WARNING! **Catch hydraulic fluid and dispose of environmentally.**

- Unscrew all screws (2) and take gear motor (3) off.

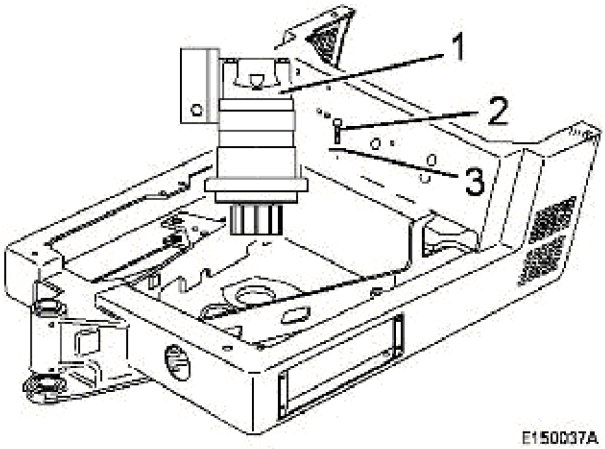

Figure 5

Installing the gear motor

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Vacuum pump

- Clean contact faces for gear motor.
- Attach and align gear motor (1).
- Cover the threads of the socket head cap screws (2) with Loctite 242, turn in with washer (3) and tighten with 85 ± 18 Nm.

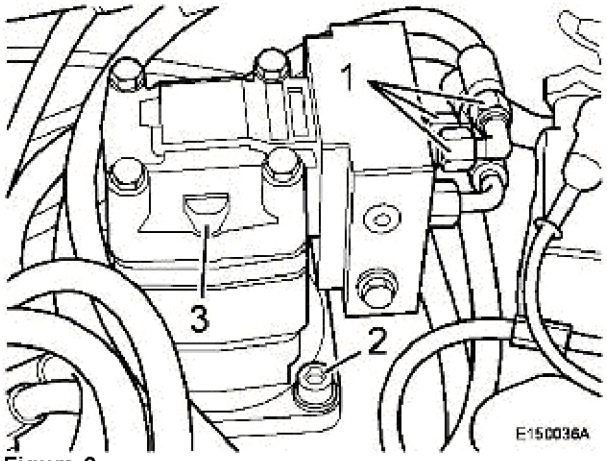


Figure 6

- Unscrew the plugs from hydraulic lines (1), connect the lines to the motor, align correctly and tighten with 48 ± 10 Nm.

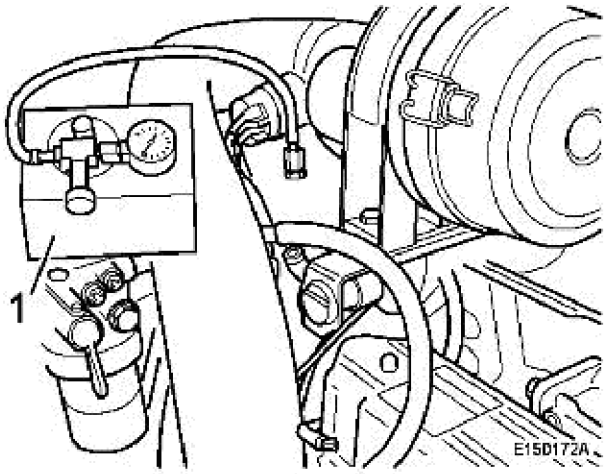


Figure 7

- Remove vacuum pump (1) and install the breather.
- Start the engine, check machine functions and leak tightness, fill up oil if necessary.

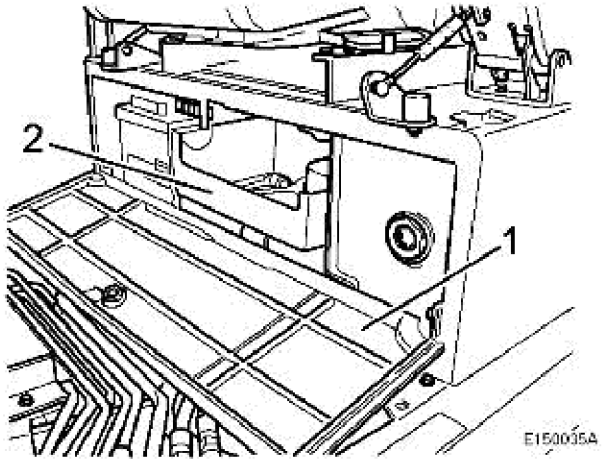


Figure 8

- Install tool box (2) and fasten it with the screw.
- Assemble flap (1) and fasten hinges with screws.

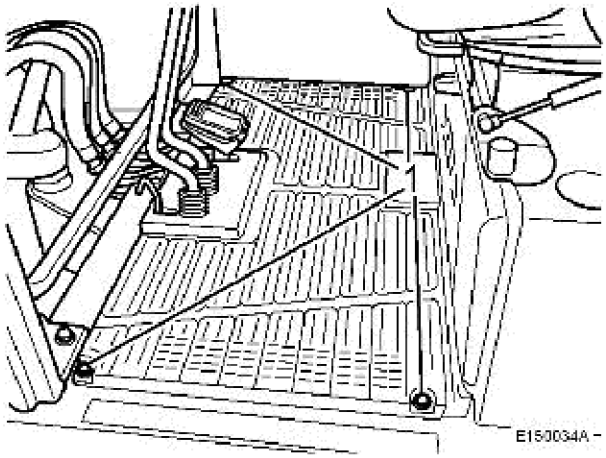


Figure 9

- Install the floor plate and tighten all screws (1).

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Hydraulic motor – slewing of superstructure**	Function Group : **441**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Hydraulic motor – slewing of superstructure

Schematic

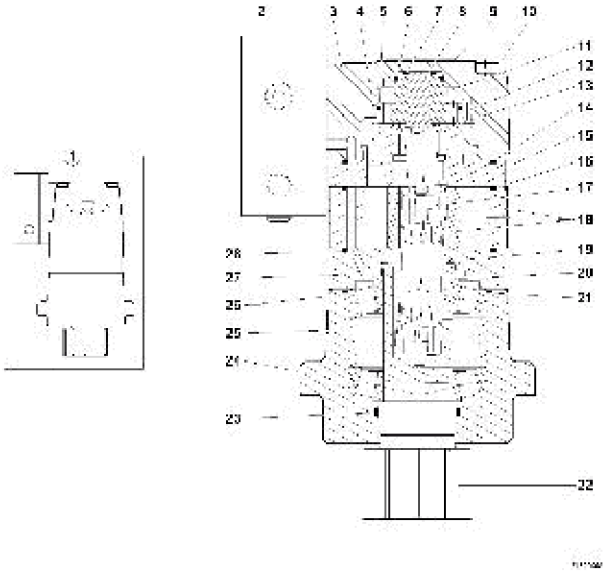
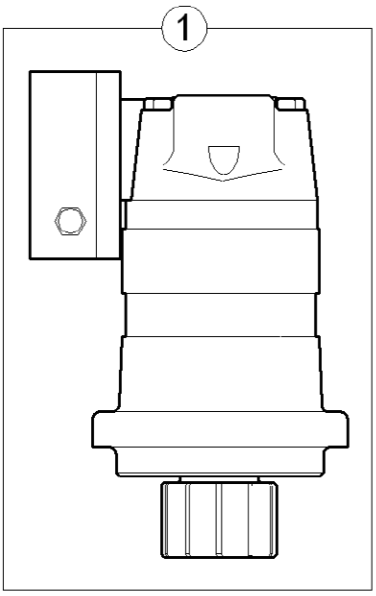
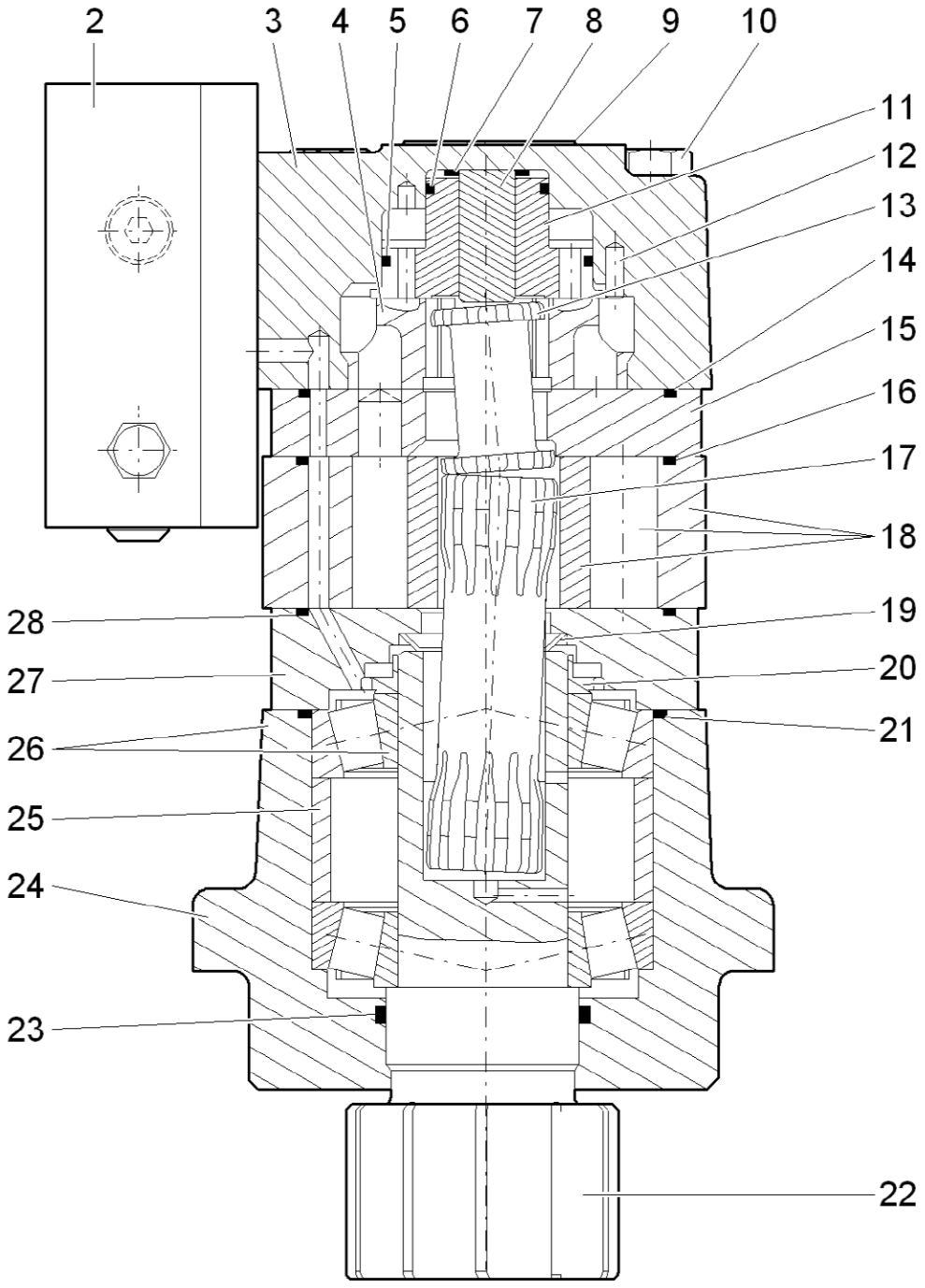


Figure 1

1 Hydraulic motor	11 Compensation shim	21 O-ring
2 Balancing valve for slewing movement	12 Guide pin	22 Shaft with pinion
3 Valve housing	13 Valve drive	23 Radial seal
4 Slewing valve	14 O-ring	24 Bearing housing
5 O-ring	15 Channel plate	25 Spacer piece
6 O-ring	16 O-ring	26 Roller bearing
7 Spring washer	17 Universal shaft	27 Intermediate plate
8 Spacer piece	18 Gear wheel set	28 O-ring
9 Identification plate	19 Seal ring	
10 Screw	20 Nut	





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VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Hydraulic motor, dismantling swivelling**	Function Group : **441**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Hydraulic motor, dismantling swivelling

Disassembling

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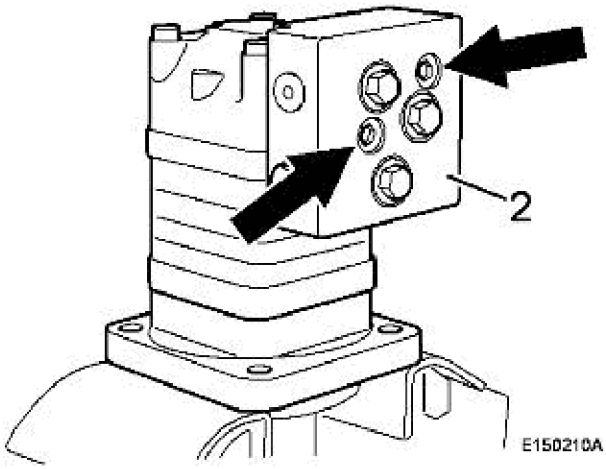

Figure 1

- Remove the hydraulic motor, see shop manual assembly group 0 - 9.
- Unscrew both socket head cap screws (arrows).
- Take off balancing valve (2) with O-rings.

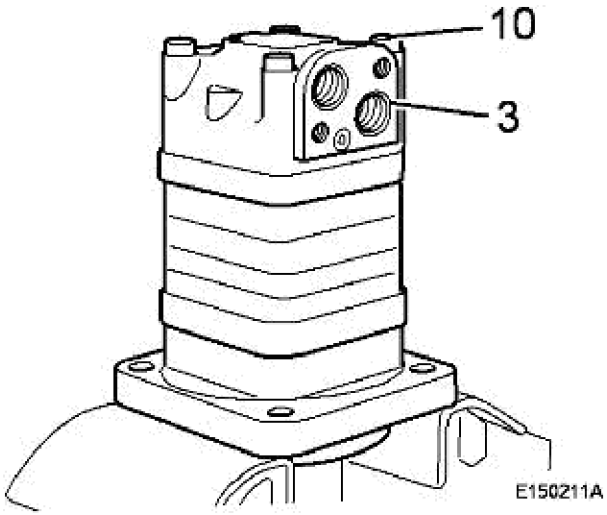

Figure 2

- Unscrew all screws (10) and take off valve housing (3).

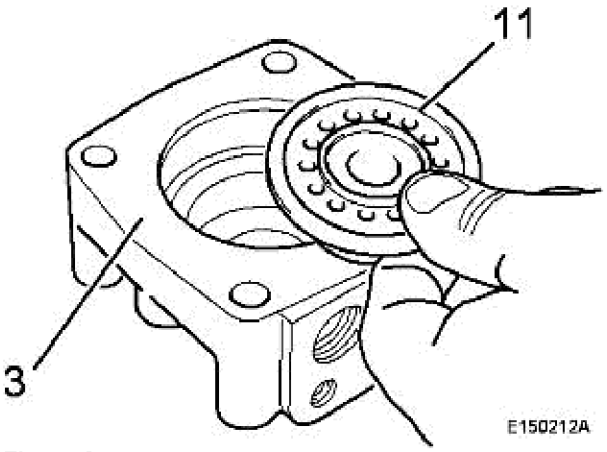

Figure 3

- Knock compensation shim (11) out of valve housing (3).

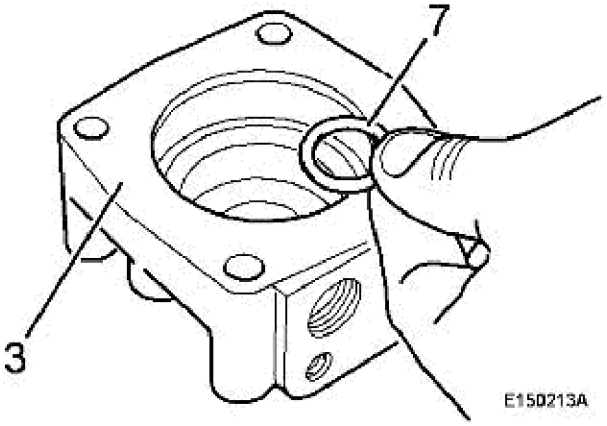

Figure 4

- Take spring washer (7) out of valve housing (3).

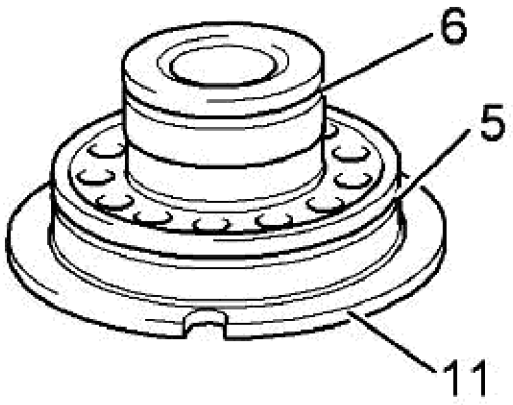

Figure 5

- Remove O-rings (5 and 6) from compensation shim (11).

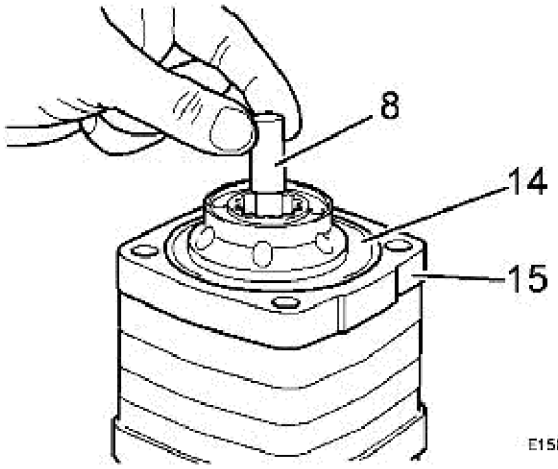

Figure 6

- Remove spacer block (/8).
- Take O-ring (14) out of channel plate (15).

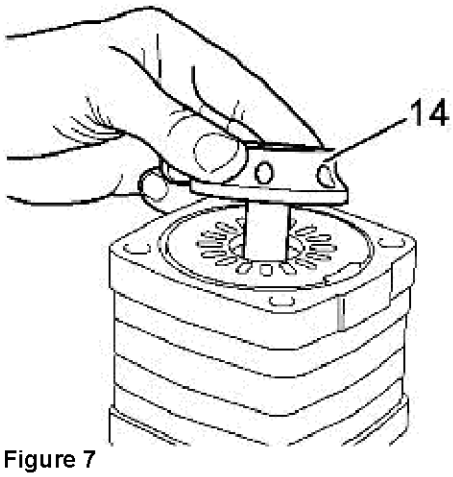

Figure 7

- Take off slewing valve (4).

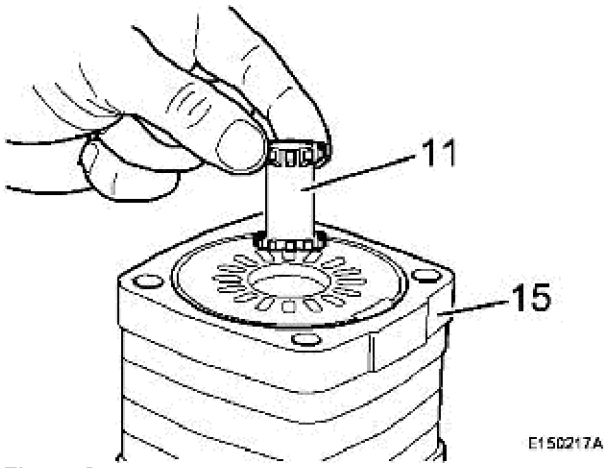

Figure 8

- Pull valve drive (11) out of channel plate (15).

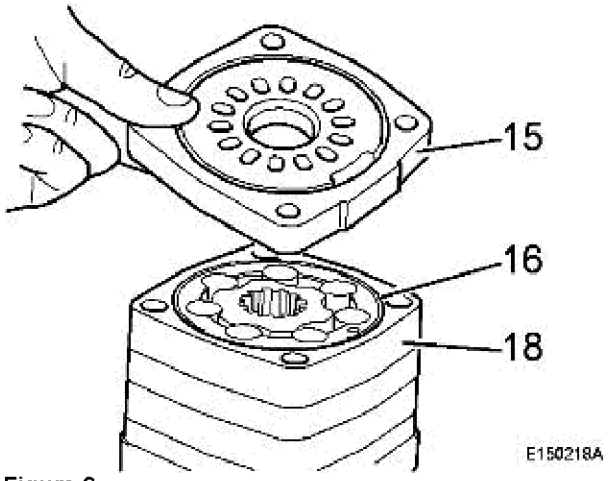

Figure 9

- Take off channel plate (15).

NOTE **Observe the installation position!**

- Take O-ring (16) out of gear wheel set (18).

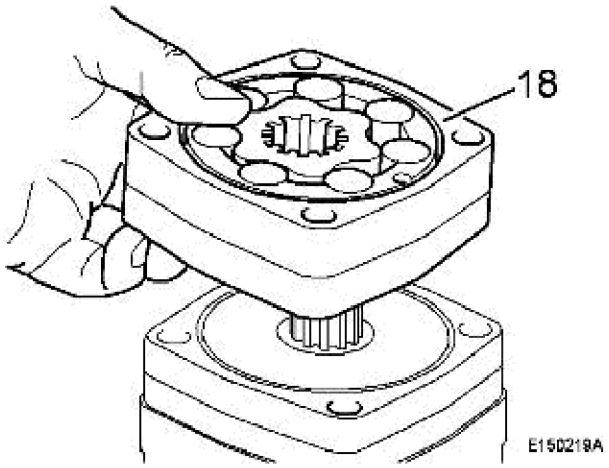

Figure 10

- Take off gear wheel set (18).

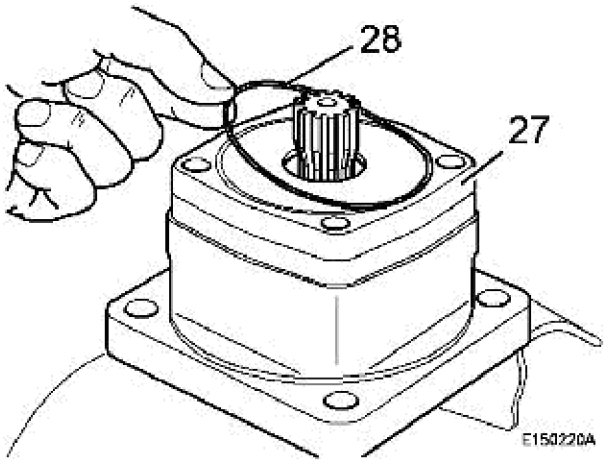

Figure 11

- Remove O-ring (28) from intermediate plate (27).

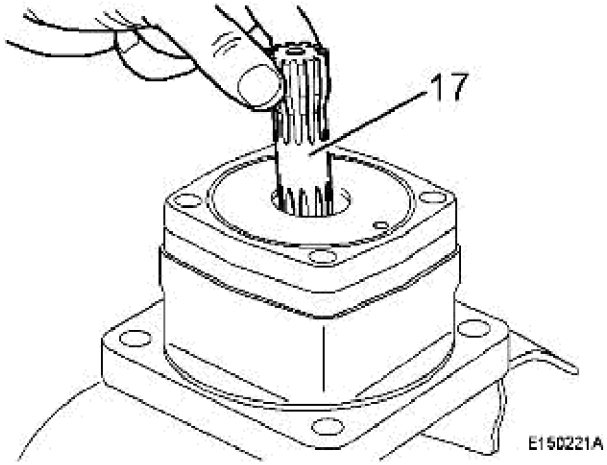

Figure 12

- Remove universal shaft (17).

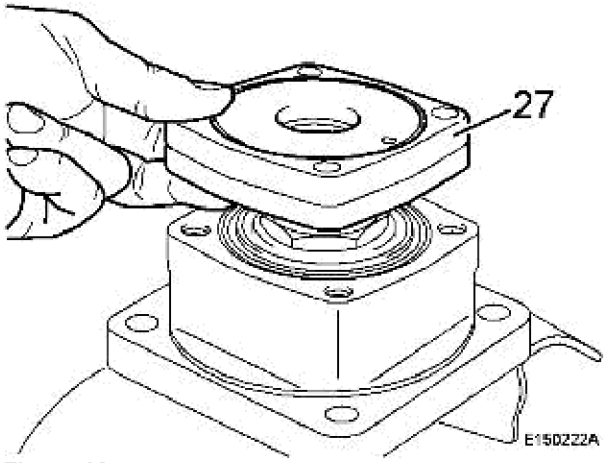

Figure 13

- Remove intermediate plate (27).

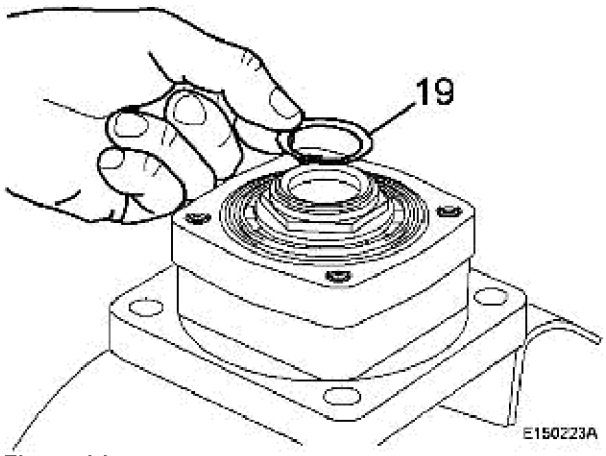

Figure 14

- Take off seal ring (19).

NOTE **Observe the installation position!**

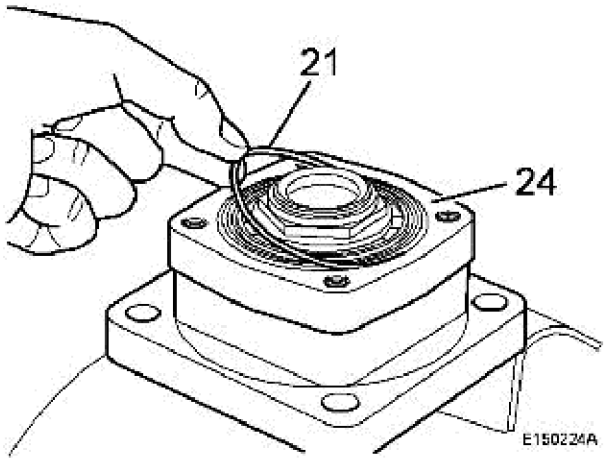

Figure 15

- Remove O-ring (21) from bearing housing (24).

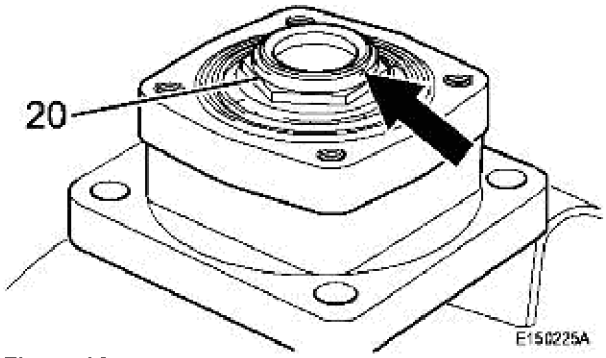

Figure 16

- Remove lock (See figure/arrow).
- Unscrew nut (20).

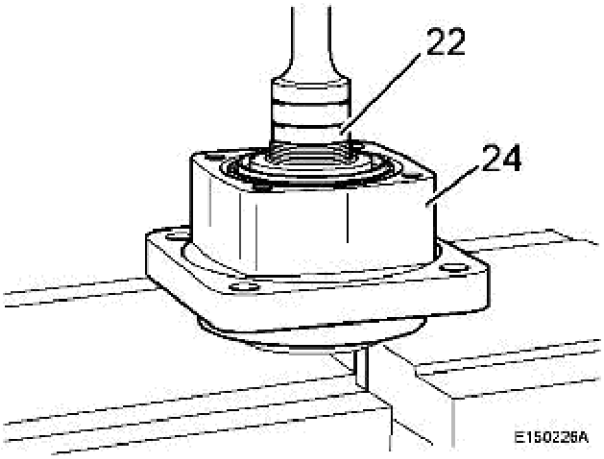

Figure 17

- Press shaft with pinion (22) out of bearing housing (24).

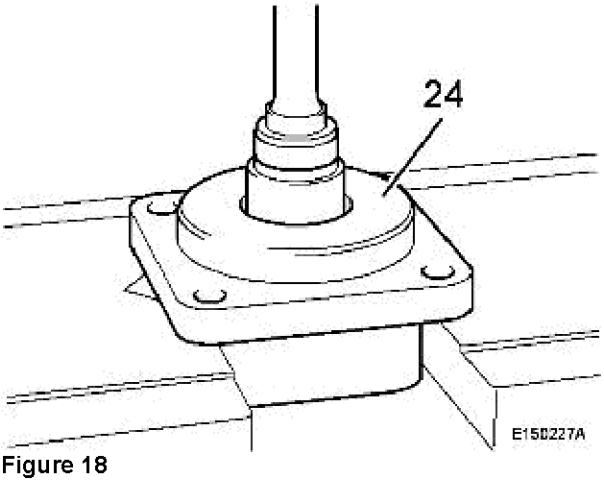

Figure 18

- Press both roller bearings (See figure/26) and spacer piece (See figure/25) out of bearing housing (24).
- Remove radial seal (See figure/23).
- Check all parts for damage and wear, replace if necessary.

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Hydraulic motor, assembling swivelling**	Function Group : **441**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Hydraulic motor, assembling swivelling

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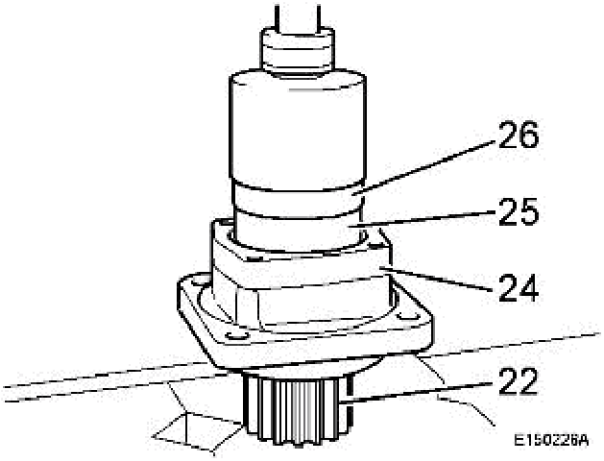

Figure 1

- Wet the new radial seal (See figure/23) with oil and insert it into the bearing housing (See figure/24).
- Press shaft with pinion (22) into the bearing housing.
- Press both roller bearings (26) and spacer pieces (25) into the bearing housing (24) until they bottom.

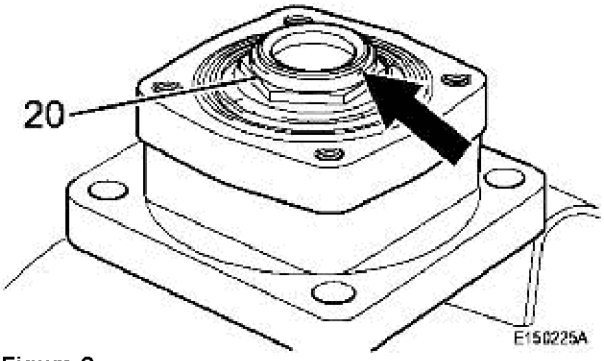

Figure 2

- Screw on nut (20) and tighten with 100 Nm.
- Nut on groove of shaft with pinion (arrow).

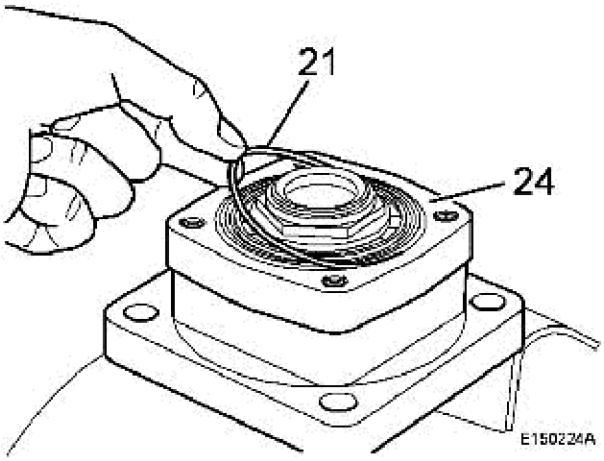

Figure 3

- Wet O-ring (21) with oil and insert it into the bearing housing (24).

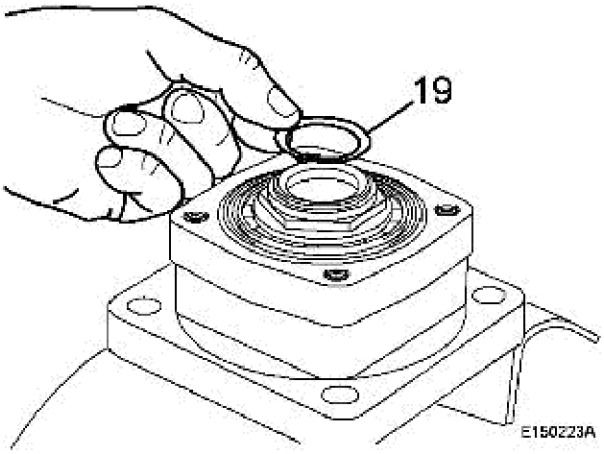

Figure 4

- Apply the new seal ring (19) with the arched surface pointing up.

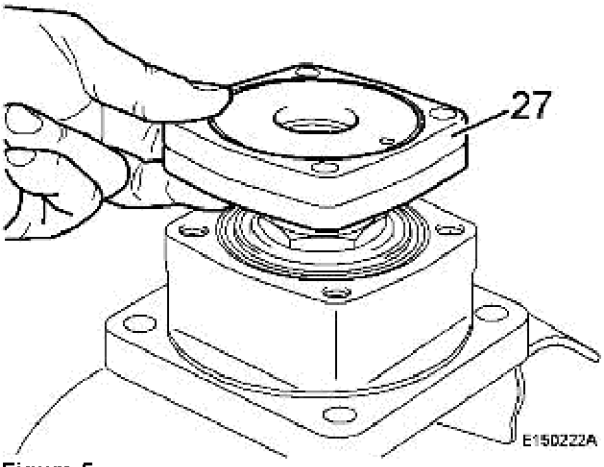

Figure 5

- Assemble intermediate plate (27).

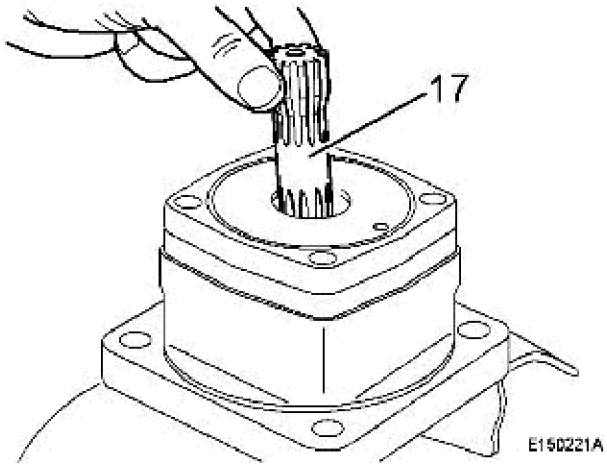

Figure 6

- Insert universal shfat (17) into the bearing housing with intermediate plate.

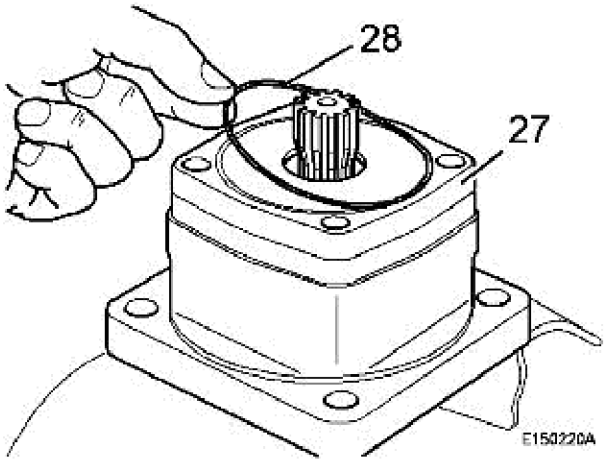

Figure 7

- Wet O-ring (28) with oil and insert it into the intermediate plate (27).

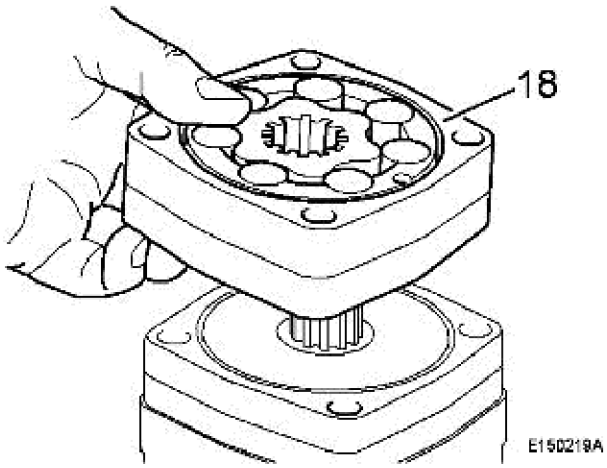

Figure 8

- Plug gear wheel set (18) onto universal shaft (See figure /17) in correct assembly position.

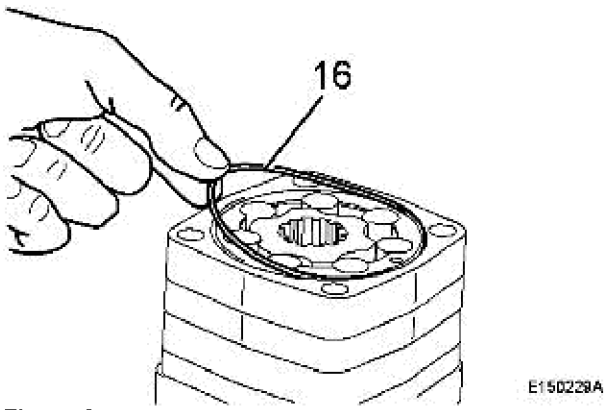

Figure 9

- Wet O-ring (16) with oil and insert it into the gear wheel set.

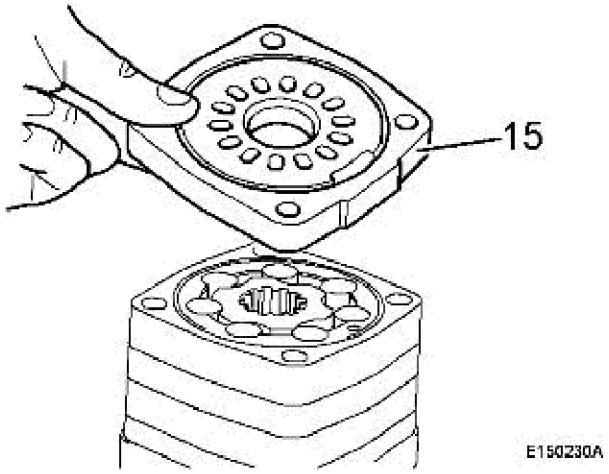

Figure 10

- Assemble channel plate (15) in correct assembly position.

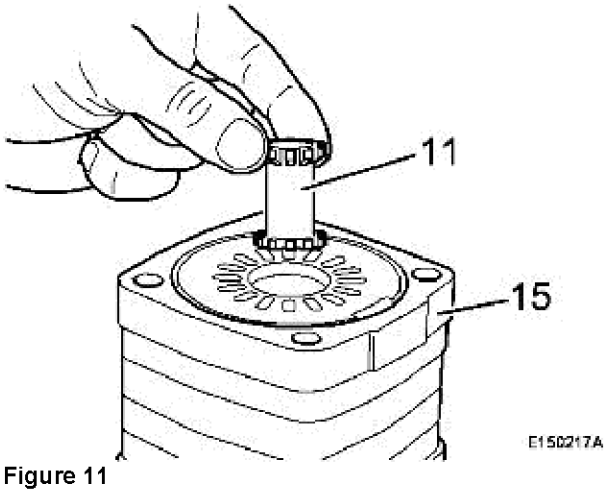

Figure 11

- Insert valve drive (11) through channel plate (15) into the gear wheel set.

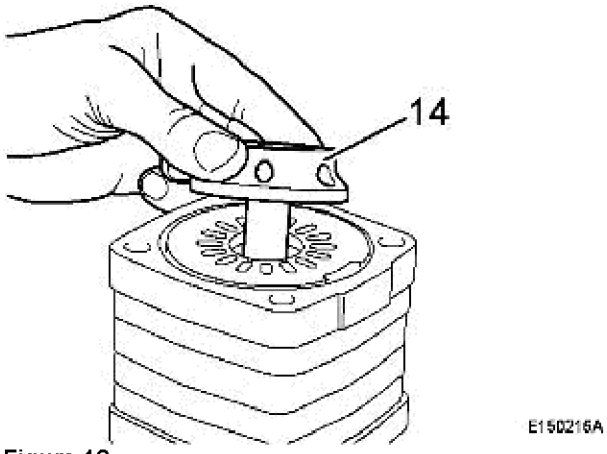

Figure 12

- Plug slewing valve (14) to the valve drive.

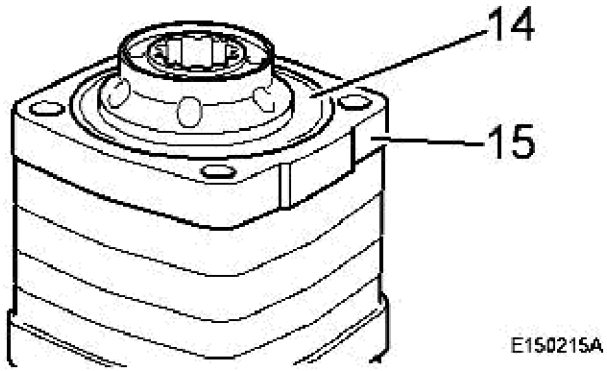

Figure 13

- Wet O-ring (14) with oil and insert it into the channel plate (15).

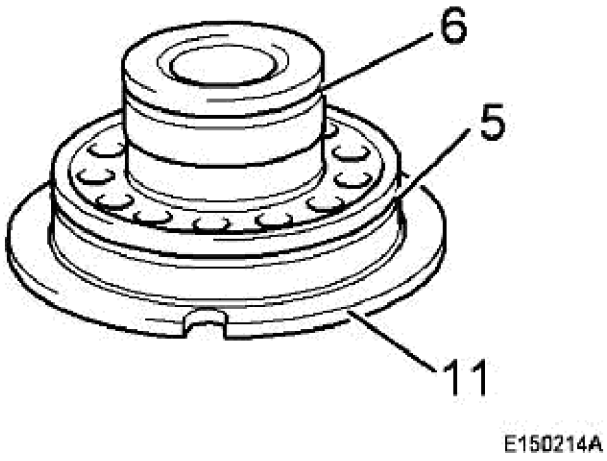

Figure 14

- Apply some oil to the new O-rings (5 and 6) and assemble to compensation housing (11).

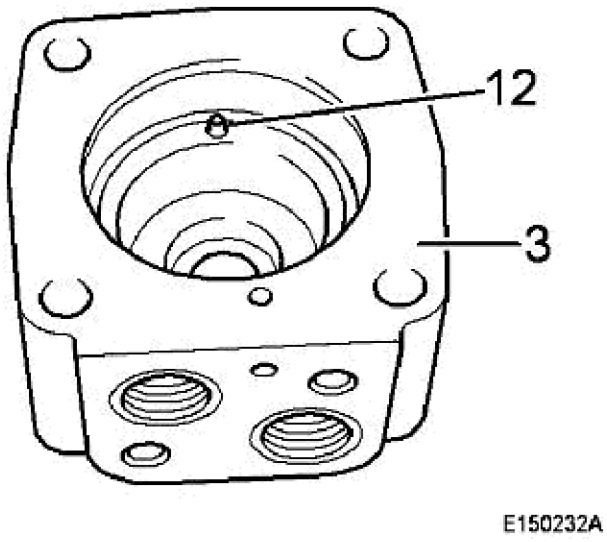

Figure 15

- If necessary knock a new guide pin (12) into the distributor housing (3).

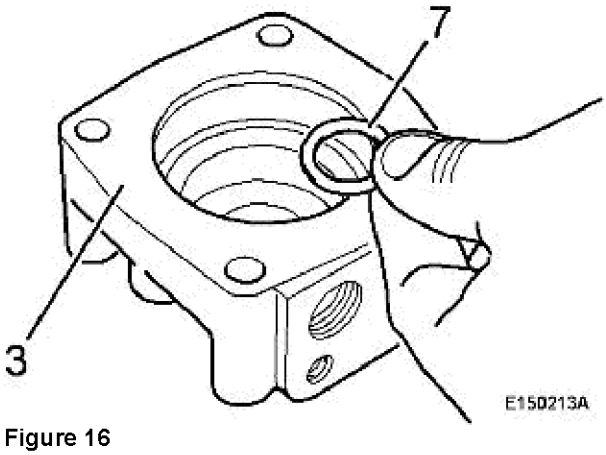

Figure 16

- Insert spring washer (7) into valve housing (3).

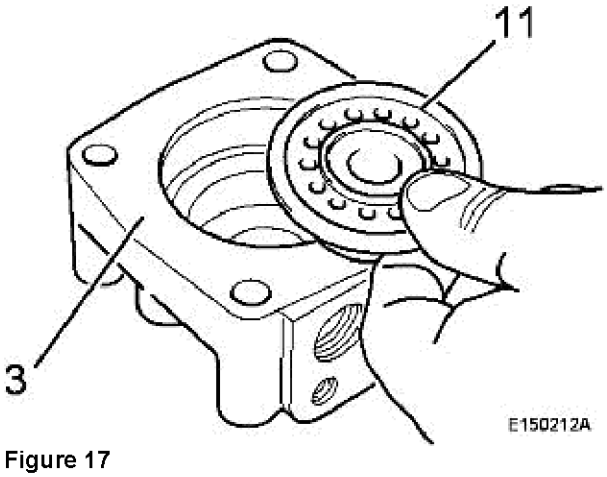

Figure 17

- Insert compensation shim (11) with the recess towards guide pin (12).
- Insert spacer piece (See figure/8) into the compensation shim.

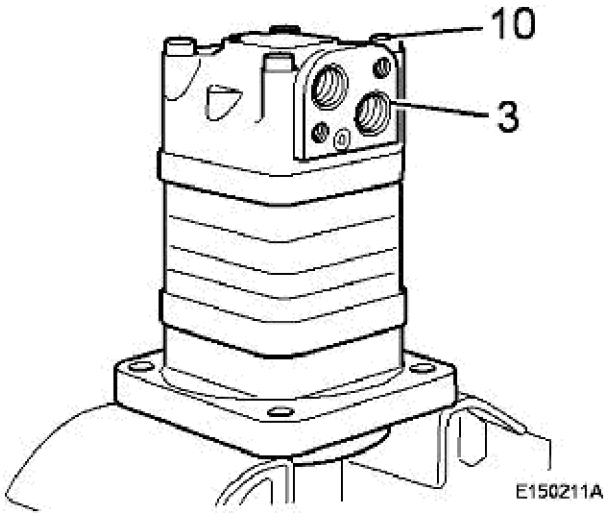

Figure 18

- Attach valve housing (3), turn in the screws and tighten with 75 Nm.

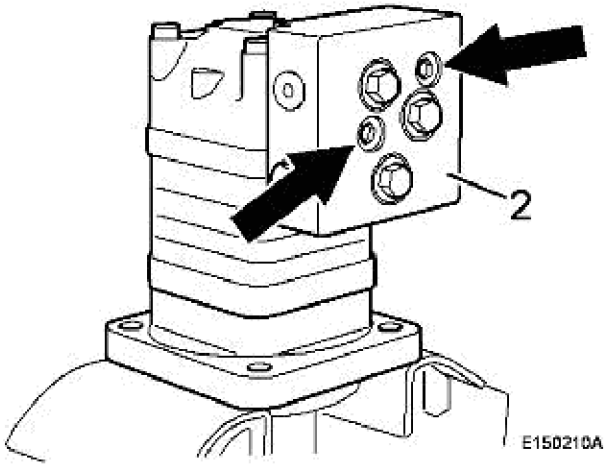

Figure 19

- Attach balancing valve (2) with new O-rings, screw in socket head cap screws and tighten with 45 Nm.

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Miscellaneous**	Function Group : **441**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Miscellaneous

Fault rectification on hydraulic motor

Faults on the hydraulic motor should be detected at an early stage and rectified as quickly as possible in order to avoid more expensive repairs. The following table summarizes the most important faults and their rectification.

Problem/fault	Possible cause of fault	Fault remedy
Loud motor noises	Roller bearings worn (uniform humming)	Replace roller bearings.
Unloaded:	Charge pressure too low (cracking noises)	Check back pressure. Check non-return valve for corrosion.
Under load:	Extensive leak oil losses (hard noise)	Check motor block and/or control block.
The motor does not turn	No flow quantity	Check drive and pump inlet.
	Valve damaged or affected by corrosion (no pressure)	Replace valve.
	Excessive leak oil losses	Check the condition of motor block and control block.
	Brake blocked	Check brake pilot circuit.
The loaded motor does not run with normal speed	Insufficient flow rate	Check pumping capacity and rotary speed.
	Extensive leak oil losses	Check motor block and/or control block.
	Pressure too low	Check pressure relief valve setting.
The motor rotates irregularly	Irregular flow rate Extensive leak oil losses	Check pumping capacity. Check motor block and/or control block.
External oil losses	Motor case pressure too high	Check the leak oil line filter. Check whether the leak oil line is clogged.
	Seals damaged by pressure peaks or high operating temperatures. Use of non-permitted pressure fluid or pressure fluid not compatible with the sealing compound or dirty.	Replace seals
	Unit defective	Check tightening torques of bolts on unit, if necessary replace the unit.

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Design**	Function Group : **443**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Design

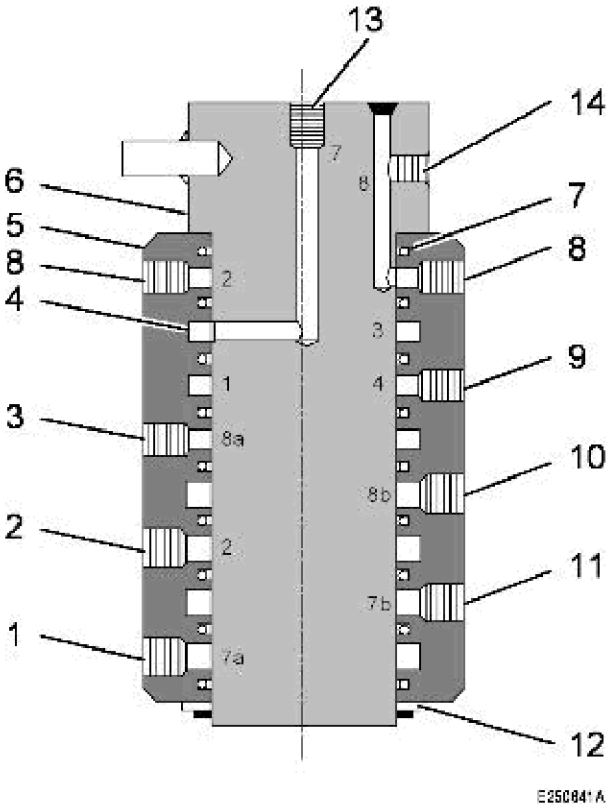

Figure 1

1. Travel gear motor, left hand side (1).
2. Travel gear motor, left hand side (2).
3. Dozer blade cylinder (6a)
4. Return flow line (7a)
5. Hub
6. Shaft
7. Seal
8. Travel motor, left (8a)
   Line for high speeds (8b)
9. Return flow line (7a)
10. Travel gear motor, right hand side (4).
11. Travel gear motor, right hand side (3).
12. Cover
13. Return flow port (7)
14. Connection for high speed (8)

The rotary oil distributor consists of a hub (5), a shaft (6), a seal (7) and a cover (12).

The hub is provided with oil grooves to control the oil flows. The shaft contains channels to supply the hub with oil. The seal prevents oil leaks between shaft and hub.

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Function**	Function Group : **443**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Function

Oil is delivered to the control valve on the rotary oil distributor, flows through the vertical ports in the shaft to the left and right hand travel motors to drive these motors.

The hub unit (5) is connected with the lower frame and the shaft (6) rotates with the superstructure.

The oil flows through the circumferential grooves and the oil flow is therefore not disturbed by the slewing movements of the machine.

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Brake, description**	Function Group : **500**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Brake, description

NOTE **This section only covers the brake system on machines with wheels. The brake on track driven machines is explained in chapter 4, power transmission, together with the other components.**

Brake see See further

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Steering system, description**	Function Group : **600**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Steering system, description

NOTE — This section only covers the steering system on machines with wheels. The steering system on track driven machines is explained in chapter 4, power train, description see page 4:16 – 4:18, together with the other components.

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Frame and crawler unit**	Function Group : **700**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Frame and crawler unit

EC15B XR

Specification, frame and crawler unit

Item		Unit		Specification	
				Steel tracks	**Rubber tracks**
Length of lower frame		mm		1045	
Joint distance		mm		-	
Number of links		pcs.		34	
Number of track supporting idlers		pcs.		0	
Number of track rollers		pcs.		6	
Tension spring	Type	–		Hydraulic adjustment (grease)	
	SPring, adjustment length	mm		140	
	Adjustment force	kg		1300	
Track drive	Number of teeth	pcs.		14	
	Pitch diameter	mm		-	
Track pads	Number of track pads	pcs.		34	
	Width of track pad	mm		230	
Ground area pressure with standard working equipment (boom, arm and dipper	300 mm width (triple grouser)	Nm^2	with cabin	3.2	3.1
			without cabin	2.9	2.8

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Frame and crawler unit**	Function Group : **700**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Frame and crawler unit

EC15B XT/XTV

Specification, frame and crawler unit

Item		Unit		Specification	
				Steel tracks	**Rubber tracks**
Length of lower frame		mm		1085	
Joint distance		mm		-	
Number of links		pcs.		34	
Number of track supporting idlers		pcs.		0	
Number of track rollers		pcs.		6	
Tension spring	Type	–		Hydraulic adjustment (grease)	
	SPring, adjustment length	mm		140	
	Adjustment force	kg		1300	
Track drive	Number of teeth	pcs.		21	
	Pitch diameter	mm		305,34	
Track pads	Number of track pads	pcs.		34	
	Width of track pad	mm		34	
Ground area pressure with standard working equipment (boom, arm and dipper	300 mm width (triple grouser)	Nm^2	with cabin	EC15B XT: 3.3 EC15B XTV: 3.5	EC15B XT: 3.2 EC15B XTV: 3.4
			without cabin	EC15B XT: 3.1 EC15B XTV: 3.3	EC15B XT: 3.0 EC15B XTV: 3.2

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Frame and crawler unit**	Function Group : **700**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Frame and crawler unit

EC20B XT/XTV

Specification, frame and crawler unit

Item		Unit		Specification	
				Steel tracks	**Rubber tracks**
Length of lower frame		mm		1240	
Joint distance		mm		-	
Number of links		pcs.		38	
Number of track supporting idlers		pcs.		0	
Number of track rollers		pcs.		8	
Tension spring	Type	–		Hydraulic adjustment (grease)	
	SPring, adjustment length	mm		140	
	Adjustment force	kg		1300	
Track drive	Number of teeth	pcs.		21	
	Pitch diameter	mm		305,34	
Track pads	Number of track pads	pcs.		38	
	Width of track pad	mm		230	
Ground area pressure with standard working equipment (boom, arm and dipper	300 mm width (triple grouser)	Nm^2	with cabin	EC20B XT: 3.0 EC20B XTV: 3.1	EC20B XT: 2.9 EC20B XTV: 3.0
			without cabin	EC20B XT: 2.8 EC20B XTV: 2.9	EC20B XT: 2.7 EC20B XTV: 2.8

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Removing the cylinder for adjustable track width**	Function Group : **7181**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Removing the cylinder for adjustable track width

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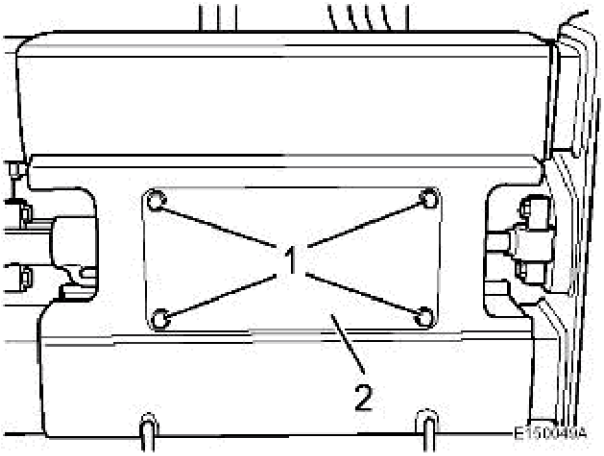

Figure 1

- Lower the working attachment to the ground.
- Shut down the engine and move the control lever to all directions to relieve the residual pressure.
- Unscrew screws (1) and take off cover (2).

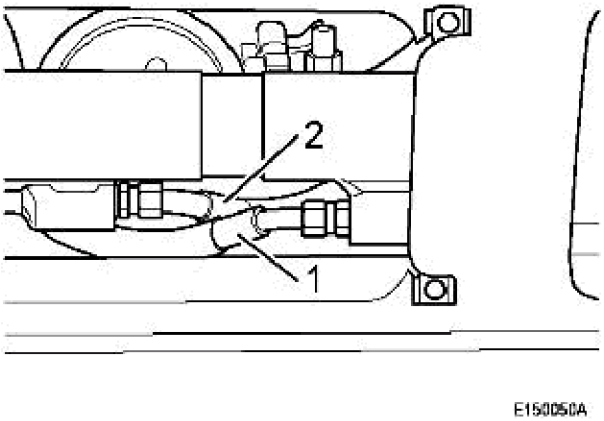

Figure 2

- Mark hydraulic lines (1 and 2), unscrew the spigot nuts and lay the lines to the side.

NOTE Close all lines and openings withz clean caps and plugs.

WARNING! Catch hydraulic fluid and dispose of environmentally.

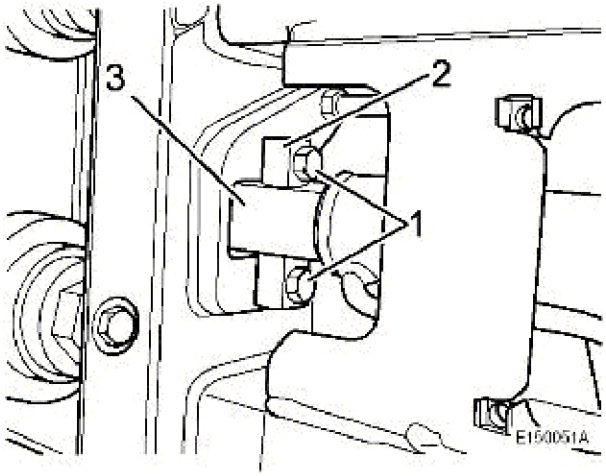

Figure 3
Piston side

- Unscrew screws (1).
- Knock the stub axle (2) out of piston and piston rod sides.
- Take out the cylinder (3) for track width adjustment.

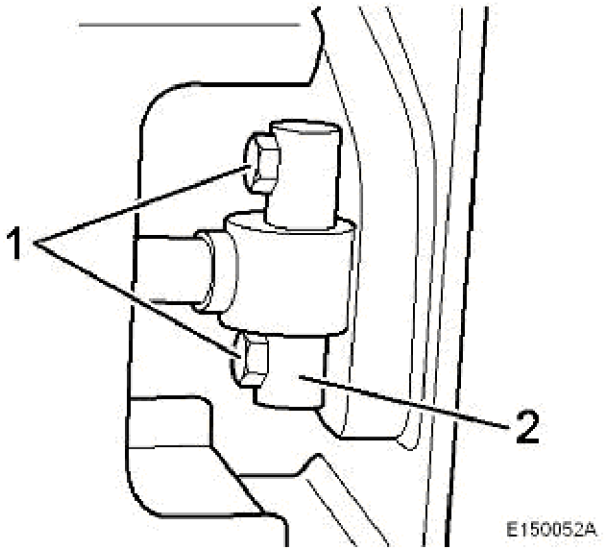

Figure 4
Piston rod side

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Assembling the cylinder for adjustable track width**	Function Group : **7181**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Assembling the cylinder for adjustable track width

Op nbr

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- Take out the cylinder (See figure/3) for track width adjustment.
- Knock the stub axle (2) (See figure and See figure) into piston and piston rod sides.
- Turn in screws (1) (See figure and See figure) and tighten with 105 ± 20 Nm.

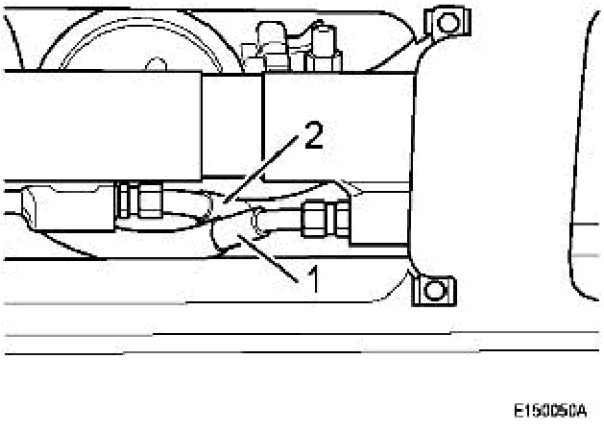

Figure 1

NOTE **Remove all plugs before connecting the hydraulic lines.**

- Connect hydraulic lines (1 and 2), align it correctly and tighten with 18 ± 4 Nm.
- Check hydraulic oil level, top up if necessary.
- Start the engine, check the function of the machine and check for leaks.

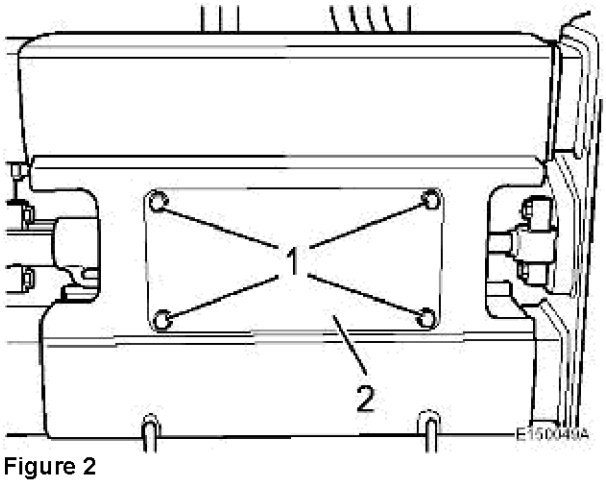

Figure 2

- Attach cover (2), turn in screws (1) and tighten with 60 ± 10 Nm.

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Removing the superstructure**	Function Group : **7185**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Removing the superstructure

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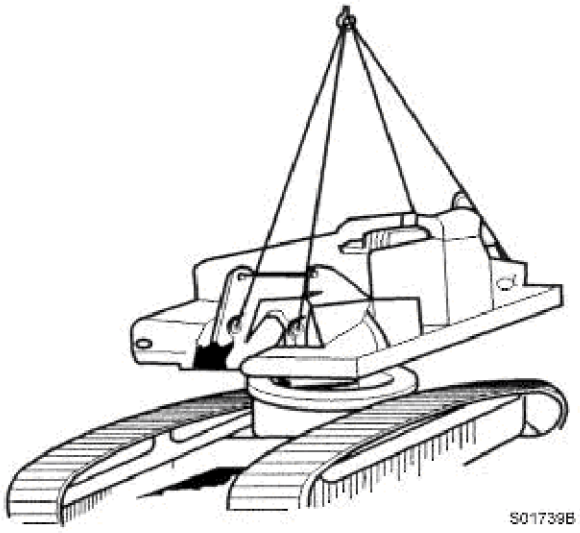

Figure 1
Lifting the superstructure

WARNING! **The superstructure has a weight of approx. 225 kg (without counter weight and working attachment). Before starting to disassemble or assemble the superstructure make sure the excavator is safely parked and the area around is safe.**

- Remove the working attachment.
- Remove cabin and engine hood.
- Unscrew the screw for the rotary oil distributor, remove the cover, the hydraulic hoses and one servo hydraulics hose from the rotary oil distributor.

NOTE **Mark the hoses and tie them together. Close all disconnected hoses and pipes with plugs.**

- Fasten a steel rope to the superstructure. Lift the crane until the steel rope is tight.

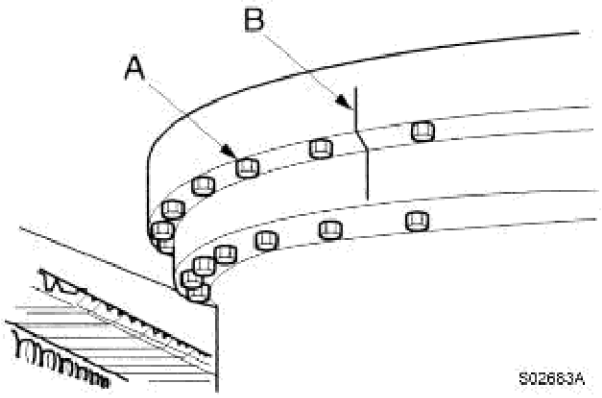

Figure 2
Assembled live ring

A. Screw
B. Check the alignment of the positioning marks

- Unscrew the screws (A) connecting outer race and live ring.
- Lift the superstructure slightly up and then lift it completely off while observing all safety precautions.

Assembling the superstructure

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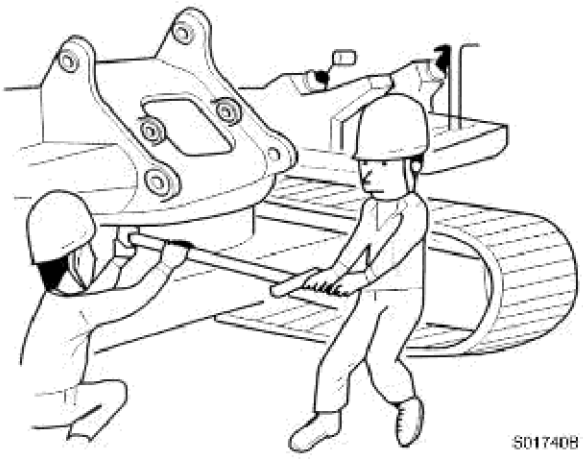

Figure 3
Assembling the superstructure

- Tie the hoses connected to the rotary oil distributor together and fasten them upright.
- Cover the screws and tapped bores of the live ring with "Three Bond 1215" (Loctite 515).
- Lift up the superstructure and lower it onto the life ring.
  Lower the superstructure so that the pinio0n engages in the live ring.
  Tighten screws crosswise with 140 ± 25 Nm.
- Connect the hoses. Reinstall the screw of the rotary oil distributor and the cover.
- Assemble cabin and engine hood.

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Removing the guide sprocket**	Function Group : **7751**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Removing the guide sprocket

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Wire rope 1.5 m

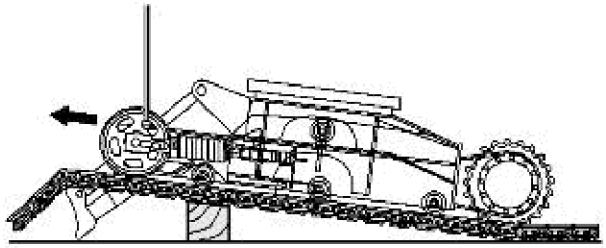

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Figure 1
Remove the guide sprocket unit

- Raise the machine with the dozer blade and support it with wooden blocks See figure.
- Remove the track or rubber track respectively, see See further .
- Sling a rope around the track spring holder, lift up the guide sprocket unit and push the holder out of the crawler frame with a prybar.

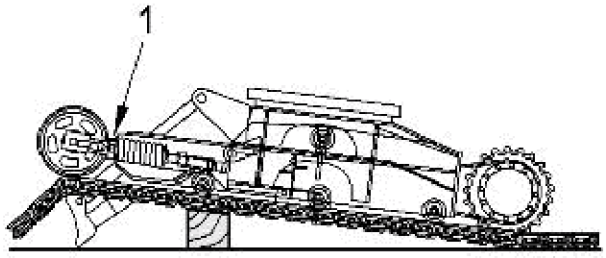

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Figure 2
Unscrew connecting screws.

- Unscrew connecting screws (1) from guide sprocket and spring pack.

Assembling the guide sprocket

Op nbr

Wire rope 1.5 m

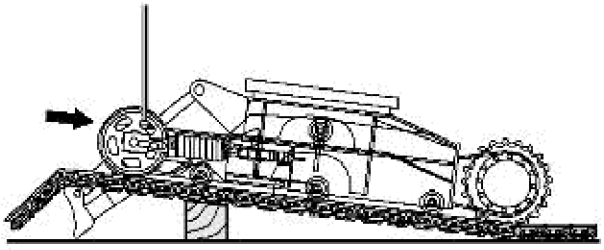

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Figure 3
Installing the guide sprocket unit

- Tighten connecting screws (See figure/1) for guide sprocket and spring pack.
- Sling a wire rope around the spring pack holder, lift up the guide sprocket unit, then attach the sliding shoe and slide it into the groove on the crawler frame.
  Caution!
  Make sure that the cast recess on the piston end of the spring pack is located in the crawler frame bore.

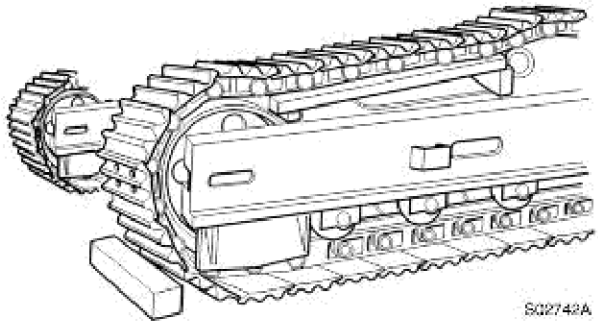

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Figure 4
Installing the track or rubber track resp.

- Installation of track or rubber track, see See further .
- Adjusting the track sagging, see See further .

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Removing the track drive**	Function Group : **7752**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Removing the track drive

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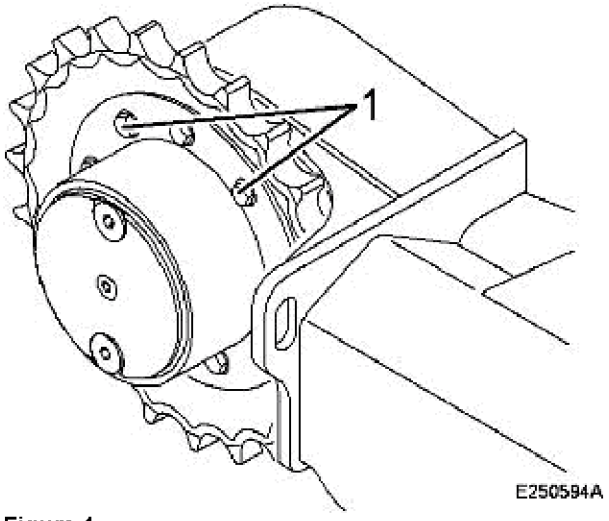

Figure 1

- Remove the track or rubber track respectively, see See further .
- Place a wooden block between track and lower frame. Position the lower frame on the block to be able to lift the track drive off the track.
- Unscrew the track drive fastening screws (1) with a socket wrench.

Assembling the track drive

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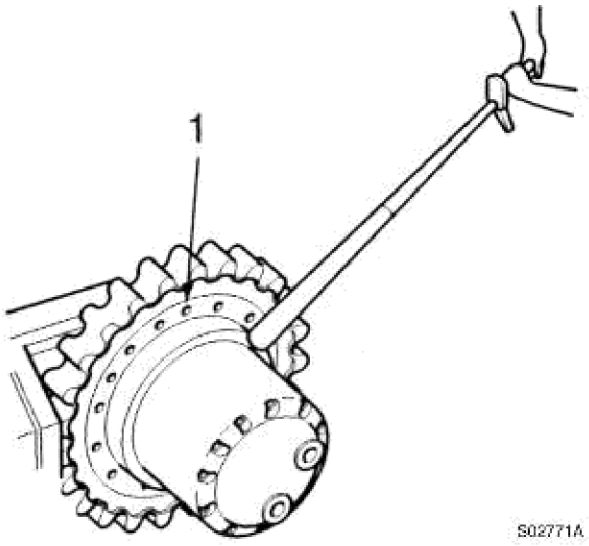

Figure 2
Screws

Assembly must be performed in reverse order.

- Attach the track drive to the travel motor housing.
- Slightly cover screws (1) with Loctite 277 and tighten with 95 Nm.
- Installation of track or rubber track, see See further .
- Adjusting the track sagging, see See further .

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Track drive, wear measurement**	Function Group : **7752**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Track drive, wear measurement

EC15B XR

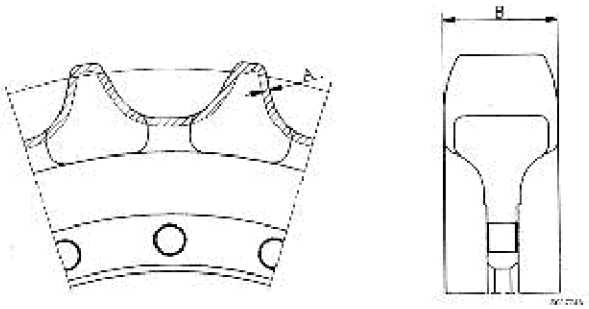

Figure 1
Track drive

Wear limit, unit: mm

Symbol	Item		Specification	Remedy
A	Wear limit on teeth of track drive hub		3	Replace
B	Width of track drive	Specified dimension	-	
		Permissible value	20	
C	Number of teeth		14 pcs.	-

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Track drive, wear measurement**	Function Group : **7752**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Track drive, wear measurement

EC15B XT/XTV, EC20B XT/XTV

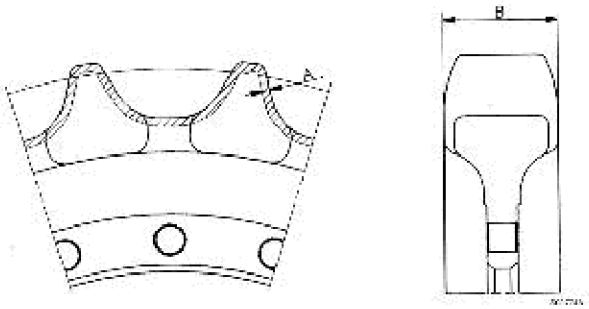

Figure 1
Track drive

Wear limit, unit: mm

Symbol	Item		Specification	Remedy
A	Wear limit on teeth of track drive hub		3	Replace
B	Width of track drive	Specified dimension	-	
		Permissible value	23	
C	Number of teeth		21 pcs.	-

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Adjusting the track sagging**	Function Group : **7753**	Information Type : **Service Information**	Print Date : **19/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Adjusting the track sagging

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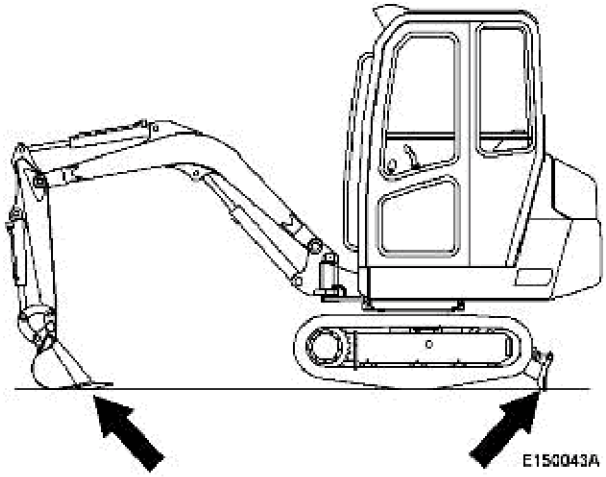


Figure 1
Lifting the excavator

- Swivel the superstructure to the side and lift up the track by lowering the boom.

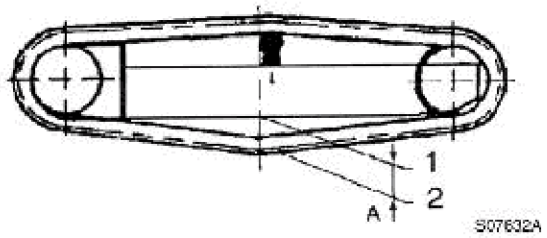


Figure 2
Measure the sagging of the track

1. Bottom side of frame
2. Top side of track link

- Run the track several times forward and reverse. Stop the track during reverse movement.
- Measure the sag (A) in the middle of the crawler frame between track pad and track roller mounting face.

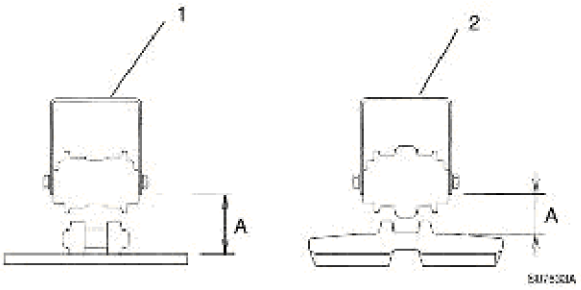


Figure 3

1. Steel track
2. Rubber track

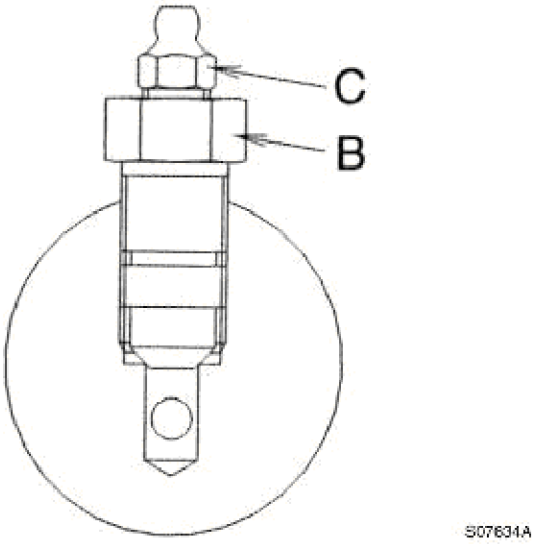


Figure 4

WARNING!

The grease in the track adjustment cylinder is under high pressure. Do not remove the nipple or the valve unit to remove the grease.
Never loosen the valve for more than 2 revolutions as otherwise the grease will be thrown out.
Do not stand near the guiding sprocket, because the track tensioning device may drop down.

- In order to reduce sagging of the track press multi-purpose grease through grease nipple (C) into the adjustment cylinder. In order to increase sagging of the track loosen the valve unit (B) by one revolution, so that the grease can be drained off. Tighten the valve unit when the sag is correct.

  Caution!
  If the piston in the track tensioning cylinder does not move replace the valve unit, repair or replace the cylinder.

- Adjust the track sagging. See following table.

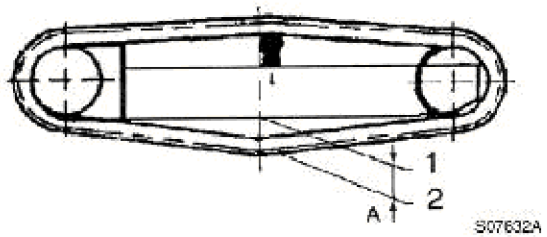


Figure 5
Measure the sagging of the track

1. Bottom side of frame
2. Top side of track link

Track sagging, steel track

Soil condition	Distance (A) mm
Normal soil	90...95

Track sagging, rubber track

Soil condition	Distance (A) mm
Any	60...65

Track tensioning device

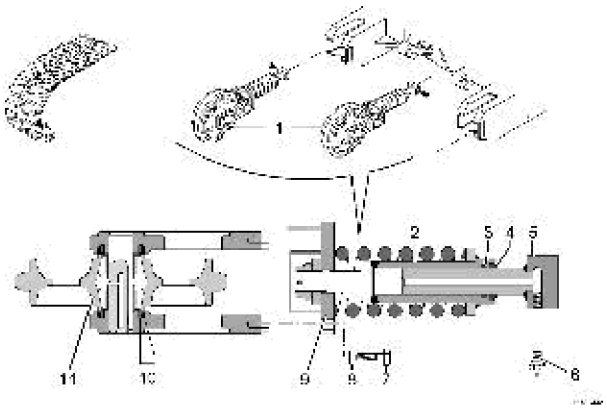
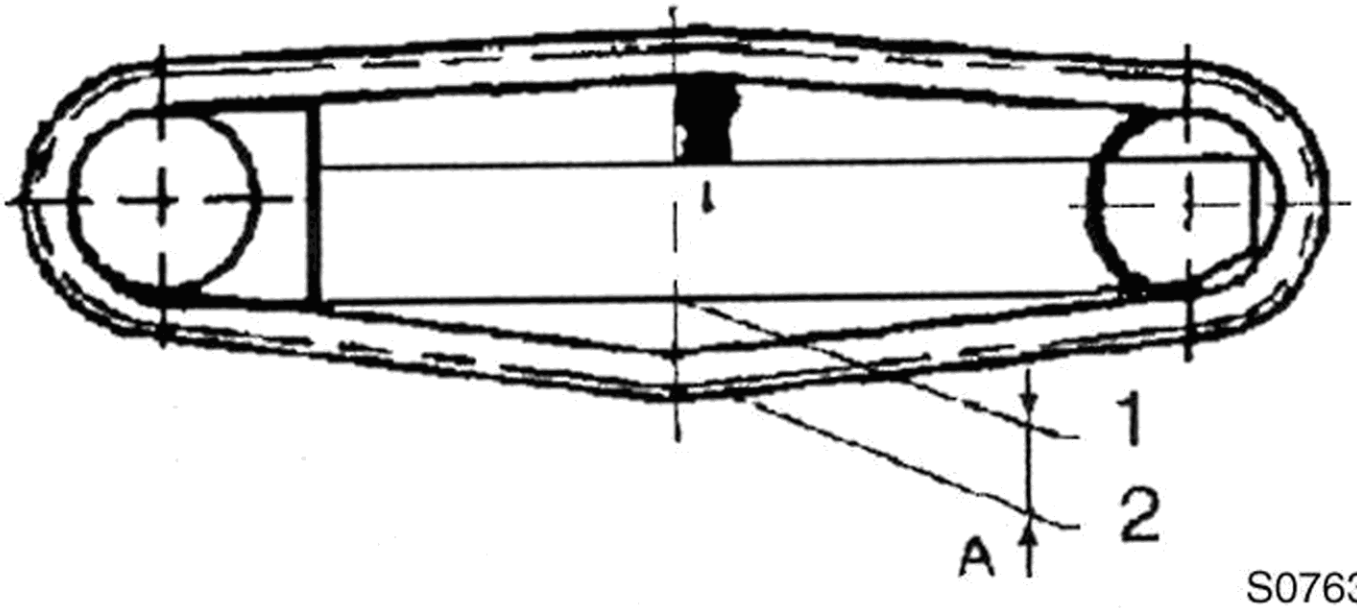


Figure 6

1 Track tensioning device
2 Cylinder
3 Seal
4 Seal
5 Piston
6 Valve
7 Screw
8 Washer
9 Spring block
10 Seal
11 Idler pulley



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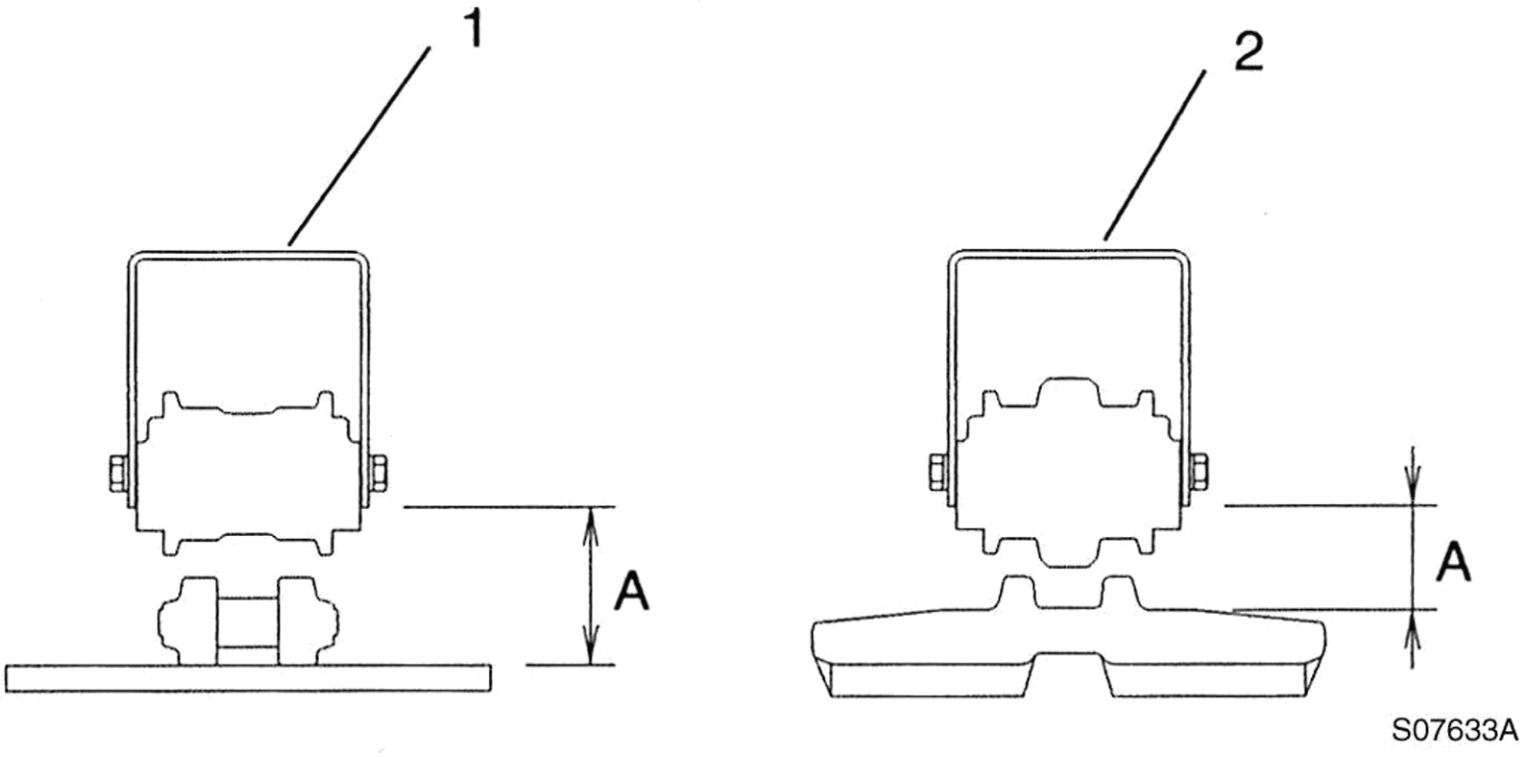
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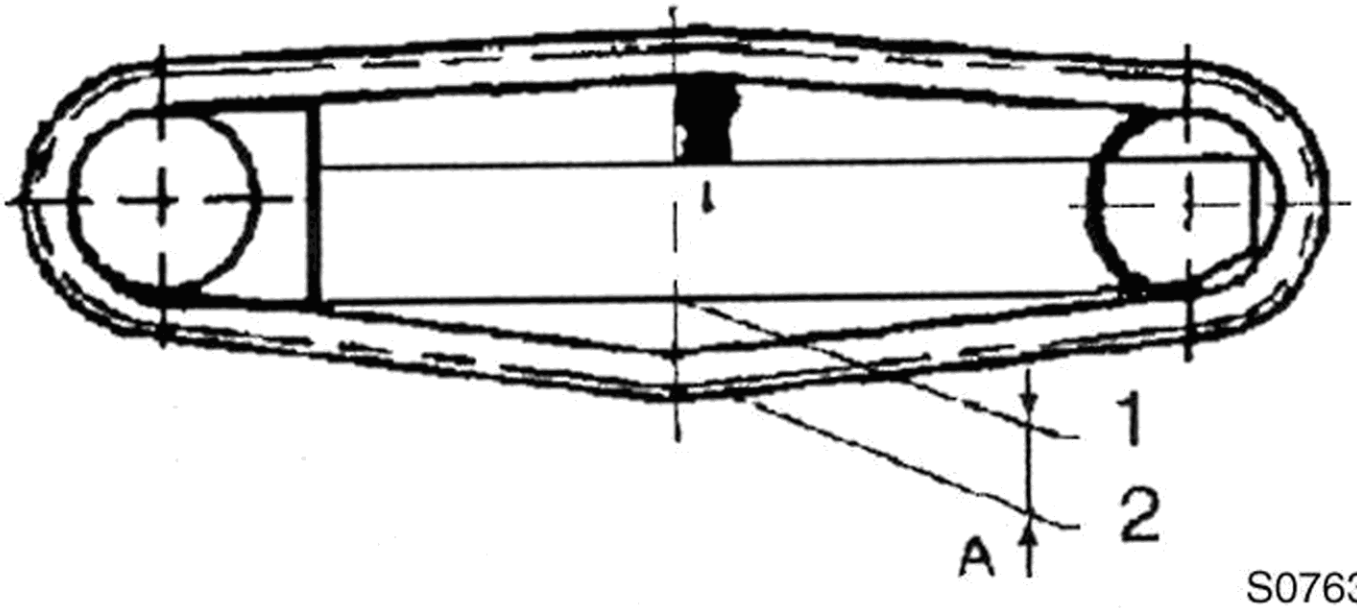

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VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Removing the crawler tracks**	Function Group : **7753**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Removing the crawler tracks

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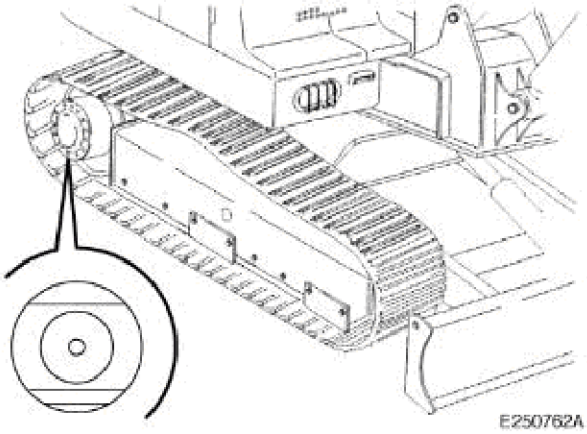

Figure 1
Position, main bolt

- Each track link is fastened with a main bolt. Move the machine until the bolt has reached the position indicated by the arrow.

WARNING!

The grease in the track adjustment cylinder is under high pressure. Do not remove the nipple or the valve unit to remove the grease.
Never loosen the valve for more than 2 revolutions as otherwise the grease will be thrown out.
Do not stand near the guiding sprocket, because the track tensioning device may drop down.

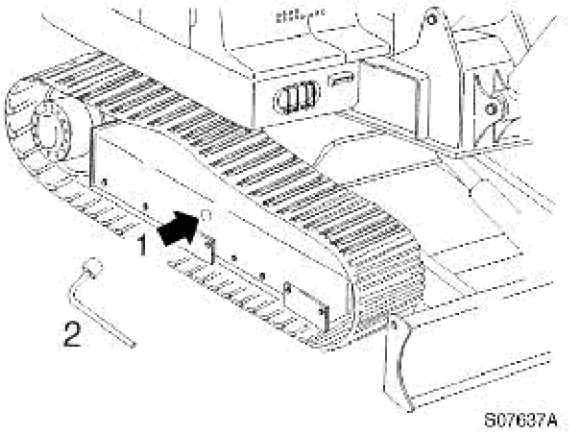

Figure 2
Slackening the track tensioning valve

- Slacken the tensioning valve (1) by 1 revolution and drain off grease in order to reduce the tension.

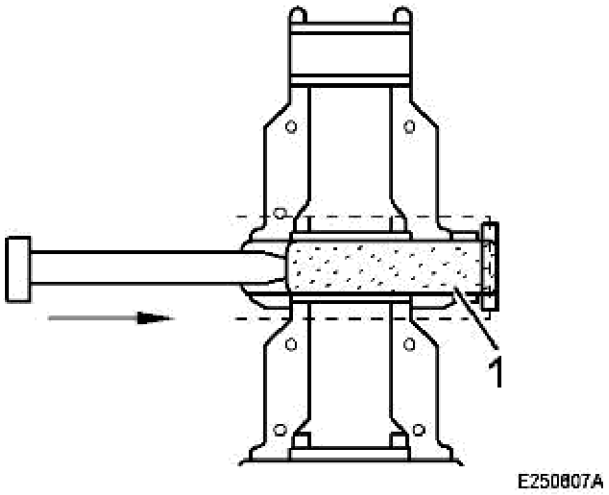

Figure 3
Removing the main bolt

1. Main bolt

- Remove track pad fastening screws and track pad from the main track link. Remove the track pad before and after the main bolt.
- Press the main bolt (1) out with a hydraulic press.

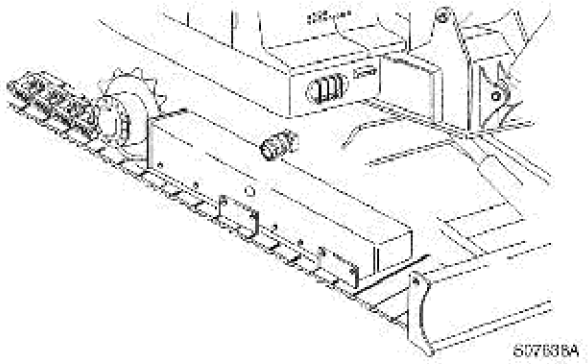

Figure 4
Slow backward movement of the machine

- Perform the same work on the second track.
- Drive the machine slowly backward off the track. Drive the machine onto another track or a thick steel base.

Assembling the crawler track

Op nbr

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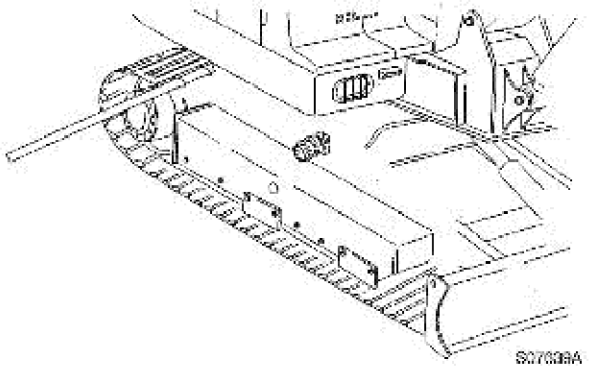


Figure 5
Inserting a rod into the bore for the main bolt.

- Drive the machine slowly onto the track. Insert a rod into the bore for the main bolt at the end of the crawler track. Help the track drive to engage in the track.

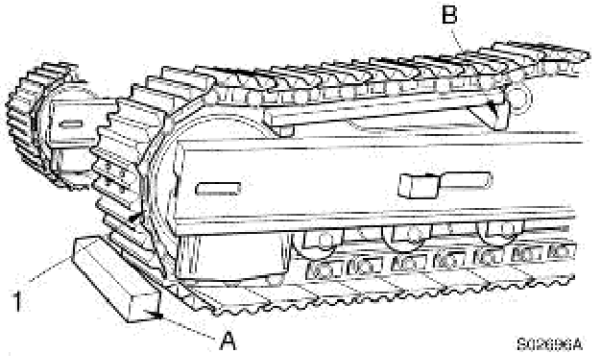


Figure 6
Supporting the track

1. Main bolt

- When aligning the main bolt bores in the track links use wooden blocks A and B to support the track.

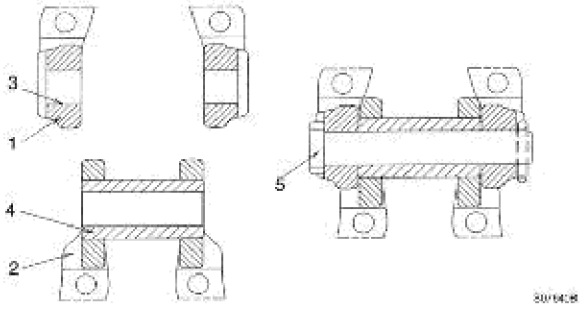


Figure 7
Assembling the main bolt

- Connect main link (1) with link (2). Align bolt bore (3) of main link (1) and the bore of main bushing (4) pressed into link (2).
- Press the main bolt (5) with a hydraulic press through the aligned bores (3) and (4).

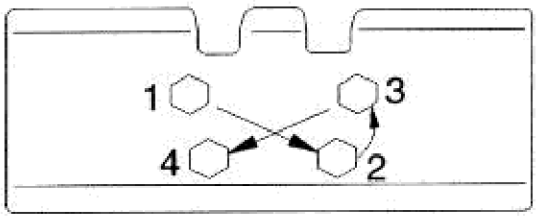
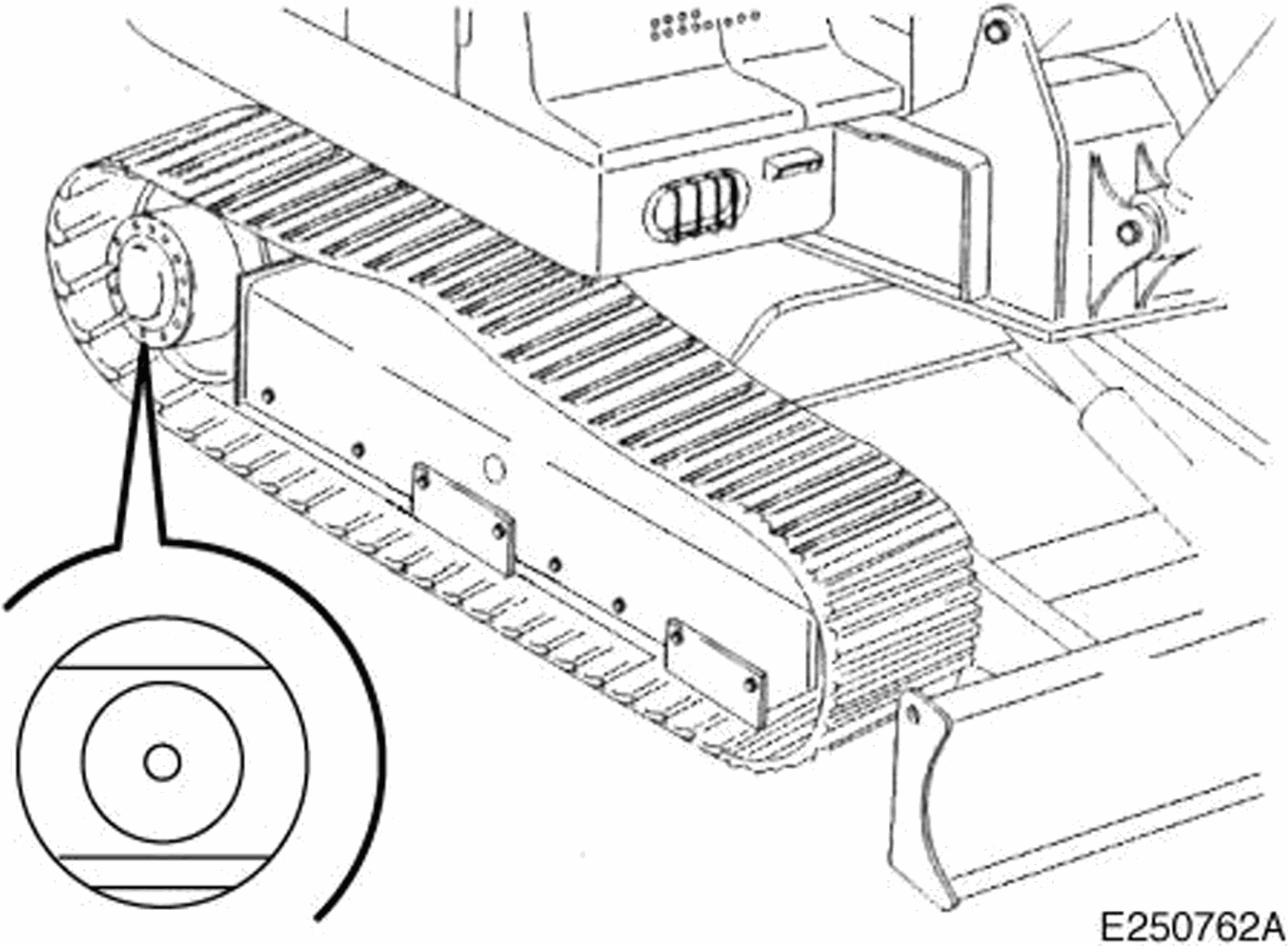


Figure 8

- Reinstall the disassembled track pads.
  Insert the screws and tighten them crosswise See figure.
  Tightening torque 150 Nm
- Adjust the track sagging.



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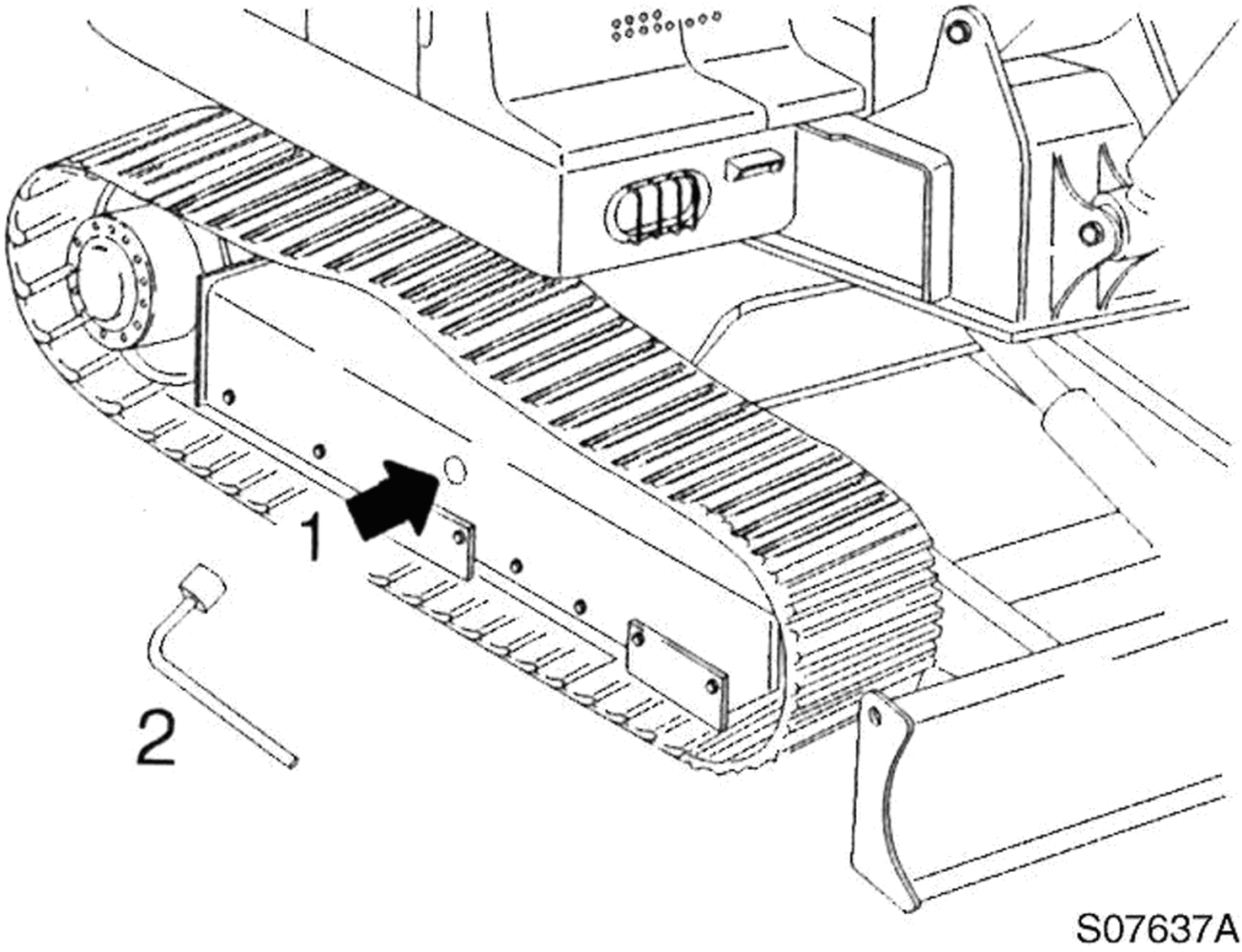
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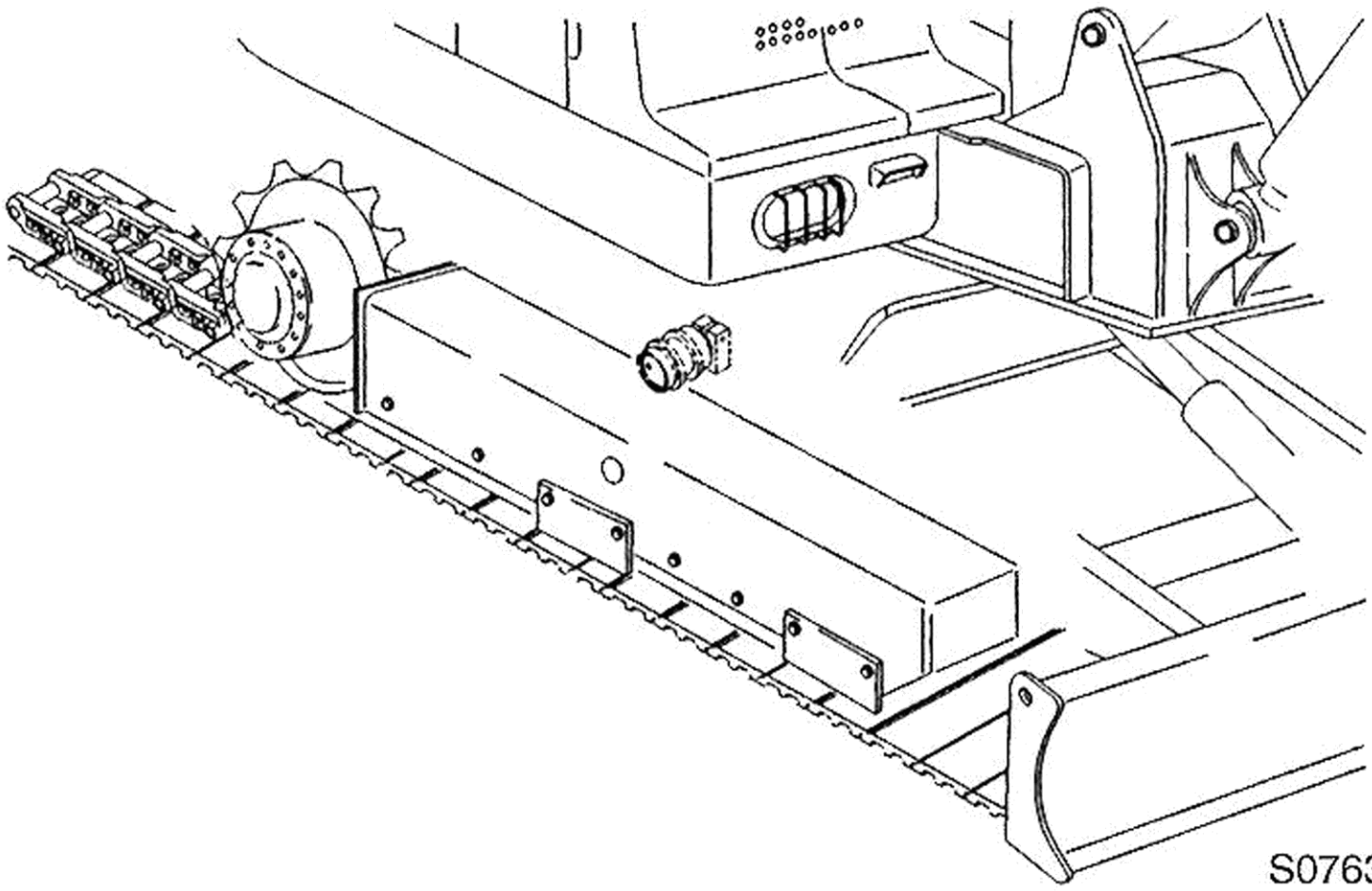

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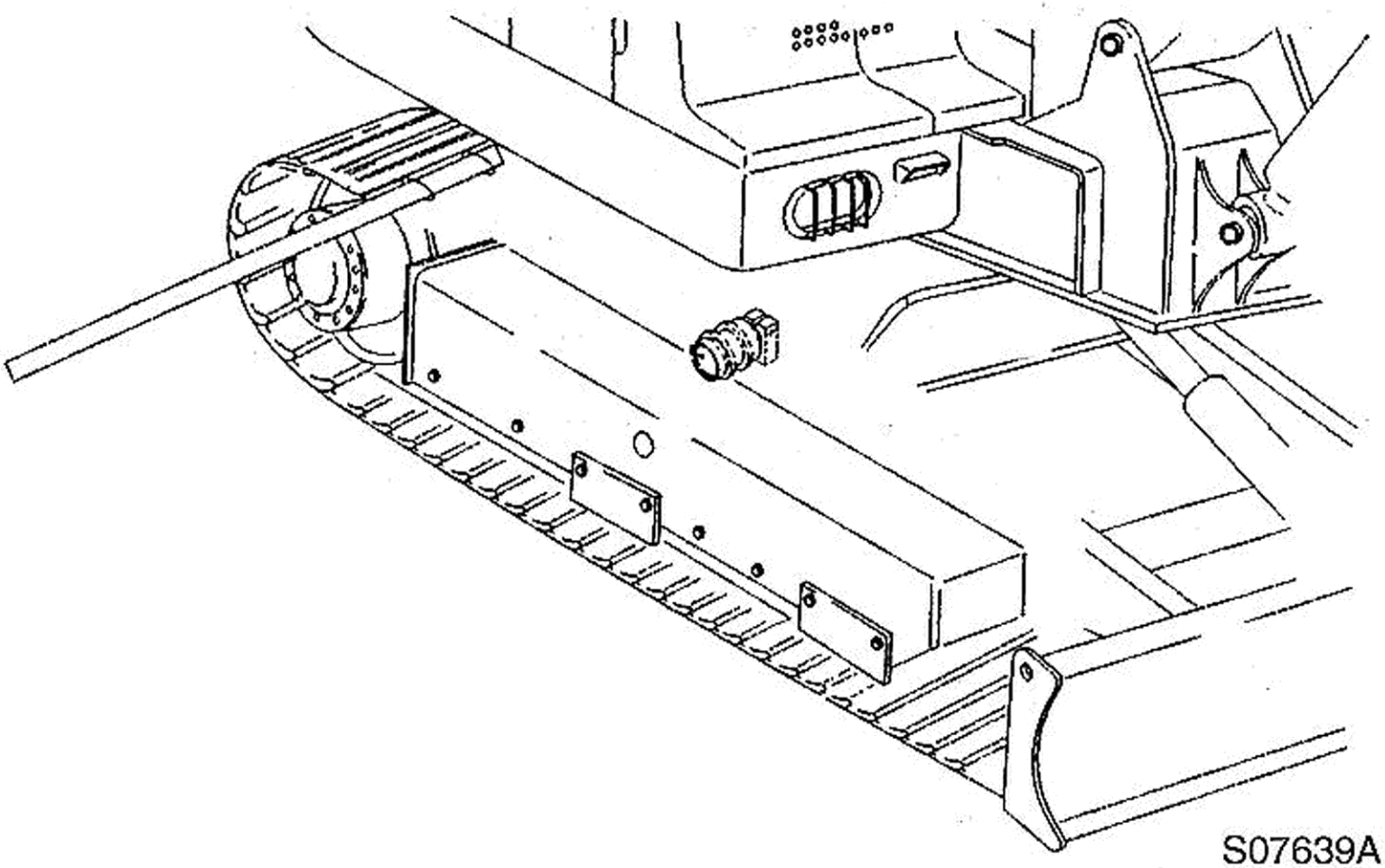
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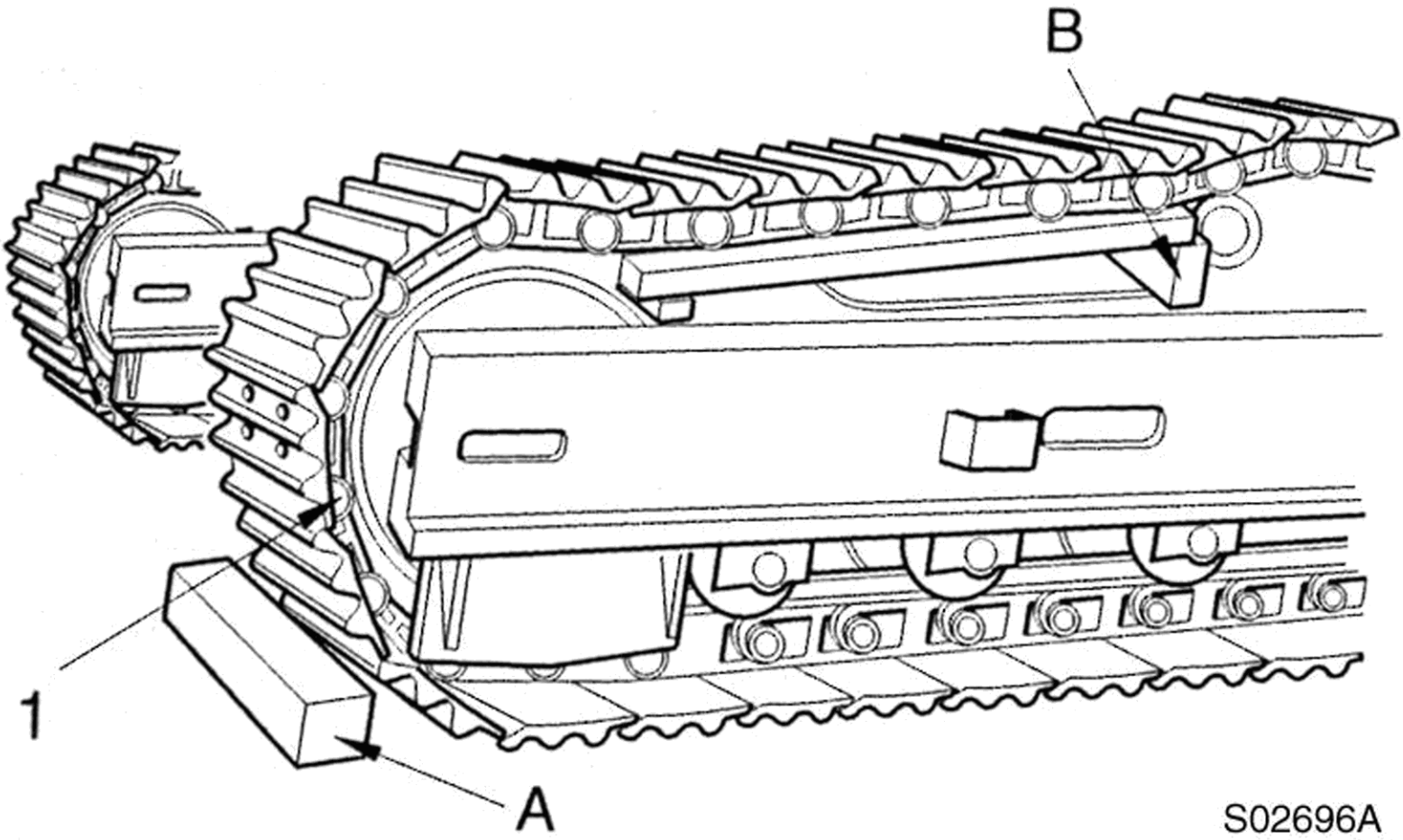
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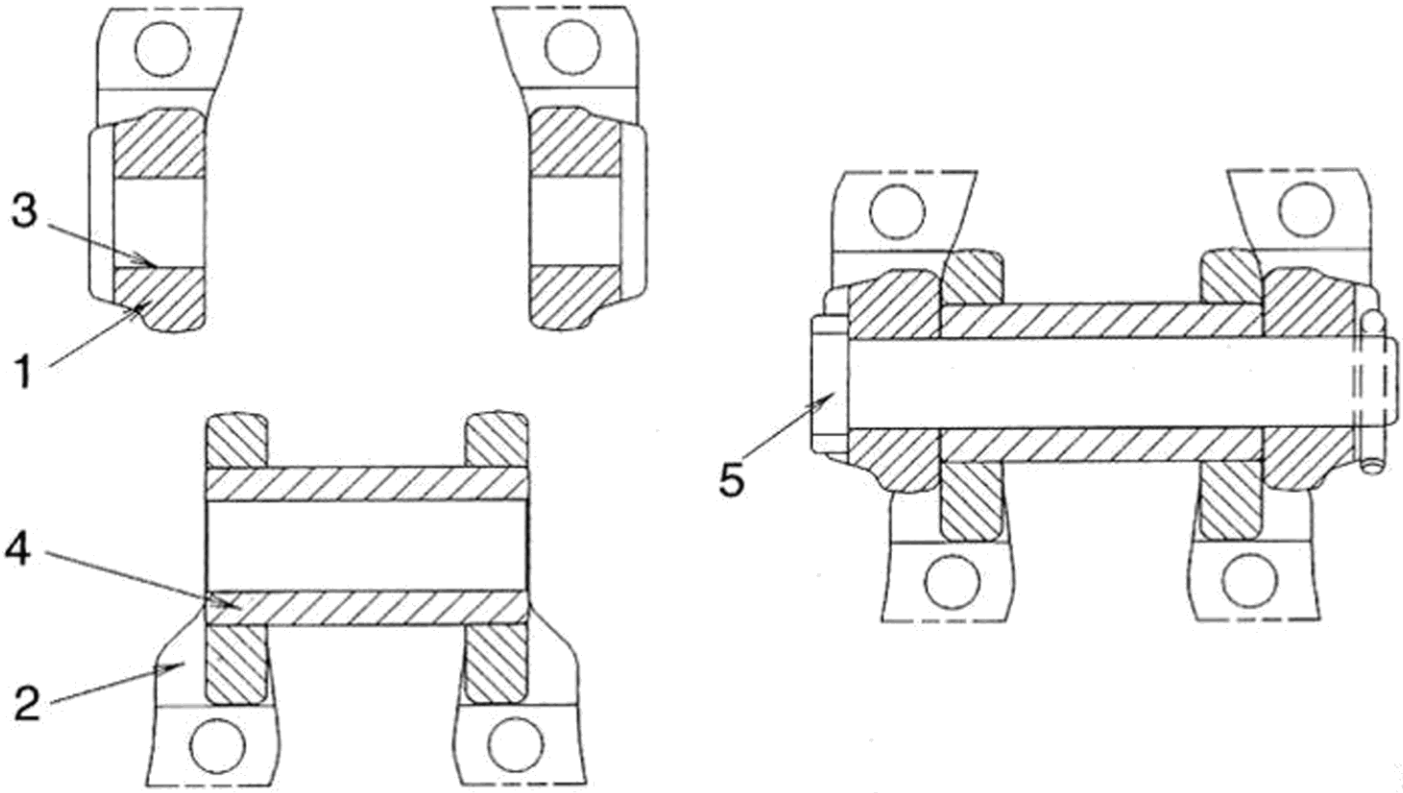

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VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Removing the rubber track**	Function Group : **7753**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Removing the rubber track

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WARNING!

The grease in the track adjustment cylinder is under high pressure. Do not remove the nipple or the valve unit to remove the grease.
Never loosen the valve for more than 2 turns as otherwise it will be thrown out together with the grease.
Do not stand near the guiding sprocket, because the track tensioning device may drop down.

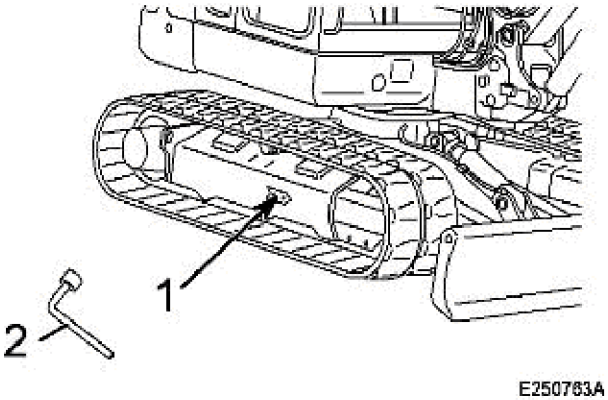

Figure 1
Slackening the track tensioning valve

- Slacken the tensioning valve for 1 turn and drain off grease in order to reduce the tension.

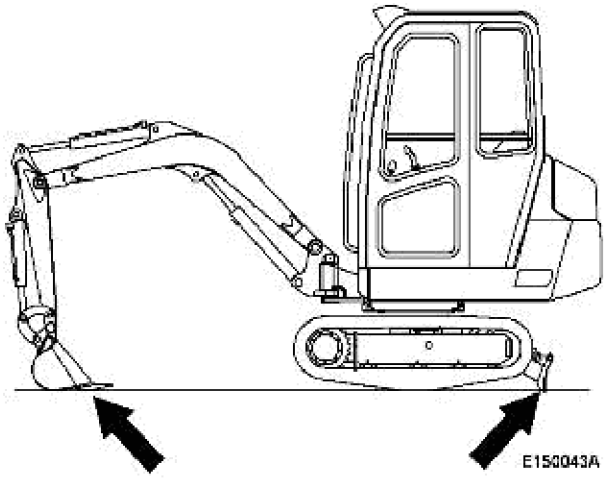

Figure 2
Lifting the excavator

- Swivel the superstructure to the side and lift up the rubber track by lowering the boom.
- Take the rubber track off track drive and guide sprocket.

Assembling the rubber track

Op nbr

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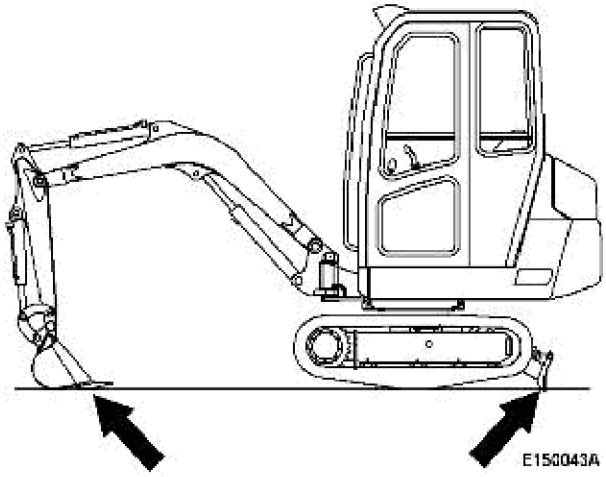
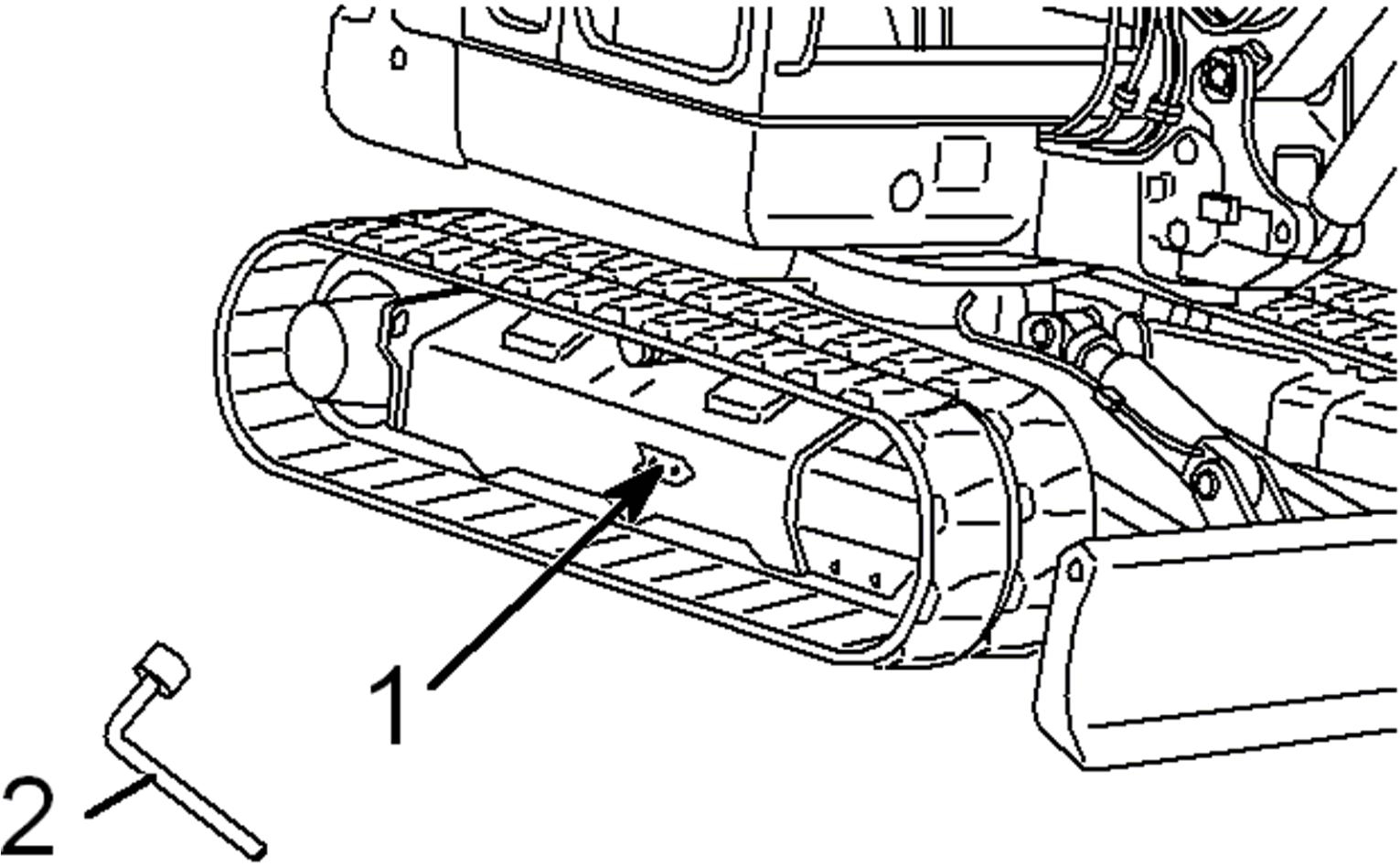


Figure 3
Lowering the excavator

- Lay the rubber track onto track drive and guide sprocket.
- Run the rubber track several times forward and backward and stop the track in backward movement.
- Adjust the sag of the rubber track.
- Lower the superstructure by lifting the boom.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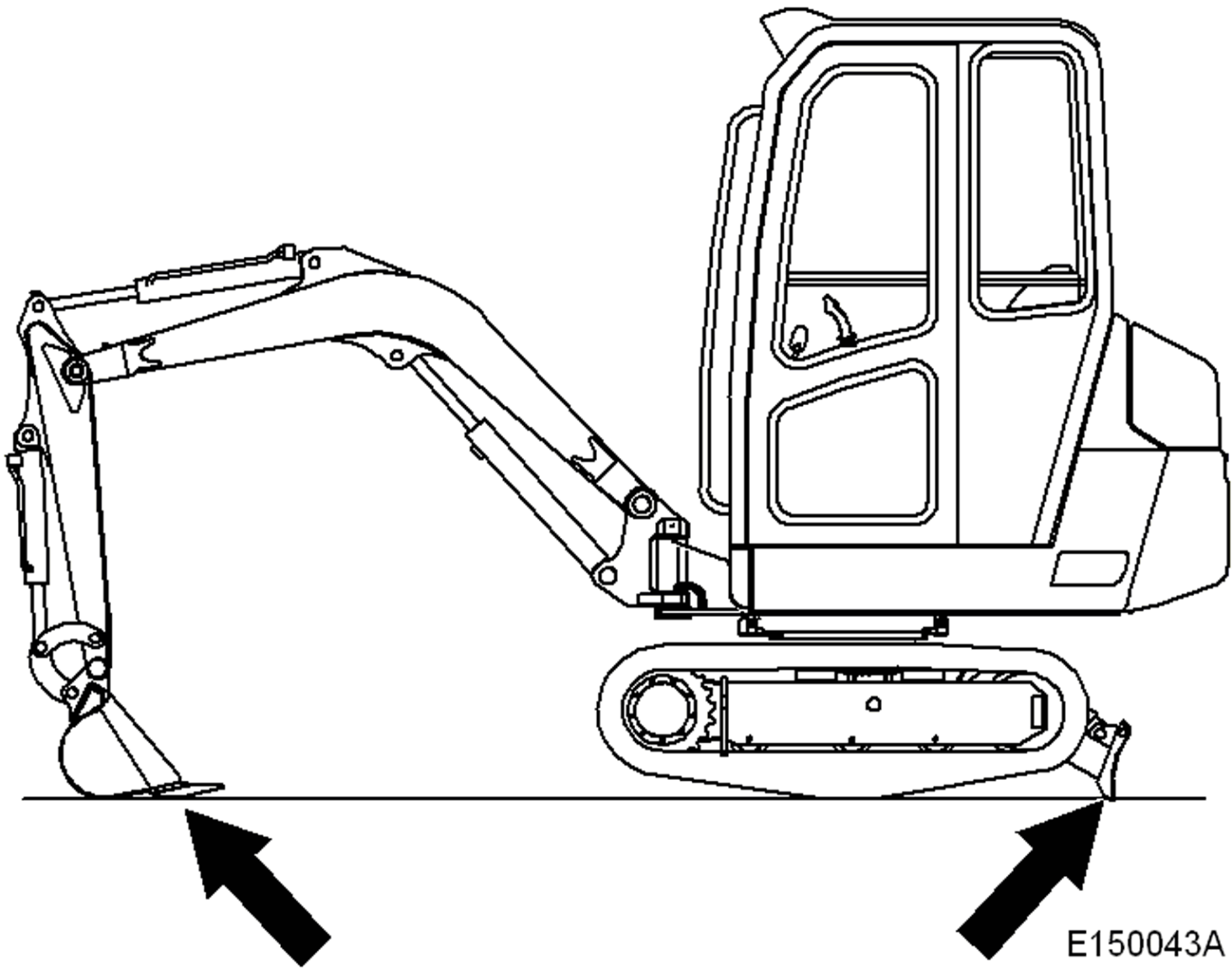
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VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Removing the sliding bar**	Function Group : **7755**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Removing the sliding bar

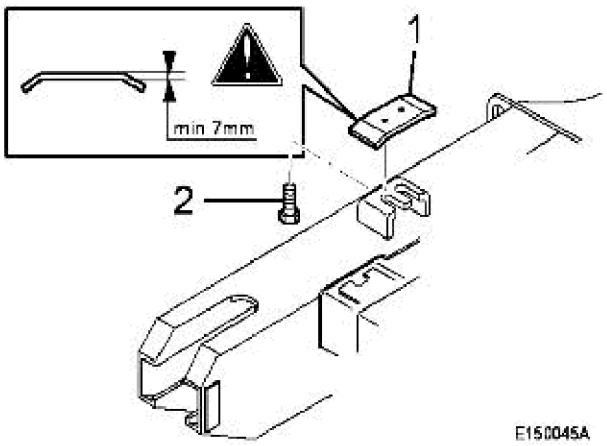

Figure 1
Remove the sliding bar

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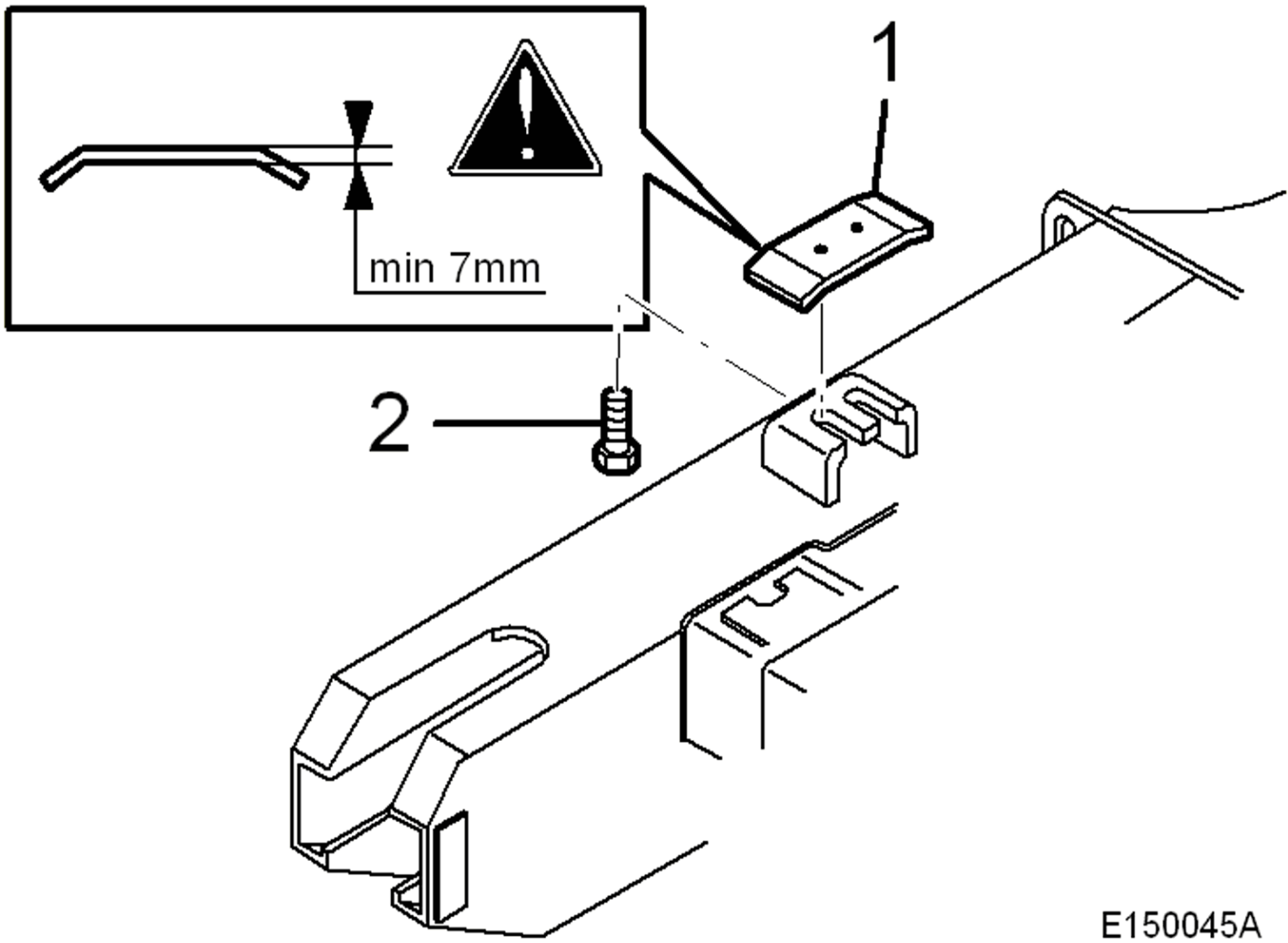
- Increase the track sagging, see See further .
- Slacken screws (2) and take off sliding bar (1).
- Replace the sliding bar (1) if the min. thickness of 7 mm is reached.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VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Assembling the sliding bar**	Function Group : **7755**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Assembling the sliding bar

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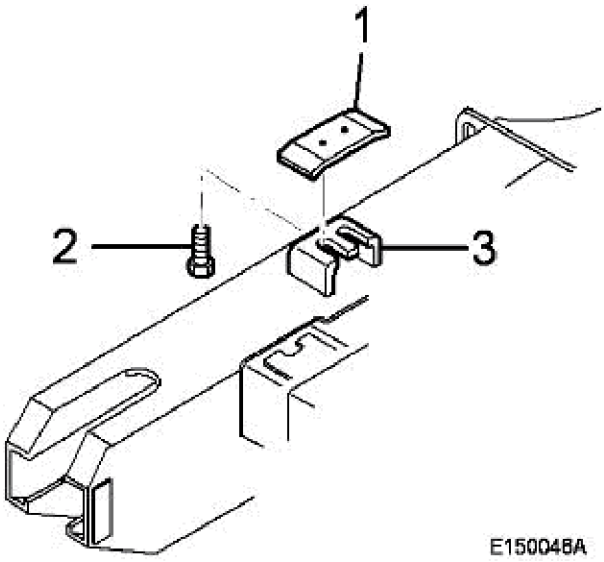
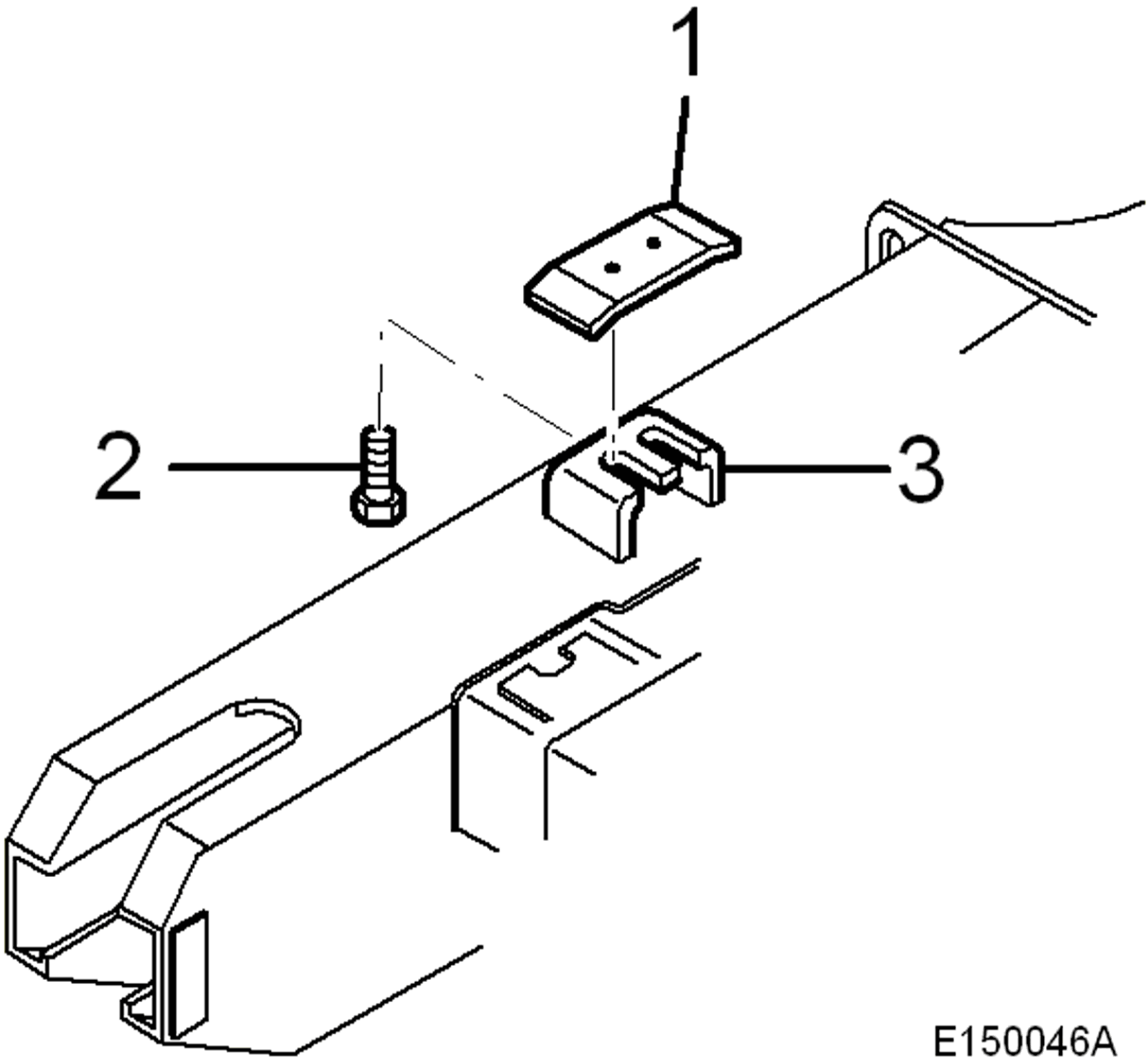


Figure 1
Assembling the sliding bar

- Clean the contact face on the frame.
- Turn both screws (2) into the sliding bar (1).
- Insert the sliding bar into the holding device (3) on the frame and tighten the screws with 60 ± 10 Nm.
- Adjust the track sagging.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VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Removing the track roller**	Function Group : **7756**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Removing the track roller

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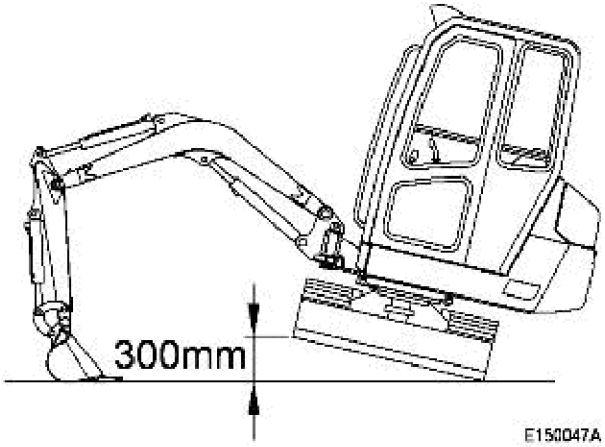

Figure 1
Lifting the machine

- Relieve the track, see See further .
- Lift the track approx. 300 mm off the ground, as shown.
- Place a wooden block under the track roller and unscrew the fastening screws (1).
- Pull out the track roller.

NOTE **The removal and installation of the track roller is identical for steel and rubber tracks.**

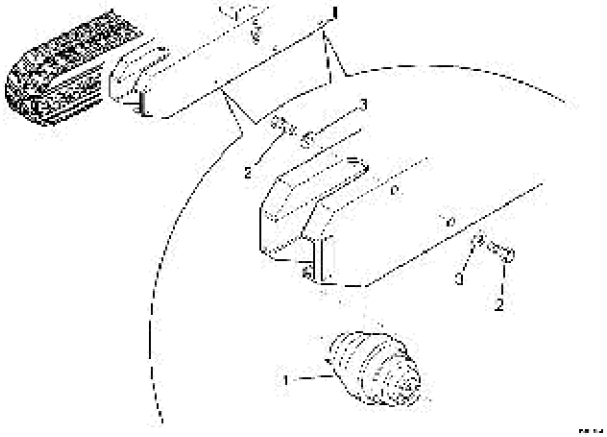

Figure 2
Removing the track roller

1 Track roller
2 Screw
3 Washer

Installing the track roller

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- Assemble the new track roller and align the bore in the lower frame to the bore in the track roller.
- Insert screw (1) with washer (2) and tighten with 60 ± 10 Nm.
- Adjust the sag of the track and lower the machine to the ground.

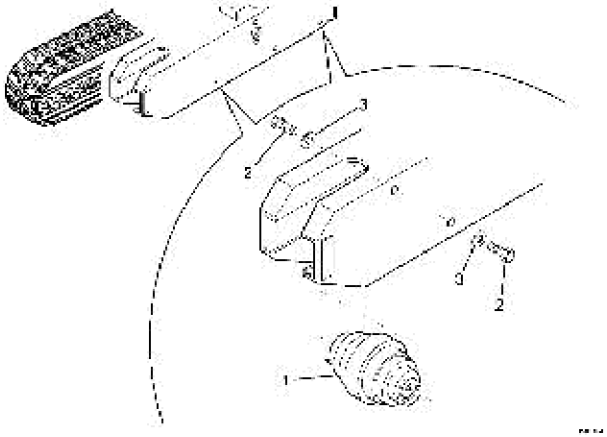
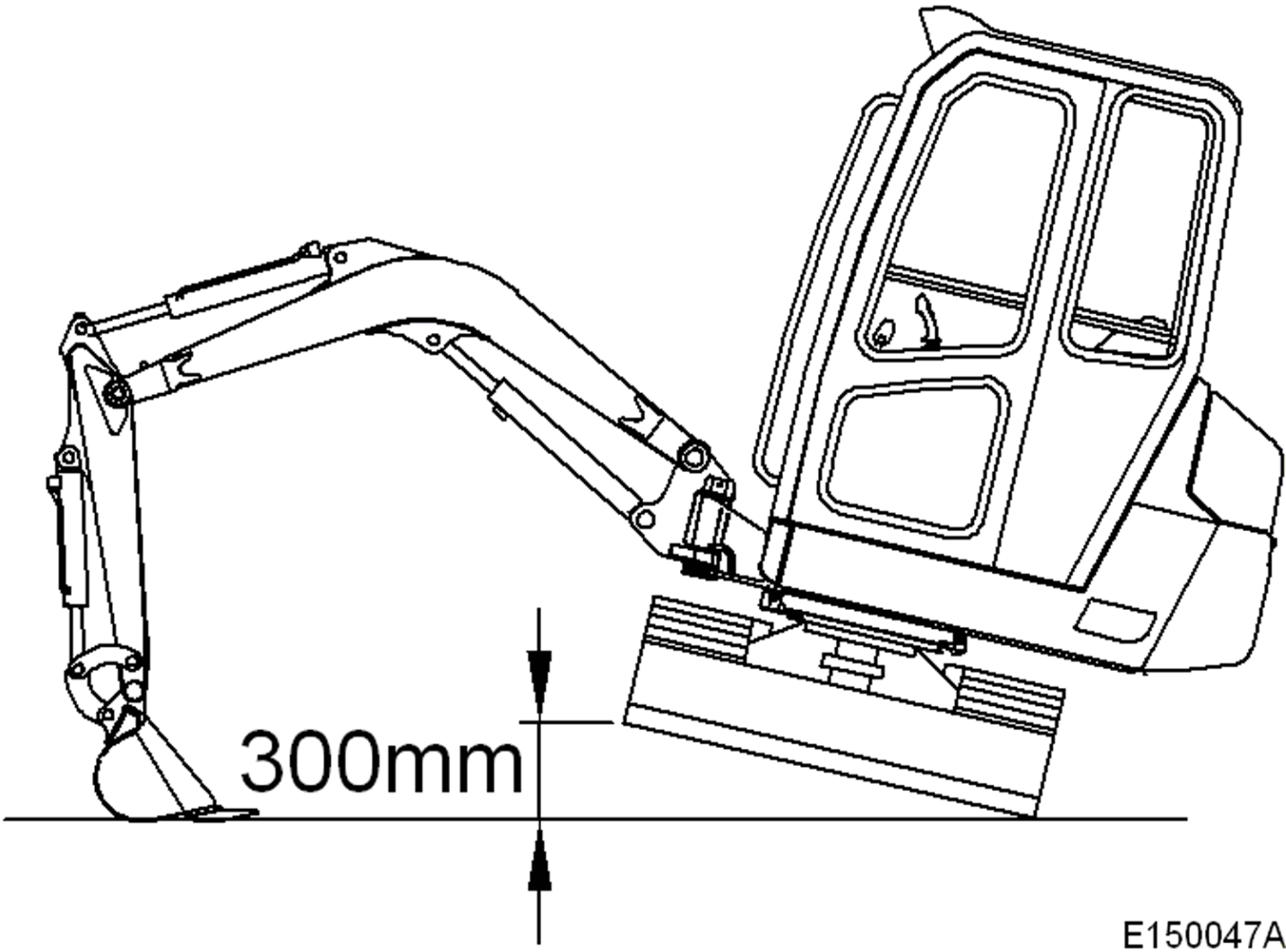


Figure 3
Installing the track roller

1 Track roller
2 Screw
3 Washer



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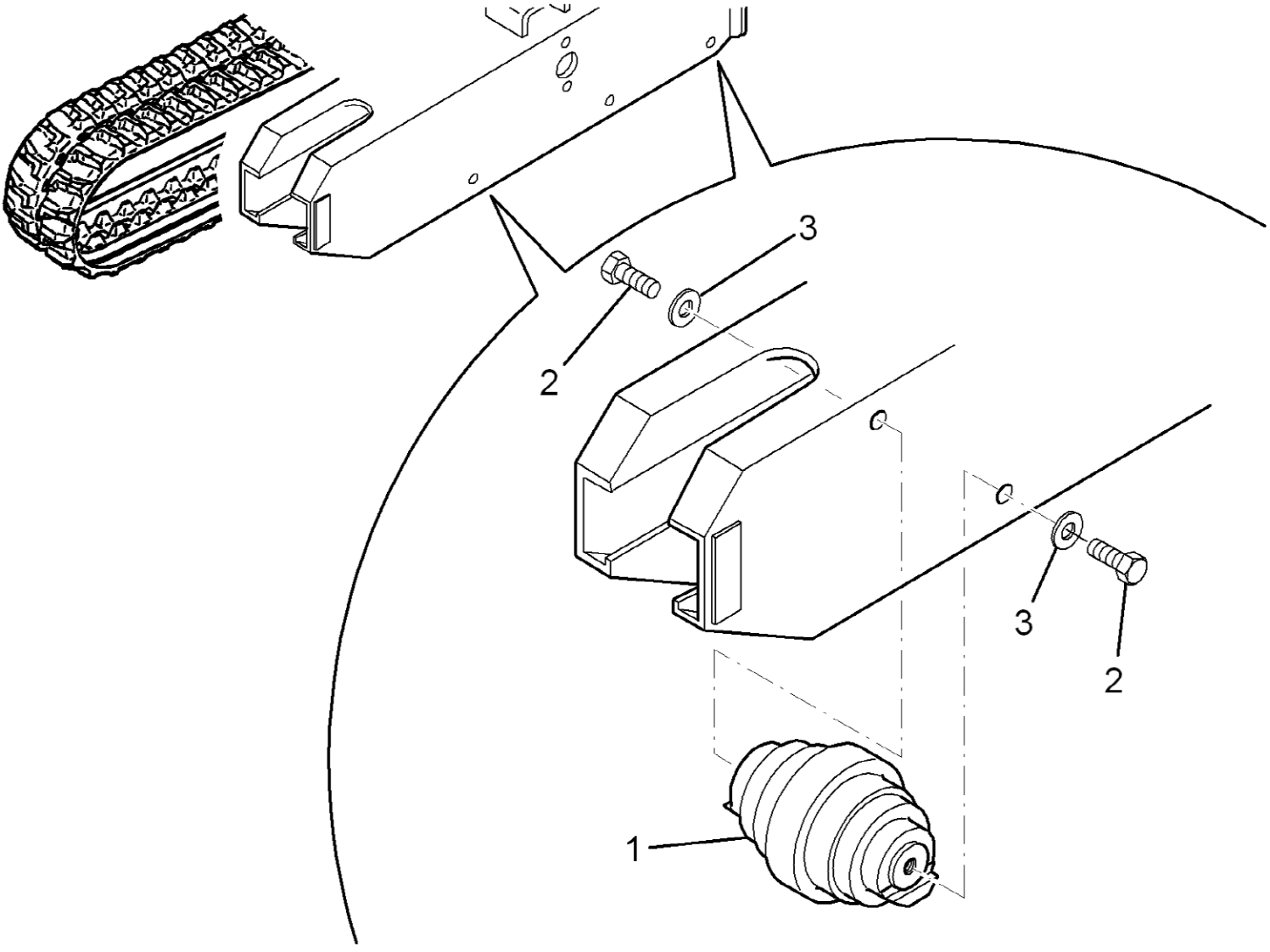

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VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Cabin (closed)**	Function Group : **810**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Cabin (closed)

Removing the cabin

Op nbr

Lifting sling 2 m
Shackle 3/8""

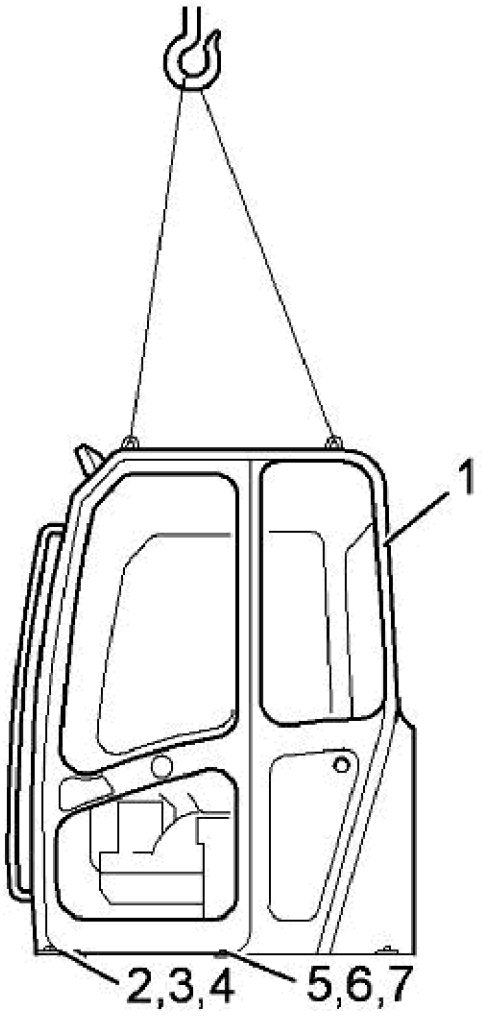

Figure 1
Cabin

1. Cabin
2. Screw
3. Washer
4. Spring washer
5. Screw
6. Washer
7. Spring washer

- Attach the steel ropes to the lifting points of the cabin and lift the cabin until the ropes are tight.
- Unscrew the 6 fastening screws (2, 5) from the upper frame.
- Disconnect the electric cables from the plug connections.
- Lift the cabin slightly up, make sure that the area around is safe and lift it off completely.

Assembling the cabin

Op nbr

Lifting sling 2 m
Shackle 3/8""

- Attach the steel ropes to the lifting points of the cabin and lower the cabin to fastening position.
- Insert the fastening screws (2) and tighten with 94 ± 10 Nm. Then insert the fastening screws (5) and tighten with 64 ± 7 Nm.
- Reconnect the electric cables to the plug connections.

NOTE	**Make sure that the cabin frame does not hit against the dashboard during disassembly and assembly.**

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Roll over protection structure**	Function Group : **810**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Roll over protection structure

Removing the roll over protection structure

Op nbr

Lifting sling 2 m
Shackle 3/8""

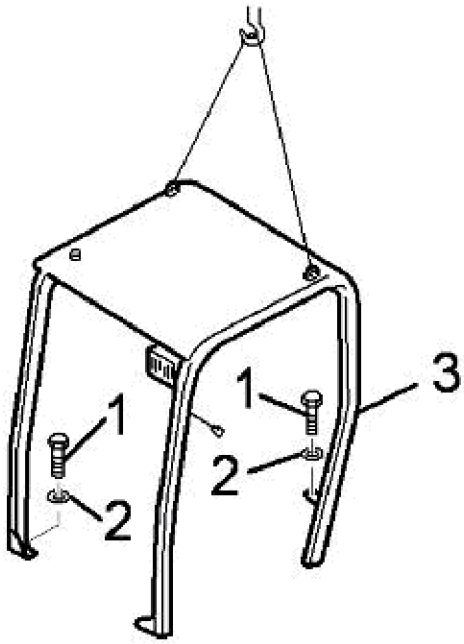

Figure 1

1. Screw
2. Washer
3. Roll over protection structure

- Attach the lifting sling to the lifting points of the cabin and lift the roll over protection structure until the ropes are tight.
- Unscrew four fastening screws (1) and take them off with washers (2).

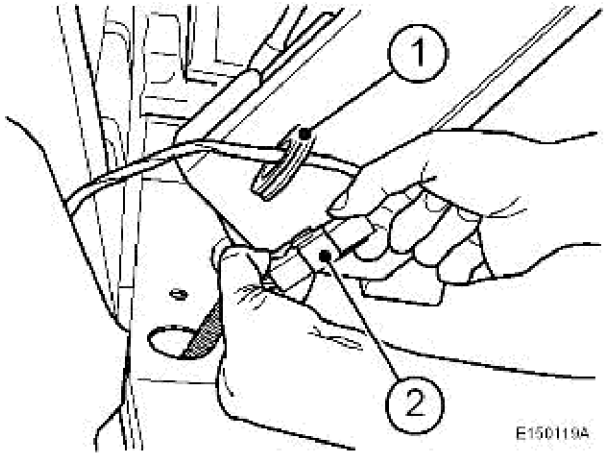

Figure 2

- Force out the rubber grommet (1).
- Disconnect plug connection (2).
- Lift the roll over protection structure slightly up, make sure that the area around is safe and lift it off completely.

Assembling the roll over protection structure

Op nbr

Lifting sling 2 m
Shackle 3/8""

- Attach the lifting sling to the lifting points of the roll over protection structure and lower the roll over protection structure to fastening position.
- Insert the fastening screws (See figure/1) and tighten with 105 ± 20 Nm.
- Remove lifting sling and shackles
- Join plug connection (See figure/2) together.
- Assemble the rubber grommet (See figure/1).

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **General notes to be observe when working on the hydraulic system**	Function Group : **900**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

General notes to be observe when working on the hydraulic system

The operating safety, productivity and lifetime of a machine depends mainly on the proper use and regular maintenance of the machine.

To ensure an optimal performance of the machine all information and instructions concerning the type and frequency of maintenance activities and lubrication mentioned in this instruction manual must be strictly observed and applied. Claims covered by warranty can only be accepted if all specified inspections have been performed according to schedule and by trained specialists.

It is highly recommended to use only genuine spare parts, which are available from authorized VOLVO dealers. Repairs and adjustments must only be performed by qualified and trained mechanics from these authorized dealers or VOLVO sales subsidiaries.

The machine described in these instructions complies with the technical regulations valid at the date of issue. We reserve the right to implement any changes or modifications to machine components deemed useful or necessary at any time without prior notification. This does not include the obligation to change the content of this manual accordingly. Illustrations and information contained in this manual are not binding and cannot be subject of any claims.

Safety guidelines to be observed during service and repair work

The engine must be shut down and the working attachment lowered to the ground or supported.

The pressure relief and safety valves in the hydraulic circuits of excavators may only be adjusted by VOLVO service personnel. Any changes to their adjustment will render the warranty null and void.

The service manual must always be close at hand when performing repair work. Beside the repair instructions all applicable legal regulations concerning the avoidance of accidents and the protection of the environment must also be observed.

Before starting work on the machine all service personnel involved in such repairs must have read this manual and should be acquainted with the operation of the machine and the different control functions. Before starting work all persons involved must have read the repair instructions and especially the chapter on safety. These notes must not be read while already performing this work. This applies especially for persons who are only occasionally involved in repairs or maintenance work on this machine.

These notes also deal with the handling of hazardous substances, the protective outfit of the personnel and the traffic regulations.

From time to time the workshop manager must check whether the personnel is sufficiently trained and performs all work in compliance with the repair instructions and is aware of the safety risks. Work on and with the machine must only be performed by sufficiently trained persons. Statutory minimum age limits must be strictly observed.

For safety reasons long hair must be tied back. Clothes should be of tight fit. Jewellery that may be caught by the machine and cause injury must be taken off.

Wear special protective outfit if required by special circumstances or by legal regulations.

Observe all safety and warning notes on the machine. Make sure that all safety and warning signs are well legible at all times.

Do not make any modifications, additions or changes, which might affect the safety, without the written consent of the manufacturer. This also applies for the insulation and adjustment of safety devices and pressure limitation valves as well as for welding work on load bearing elements.

Replace the hydraulic hoses in the specified or convenient intervals, even if no safety affecting fault was found.

Perform inspections and maintenance work in the time intervals specified in the repair instructions.

Maintenance and repair work must only be carried out with suitable tools and requires appropriate workshop facilities.

The personnel must be informed about the location of fire fighting equipment and the respective operating instructions. In case of a fire apply the correct warning and fire fighting methods. When refuelling shut the engine down, do not smoke and avoid open fire. Do not use the machine in an explosive environment. Work in such area can cause fire or explosion and result in severe injury.

Persons attending a training course may only work with the machine if they are permanently supervised by an experienced person.

Work on the equipment or in the area of hydraulic components must only be performed by persons who have sufficient knowledge and experience in handling hydraulic systems.

Persons under the influence of alcohol or drugs, which affect the responsiveness, are NOT permitted to work on the machine. Avoid any risky working methods.

Run combustion engines only adequately ventilated rooms. Ensure sufficient ventilation before starting the machine inside a closed room.

Start the machine only from the driver's seat. Before starting or moving the machine make sure that there are no persons inside the movement radius of the machine.

Before starting the machine you should generally make sure that all accessories are securely fastened.

Always keep your hands on the control levers while the machine is in motion.

If the machine has been shut down for repair or maintenance purposes preventive measures must be applied to avoid accidental starting. For this purpose lock all control elements and pull off the ignition key or attach a warning sign to the ignition switch.

Perform repair and maintenance work only when the machine is parked on level ground of sufficient load bearing capacity and all necessary measures have been applied to rule out tipping over or accidental starting of the machine.

In order to rule out accidents, large components or assembles, which must be removed to be replaced, must be carefully fastened and located with lifting tackle. Use only suitable and technically perfect lifting gear and lifting tackle of sufficient load bearing capacity.
Do not stand under loads being lifted.

Before performing maintenance and repair work remove all oil, fuel and dirt from the machine. This applies particularly for joints and connecting threads. Do not use any aggressive cleaning agents. Use only lint-free cloths. Before cleaning the machine with water, a steam jet (high pressure cleaner) or with a cleansing agent cover all openings which should normally be protected against water, steam and cleansing agents for reasons of safety or correct function. After cleaning check all fuel, lubrication oil and pressure fluid lines for leaks, loose connections, scratches and damage. Any defects found must be rectified immediately.

Tighten all bolted connections which were loosened for maintenance and repair work.

All safety devices removed for adjustment, maintenance or repair must be installed and checked again immediately after the work is completed.

Make sure that all consumables and replaced parts are disposed of environmentally.

Comply with the construction site regulations. Welding, torch cutting and grinding operations on the machine must only be performed if this has been expressly authorized, as there may be a risk of explosion or fire. Before performing welding, torch cutting and grinding operations clean the machine and its surrounding area to remove dust and inflammable substances. Ensure sufficient ventilation of the rooms (danger of explosion).

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Adjusting the pressure and checking for leaks**	Function Group : **900**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Adjusting the pressure and checking for leaks

WARNING!

Work on the equipment or in the area of hydraulic components must only be performed by persons who have sufficient knowledge and experience in handling hydraulic systems. The following safety rules must generally be observed when working on the hydraulic system of the machine.

1. Depressurize all system sections and pressure lines to be removed before starting repair work. Observe all specific notes applicable for the respective unit.
2. Make sure that nobody can operate the machine as long as work is being performed on the machine.
3. Avoid contact with hot and/or pressurized hydraulic oil. Always close access doors to service points before pressurizing the system in order to protect persons from hydraulic oil jets, which may be dangerous even under considerably low pressures.
4. Use pressure gauges with long test hoses so that the pressure can be read at a safe distance. Make sure that these lines and hoses are not pinched by the doors.
5. The first lever or pedal movement should be performed slowly to prevent sudden or unexpected machine movements and pressures in excess of the specified pressures. Interrupt the pressure increase when the machine has reached the specified pressure. Do not try to exceed the specified limit value.
6. When using adjustment devices with unknown sensitivity adjust the pressure in small increments. This is of special importance for the auxiliary hydraulic circuit in which the pressure builds up immediately when starting the engine. It has happened that the pressure increased to such a level, that the pressure gauge turned around a second time. The pressure was thereby wrongly read as being too low. It was increased further and finally caused the system to burst.
7. Check all lines, pipes and screwed connections regularly for external leaks and damage. Repair any damage immediately.
8. Splashed oil may cause injury. Watch out for oil leaks. Oil on the inside of a door may be a sign for an oil leak occurring during pressure build up. Use a piece of paper or cardboard (not your hands!) to check for possible leak oil losses.
9. Check the pressure testing equipment at regular intervals and replace defective parts.
10. Make sure that no connections are mixed up by mistake. Connections, length and quality of hoses must comply with the technical requirements.

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Test and adjustment values for EC20B**	Function Group : **900**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Test and adjustment values for EC20B

Hydraulic oil temperature between 40 °C and 50 °C and engine running with maximum speed

Pressures	Operating conditions		Unit	Value
Pilot pressure	In case of a problem check the LS-pressure at stand.by operation first, must be 6 bar ± 1.0		bar	32 +5/-0
Pressure differential (Delta-P) = HP-LS	Info: Pressure differential (Delta-P) at stand-by = 16 bar (high pressure = ~ 19 bar and LS = ~ 3 bar)		bar	16 ±1
LS-pressure relief valve	Dozer blade at lift stop, measure on high pressure side		bar	210 ±5
Slewing drive	Block the slewing drive, check pressure differential (Delta-P)		bar	160 +5/-10
Secondary pressure relief valve				
Boom and dipper arm	Use only a hand pump		bar	280
Power control				
Max. flow rate (Qmax)	Accessories + dipper arm (piston side), High pressure = 50 bar ±10		l/min	43 +3/-10
First point	(Q1) = High flow rate	Attachment + boom (piston side)	l/min	25
	(P1) = Low pressure	Pressure increase when reducing the flow after flow meter	bar	145 ±10
	Measure with the dozer blade at the upper limit, the engine speed must be higher than		min^{-1}	2000

Speeds and flow rates	Cylinder side	Conditions	Unit	Speed	Unit	Value
Boom	Positive side (piston side)	Flow at high pressure of 50 bar	Seconds	3.4	l/min	23 ±2
	Negative side (piston rod side)	Flow at high pressure of 50 bar	Seconds	3.4	l/min	16 ±2
Dipper	Positive side (piston side)	Flow at high pressure of 50 bar	Seconds	2.8	l/min	32 ±3
	Negative side (piston rod side)	Flow at high pressure of 50 bar	Seconds	2.4	l/min	22 ±2
Bucket	Positive side (piston side)	Flow at high pressure of 50 bar	Seconds	2.1	l/min	31 ±3
	Negative side (piston rod side)	Flow at high pressure of 50 bar	Seconds	1.9	l/min	23 ±2
Dozer blade	Positive side (piston side)	Flow at high pressure of 50 bar	Seconds	1.5	l/min	16 ±2
	Negative side (piston rod side)	Flow at high pressure of 50 bar	Seconds	1.4	l/min	12 ±2
Offset	Positive side (piston side)	Flow at high pressure of 50 bar	Seconds	4.7	l/min	14 ±0.5
	Negative side (piston rod side)	Flow at high pressure of 50 bar	Seconds	4.8	l/min	9 ±0.5
Crawler track drive	Low crawler track speed	Rubber tracks	km/h	2.4	Tr/mn	30

Speeds and flow rates	Cylinder side	Conditions	Unit	Speed	Unit	Value
	High crawler track speed	Rubber tracks	km/h	3.7	Tr/mn	63
Slewing drive	Left and right	For 1 revolution	Seconds	6	l/min	15 ±0.5
		Per minute	rpm	10 +/-0.2	l/min	15 ±0.5
Attachment	Left and right	Flow at high pressure of 50 bar	Seconds		l/min	40 ±4

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Construction Equipment

PROSIS Service Information

Document Title : **Hydraulic circuit**	Function Group : **910**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Hydraulic circuit

This chapter contains descriptions of the functions of the components in the hydraulic circuit and, where necessary, information on the control and adjustment of these components.

The hydraulic circuit of the machine is divided into two sub-circuits, the working hydraulics and the hydraulic auxiliary or pilot circuit.

The circuit for the working hydraulics consists of the working pumps for the machine, the hydraulic cylinders, the travel motors and the slewing gear motor. However, the hydraulic travel motors and the slewing motor are described in chapter 4, in order to maintain a division into standard function groups.

The pressure in the circuit of the working hydraulics changes with the resistance opposed to the movements. The operating pressure is limited by pressure relief valves and the pressure peaks in the circuit are compensated by secondary pressure relief valves.

Among others, the auxiliary hydraulic circuit is used to control the elements in the valve blocks, which supply the cylinder and the hydraulic slewing motor with oil. This auxiliary pressure is monitored by a pressure reducing valve.

Before conduction any tests or adjustments in the hydraulic circuit for the working attachment the following precautions must be applied after the engine has been shut down:

- Lower the working attachment to the ground:
  - Set the starting contactor to ON.
  - Lower the console (seat armrest) to unlock the controls.
  - Lower the working attachment to the ground using the boom control lever.
- If thze starting contactor is defective or an electrical faults occur:
  - Remove the tool compartment.
  - Press the button of the hydraulic safety solenoid valve and hold the button depressed.
  - Lower the working attachment to the ground using the boom control lever.
- If hoses on the boom cylinder have cracked on machines with safety valve:
  - loosen the connection of the sensor on the cylinder by 3/4 to 1 turn and lower the working attachment slowly to the ground.
  - Retighten the connection when the process is finished.
- Relieving remaining pressures:
  - Set the starting contactor to ON.
  - Lower the console (seat armrest) to unlock the controls.
  - Move the control lever to all directions.
- Disconnect the battery.

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PROSIS Service Information

Document Title : **Hydraulic diagram EC15B XT**	Function Group : **910**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Hydraulic diagram EC15B XT

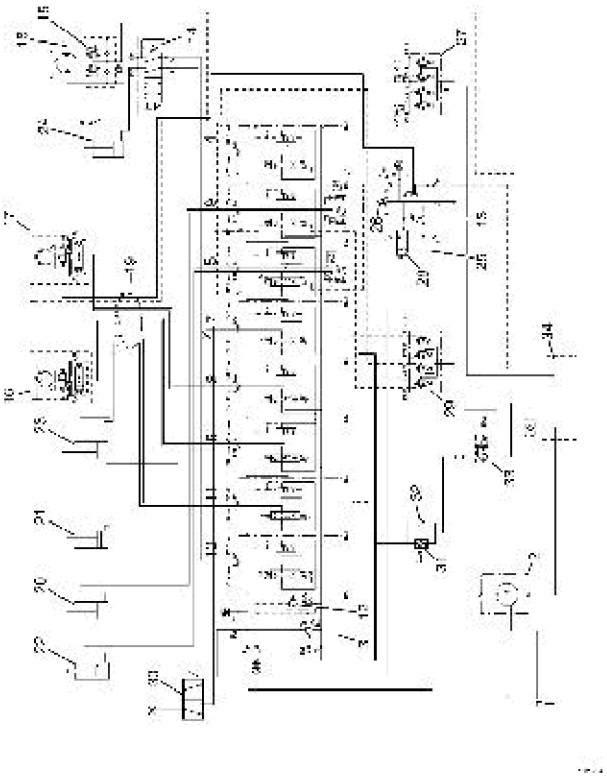
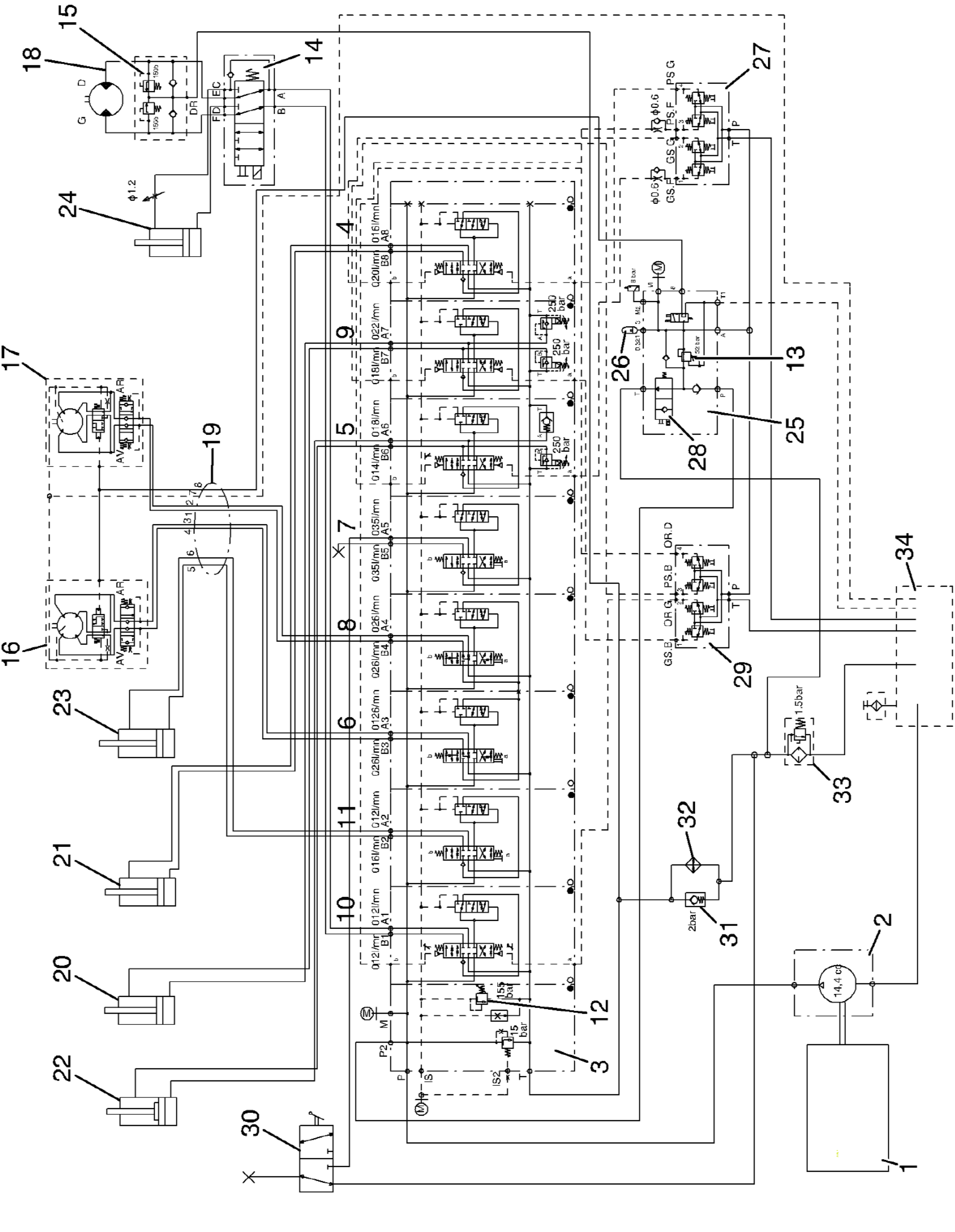


Figure 1

Hydraulic diagram EC15B XT

1. Diesel engine
2. Hydraulic pump
3. Oil distributor
4. Bucket element
5. Boom element
6. Element for left hand travel motor
7. Options element
8. Element for right hand travel motor
9. Dipper element
10. Element for slewing / offset gear
11. Dozer blade element
12. Pressure relief valve P1
13. Pressure relief valve P2
14. Solenoid valve for slewing gear / offset
15. Crossover - valve
16. Hydraulic travel motor, left
17. Hydraulic travel motor, right
18. Hydraulic slewing motor with brake
19. Rotary oil distributor

20. Dipper cylinder
21. Bucket cylinder
22. Boom cylinder
23. Dozer blade cylinder
24. Offset cylinder
25. Hydraulic servo valve block (pilot pressure)
26. Auxiliary or pilot pressure accumulator
27. Control lever / hydraulic control element
28. Solenoid valve high / low speed
29. Control lever / hydraulic control element
30. Three-way valve
31. By-pass valve
32. Oil cooler
33. Filter
34. Tank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Construction Equipment

PROSIS Service Information

Document Title : **Hydraulic diagram EC15B XTV**	Function Group : **910**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Hydraulic diagram EC15B XTV

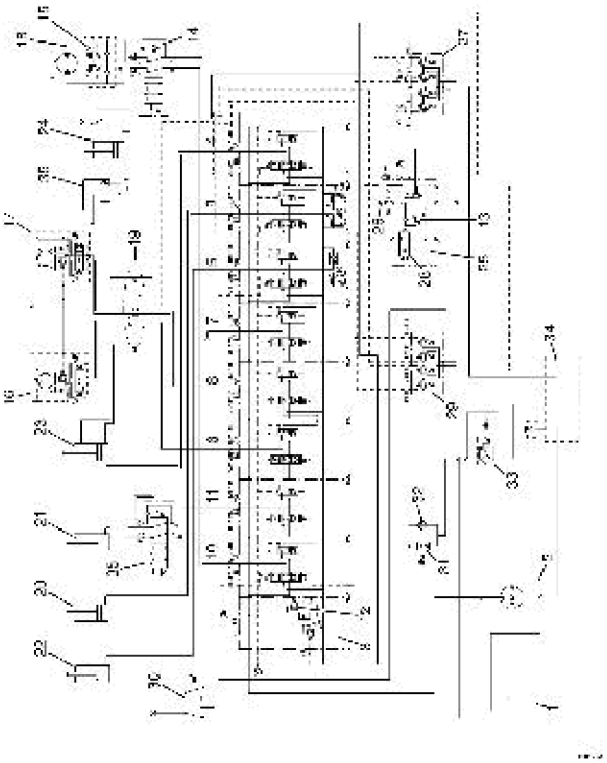

Figure 1

Hydraulic diagram EC15B XTV

1. Diesel engine
2. Hydraulic pump
3. Oil distributor
4. Bucket element
5. Boom element
6. Element for left hand travel motor
7. Options element
8. Element for right hand travel motor
9. Dipper element
10. Element for slewing / offset gear
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12. Pressure relief valve P1
13. Pressure relief valve P2
14. Solenoid valve for slewing gear / offset
15. Crossover - valve
16. Hydraulic travel motor, left
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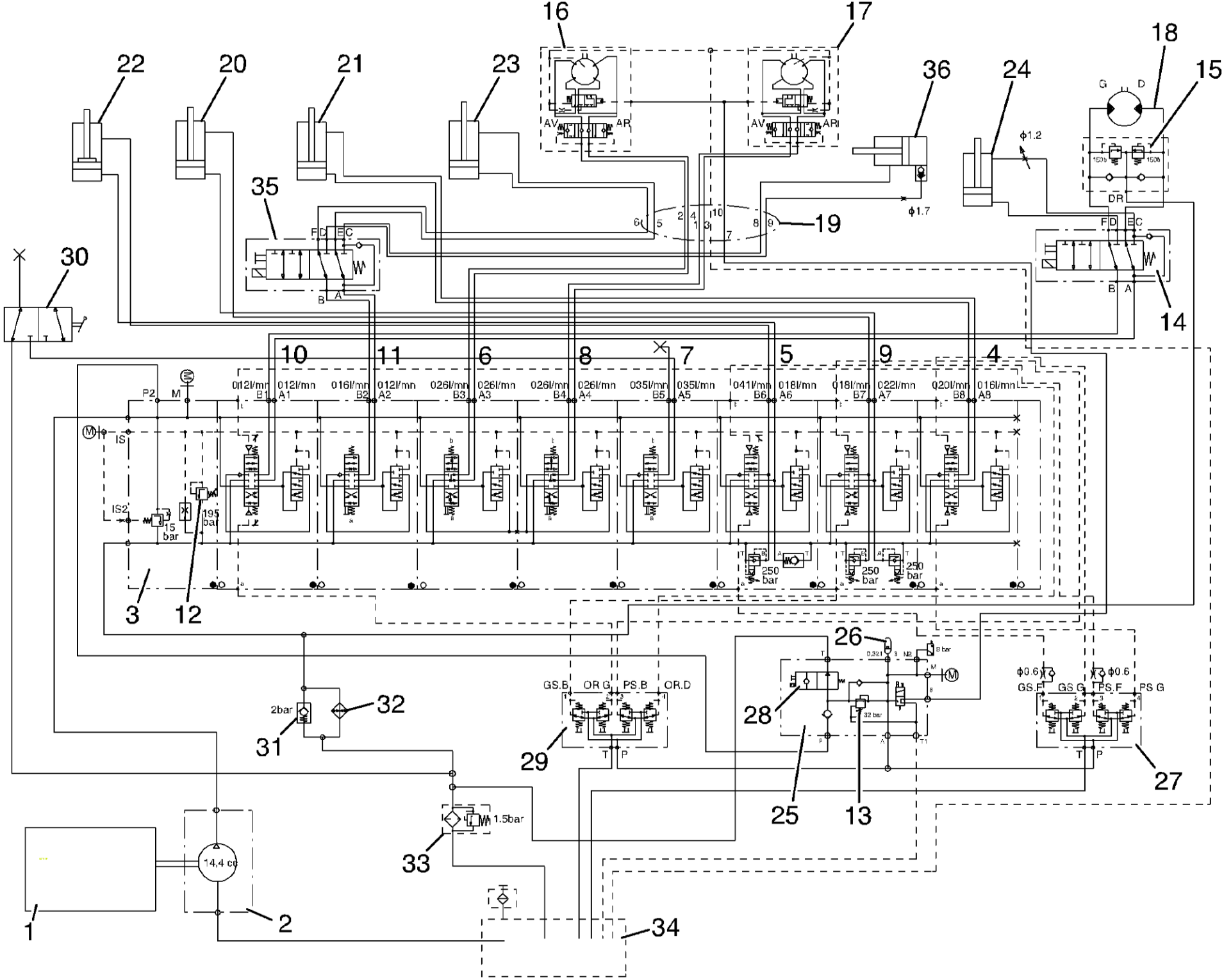
27. Control lever / hydraulic control element
28. Solenoid valve high / low speed
29. Control lever / hydraulic control element
30. Three-way valve
31. By-pass valve
32. Oil cooler
33. Filter
34. Tank
35. Selector switch for adjustable track width
36. Cylinder for adjustable track width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012l/mn B1
012l/mn A1
016l/mn B2
012l/mn A2
026l/mn B3
026l/mn A3
026l/mn B4
026l/mn A4
035l/mn B5
035l/mn A5
041l/mn B6
018l/mn A6
018l/mn B7
022l/mn A7
020l/mn B8
016l/mn A8
P2
M
IS
IS2
15 bar
195 bar
250 bar
3
12
2bar
32
31
29
GS.B
OR G
PS.B
OR.D
26
28
25
13
GS.F
GS G
PS.F
PS G
27
1.5bar
33
14,4 cc
1
2
34
AV
AR
FD
EC
DR
G
D
ϕ1.2
ϕ1.7
ϕ0.6

E1501129A

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Hydraulic diagram EC20B XT**	Function Group : **910**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Hydraulic diagram EC20B XT

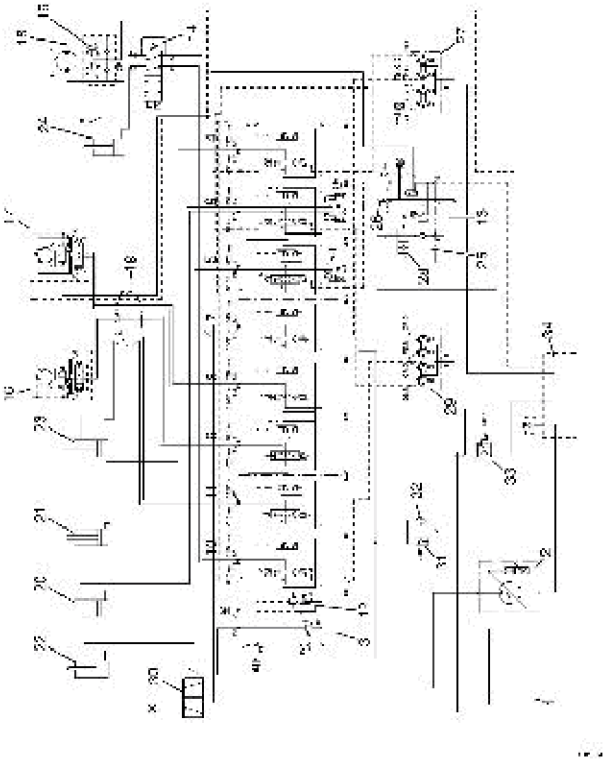
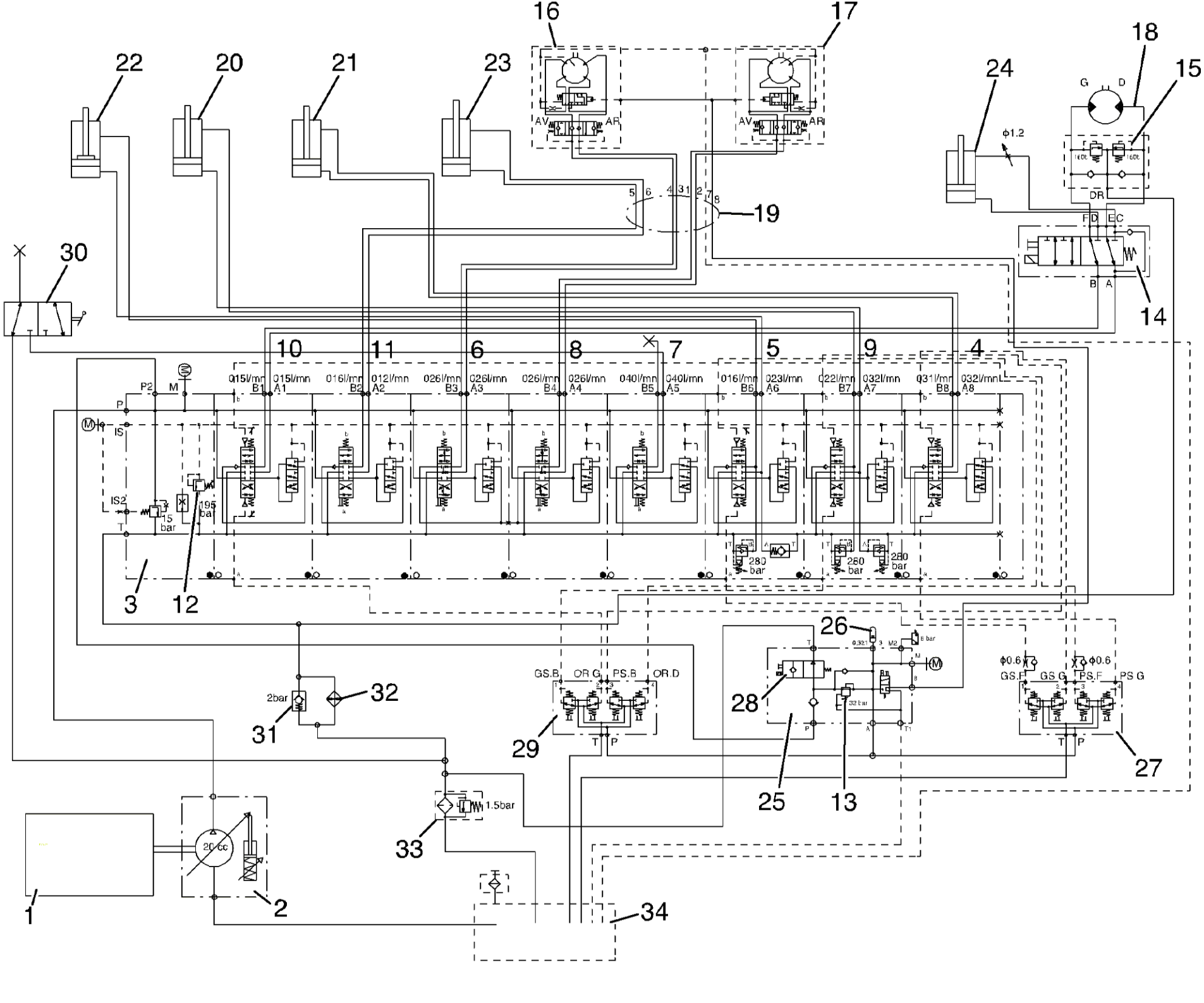


Figure 1

Hydraulic diagram EC20B XT

1. Diesel engine
2. Hydraulic pump
3. Oil distributor
4. Bucket element
5. Boom element
6. Element for left hand travel motor
7. Options element
8. Element for right hand travel motor
9. Dipper element
10. Element for slewing / offset gear
11. Dozer blade element
12. Pressure relief valve P1
13. Pressure relief valve P2
14. Solenoid valve for slewing gear / offset
15. Crossover - valve
16. Hydraulic travel motor, left
17. Hydraulic travel motor, right
18. Hydraulic slewing motor with brake
19. Rotary oil distributor
20. Dipper cylinder

21. Bucket cylinder
22. Boom cylinder
23. Dozer blade cylinder
24. Offset cylinder
25. Hydraulic servo valve block (pilot pressure)
26. Auxiliary or pilot pressure accumulator
27. Control lever / hydraulic control element
28. Solenoid valve high / low speed
29. Control lever / hydraulic control element
30. Three-way valve
31. By-pass valve
32. Oil cooler
33. Filter
34. Tank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EC
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P2
M
P
IS
IS2
15 bar
195 bar
2bar
1.5bar
20 cc
280 bar
32 bar
GS.B
OR.G
PS.B
OR.D
GS.F
GS.G
PS.F
PS.G
ϕ1.2
ϕ0.6

E150130A

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Hydraulic diagram EC20B XTV**	Function Group : **910**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Hydraulic diagram EC20B XTV

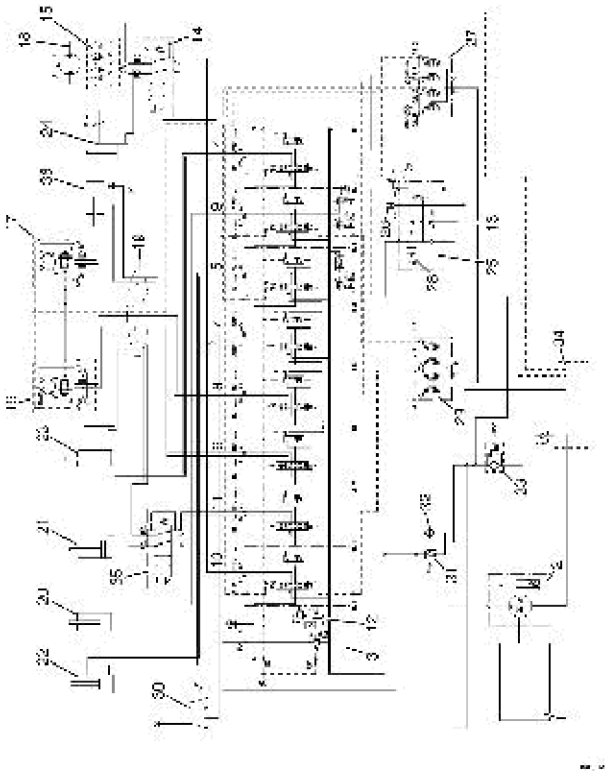

Figure 1

Hydraulic diagram EC20B XTV

1. Diesel engine
2. Hydraulic pump
3. Oil distributor
4. Bucket element
5. Boom element
6. Element for left hand travel motor
7. Options element
8. Element for right hand travel motor
9. Dipper element
10. Element for slewing / offset gear
11. Dozer blade element
12. Pressure relief valve P1
13. Pressure relief valve P2
14. Solenoid valve for slewing gear / offset
15. Crossover - valve
16. Hydraulic travel motor, left
17. Hydraulic travel motor, right
18. Hydraulic slewing motor with brake
19. Rotary oil distributor

20. Dipper cylinder
21. Bucket cylinder
22. Boom cylinder
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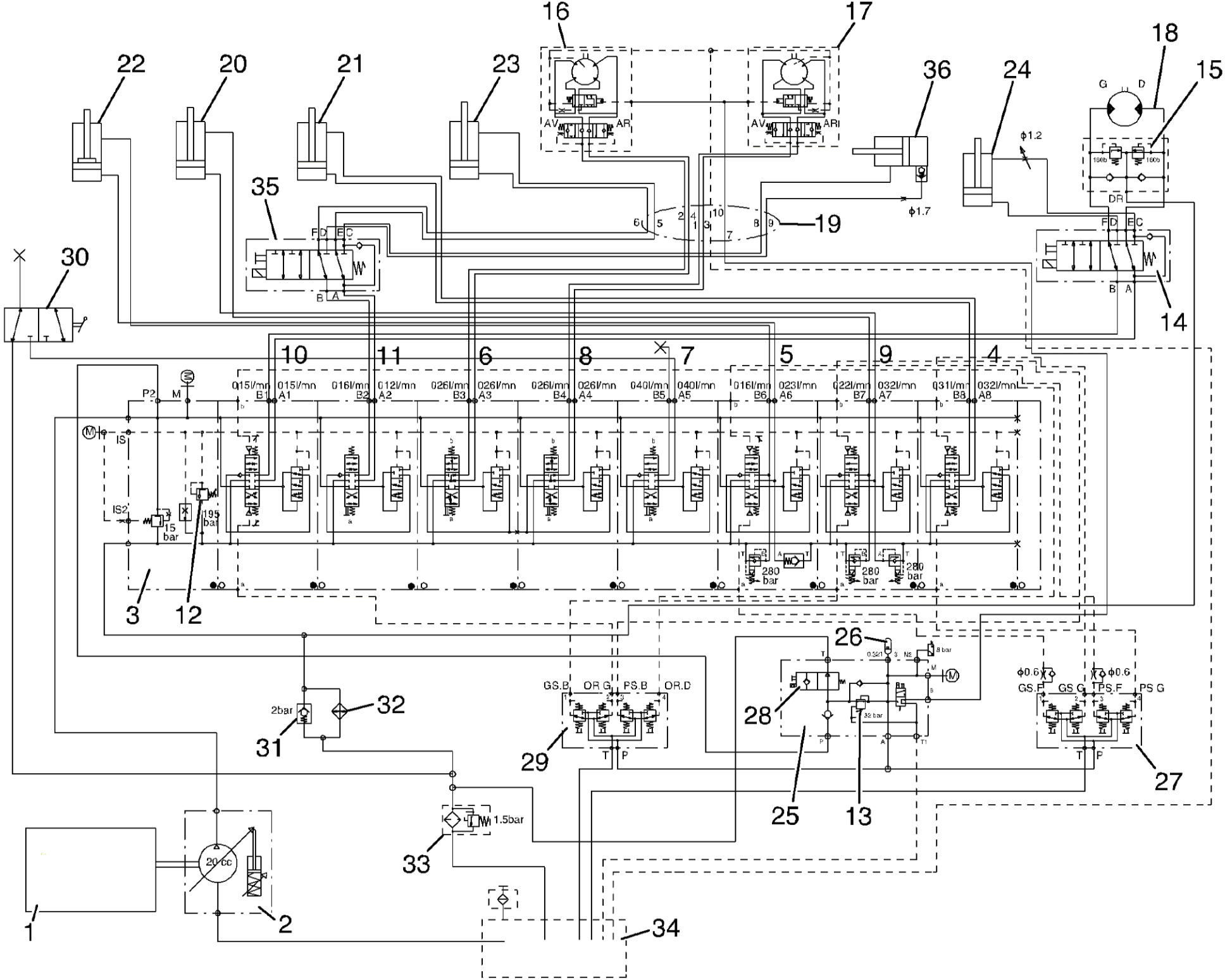
24. Offset cylinder
25. Hydraulic servo valve block (pilot pressure)
26. Auxiliary or pilot pressure accumulator
27. Control lever / hydraulic control element
28. Solenoid valve high / low speed
29. Control lever / hydraulic control element
30. Three-way valve
31. By-pass valve
32. Oil cooler
33. Filter
34. Tank
35. Selector switch for adjustable track width
36. Cylinder for adjustable track width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A
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D
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P2
M
IS
IS2
15 bar
195 bar
280 bar
2bar
1.5bar
20 cc
GS.B
OR.G
PS.B
OR.D
GS.F
GS G
PS.F
PS G
T
P
ϕ1.2
ϕ1.7
ϕ0.6

E150131A

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Hydraulic diagram EC15B XT**	Function Group : **910**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Hydraulic diagram EC15B XT

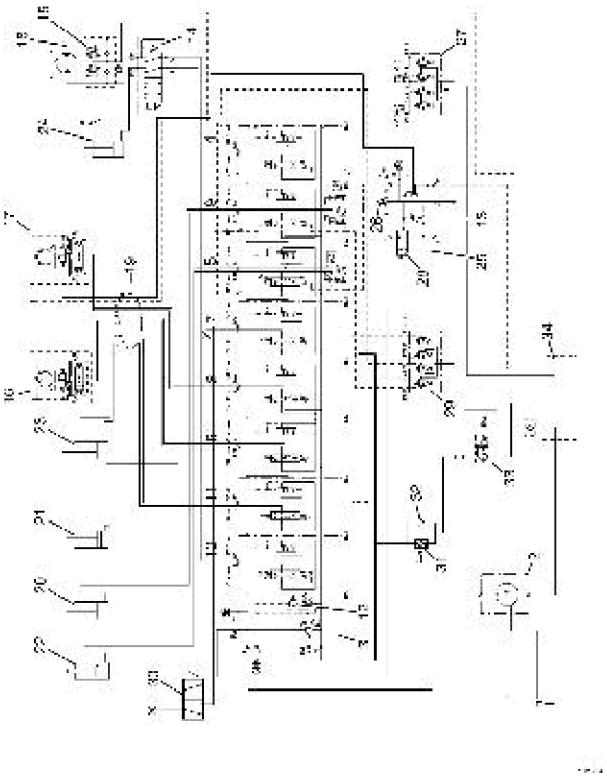

Figure 1

Hydraulic diagram EC15B XT

1. Diesel engine
2. Hydraulic pump
3. Oil distributor
4. Bucket element
5. Boom element
6. Element for left hand travel motor
7. Options element
8. Element for right hand travel motor
9. Dipper element
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12. Pressure relief valve P1
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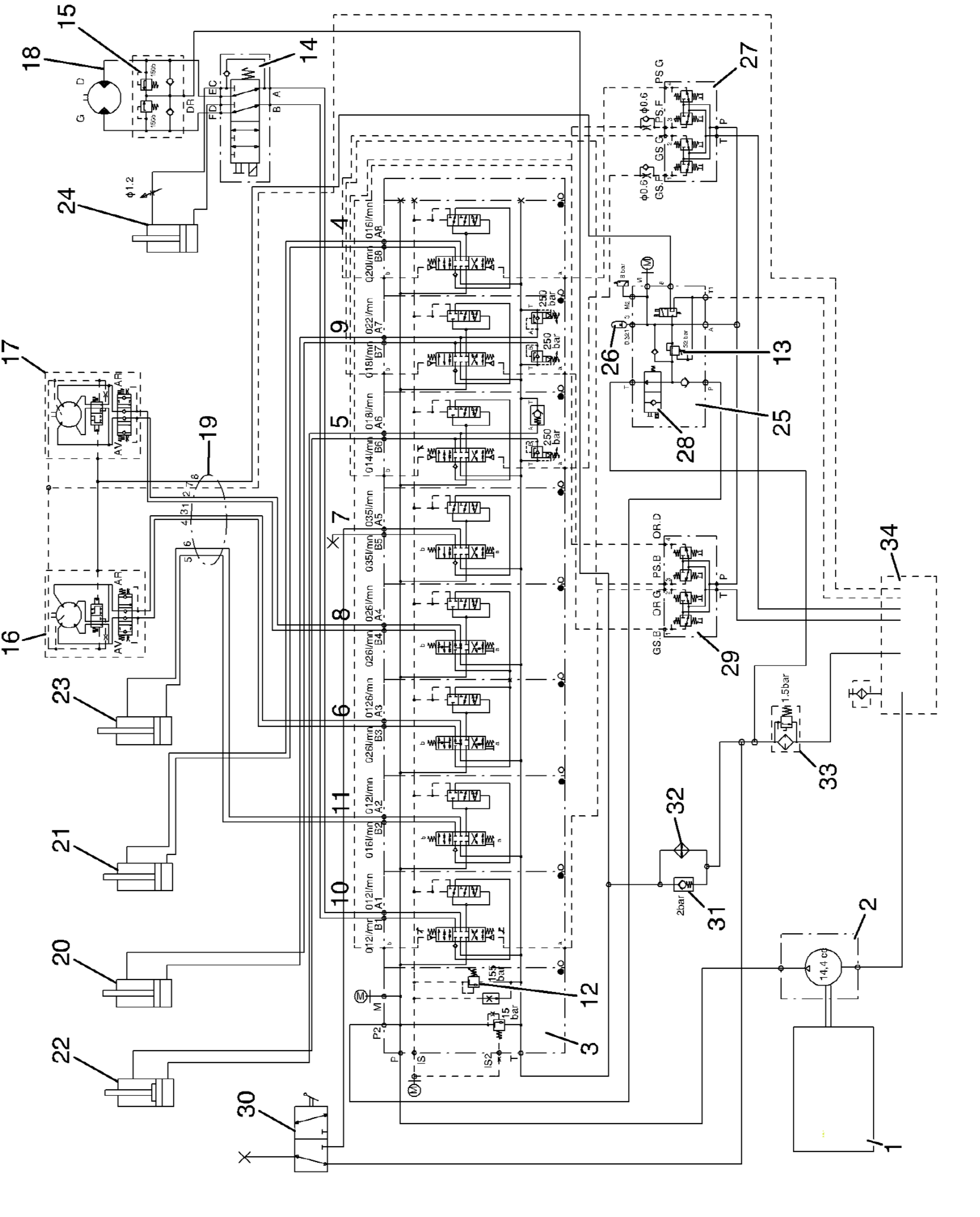
27. Control lever / hydraulic control element
28. Solenoid valve high / low speed
29. Control lever / hydraulic control element
30. Three-way valve
31. By-pass valve
32. Oil cooler
33. Filter
34. Tank



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Construction Equipment

PROSIS Service Information

Document Title : **Hydraulic diagram EC15B XTV**	Function Group : **910**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Hydraulic diagram EC15B XTV

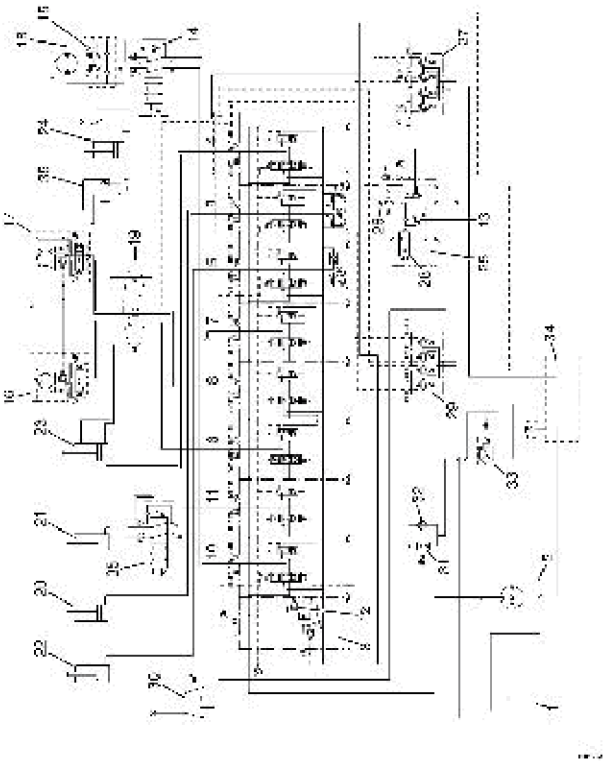

Figure 1

Hydraulic diagram EC15B XTV

1. Diesel engine
2. Hydraulic pump
3. Oil distributor
4. Bucket element
5. Boom element
6. Element for left hand travel motor
7. Options element
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16. Hydraulic travel motor, left
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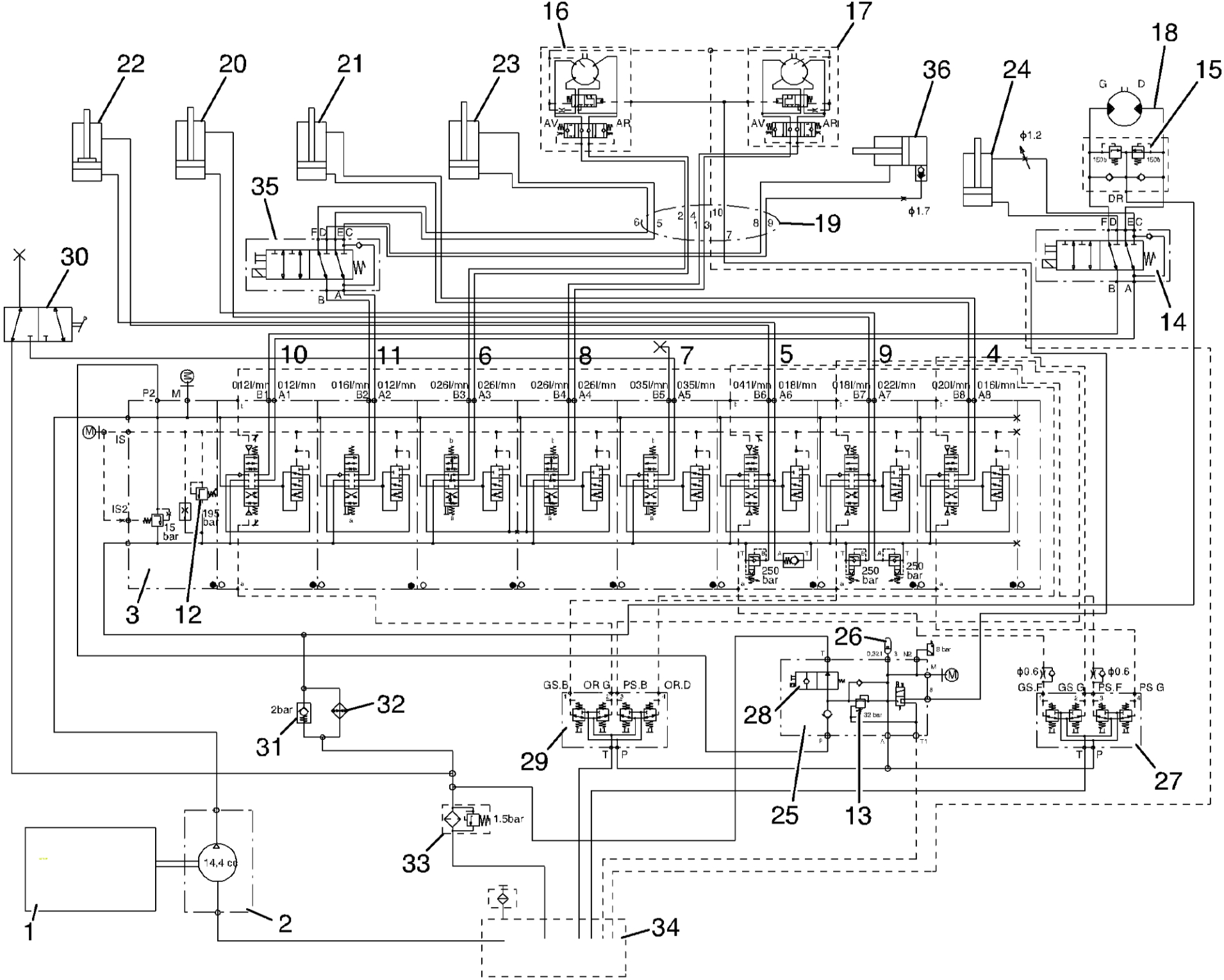
31. By-pass valve
32. Oil cooler
33. Filter
34. Tank
35. Selector switch for adjustable track width
36. Cylinder for adjustable track width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026l/mn A4
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035l/mn A5
041l/mn B6
018l/mn A6
018l/mn B7
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020l/mn B8
016l/mn A8
P2
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IS2
15 bar
195 bar
250 bar
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2bar
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OR G
PS.B
OR.D
26
28
25
13
GS.F
GS G
PS.F
PS G
27
1.5bar
33
14,4 cc
1
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34
AV
AR
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DR
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ϕ1.2
ϕ1.7
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E1501129A

VOLVO
Construction Equipment

PROSIS Service Information

Document Title :	Function Group :	Information Type :	Print Date :
Hydraulic diagram EC20B XT	**910**	**Service Information**	**23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Hydraulic diagram EC20B XT

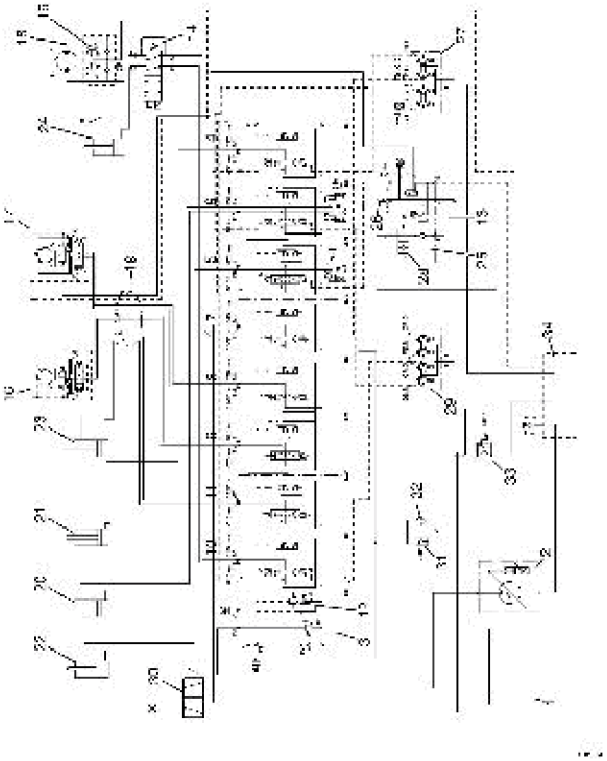

Figure 1

Hydraulic diagram EC20B XT

1. Diesel engine
2. Hydraulic pump
3. Oil distributor
4. Bucket element
5. Boom element
6. Element for left hand travel motor
7. Options element
8. Element for right hand travel motor
9. Dipper element
10. Element for slewing / offset gear
11. Dozer blade element
12. Pressure relief valve P1
13. Pressure relief valve P2
14. Solenoid valve for slewing gear / offset
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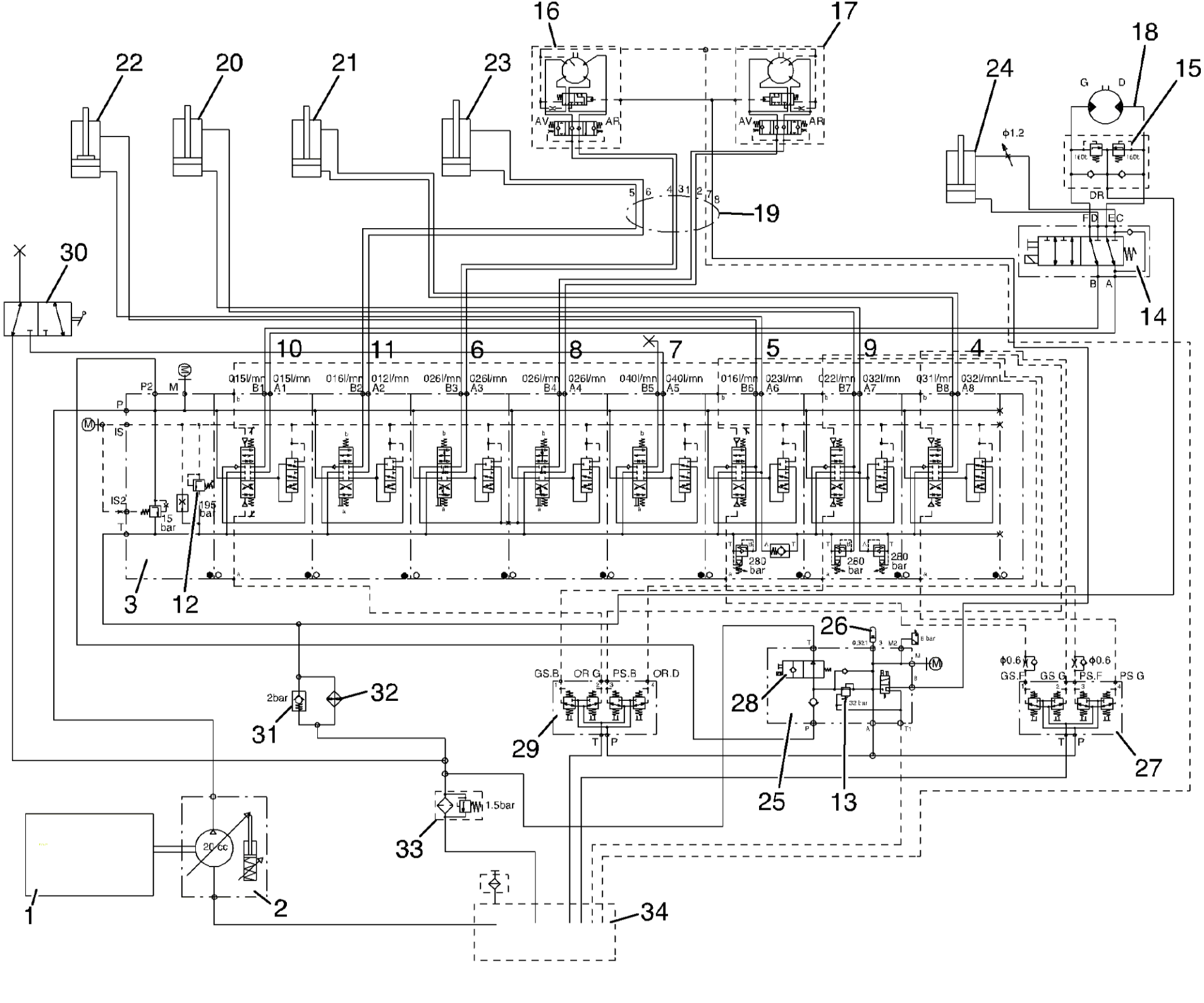
28. Solenoid valve high / low speed
29. Control lever / hydraulic control element
30. Three-way valve
31. By-pass valve
32. Oil cooler
33. Filter
34. Tank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IS2
15 bar
195 bar
2bar
1.5bar
20 cc
280 bar
32 bar
GS.B
OR.G
PS.B
OR.D
GS.F
GS.G
PS.F
PS.G
ϕ1.2
ϕ0.6

E150130A

VOLVO
Construction Equipment

PROSIS Service Information

Document Title : **Hydraulic diagram EC20B XTV**	Function Group : **910**	Information Type : **Service Information**	Print Date : **23/10/2011**
Profile : **CEX, EC15B XTV (Volvo) [GB]**			

Hydraulic diagram EC20B XTV

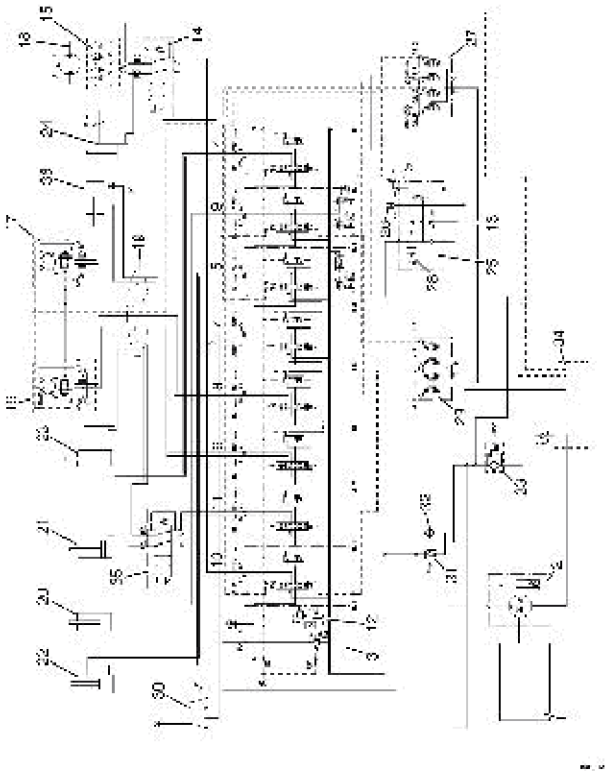

Figure 1

Hydraulic diagram EC20B XTV

1. Diesel engine
2. Hydraulic pump
3. Oil distributor
4. Bucket element
5. Boom element
6. Element for left hand travel motor
7. Options element
8. Element for right hand travel motor
9. Dipper element
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12. Pressure relief valve P1
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28. Solenoid valve high / low speed
29. Control lever / hydraulic control element
30. Three-way valve
31. By-pass valve
32. Oil cooler
33. Filter
34. Tank
35. Selector switch for adjustable track width
36. Cylinder for adjustable track width