

Identification of warning and danger signs

All parts of this manual having to do with your safety or the safe operation of the machine are marked with the following signs. Please pass all safety instructions on to other users, too.



DANGER!

Sign to indicate instructions which must be observed. Failure to do so would cause danger to life and limb to the operator and the people around him.

☞ Preventive measures



ATTENTION!

Sign to indicate instructions which must be observed. Failure to do so could result in damage to the machine.

☞ Measures to prevent damage to the machine.



NOTE!

Sign to indicate instructions for a more efficient and economic use of the machine.



CAUTION!

Sign to indicate instructions to be followed during disassembly / assembly.



ENVIRONMENT!

Sign to indicate instructions which must be observed in order to avoid damage to the environment.

Danger to the environment is caused by irregular handling and incorrect disposal of toxic material (e.g. old oil).

The warning and instruction signs placed on the machine provide important recommendations for safe operating. These instructions involve your safety – observe them at all times!

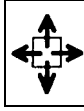
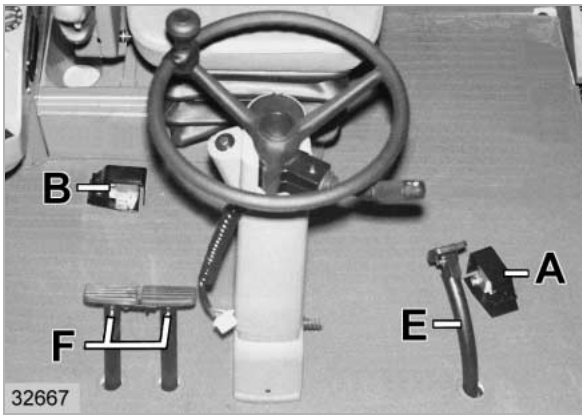
Correct use of the machine

Fitting and retrofitting of ancillary equipment which is not originally manufactured by CLAAS, and, in addition, also modifications and changes may only be carried out with the consent of CLAAS, as any such actions may have considerable adverse effects on the safety and operational function of the machine.

Any arbitrary modifications carried out on the machine will relieve the manufacturer of all liability for any resulting damage or injury.

General safety and accident prevention regulations

1. In addition to the instructions contained in this manual, also observe the general safety and accident prevention regulations.
2. Always comply with local traffic regulations when driving on public roads.
3. Before starting the engine ensure that the transmission is in neutral and that all guards are installed and in their correct position.
4. Start the engine only from the operator's seat. Never attempt to start the engine by shortening across the starting motor terminals as the machine may immediately start to move.
5. Before moving away, always check the immediate vicinity of the machine. Ensure adequate visibility. For a warning, always blow the horn before starting up!
6. Never run the engine in a closed building!
7. Clothing worn by the fitter must be close-fitting. Avoid wearing loose jackets, shirts or ties.
8. Handle fuel with care. – It is highly flammable. Never refuel the machine in the vicinity of naked flames or sparks. Do not smoke during refuelling!
9. Always stop the engine and remove the ignition key before refuelling. Fill the fuel tank outdoors. Clean up any spilled fuel immediately!
10. Prevent fires by keeping the machine clean!
11. Take care when handling brake fluid and battery acid (toxic and corrosive)!
12. Always blow the horn before starting the engine and engaging the main drive.



Removing the steering column

Unbolt the two foot switches (A and B) and disconnect the cable plugs.

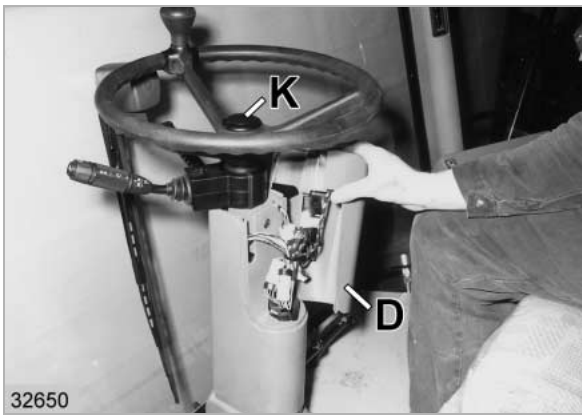
Remove the top from the parking brake pedal (E). For this unscrew the M 6 bolt and drive out the pin.

Remove the tops from the two foot brake pedals (F) by unscrewing one M 8 bolt each.

Pull the floor mat halves over the pedals (E and F) and then remove them from the cab.

1

(Fig. 1)



2

Remove the inspection cover (D) from the cover to one side and disconnect the five cable plugs.

Remove the centre cover (K).

(Fig. 2)

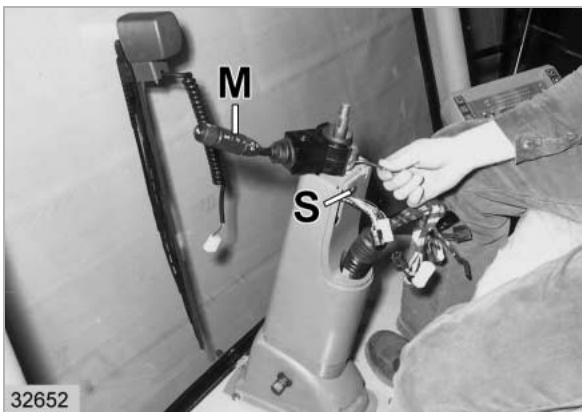


3

Unbolt the M 16 hex. nut.

Using a three-armed puller, pull the steering wheel off the shaft.

(Fig. 3)

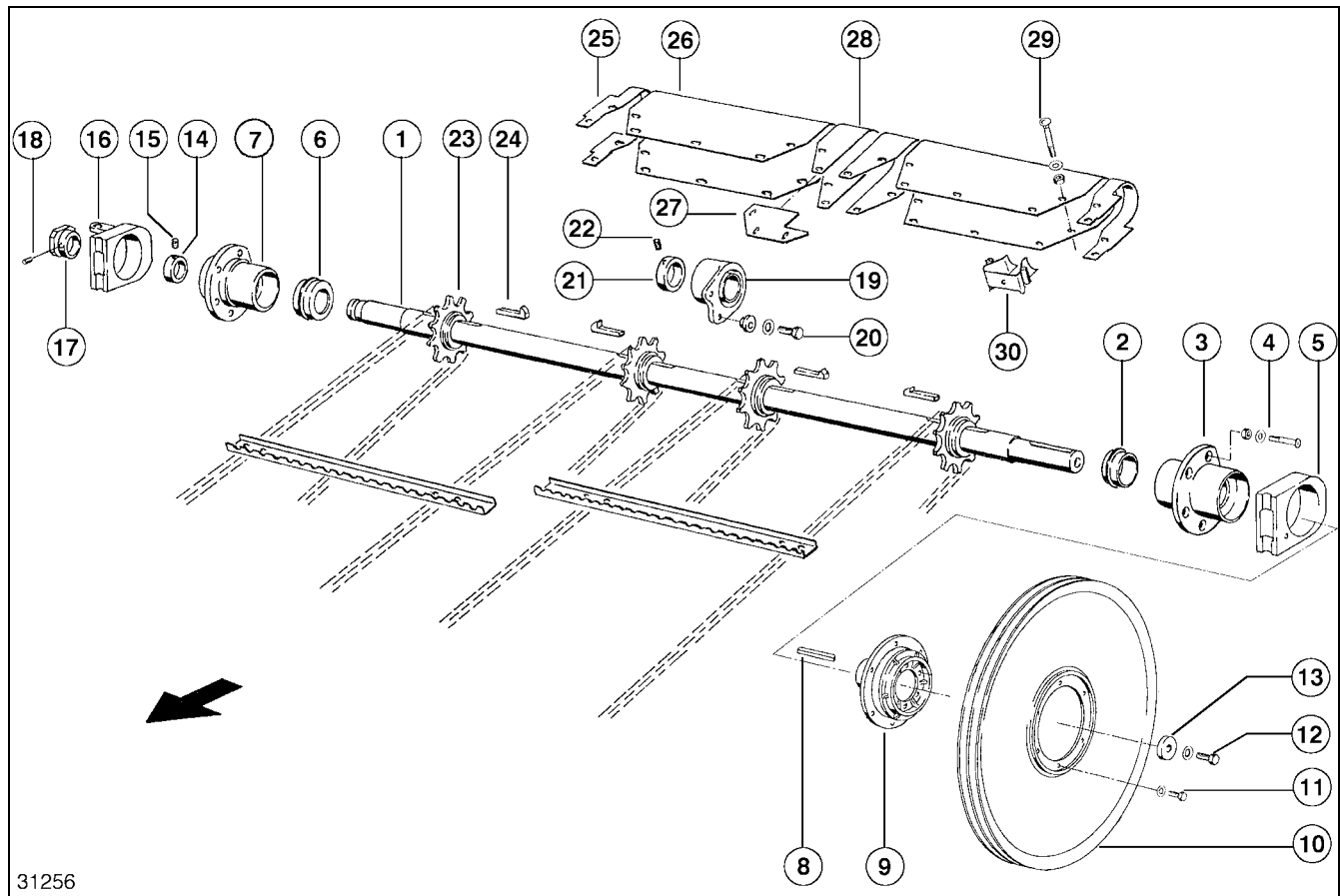


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Remove the M 5 x 16 cheese-head screw and then the multifunction switch (M).

Remove the screw (S) so that the upper section of the steering column cover can be removed.

(Fig. 4)



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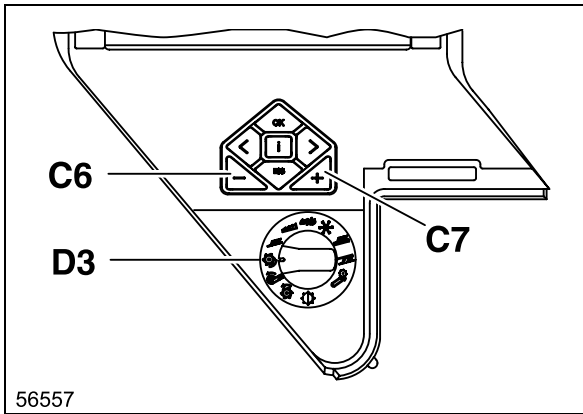
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Feed rake top shaft, disassembled

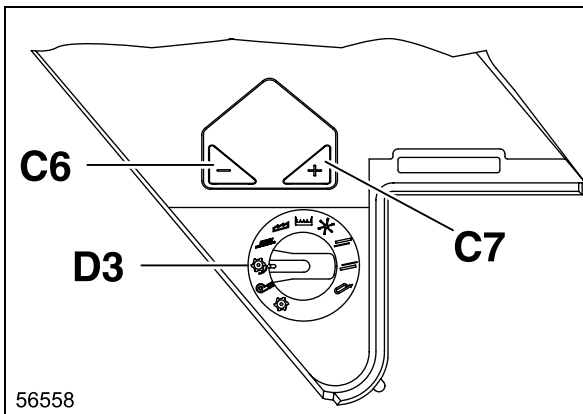
- 1 Feed rake top shaft
- 2 Protective tube
- 3 Bearing assembly, mounted
- 4 Countersunk head bolt M 12 x 65 DIN 7991
Hex. nut M 12 DIN 934
Contact washer A 12
- 5 Bearing housing
- 6 Protective tube
- 7 Bearing assembly, mounted
- 8 Parallel key A 14 x 9 x 100
- 9 Slip clutch
- 10 V-belt pulley
- 11 Hex. bolt M 10 x 35 DIN 933-8.8
Contact washer A 10
- 12 Hex. bolt M 16 x 50 DIN 933-8.8
Contact washer A 16
- 13 Washer
- 14 Lock collar 45
- 15 Set screw M 10 x 1.25 x 8 DIN 916
- 16 Bearing housing
- 17 Cam wheel
- 18 Set screw M 10 x 8 DIN 916
- 19 Bearing assembly, mounted
Adjusting plate
- 20 Hex. bolt M 12 x 30 DIN 933-8.8
Contact washer A 12
- 21 Lock collar 50
- 22 Set screw M 10 x 1.25 x 8

- 23 Sprocket, 11 teeth
- 24 Gib head key 14 x 9 x 63
- 25 Anti-wrapping guard
- 26 Anti-wrapping guard
- 27 Sealing plate
- 28 Anti-wrapping guard
- 29 Mushroom head bolt M 8 x 25 DIN 603
Hex. nut M 8
Contact washer A 8
- 30 Filler section

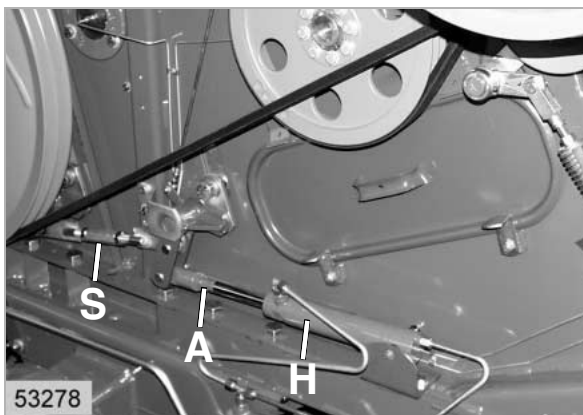
(Fig. 45)



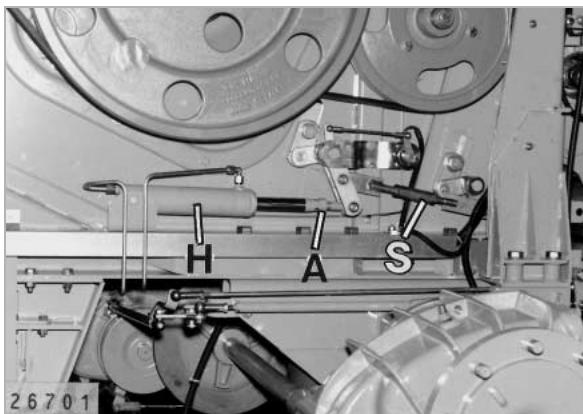
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Basic concave setting



NOTE!

When engaging the threshing mechanism after an extended standstill period, the electronic unit moves the concave to the closest and the widest position.

After this, it moves the concave back to the pre-selected position.

1. Bleeding the hydraulic cylinder:

Let the engine run during the bleeding process.

Turn the rotary switch to position (D3).

- Move the concave to the widest position by actuating pushbutton (C7).

Once the concave is closed, leave your finger on the key (C7) for a further 15 – 20 sec.

Important! Check that the concave adjustment hydraulic cylinders (H) are fully extended.

- Then move the concave to the closest position by actuating pushbutton (C6).

Once the concave is closed, leave your finger on the key (C6) for a further 15 – 20 sec.

Important! Check that the concave adjustment hydraulic cylinders (H) are fully retracted.

The bleeding process is complete.

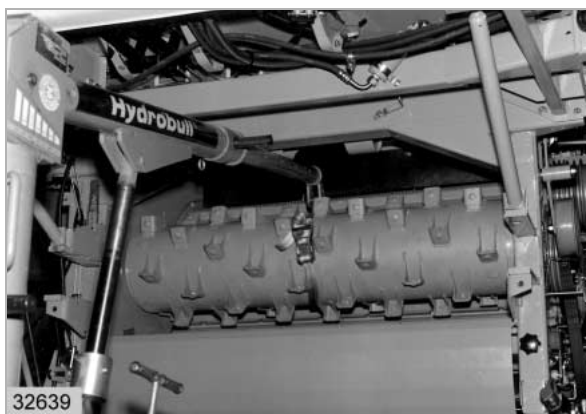
(Fig. 39, 40, 41, 42, 43)

2. Checking the basic concave settings:

Measure the basic setting. To do this bleed the hydraulic cylinders and move the concave to the narrowest position.

The lengths of the turnbuckles, hydraulic cylinders and potentiometer linkage must be set according to the specified dimensions.

(Fig. 43, 44)



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Place the accelerator (1) in position on the two anti-wrapping guards (5).

(Fig. 50, 54)



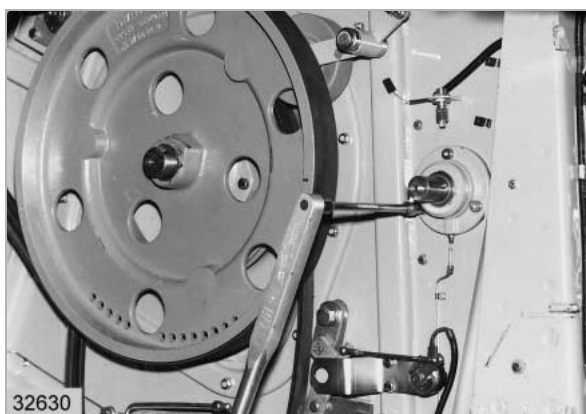
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Slightly grease the bearing seat.

Using a plastic-tip hammer, drive the shaft (2) and the bearing assembly (7 – 12) together into the accelerator (1).

(Fig. 50, 55)



56

Using a suitable lever, raise the accelerator (1) up.

Bolt the bearing assembly to the drum housing using the three cheese-head screws (11).

Tightening torque = 78 Nm

Now reconnect the grease pipe to the bearing housing (10).

(Fig. 50, 56)



57

On the left-hand side of the machine, the bearing bore and the shaft seat should be clean and free from grease.

Push the bearing assembly (13 – 16) onto the shaft end.



Using the special tool (W), push the bearing assembly to the drum wall.

(Fig. 50, 57)



5

Carefully lower the separating grate toward the middle, detach it from the outside guide rail and place it on to the return floor.

(Fig. 5)



6

Pull all the grates, one after the other, to the rear and remove.

(Fig. 6)



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To ease removal of the separation grates, place the grates crosswise on to the return floor.

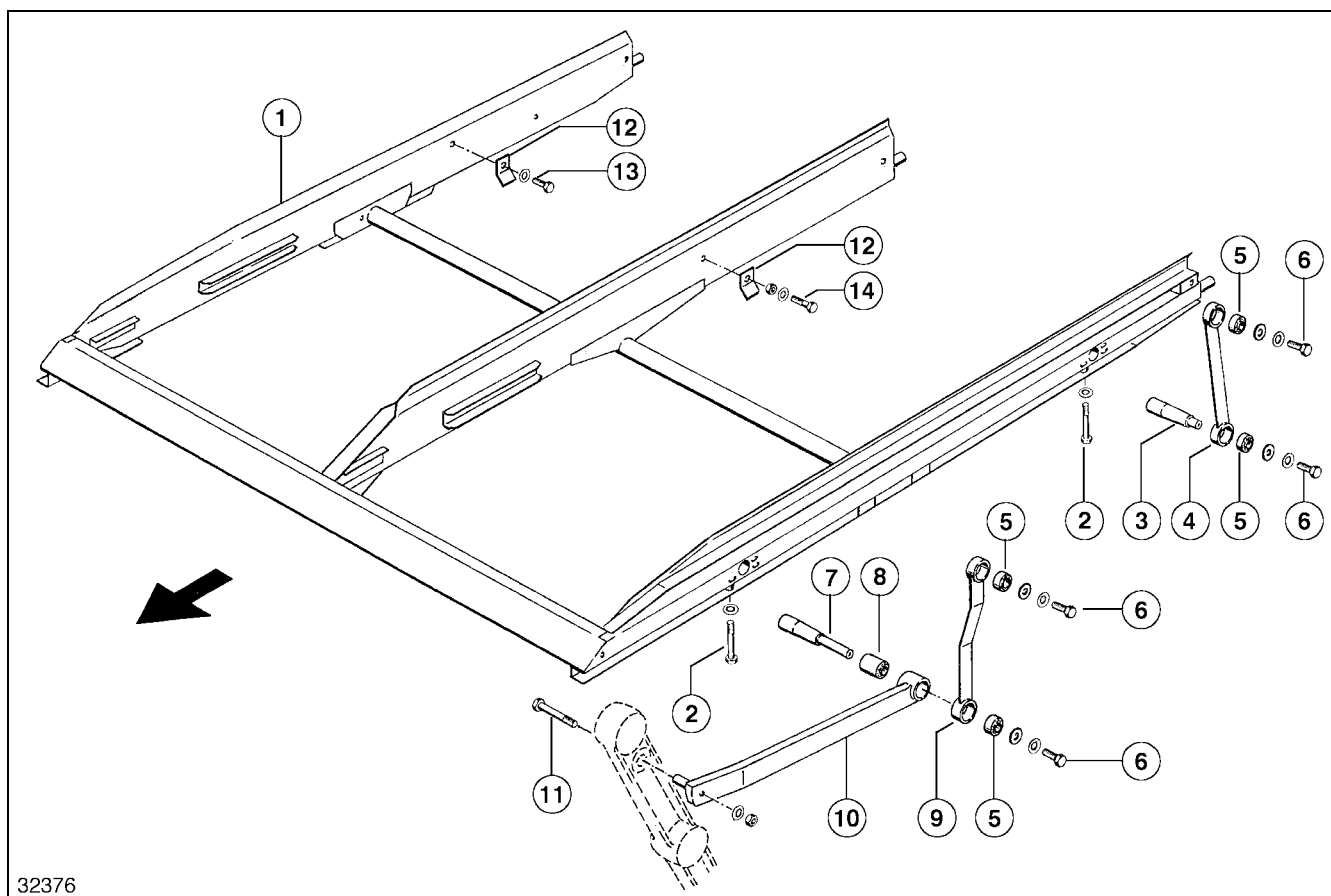
(Fig. 7)



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When the separation grates have been removed, the toothed bars can be renewed for instance.

(Fig. 8)



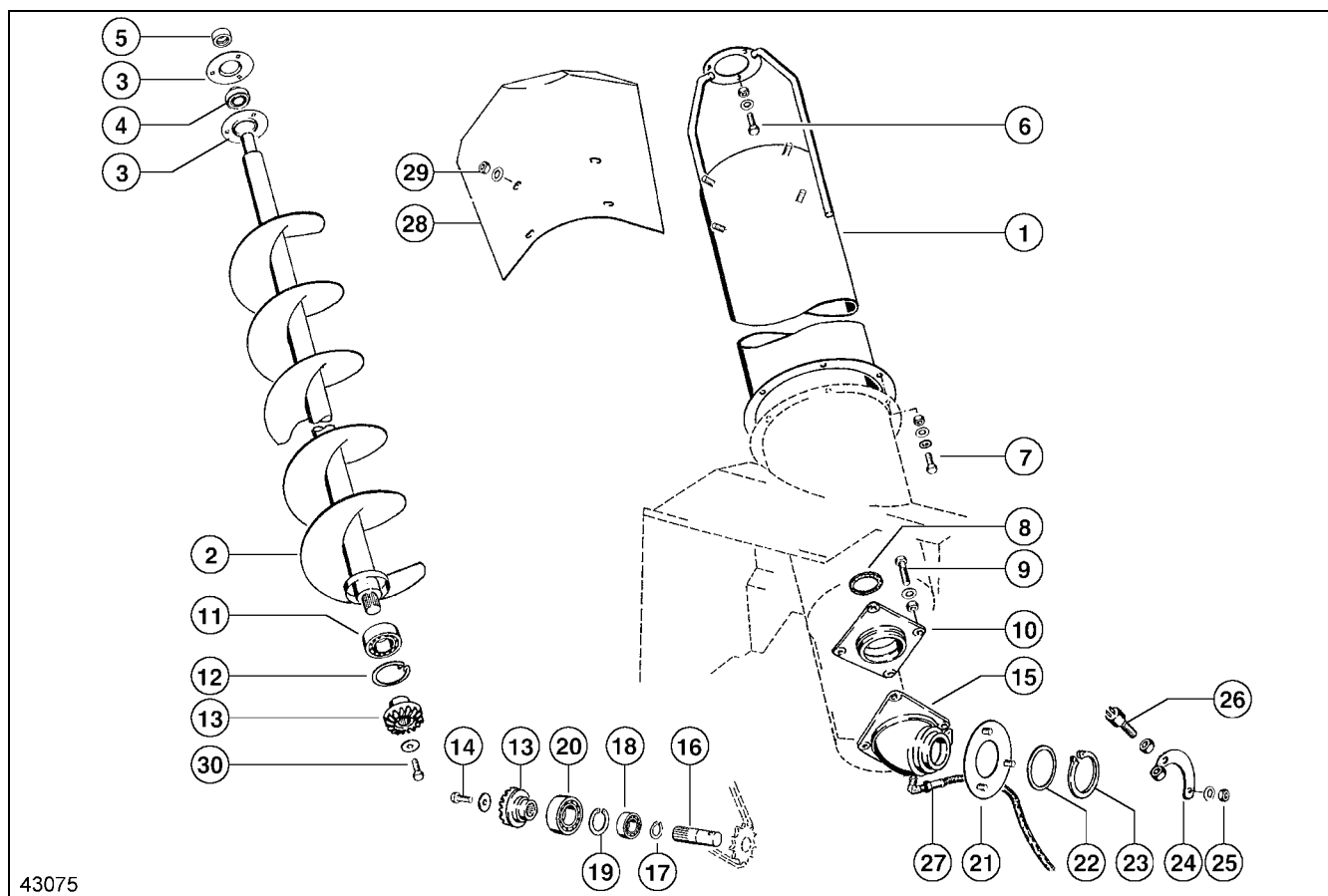
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3-D upper sieve frame, disassembled

- 1 Upper sieve frame
- 2 Hex. bolt M 10 x 75 DIN 931-10.9
Contact washer A 10
- 3 Pin
- 4 Rear control arm
- 5 Metal/rubber bearing
- 6 Hex. bolt M 10 x 20 DIN 933-8.8
Contact washer A 10
Washer 11 x 26 x 4
- 7 Pin
- 8 Metal/rubber bearing
- 9 Front control arm
- 10 Thrust rod
- 11 Pin (up to serial no. ...)
Hex. bolt M 10 x 90 DIN 931-8.8
(from serial no. ...)
Contact washer A 10
Hex. nut M 10 DIN 934-8.8
- 12 Clamping piece
- 13 Hex. bolt M 10 x 25 DIN 933-8.8
Contact washer A 10
- 14 Hex. bolt M 10 x 65 DIN 933-10.9
Contact washer A 10
Hex. nut M 10 DIN 934

(Fig. 46)



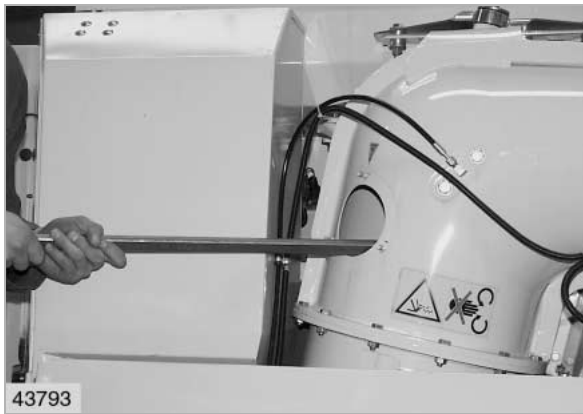
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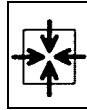
Grain tank filler auger, disassembled:

- | | |
|---|--|
| <ul style="list-style-type: none"> 1 Filler tube 2 Filler auger 3 Sheet metal flange 4 Lock collar bearing 5 Lock collar 6 Hex. bolts M 10 x 25 DIN 933-8.8 Hex. nut M 10 DIN 934 Contact washer A 10 7 Hex. bolt M 8 x 20 DIN 933-8.8 Washer 8.4 x 23 x 2 Contact washer B 8 Hex. nut M 8 DIN 934 8 Felt ring 9 Hex. bolt M 10 x 40 DIN 931-8.8 Hex. nut M 10 DIN 934 Contact washer A 10 10 Flange 11 Deep-groove ball bearing 6208-2 RS 12 Circlip 80 x 2.5 DIN 472 13 Bevel gear 14 Hex. bolt M 8 x 20 DIN 933-10.9 MK Washer 15 Housing 16 Shaft 17 Circlip 30 x 1.5 DIN 471 18 Deep-groove ball bearing 6006-2 RS 19 Circlip 55 x 2 DIN 472 20 Deep-groove ball bearing 6208-2 RS | <ul style="list-style-type: none"> 21 Bearing plate 22 Shim 23 Circlip 75 x 2.5 DIN 471 24 Mounting bracket 25 Hex. nut M 10 DIN 934 26 Magnetic pick-up Hex. nut BM 18 x 1.5 27 Hose line 28 Cover plate 29 Hex. nut M 10 DIN 934 Contact washer B 10 30 From serial no. ...: Hex. bolt M 10 x 25 DIN 933-10.9 MK Washer Up to serial no. ...: Hex. bolt M 8 x 20 DIN 933-10.9 MK |
|---|--|

(Fig. 48)



43793



Installing the horizontal grain tank unloading auger

1. Slide the horizontal grain tank unloading auger into the unloading auger tube from the rear.

The auger can be raised through the mounting opening, using a chisel.

(Fig. 39)



CAUTION!

The vertical auger must be offset by **180°**, relating to the horizontal auger in the grain tank unloading tube. The two flight ends must not touch each other. Check correct position by turning the augers.

39

2. If a 90° outlet spout is fitted:
Push the grain tank unloading auger fully to the front. Slide the flange bearing onto the auger and bolt down cover (D). Fix and secure the auger with the lock collar.

Bolt on discharge spout (90°).

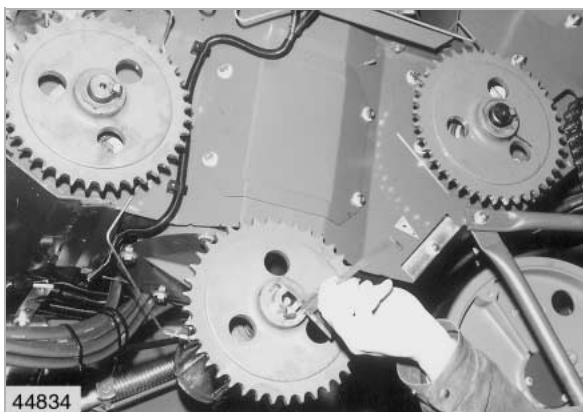
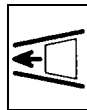
(Fig. 35)

If a 35° outlet spout is fitted:
Push the grain tank unloading auger fully to the front. Slide the bearing (L) completely on the auger and bolt it down. Observe the installation position relative to the outlet spout (35°).

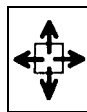
Fix and secure the auger with the lock collar.

Bolt on discharge spout (35°).

(Fig. 36)



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Removing the lower grain tank unloading angle drive

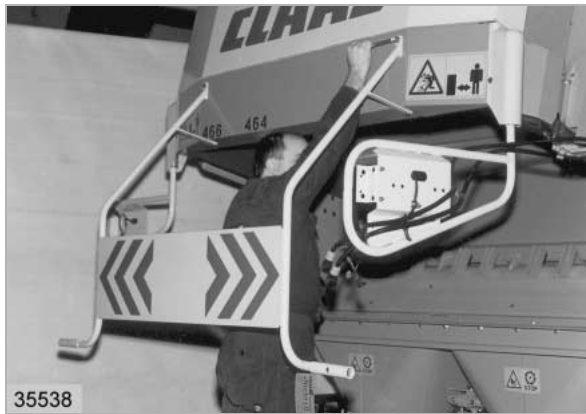
(from serial no. ...)

Release the tension of the grain tank unloading drive chain and remove chain – see page 7.2.34, *Removing the grain tank unloading drive chain (17)*.

Measure the clearance between shaft end and sprocket.

(Fig. 40)

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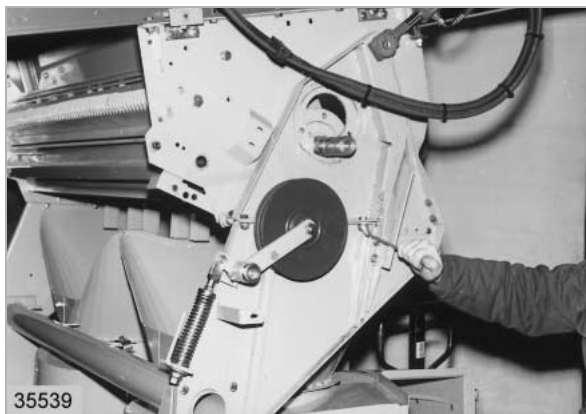


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29

Remove the safety frame.

(Fig. 29)



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30

Make sure the uni-spreader is securely supported.

Remove the left and right side panels.

Remove the jockey pulley arm completely with the jockey pulley.

(Fig. 30)



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31

Lower the uni-spreader remove it to the rear.

(Fig. 31)

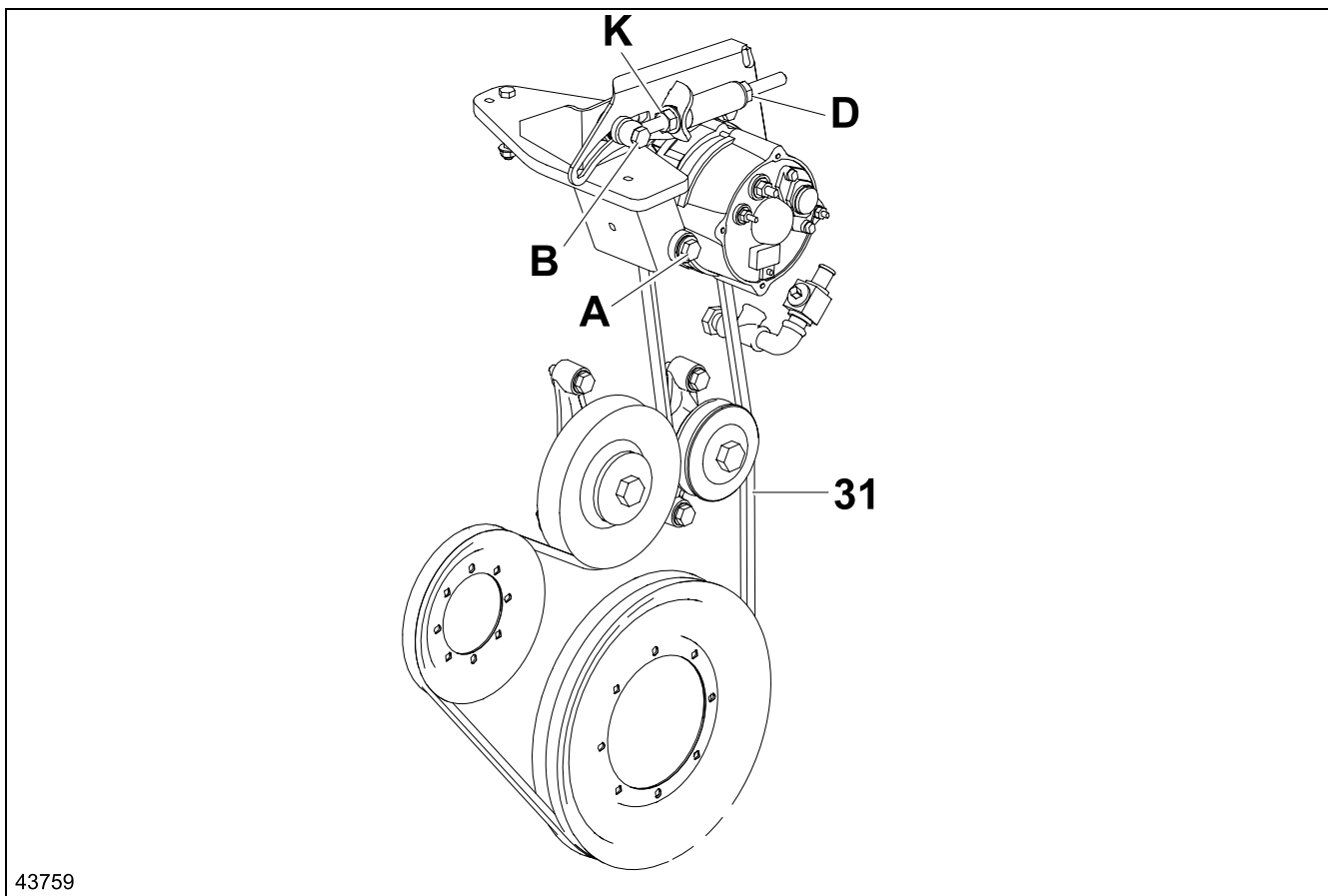


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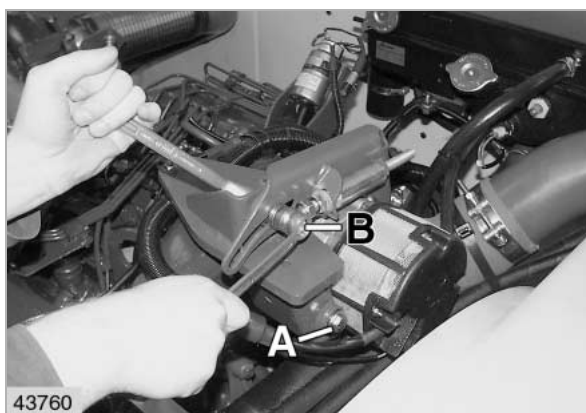
Remove the hydraulic cylinders on the left-hand and right-hand side panels of the combine and remove side panels.

(Fig. 32)

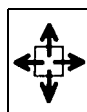


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43760



Removing the alternator drive belt (31)

Removing the fan drive belt (27), see page 7.3.15

Removing the radiator chaff screen intermediate drive belt (25), see page 7.3.12

Removing the compressed-air compressor drive belt (30), see page 7.3.21

Removing the air conditioner compressor drive belt (29), see page 7.3.19

Loosen the hex. bolt (A) from the alternator holder.

34 Unscrew hex. bolt (B) from the eyebolt.

(Fig. 33, 34)



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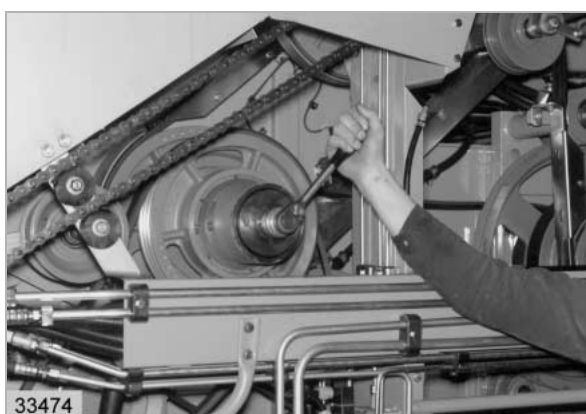
145

Remove the rotary coupling from the cutterbar drive clutch. Collect any leaking oil and seal the hydraulic connections with suitable plastic caps.

**ENVIRONMENT!**

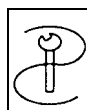
Dispose of the old oil in a way that is harmless to the environment and in accordance with existing environmental regulations.

(Fig. 145)



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146



Remove the two slotted nuts with the socket wrench part no. 181 809.0. Remove the back-up ring.

(Fig. 146)



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Remove the cylinder and the six Belleville springs.
(Fig. 147)



33476

148

Remove the three cheese-head screws.

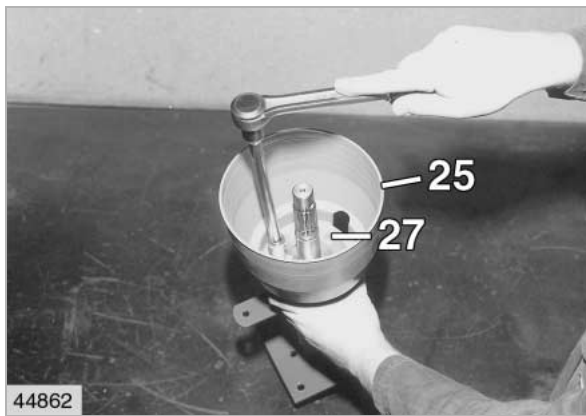
From serial no. ...:

Remove the hydraulic ram (34).

Up to serial no. ...:

Remove the hydraulic ram (22) and the mounting ring (23).

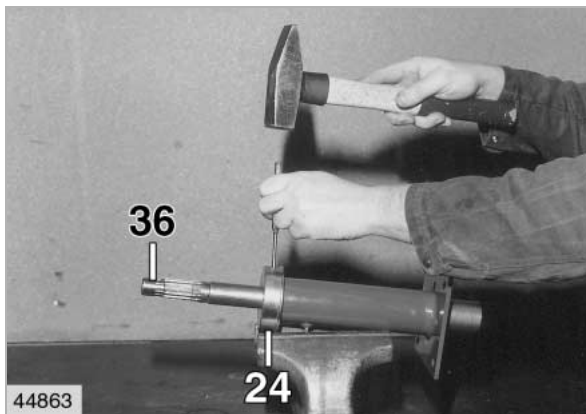
(Fig. 148, 164)



Unscrew hex. bolts (27) of conical guard (25) and remove the washer (26).

(Fig. 8, 14)

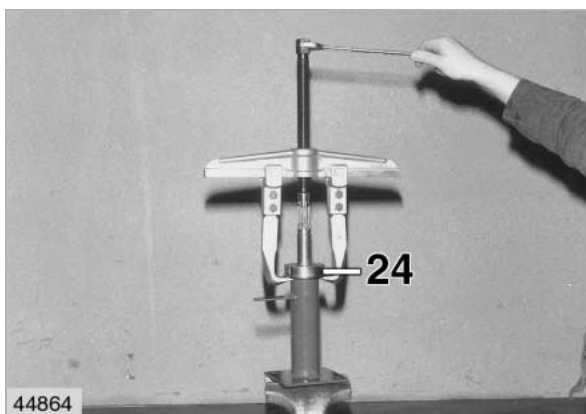
8



Secure sprocket (19) on the shaft (24) with the expansion pins (36).

(Fig. 9, 14)

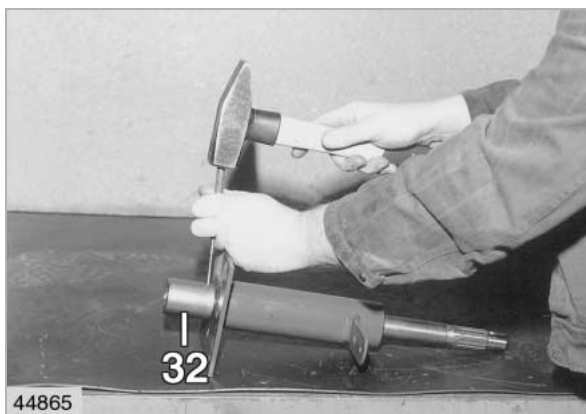
9



Pull off the hub (24) using a puller.

(Fig. 10)

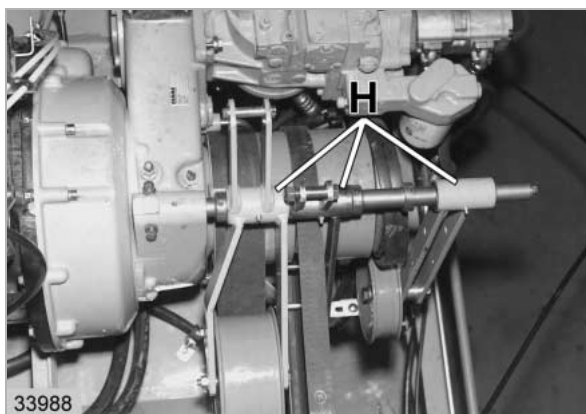
10



Drive expansion pins (30 and 31) out of the bearing bushing (32).

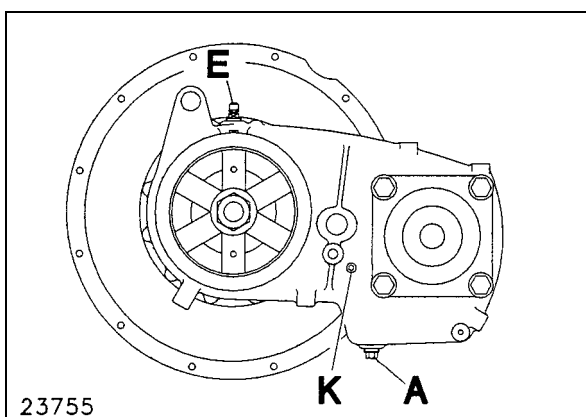
(Fig. 11, 14)

11



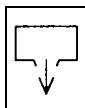
16

Slacken off the set collars and then remove the jockey pulley bracket (H).



17

Remove the old gearbox oil.



ENVIRONMENT!

Find a suitable container in which to put the old oil and then dispose off in a safe and orderly manner.

- K = Oil level check plug
- E = Oil filler plug and gearbox breather
- A = Oil drain plug

(Fig. 17)

i NOTE!

If the engine output pulley has to be removed for follow-up repairs of the transfer gearbox, unlock the castellated nut and loosen it slightly.

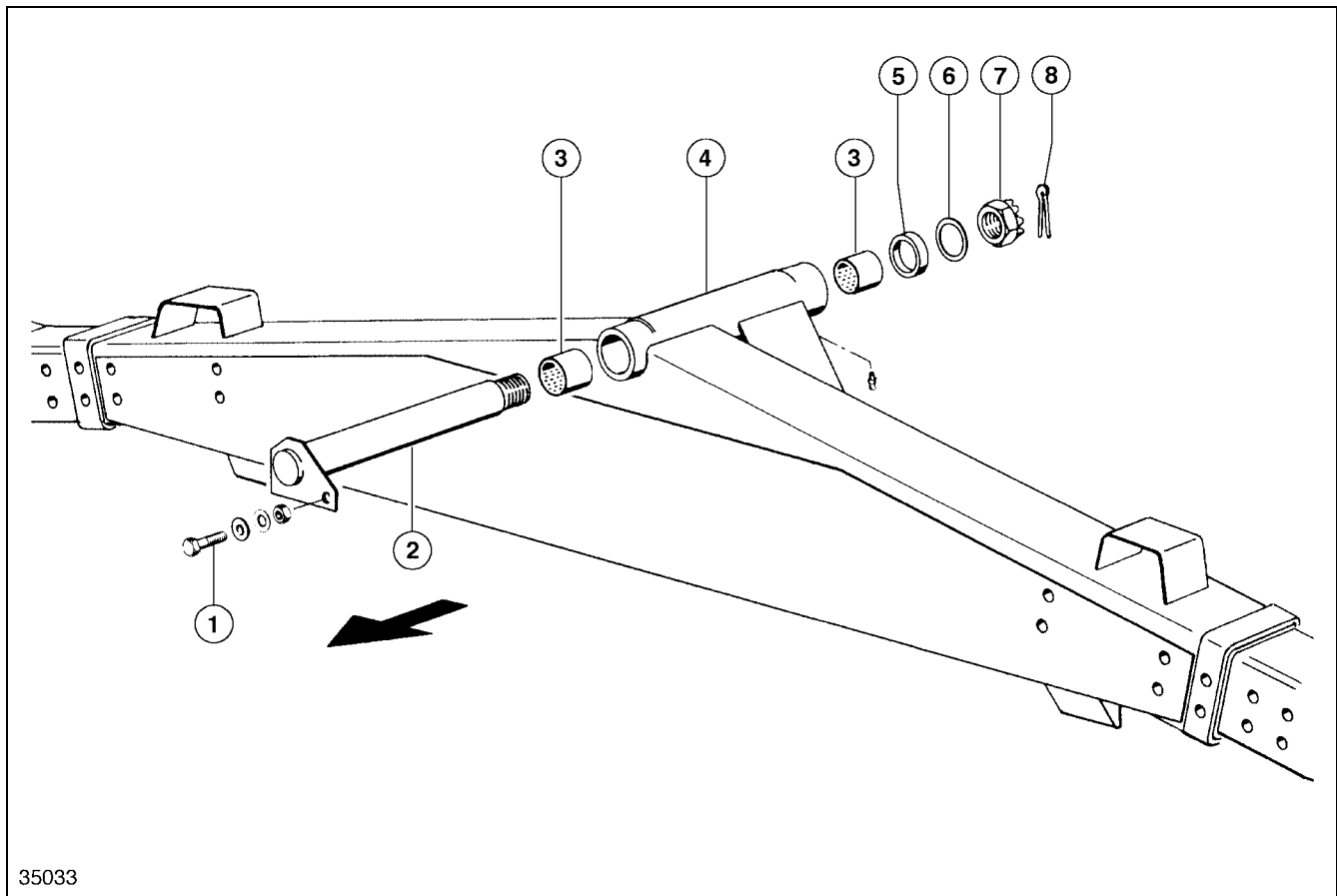
Lock the castellated nut again after loosening it.



18

Using a suitable crane, take the weight of the hydraulic pump, then unbolt the pump from the gearbox.

(Fig. 18)



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52

Steering axle bearing, disassembled

- 1 Hex. bolt M 12 x 40 DIN 933-8.8
- Washer 13 DIN 125
- Contact washer A 12
- Hex. nut M 12
- 2 Pin
- 3 Bushing
- 4 Steering axle housing
- 5 Back-up ring
- 6 Supporting ring
- Shim
- 7 Castellated nut M 42 x 1.5
- 8 Split pin 8 x 71

(Fig. 52)