angle the hydraulic steering pump to 70° steering wheel angle.

64.12

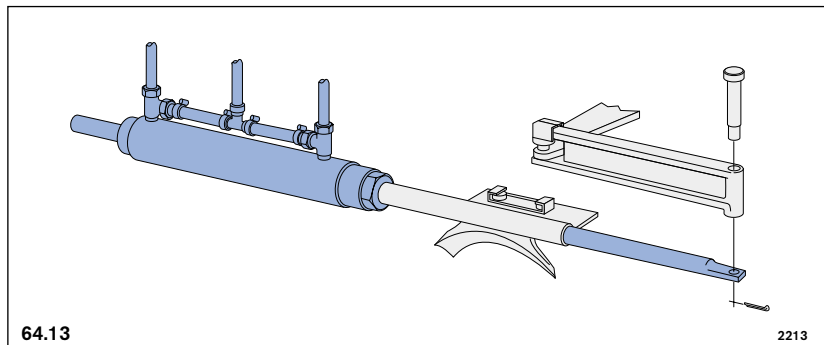
HYDRAULIC CYLINDER

Part no. 1140585-9. Used for DP-E drive with servo.



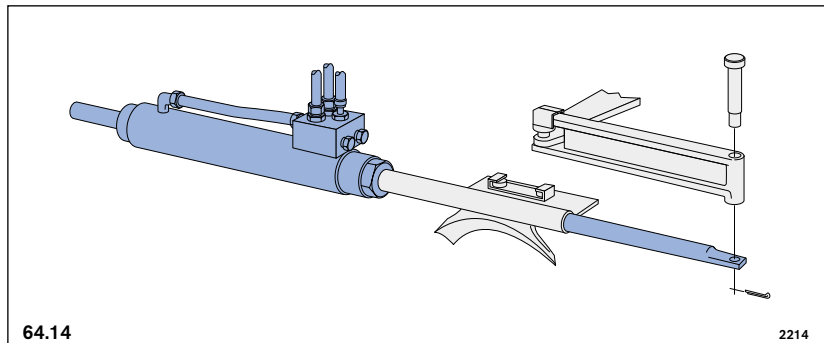
64.12

2212



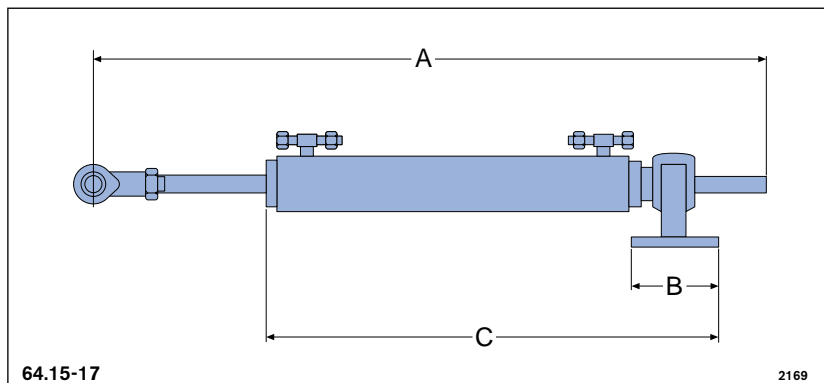
64.13

2213



64.14

2214



64.15-17

2169

**64.13
HYDRAULIC CYLINDER**
Part no. 1140587-5. Used for V6, V8 and 4 cylinder petrol engines.

**64.14
HYDRAULIC CYLINDER**
Part no. 1140586-7. Used for diesel engines with DP-E drive without servo. Also use attachment 64.8.

**64.15-17
HYDRAULIC STEERING CYLINDER**
For inboard engine installations.

Pos.no.	Part no.	Max steering power,kg	Cyl stroke, mm
64.15	1140590-9	455	178
64.16	1140591-7	682	178
64.17	1140592-5	682	228

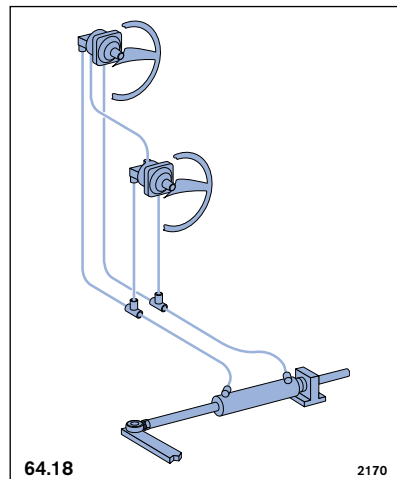
Pos.no.	Vol., cc	No of turns	A, mm	B, mm	C, mm
64.15	116	3.3	555	62	348
64.16	173	4.9	599	62	366
64.17	222	6.3	699	62	416

**64.18
CONNECTION KIT FOR DOUBLE STEERING POSITIONS**
Part no. 1140583-4. Used, for example, with a Flybridge.

**64.19
HYDRAULIC TUBE 3/8"**
Part no. 1140584-2. State length in metres when ordering.

**64.20
AIR BLEED HOSE**
Part no. 192618-7. Diam. 7 mm. State length in metres when ordering.

HYDRAULIC FLUID
Part no. 1141640-1. Volume 1 litre. See 18.13.



64.18

2170



64.22

2225



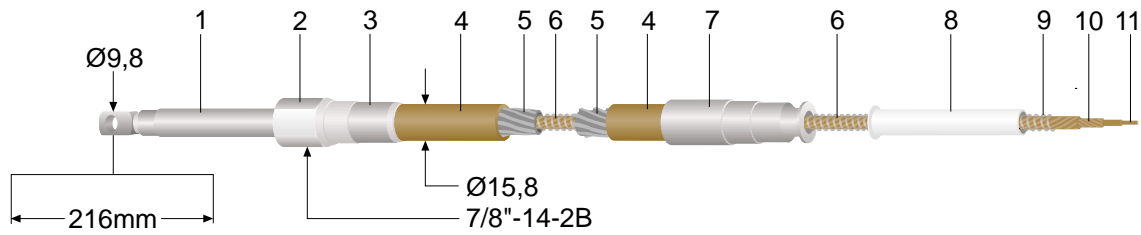
64.23-24

2227

**64.22
PARALLEL BRACE, DP-E DRIVE**
Part no. 1140610-5. For double engine installations. CC between engines 610–970 mm in accordance with ABYC and Nordic norms.

**64.23
PARALLEL BRACE, SX/DP-S DRIVE**
Part no. 3850885-9. For double engine installations. CC between engines 660–1040 mm in accordance with ABYC and Nordic norms.

**64.24
PARALLEL BRACE, SX/DP-S DRIVE**
Part no. 3850886-7. For double engine installations. CC between engines 840–1220 mm in accordance with ABYC and Nordic norms.



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64.25

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64.25

3 SPOKE ALUMINIUM STEERING WHEEL

Part no. 850936-6. Extra dished boss. Diameter 380 mm. Covered in imitation leather to provide excellent grip. Satisfies ABYC standards.



64.27

2230

64.27

HARDWOOD SPORTS STEERING WHEEL

Part no. 1140333-4. A really exclusive steering wheel for the discerning boat owner. The ring of the steering wheel is made of high gloss varnished prime quality mahogany. Diameter 340 mm.



64.28-29

2231

64.28-29

THERMO-PLASTIC STEERING WHEEL

4 spoke steering wheel manufactured of impact resistant thermo-plastic. Available in white or black. Diameter 340 mm. Satisfies ABYC standards.

Pos.no.	Part no.	Colour
64.28	1140334-2	White
64.29	1140335-9	Black

64.30

STEERING CABLE

Volvo Penta steering cables are high quality products designed to provide optimum efficient performance, i.e., a minimum of physical effort with a minimum of play.

1. Telescopic sleeve
2. Connection nut
3. End sleeve
4. Protective outer sheathing in brown HD polyethylene
5. Hardened steel wire armature
6. Inner cable
7. End sleeve
8. Protective sleeve in white HD polyethylene
9. Spring steel covering
10. 36 strand steel wire – laid to left and right
11. Core wire

Cable length m	Part no.
2.00	828886-2
2.25	828887-0
2.50	828888-8
2.75	828889-6
3.00	853185-7
3.25	853186-5
3.50	853187-3
3.75	853188-1
4.00	853189-9
4.25	853190-7
4.50	853191-5
4.75	853192-3
5.00	853193-1
5.25	828863-1
5.50	853194-9
5.75	828864-9
6.00	853195-6
6.25	828865-6
6.50	853196-4
6.75	828866-4
7.00	853197-2
7.50	853286-3
8.00	853287-1
8.50	853288-9
9.00	853289-7