

Document Title: <b>Frame and crawler unit</b>	Function Group: <b>700</b>	Information Type: <b>Service Information</b>	Date: <b>2014/4/17</b>
Profile:			

## Frame and crawler unit

### Specification, frame and crawler unit

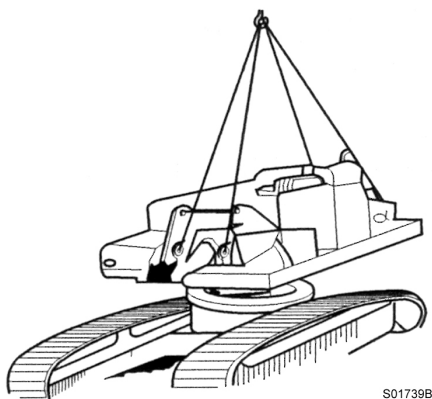
Item		Unit		Specification	
				Steel tracks	Rubber tracks
Length of lower frame		mm		1910	
Joint distance		mm		101.6	
Number of links		pcs.		40	
Number of track supporting idlers		pcs.		1	
Number of track rollers		pcs.		4	
Tension spring	Type	–		Hydraulic adjustment (grease)	
	SPring, adjustment length	mm		180	
	Adjustment force	kg		3360	
Track drive	Number of teeth	pcs.		23	
	Pitch diameter	mm		36	
Track pads	Number of track pads	pcs.		40	
	Width of track pad	mm		510	
Ground contact pressure with standard working attachment (boom, dipper and bucket)	Width 300 mm (triple grouser)	Nm2	with cabin	3.1	3.0
			without cabin	3.0	2.9

Document Title: <b>Removing and installing the superstructure</b>	Function Group: <b>7185</b>	Information Type: <b>Service Information</b>	Date: <b>2014/4/17</b>
Profile:			

## Removing and installing the superstructure

### Disassembly

Op nbr



**Figure 1**  
**Lifting the superstructure**

### **WARNING**

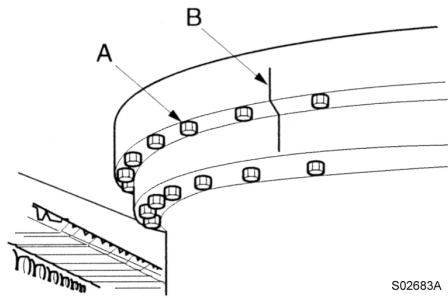
The superstructure has a weight of approx. 225 kg (without counter weight and working attachment). Before starting to disassemble or assemble the superstructure make sure the excavator is safely parked and the area around is safe.

1. Remove the working attachment.
2. Remove cabin and engine hood.
3. 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.

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



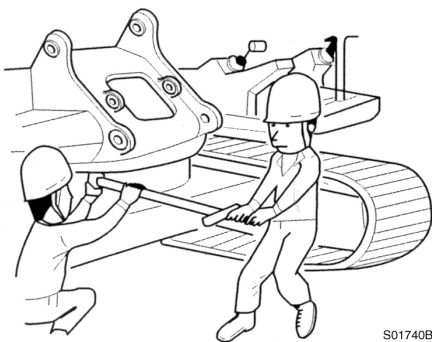
**Figure 2**  
**Assembled live ring**

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

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

### Assembly

#### Op nbr



**Figure 3**  
**Assembling the superstructure**

1. Tie the hoses connected to the rotary oil distributor together and fasten them upright.
2. Cover the screws and tapped bores of the live ring with "Three Bond 1215" (Loctite 515).
3. Lift up the superstructure and lower it onto the live ring.  
Lower the superstructure so that the pinion engages in the live ring.  
Tighten the screws crosswise.

#### **NOTE!**

Tightening torque, see torque table.

4. Connect the hoses. Reinstall the screw of the rotary oil distributor and the cover.
5. Assemble cabin and engine hood.

Document Title: <b>Removing and installing the guide sprocket</b>	Function Group: <b>7751</b>	Information Type: <b>Service Information</b>	Date: <b>2014/4/17</b>
Profile:			

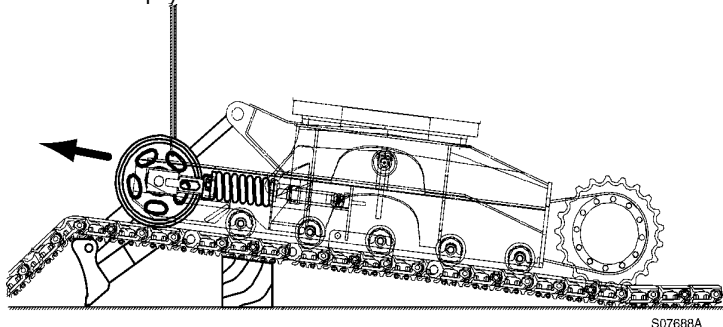
## Removing and installing the guide sprocket

### Disassembling

#### Op nbr

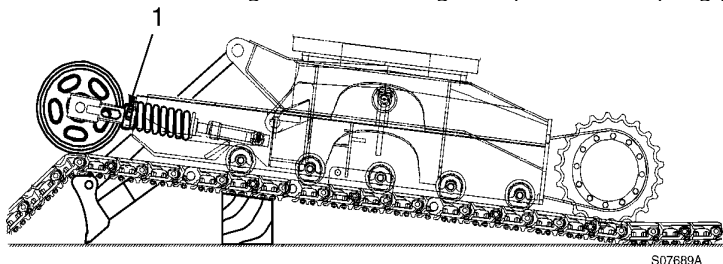
Wire rope 1.5 m

1. Raise the machine with the dozer blade and support it with wooden blocks [Invalid linktarget] .
2. Remove the track or rubber track respectively, see [Invalid linktarget] .
3. 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.



**Figure 1**  
**Remove the guide sprocket unit.**

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



**Figure 2**  
**Remove the connecting screws.**

### Installation

#### Op nbr

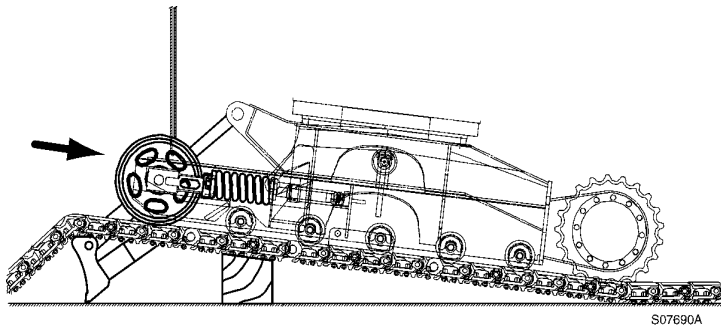
Wire rope 1.5 m

1. Tighten the connecting screws (1) for guide sprocket and spring pack.

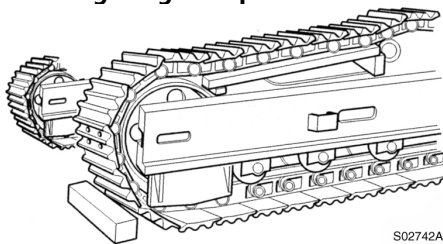
2. Sling a wire rope around the spring pack holder, lift up the guide sprocket unit, then attach the sliding shoe and slide it into the groove on the crawler frame.



Make sure that the cast recess on the piston end of the spring pack is located in the crawler frame bore.



**Figure 3**  
**Installing the guide sprocket unit**



**Figure 4**  
**Installing the track or rubber track resp.**

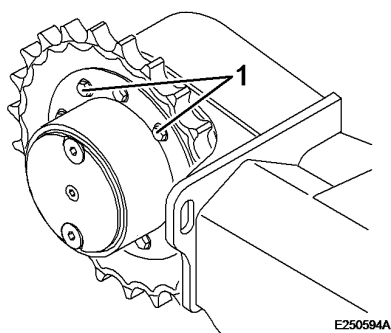
3. Installation of track or rubber track, see [Invalid linktarget] .
4. Adjusting the track sagging, see [Invalid linktarget] .

Document Title: <b>Removing and installing the track drive</b>	Function Group: <b>7752</b>	Information Type: <b>Service Information</b>	Date: <b>2014/4/17</b>
Profile:			

## Removing and installing the track drive

### Disassembling

#### Op nbr

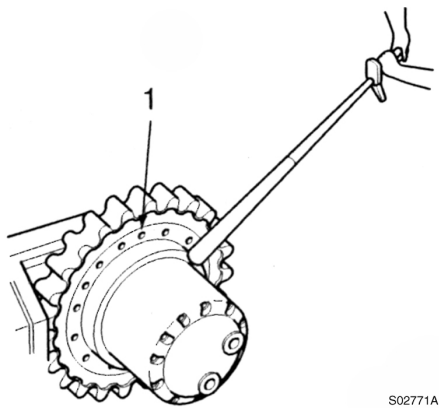


**Figure 1**

1. Remove the track or rubber track respectively, see [Invalid linktarget] .
2. 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.
3. Unscrew the track drive fastening screws (1) with a socket wrench.

### Installation

#### Op nbr



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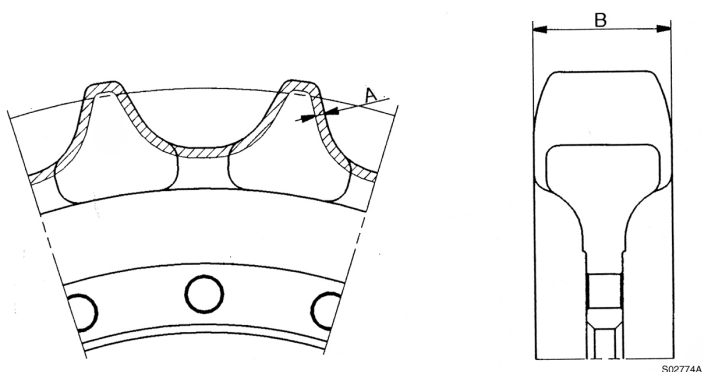
**Figure 2**  
**Tightening, fastening screws**

Assembly must bbe performed in reverse order.

1. Attach the track drive to the travel gear housing.
2. Slightly cover the track drive fastening screws (1) with Loctite 277 and tighten with 95 Nm.
3. Installation of track or rubber track, see [Invalid linktarget] .
4. Adjusting the track sagging, see [Invalid linktarget] .

Document Title: <b>Track drive, wear measurement</b>	Function Group: <b>7752</b>	Information Type: <b>Service Information</b>	Date: <b>2014/4/17</b>
Profile:			

## Track drive, wear measurement



**Figure 1**  
**Track drive**

**Wear limit, unit: mm**

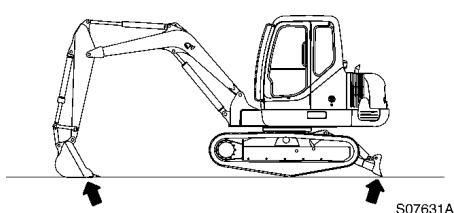
Symbol	Item		Specification	Remedy
A	Wear limit on teeth of track drive hub		5	Replace
B	Width of track drive	Specified dimension	42	
		Permissible value	36	
C	Number of teeth		23 pcs.	-



Document Title: <b>Adjusting the track sagging</b>	Function Group: <b>7753</b>	Information Type: <b>Service Information</b>	Date: <b>2014/4/17</b>
Profile:			

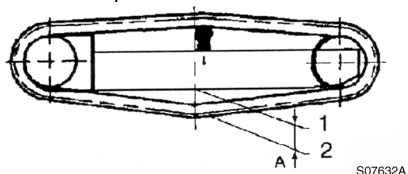
## Adjusting the track sagging

Op nbr



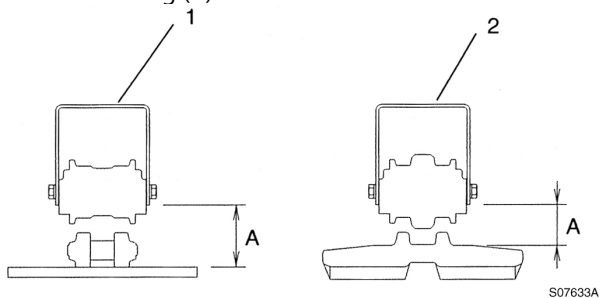
**Figure 1**  
**Lifting the excavator**

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



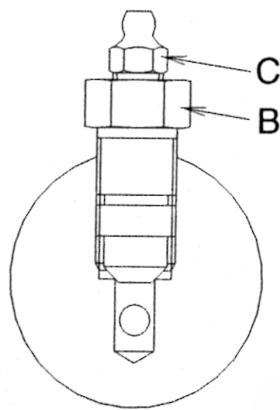
**Figure 2**  
**Measure the sagging of the track**

1. Bottom side of frame
2. Top side of track link
2. Run the track several times forward and reverse. Stop the track during reverse movement.
3. 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



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**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.

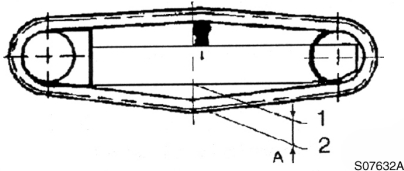
Do not stand near the guiding sprocket, because the track tensioning device may drop down.

4. 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.

5. Match the sagging of the track to the soil conditions on the construction site. See following table.



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**Figure 5**

**Measure the sagging of the track**

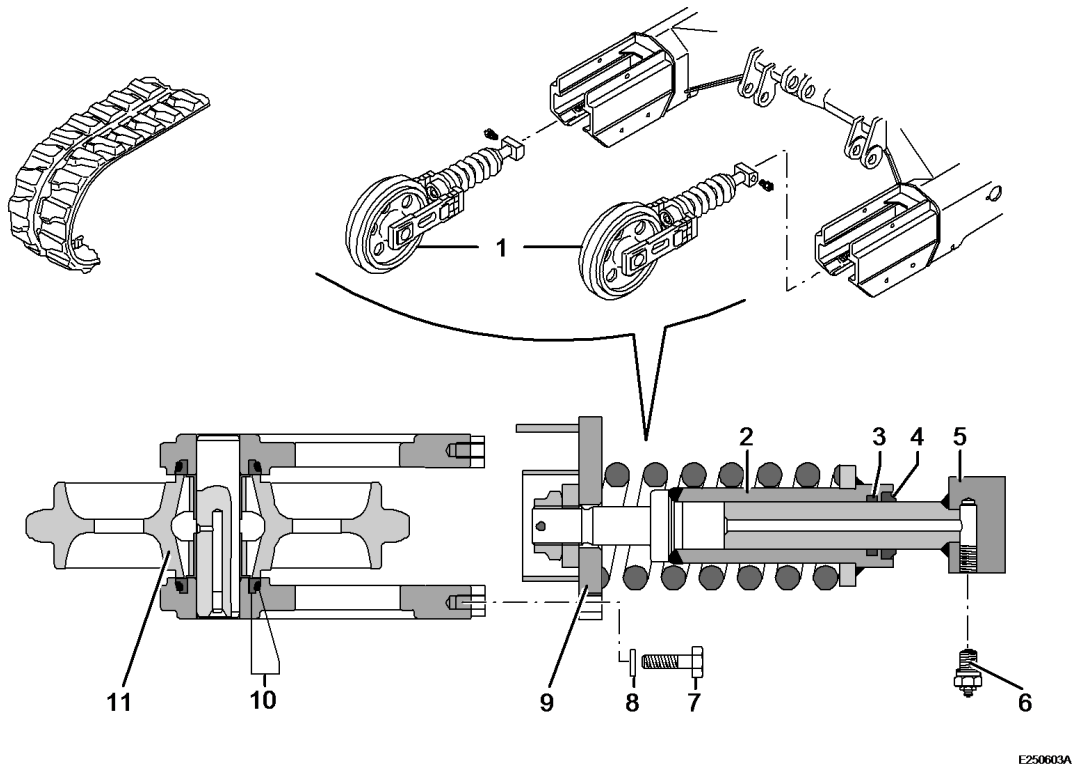
1. Bottom side of frame
2. Top side of track link

#### **Track sagging, steel track**

Soil condition	Distance (A) mm
Normal soil	130 - 140
Rock	110 - 120
Soft ground (swamp, clay, sand)	140 - 150

#### **Track sagging, rubber track**

Soil condition	Distance (A) mm
----------------	--------------------

**Figure 6**

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

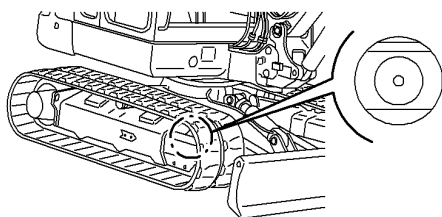
**Track tensioning device**

Document Title: <b>Removing and installing the track</b>	Function Group: <b>7753</b>	Information Type: <b>Service Information</b>	Date: <b>2014/4/17</b>
Profile:			

## Removing and installing the track

### Disassembling

#### Op nbr



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**Figure 1**  
**Position, main bolt**

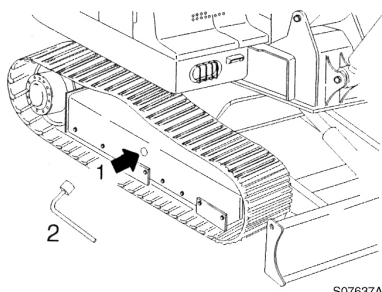
1. Each track link is fastened with a main bolt. Move the machine until the bolt has reached the position indicated by the arrow.



**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.

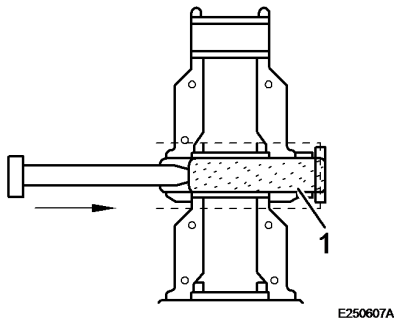
Do not stand near the guiding sprocket, because the track tensioning device may drop down.



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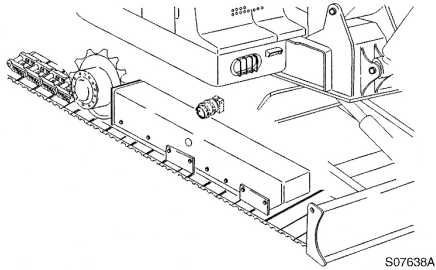
**Figure 2**  
**Slackening the track tensioning valve**

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



**Figure 3**  
**Removing the main bolt**

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

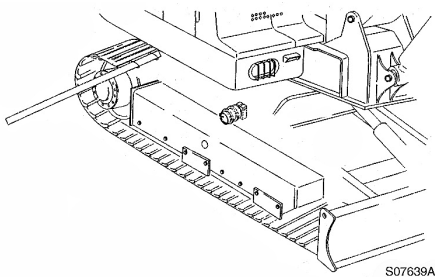


**Figure 4**  
**Slow backward movement of the machine**

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

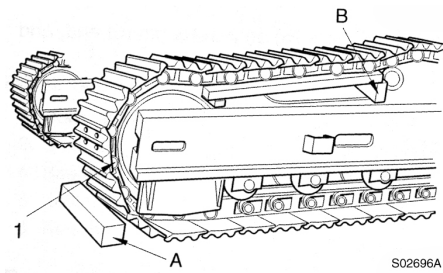
## Installation

### Op nbr



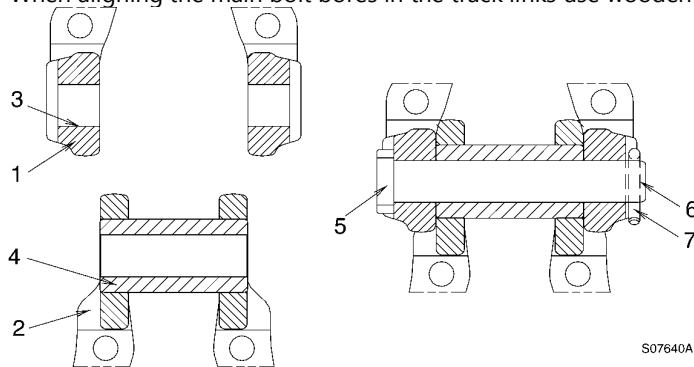
**Figure 5**  
**Inserting a rod into the bore for the main bolt.**

1. 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.



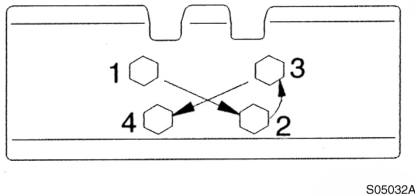
**Figure 6**  
**Supporting the track**

1. Main bolt
2. 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**

3. 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).
4. Press the main bolt (5) with a hydraulic press through the aligned bores (3) and (4).



**Figure 8**

5. Reinstall the disassembled track pads.  
Insert the screws and tighten them crosswise [Invalid linktarget] .  
Tightening torque 100-200 Nm
6. Adjust the track sagging.

Document Title: <b>Removing and installing the rubber track</b>	Function Group: <b>7753</b>	Information Type: <b>Service Information</b>	Date: <b>2014/4/17</b>
Profile:			

## Removing and installing the rubber track

### Disassembling

Op nbr

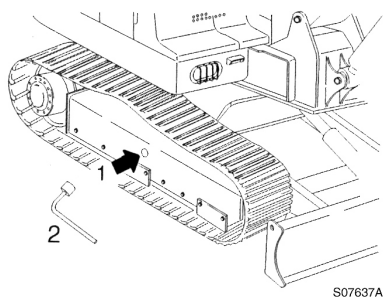


### WARNING

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.

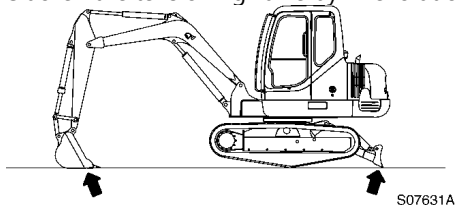


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**Figure 1**

**Slackening the track tensioning valve**

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



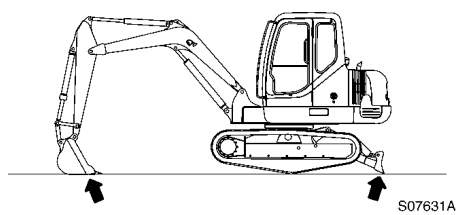
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**Figure 2**

**Lifting the excavator**

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

### Installation



**Figure 3**  
**Lowering the excavator**

1. Lay the rubber track onto track drive and guide sprocket.
2. Run the rubber track several times forward and backward and stop the track in backward movement.
3. Adjust the sag of the rubber track.
4. Lower the superstructure by lifting the boom.

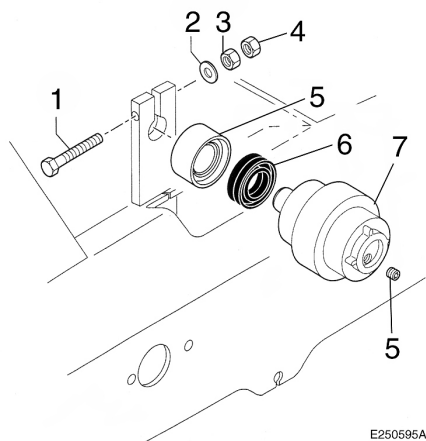


Document Title: <b>Removing and installing the track supporting idler</b>	Function Group: <b>7755</b>	Information Type: <b>Service Information</b>	Date: <b>2014/4/17</b>
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## Removing and installing the track supporting idler

### Disassembling

#### Op nbr



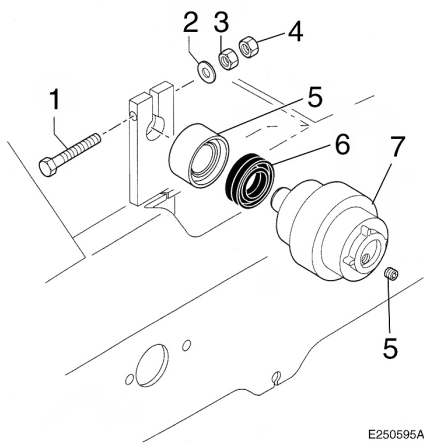
**Figure 1**

### Disassembling the track supporting idler

1. Increase the track sagging, see [Invalid linktarget] .
2. Loosen counter nut (4) and unscrew nut (3).
3. Pull screw (1) out of the holder and take off the track supporting idler.

### Installation

#### Op nbr



**Figure 2**  
**Assembling the track supporting roller**

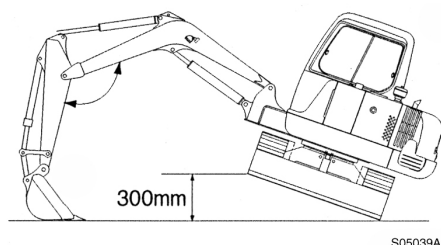
1. Insert the track roller with a new seal into the holder.
2. Cover screw (1) slightly with Loctite 277, assemble washer (2), turn on nut (3) and tighten with 90...130 Nm.
3. Tighten counter nut (4) and hold nut (3).
4. Adjust the track sagging.

Document Title: <b>Removing and installing the track roller</b>	Function Group: <b>7756</b>	Information Type: <b>Service Information</b>	Date: <b>2014/4/17</b>
Profile:			

## Removing and installing the track roller

### Disassembling

#### Op nbr



**Figure 1**  
**Lifting the machine**

1. Relieve the track, see [Invalid linktarget] .
2. Lift the track approx. 300 mm off the ground, as shown.
3. Place a wooden block under the track and unscrew the fastening screws (1).
4. Pull out the track roller.

**NOTE!**

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

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