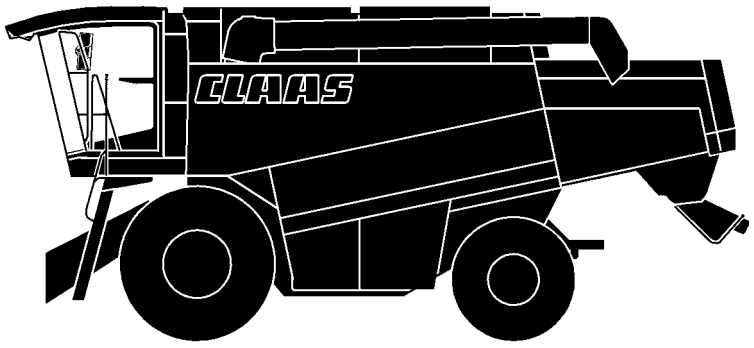
OPERATOR'S MANUAL

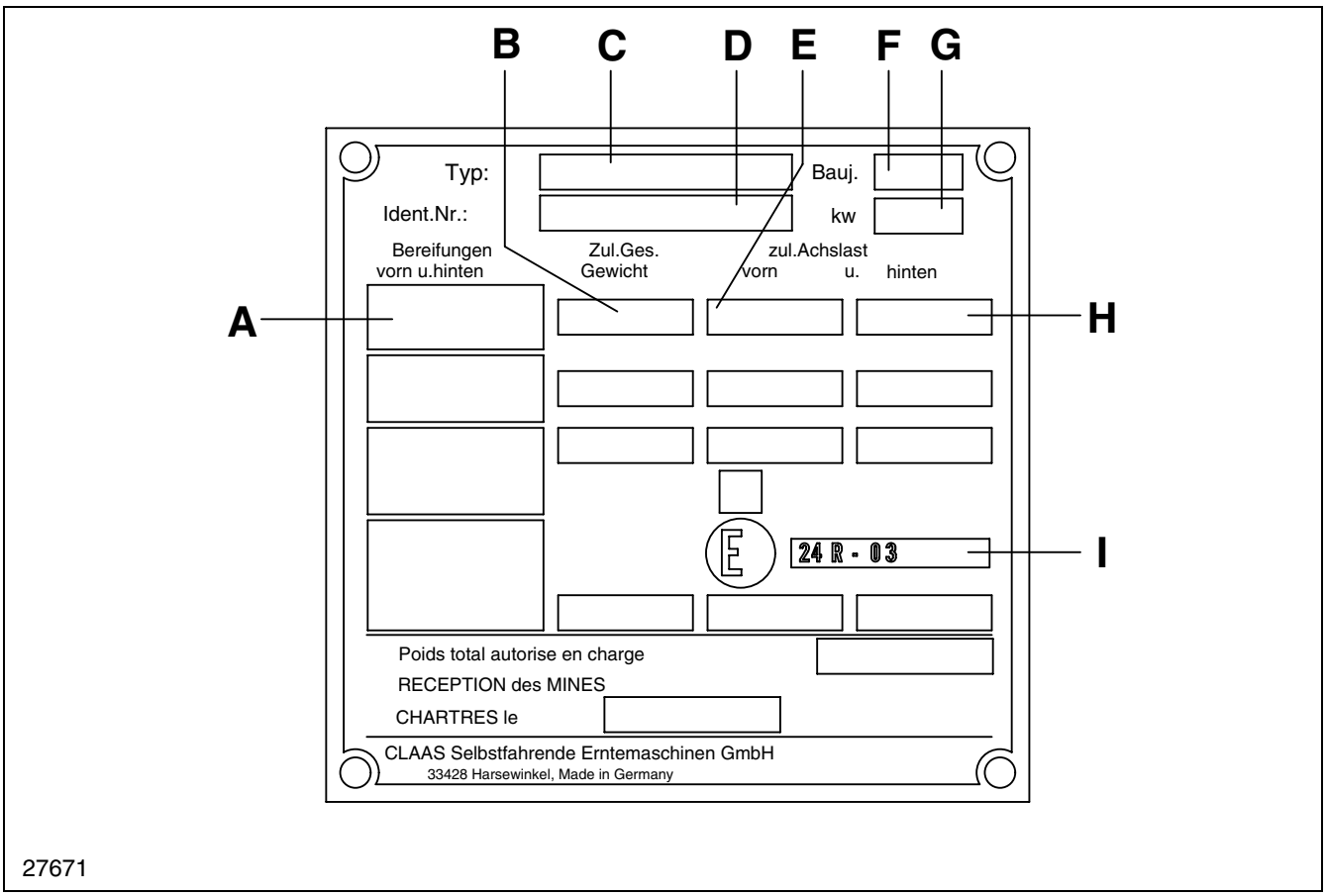
CLAAS



LEXION 460 / LEXION 450
LEXION 440 / LEXION 430
LEXION 420 / LEXION 410

IMO

10. Maintenance – basic machine



1

IDENTIFICATION PLATE / SERIAL NUMBER

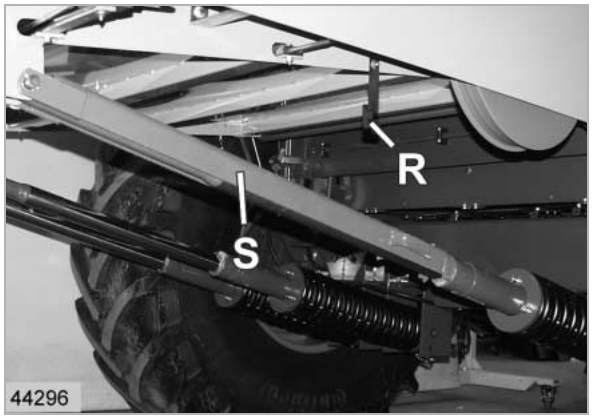
A = Tyres
B = Authorized gross weight
C = Type
D = Identification No. (serial number of machine)
E = Authorized front axle load
F = Year of manufacture
G = Rated capacity of engine (kW)
H = Authorized rear axle load
I = ECE-engine designation

(Fig. 1)

Safety lock

DANGER!

Work under raised attachment (cutterbar, maize picker head etc.) only when you are sure that the front attachment is safely supported!

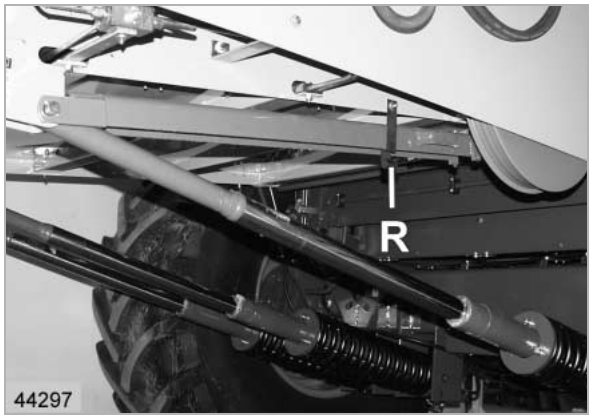


1

Completely raise the feeder housing.

Release safety lock (S) at latch (R) and fold onto the hydraulic piston.

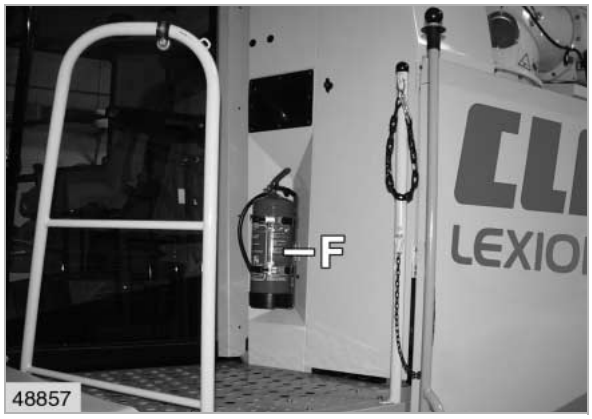
(Fig. 1)



2

During combine operation, the safety lock must be secured with latch (R).

(Fig. 2)



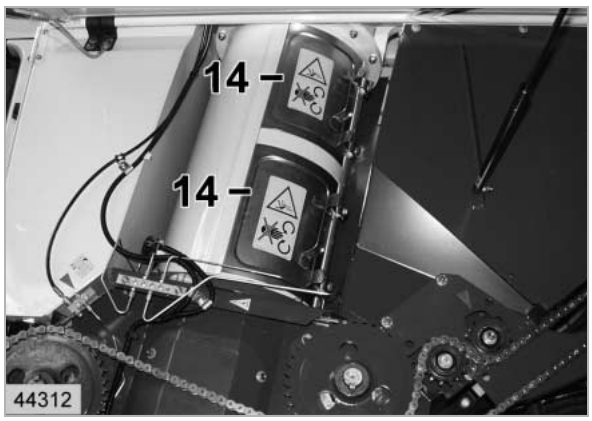
3

Fire extinguisher

The agent for the fire extinguisher manufacturer should check the extinguisher (F) at least every other year. The date of manufacture or the date last checked is shown on the extinguisher.

The fire extinguisher (F) must be installed on the left side of the machine, next to the engine compartment.

(Fig. 3)



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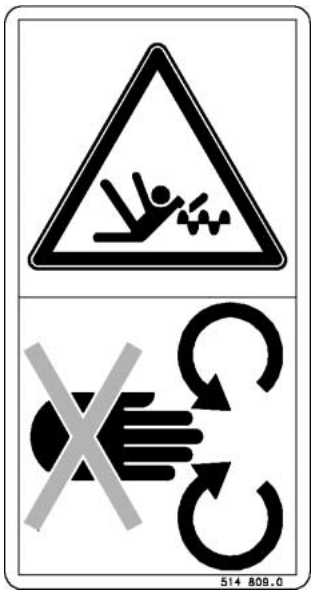


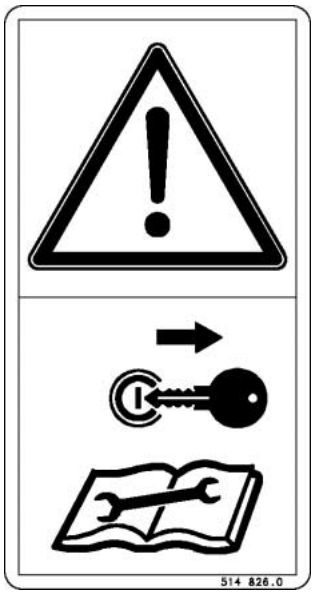
26

514 809.0 (14)

Keep hands away from rotating augers.

(Fig. 24, 25, 26)

57



58

514 826.0 (35)

Before carrying out repair and maintenance work, shut off the engine and remove the ignition key.

(Fig. 57, 58)

CLAAS LEXION 460 / 450 / 440

Cleaning unit

Forced air cleaning fan	6-section turbine fan
Wind volume control	by electrically controlled infinitely variable fan speed
Sieve pan	under-ventilated cleaning step in preparation floor, preparation floor sections can be removed from the front
– Standard sieve pan	split
– 3-D sieve pan (option)	dynamic side hill levelling, effective in 3 dimensions
Upper sieve	long-lipped frogmouth sieve
Lower sieve	short-lipped frogmouth sieve
Total cleaning area	5.80 m² (62.6 ft²)

Returns — returned to accelerator

Grain tank

Capacity	LEXION 460	9600 litres (approx. 7.6 metric tons of wheat)
	LEXION 450	8600 litres (approx. 6.9 metric tons of wheat)
	LEXION 440	8100 litres (approx. 6.5 metric tons of wheat)
Unloading tube	electro-hydraulic position control	

CLAAS LEXION 430 / 420

Specifications being determined on a machine equipped with 6-cylinder engine, full fuel tank, cabin with driver and 800/65 R 32 167 A8 R1 and 16.5/85 - 24 - 10 PR tyres.

Cutterbar	3.90 m (13'), 4.50 m (15'), 5.40 m (18'), 6.00 m (20'), 6.60 m (22'), 7.50 m (25')
Height adjustment	electro-hydraulic
Cutting height	
– Cutterbar with Auto Contour	from 595 mm* below ground level to 1440 mm* above ground level
– Cutterbar without Auto Contour	from 625 mm* below ground level to 1410 mm* above ground level
Clearance height (under cutterbar skids)	
– Cutterbar with Auto Contour	980 mm* with floatation springs in use 1270 mm* with floatation springs blocked
– Cutterbar without Auto Contour	950 mm* with floatation springs in use 1240 mm* with floatation springs blocked
	* may be as much as 50 mm less, depending on make of tyre
Intake auger	
– Speed	176 rpm with 13-tooth sprockets 204 rpm with 15-tooth sprockets
Spring tine reel	6 sections
Reel drive	V-belt-operated variable speed drive, electrically controlled
Reel speed:	
– via universal drive shaft	14-tooth sprocket infinitely variable from 12 – 47 rpm
	17-tooth sprocket infinitely variable from 15 – 57 rpm
– via intake auger	64-tooth sprocket infinitely variable from 15 – 60 rpm
	52-tooth sprocket infinitely variable from 12 – 49 rpm
Reel height adjustment	electro-hydraulic
Fore and aft reel adjustment	electro-hydraulic
Feed rake conveyor	chain conveyor
Cutterbar clutch	electro-hydraulically operated

CLAAS LEXION 410

Specifications being determined on a machine equipped with 6-cylinder engine, full fuel tank, cabin with driver and 800/65 R 32 167 A8 R1 and 16.5/85 - 24 - 10 PR tyres.

Cutterbar	3.90 m (13'), 4.50 m (15'), 5.40 m (18'), 6.00 m (20')
Height adjustment	electro-hydraulic
Cutting height	
– Cutterbar with Auto Contour	from 595 mm* below ground level to 1440 mm* above ground level
– Cutterbar without Auto Contour	from 625 mm* below ground level to 1410 mm* above ground level
Clearance height (under cutterbar skids)	
– Cutterbar with Auto Contour	980 mm* with floatation springs in use 1270 mm* with floatation springs blocked
– Cutterbar without Auto Contour	950 mm* with floatation springs in use 1240 mm* with floatation springs blocked
	* may be as much as 50 mm less, depending on make of tyre
Intake auger	
– Speed	176 rpm with 13-tooth sprockets 204 rpm with 15-tooth sprockets
Spring tine reel	6 sections
Reel drive	V-belt-operated variable speed drive, electrically controlled
Reel speed:	
– via universal drive shaft	14-tooth sprocket infinitely variable from 12 – 47 rpm
	17-tooth sprocket infinitely variable from 15 – 57 rpm
– via intake auger	64-tooth sprocket infinitely variable from 15 – 60 rpm
	52-tooth sprocket infinitely variable from 12 – 49 rpm
Reel height adjustment	electro-hydraulic
Fore and aft reel adjustment	electro-hydraulic
Feed rake conveyor	chain conveyor
Cutterbar clutch	electro-hydraulically operated

SAFETY FEATURES

Slip clutch	Slip clutch torque (cold state)	Spring length
Reel	430 ± 30 Nm	26 mm
Main table auger	700 Nm	
Upper feed rake shaft	840 ± 40 Nm	

Shear bolt	
Grain tank unloading	M 8 x 45 DIN 931-8.8 hex. bolt VM 8 self-locking nut Torque setting 25 Nm

Putting the Climatic into operation

DANGER!

Important notes regarding the compressor cooling system.

1. Avoid any contact with refrigerants!
2. Consult a physician immediately if refrigerant contacts the eye!
3. Maintenance and repairs must only be executed by a professional refrigerant workshop.
4. Welding must not be carried out on sections of the refrigerant circulation and their immediate neighbourhood. **– Danger of poisoning!**
5. The maximum ambient temperature for refrigerants is 80 °C.

Oil for the compressor and refrigerants – see Maintenance section.

Note:

When the motor is at a standstill and the ignition is switched on, the evaporator blower speed is reduced to 30% of the nominal speed after 10 minutes.

This occurs to prevent high discharge of the battery.

Switch on the ignition (start the motor).

After the ignition is switched on, the software version is displayed for 3 seconds.

Climatic self-test:

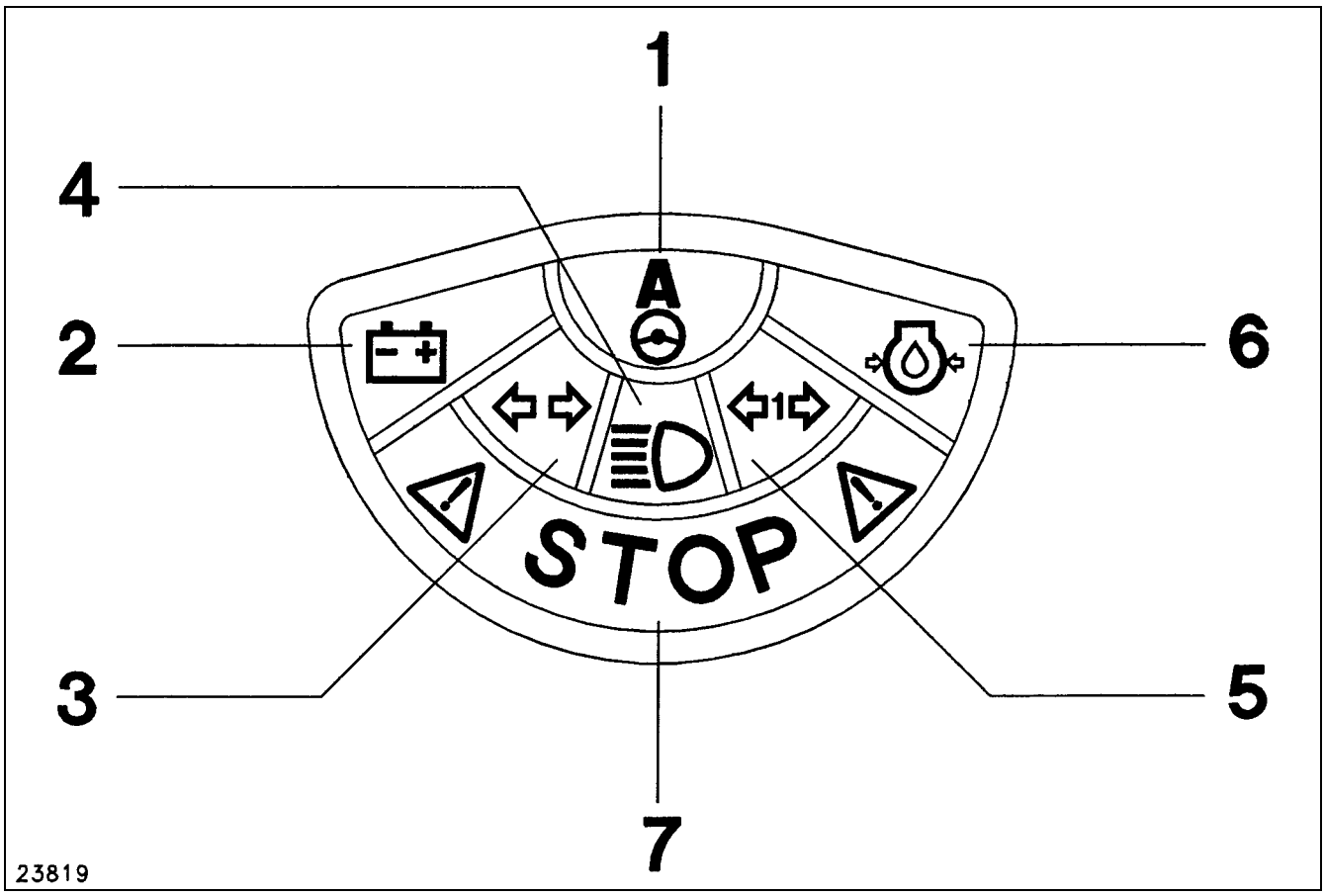
After start-up, the controller carries out a self-test. The self-test takes approximately 20 seconds.

Note:

To avoid incorrect temperature control by the automatic air conditioning system, close refrigerating box lid (8, Fig. 1) immediately after use.

Problem, possible cause and / or remedy – Compressor-type air conditioner

Problem	Possible cause and / or remedy
Air conditioning system switches off automatically. The warning light (B7) on the monitor will light up.	1. Extremely high outside temperature. Allow the system to cool down, then turn on again. Close doors and windows.
Compressor-type air conditioning system does not cool. Only uncooled air comes out of air louvres.	1. Magnetic clutch does not engage. Have clutch replaced. 2. Drive belt slack. Tension or replace V-belt. 3. Cable connections loose. Tighten loose or disconnected cables. 4. Fuses (F 33) blown. Install new fuse. 5. Compressor not pumping refrigerant. Expansion valve iced. Saturation point of moisture indicator reached (blue ball has turned pink). Have filter-receiver replaced. For this, the system has to be discharged by use of the correct recovery equipment and then recharged.
Cool air is blown through the air louvres, but air flow is insufficient to cool the cabin.	1. Evaporator in cabin roof clogged. Clean evaporator. 2. Evaporator defective. Install new evaporator. (Have air conditioning system discharged by use of the correct recovery equipment and then recharged with refrigerant.) 3. Condenser (in front of radiator) is soiled. Clean condenser. 4. Refrigerant level too low. White ball does not float and is at bottom of indicator. Have air conditioning system checked by qualified refrigeration services. 5. Outside air getting into the cabin. Close doors and windows completely.
Air conditioning system provides cool air for a time, then discharges warm air again.	1. Ice forming in the expansion valve. Saturation point of filter-receiver reached. Blue ball has turned pink. Have filter-receiver replaced. (Have air conditioning system discharged with refrigerant.)
Compressor too noisy.	1. Compressor bearings damaged. Have compressor repaired or replaced. For this, the refrigerant has to be discharged from the system by use of the correct recovery equipment and then recharged. 2. Oil level in compressor too low (indicated by external leakage). Have repair work carried out by a specialist workshop. Check oil level in compressor only with system drained. For this, the system has to be discharged.



7

Vehicle information unit

1 CLAAS Autopilot, green
2 Battery state-of-charge, light-red
3 Turning signal (trailer), green
4 Indicator light – main beam headlights, blue
5 Turning signal, green
6 Blank
7 Main warning light, light-red

(Fig. 7)

Seat depth adjustment

The seat depth may be adjusted individually.

To adjust the seat depth, lift the right-hand button (3). Simultaneously push the seat cushion to the front or rear to reach the desired position.

(Fig. 22)

Seat angle adjustment

The longitudinal angle of the seat cushion can be adjusted individually.

To adjust the angle, lift the left-hand button (4). Simultaneously load or relieve the seat cushion to angle it in the desired direction.

(Fig. 22)

Weight adjustment

Set the operator's weight with the combine at standstill. Fold out adjustment lever (5).

The set weight can be read off from indicator (6).

(Fig. 22)

Horizontal adjustment of operator's seat

Actuating the locking lever (7) upwards releases the longitudinal adjustment.

DANGER!

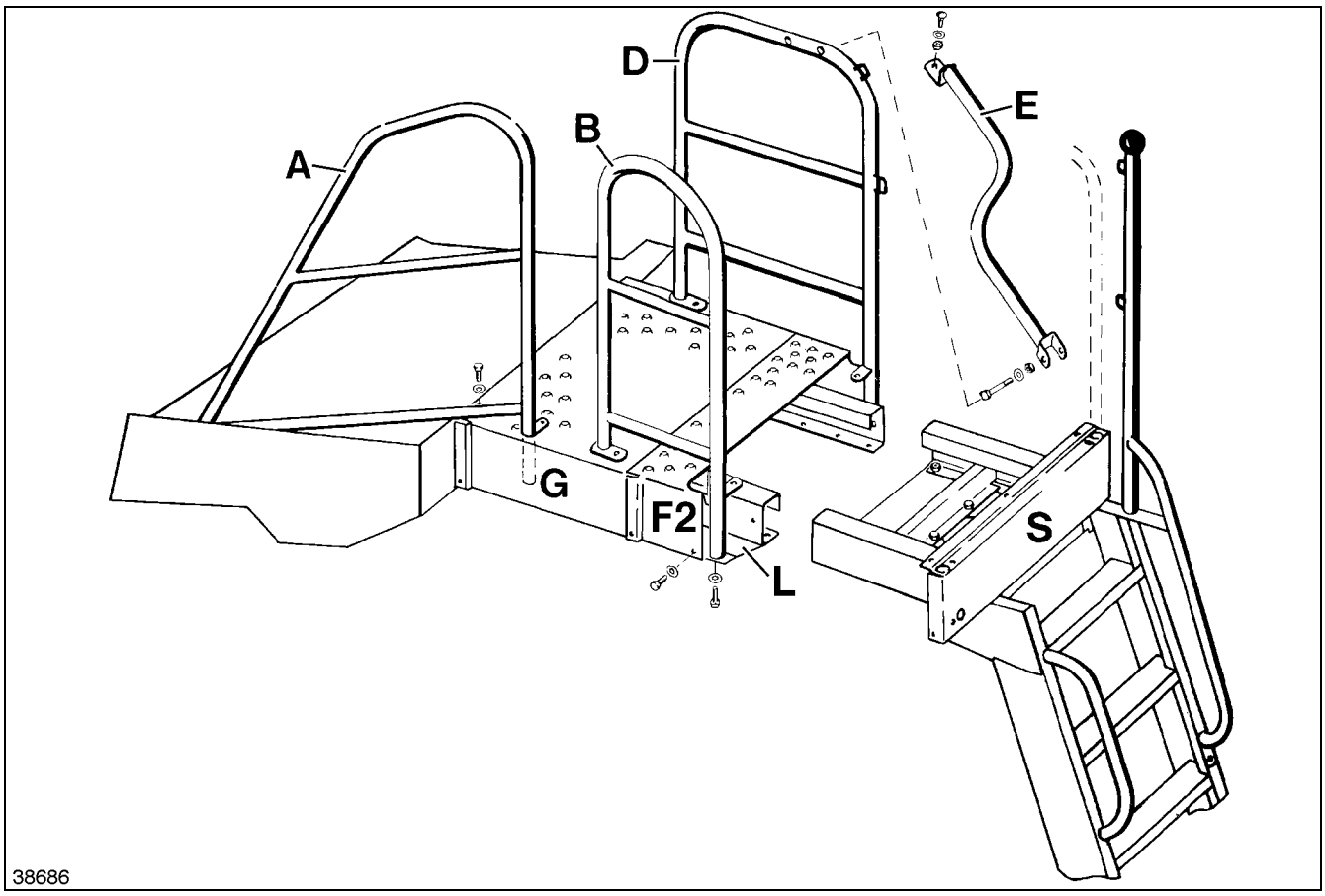
The locking lever (7) must engage in the desired position. After locking, it must be impossible to push the operator's seat to another position.

(Fig. 22)

Adjusting the angle of the left-hand arm rest

The longitudinal angle of the left-hand arm rest may be changed by turning the handwheel (9).

(Fig. 22)



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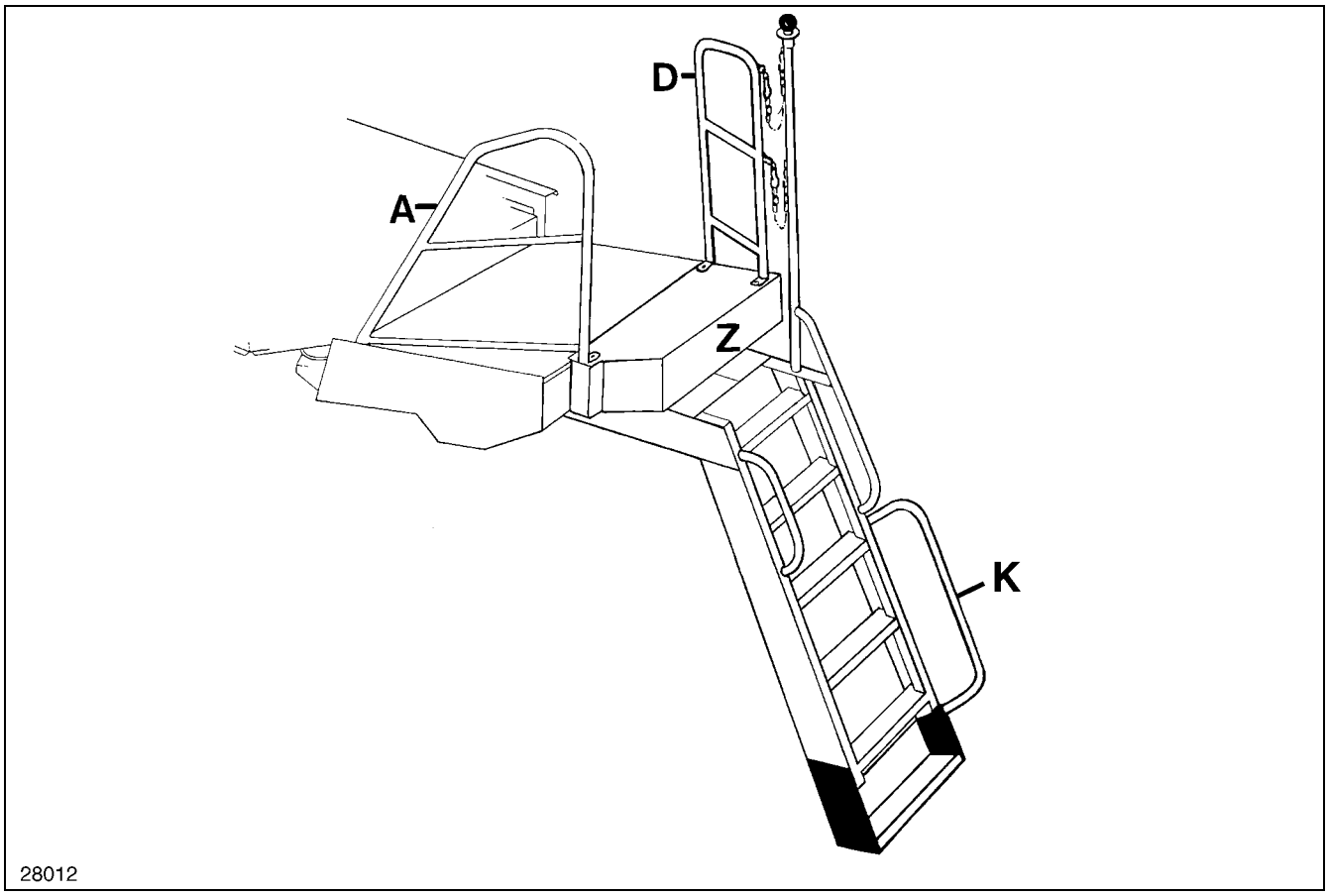

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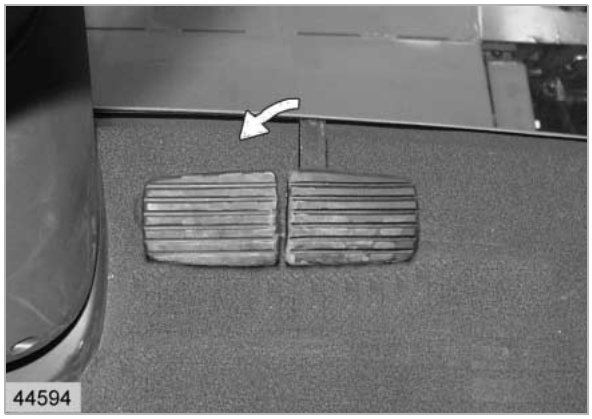


10

Brakes

Foot brake

DANGER!

The brake pedals must be locked together when driving on public roads and lanes to ensure that the braking effect is applied equally to both drive wheels.

The foot brake is designed as a single-wheel brake. After the pedal lock is removed, the brake can be used to facilitate driving around sharp corners or when turning, e.g. when operating in rice.

Use the brakes carefully on hilly ground!

The foot brake should grip after the first third of the pedal travel.

(Fig. 10)

DANGER!

Check the braking effect and in particular the condition of the brake pads at regular intervals.

Adjustments, maintenance and repairs to the brake system must only be carried out by specialist workshops.

Brake pad wear indicator:

When the brake pads are worn, the symbol (!) will appear on the monitor as soon as the foot brake pedal is completely depressed (functions only with the ignition switched on and the parking brake released).

DANGER!

As soon as the warning light comes on, have all brake linings replaced by a specialist workshop.

CUTTERBAR HYDRAULIC CYLINDERS

Attaching cutterbar hydraulic cylinders

For field operations, the cutterbar hydraulic cylinders must be attached to holes (1) of the axle brackets.

The cutterbar float springs (F) are pre-set at the factory.

The first time a cutterbar is used, always check and, if necessary, adjust the float spring settings – see page 9.1.2, *Cutterbar floatation springs*.

When using other sizes of cutterbars, the float springs (F) must be readjusted.

Holes (2) are intended for mounting the unloading rig.

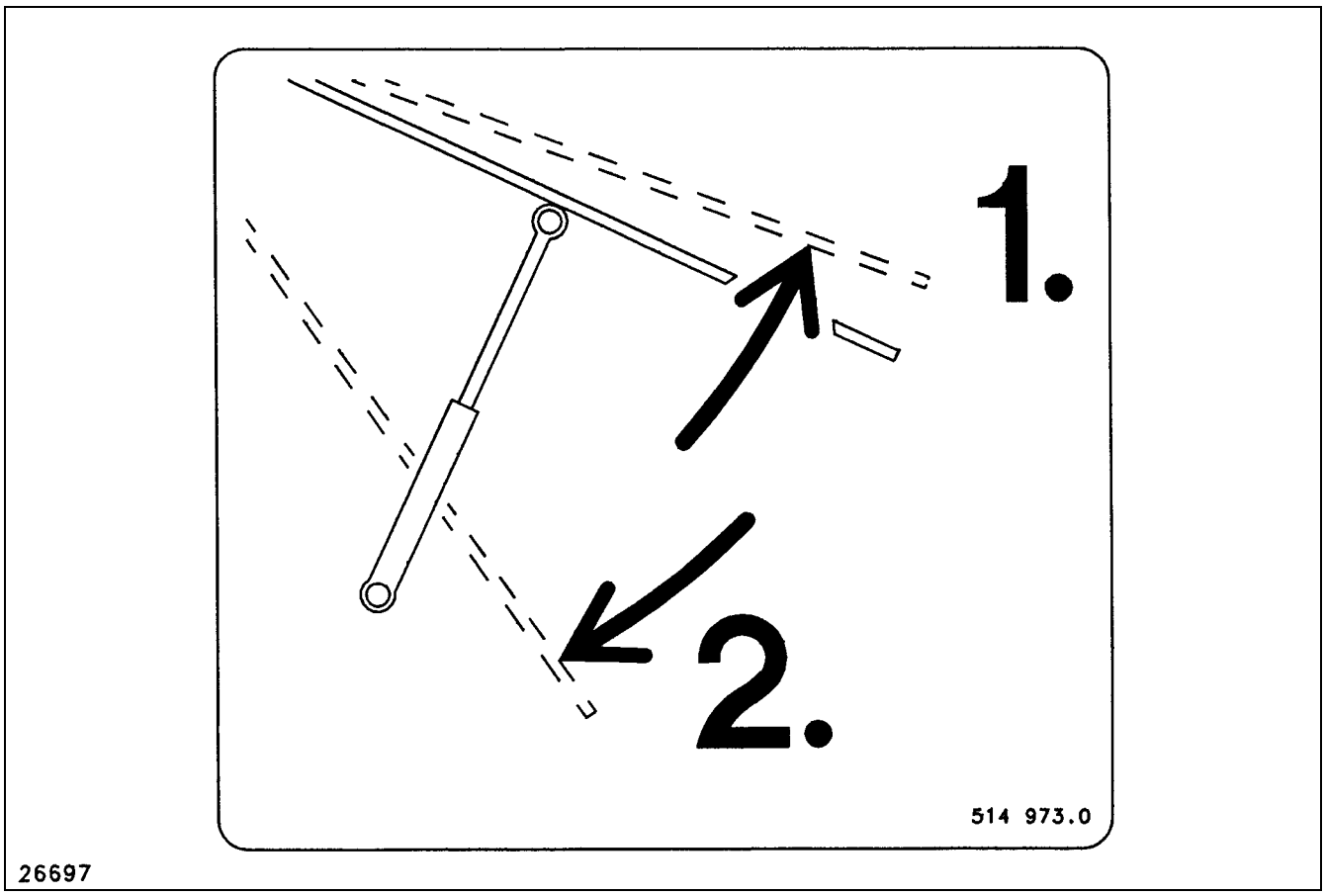
(Fig. 1)

1

Third cutterbar cylinder

Third cutterbar cylinder and stop for suspension is required, see table.

Front attachment		Number of cutterbar cylinders	Lock for left-hand cutterbar cylinder	Lock for middle cutterbar cylinder	Lock for right-hand cutterbar cylinder
Grain and rice cutterbar	up to 6.60 m	2	–	–	–
	7.50 m – 9.00 m	3	–	–	–
	5.40 m folding	3	–	–	–
Rape cutterbar	6.00 m	3	–	–	–
Sunflower cutterbar	6.00 m	2	–	–	–
	from 6.60 m	3	–	–	–
Soybean cutterbar	up to 6.60 m	2	+	–	–
	from 7.50 m	3	+	+	–
Rake up	3.90 m	2	–	–	–
Maize picker head	Multimaster	3	+	+	+
	6-row	2	+	+	+
	8-row	3	+	+	+
– = not required, + = required					



1

SIDE PANELS

Opening and closing the side panels and the rear door

The panels are held in the open position by gas strut cylinders equipped with an internal lock.

Opening the panel:

First unlock the panel (the key is located alongside the driver's seat). Unhook the safety clips (on side panels only).

Lift the panel to the mechanical stop of the gas strut cylinder, then lower the panel until the internal lock engages and the panel is held in the open position.

Closing the panel:

Raise the panel slightly to disengage the lock, then lower the panel to the closed position.

(Fig. 1)

12

13

14

Operating the front ladder with dual tyres installed

DANGER!

Operate the ladder only when the machine is stationary!

The ladder must always be set to its forward position before starting to drive the combine. See Fig. 12.

Always ensure that the ladder is turned halfway to the front at 45° before climbing up or down the ladder. See Fig. 13.

Adjusting the ladder:

When adjusting from the ground, unlock lever (1) on the operating rod and swivel the ladder to its forward position or set it to its half-forward 45° position.

When adjusting from the operator's platform, unlock lever (2) and turn the ladder using the operating rod.

DANGER!

Always ensure that the ladder latches in the selected position.

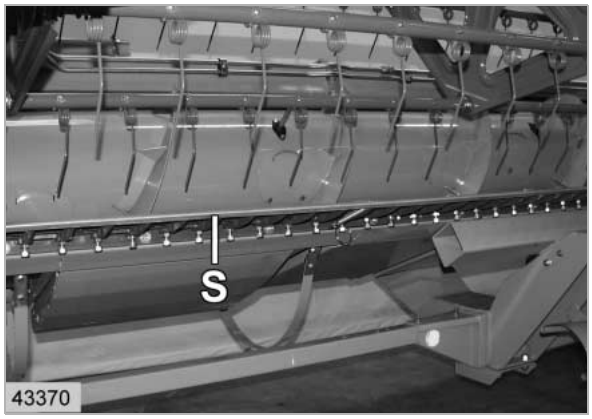
(Fig. 12, 13)

When operating the combine without the outer dual tyres, the ladder can be swivelled through 90°.

(Fig. 14)

7

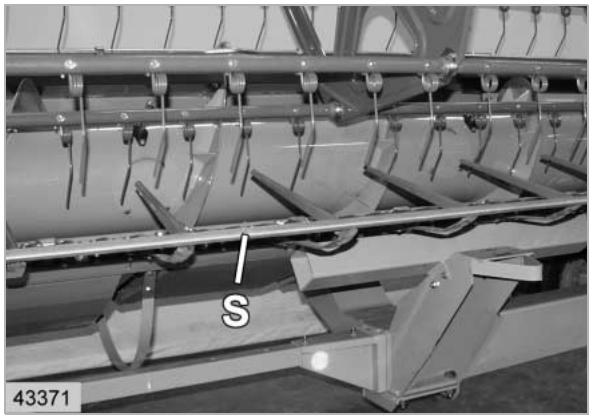
Installing and removing the cutterbar



7

Cover finger bars (fingers) and / or crop lifter with safety bars (S).

(Fig. 7, 8)



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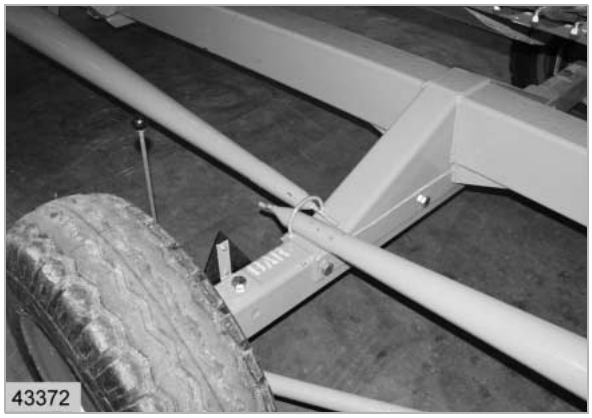


9

Stow outer deflectors away on the cutterbar trailer (if provided).

(Fig. 9)

10

Fold both crop dividers to the inside.

(Fig. 10)

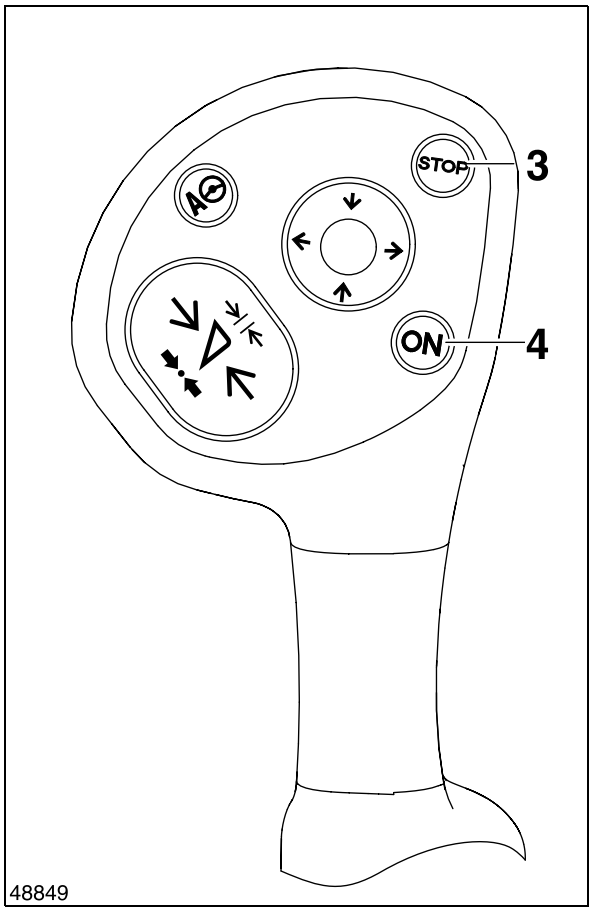
Cutterbar clutch

DANGER!

Before working in or at the cutterbar unit, always disengage the cutterbar drive, stop the engine and withdraw the ignition key (main switch key).

Cutterbar Quick Stop:

In the event that foreign matter enters the cutterbar, the cutterbar and all feed components can be instantly stopped.



16

Engaging and disengaging the cutterbar

Engaging the cutterbar:

Start the engine and engage the threshing mechanism.

The cutterbar can be engaged by pressing switch (4) on the multi-function lever.

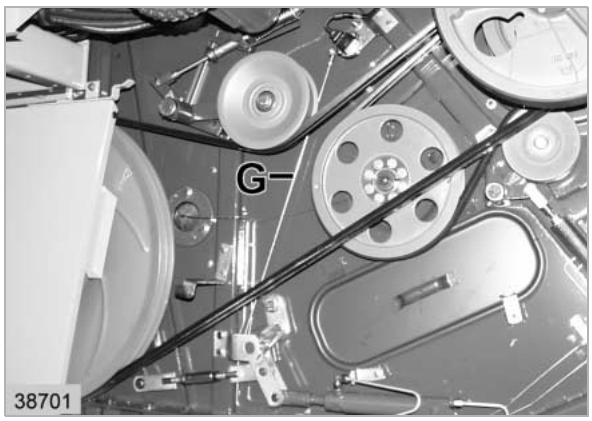
ATTENTION!

If there is any crop material in the cutterbar and / or the feeder housing, engage the cutterbar with the engine running at max. speed – no load.

Disengaging the cutterbar:

The cutterbar can be disengaged by pressing switch (3) on the multi-function lever.

(Fig. 16)



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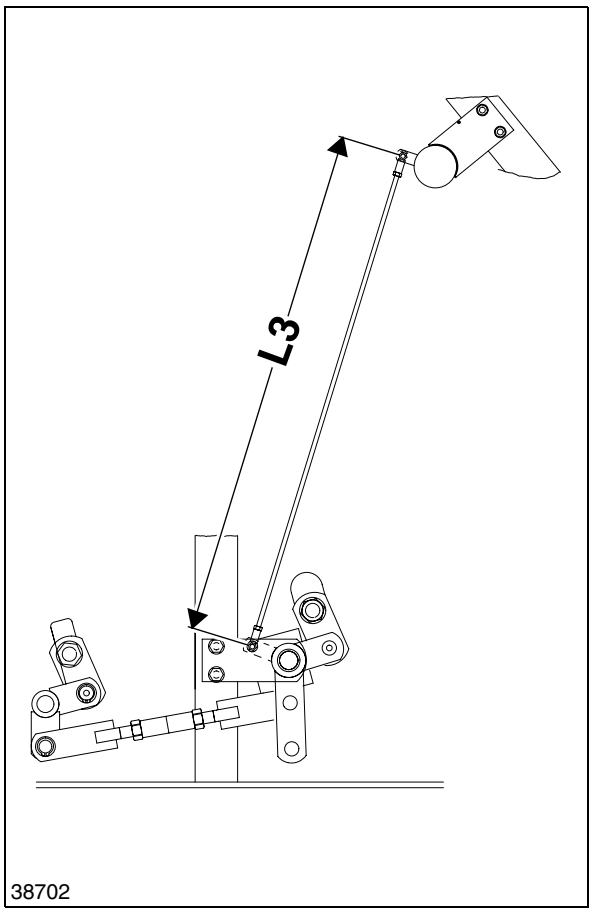


18

Setting the potentiometer linkage:

Close the concave so that it is in its narrowest position.

There must be a clearance of **7 ±1 mm** between the 3rd concave bar and the rasp bar of the threshing drum at measuring point (M2).

The value on the screen should read «7».

Should this not be the case, adjust the threaded rod (G) of potentiometer until the display reads correctly.

The basic setting (L3) of the rod is 726 mm.

(Fig. 8, 17, 18)

Learning the limit stops

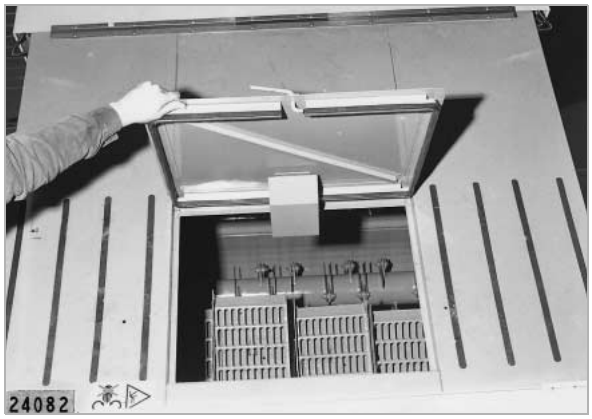
See group 8, «Learning the limit stops».

Adjust multiple fingers as follows:

Position 1:	Particularly dry and fragile straw
Position 2:	Basic setting
Positions 3, 4, 5:	Straw tending to wrap easily, e.g. pea straw or long moist grass

F = Direction of travel

(Fig. 3, 4, 5)



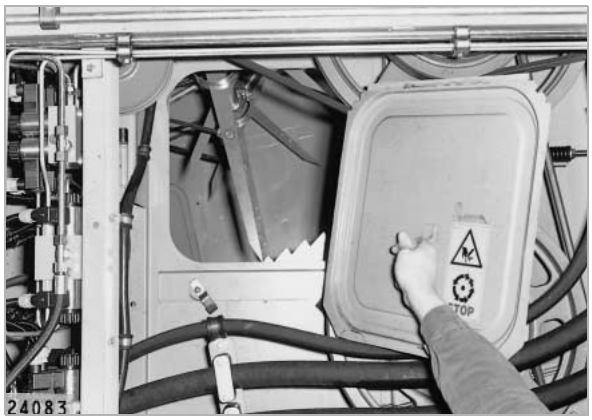
6

Cleaning the straw walkers

DANGER!

Shut off engine and switch off battery isolating switch before entering the straw walker compartment!

☞ Make sure that other persons cannot start the machine.



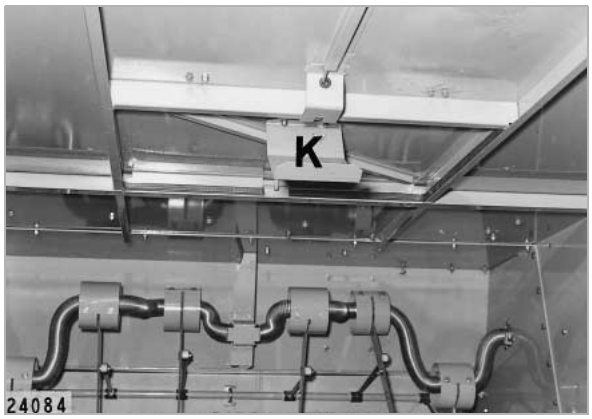
7

Check the straw walkers more frequently when using it in moist straw and in straw containing much weeds.

Remove dirt if necessary.

The straw walker compartment can be accessed through a hatch on the machine roof and through doors on both sides.

(Fig. 6, 7)



8

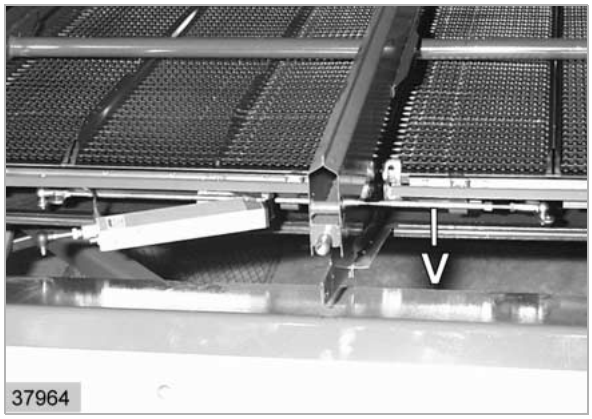
Warning signal

In case of a straw blockage in the straw walker compartment, the door (K) releases an alarm and the warning light (B 22) lights up on the screen. The buzzer will sound in intervals and an alarm text will appear on the screen.

Stop combine-harvester immediately and remove the straw blockage.

See also «Alarms» and help texts.

(Fig. 8)

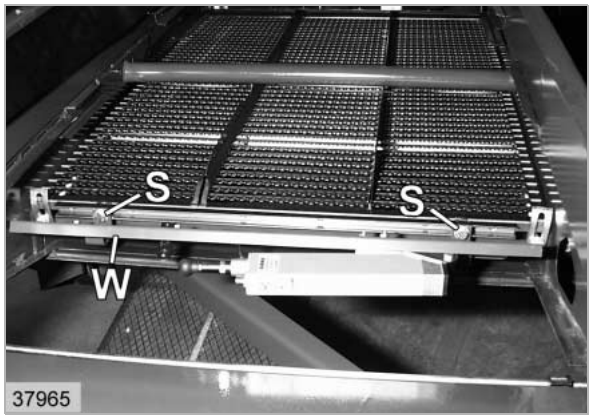


12

Removing the finishing sieves:

– Remove return pans.
– Unscrew positioning motor at ball head.
– Remove cable from positioning motor.
– Remove connecting linkage (V) from both sieves.

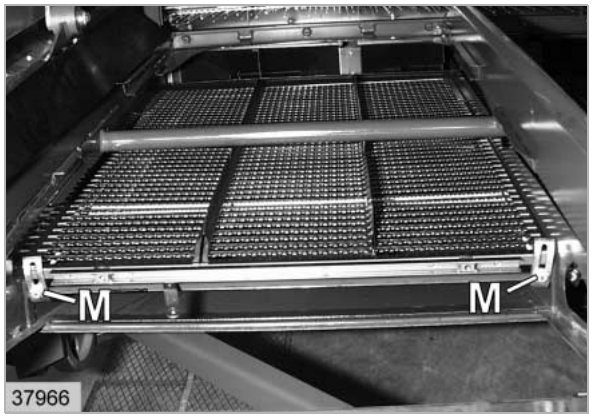
(Fig. 12)



13

– Loosen the cable fixings.
– Completely remove the wind board (W) along with the positioning motor by unscrewing the hexagon bolts (S).

(Fig. 13)



14

– Loosen clamps (M) of the axial mounting of the sieves.
– Pull out the sieves to the rear.

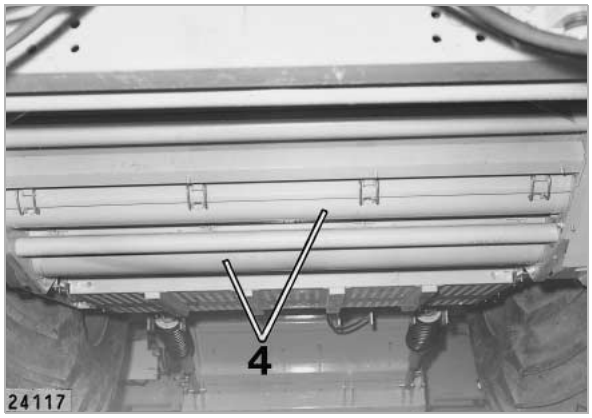
(Fig. 14)

GRAIN DELIVERY

DANGER!

Repair, service and cleaning work and the elimination of malfunctions should only be performed with the drives disengaged and the engine switched off.

☞Turn off the battery isolating switch!



1

Augers and auger troughs

Open the auger troughs (4) and clean the clean grain and returns auger troughs when changing crops or when plugging occurs.

(Fig. 1)

DANGER!

At all times beware of sharp edges on the augers. Risk of injury!

STRAW CHOPPER

Straw chopper
(hydraulic)

DANGER!

The guards of the straw chopper cover dangerous, rotating knives.

- ☞ Keep sufficient distance to the chopper during operation!
- ☞ Always disengage the threshing mechanism, stop the engine and remove the ignition key! **(Danger: rotating knives)**
- ☞ Before engaging the threshing drive ensure that there are no persons in the danger area of the straw chopper.
- ☞ Note that the chopper knives run on after the machine drives have been disengaged!

NOTE!

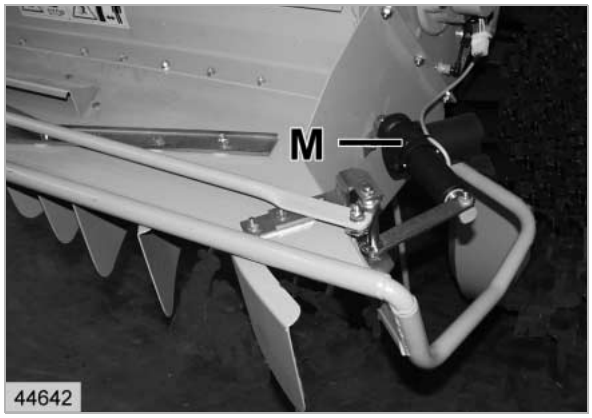
When harvesting maize, convert the straw chopper by fitting the maize attachment and reducing chopper speed.

Before using the straw chopper, check

1. The knives for damage and the free-swinging knives for secure fit
2. Tension of V-belts
3. That the belts run freely in their guards
4. That the fixed stationary knives are adjusted so that the desired length of cut is obtained
5. Setting of the cross knife

3

4



5

Electric deflector adjustment

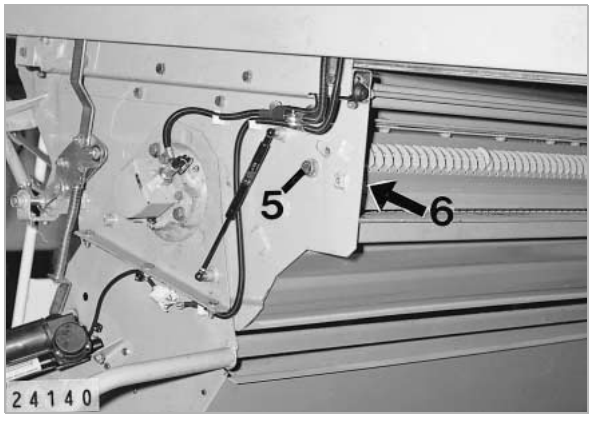
Using the electric deflector adjustment it is possible to alter the chopped straw discharge to the left or right. This is particularly advantageous when combining on a hillside or with a strong sidewind as it helps to prevent the chopped straw being discharged into the still standing crop.

Adjusting the deflectors:

When centralizing switch (20) is activated, the deflectors (L) are adjusted by motor (M).

The direction in which the centralizing switch is turned is also the direction in which the deflectors are adjusted.

(Fig. 3, 4, 5)



6

Adjusting the length of cut

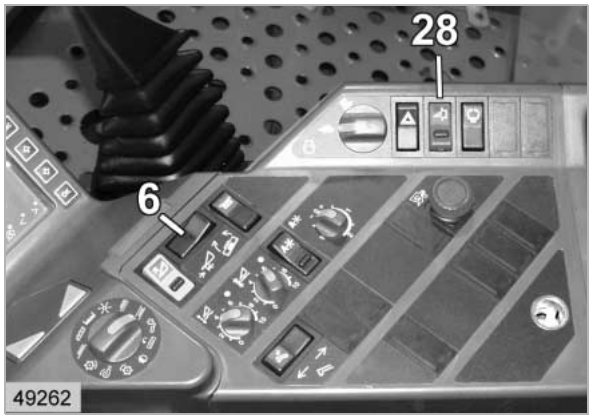
The length of cut can be altered by turning the knife carrier. Loosen hexagon head bolts (5 and 6) on both sides of the straw chopper and turn the knife carrier using a spanner.

Direction A = shorter cut
Direction B = longer cut

After adjustment, tighten hexagon head bolts (5 and 6) again on both sides of the straw chopper.

For operation in rape it is recommended to adjust the fixed, stationary knives all the way down.

(Fig. 6, 7)



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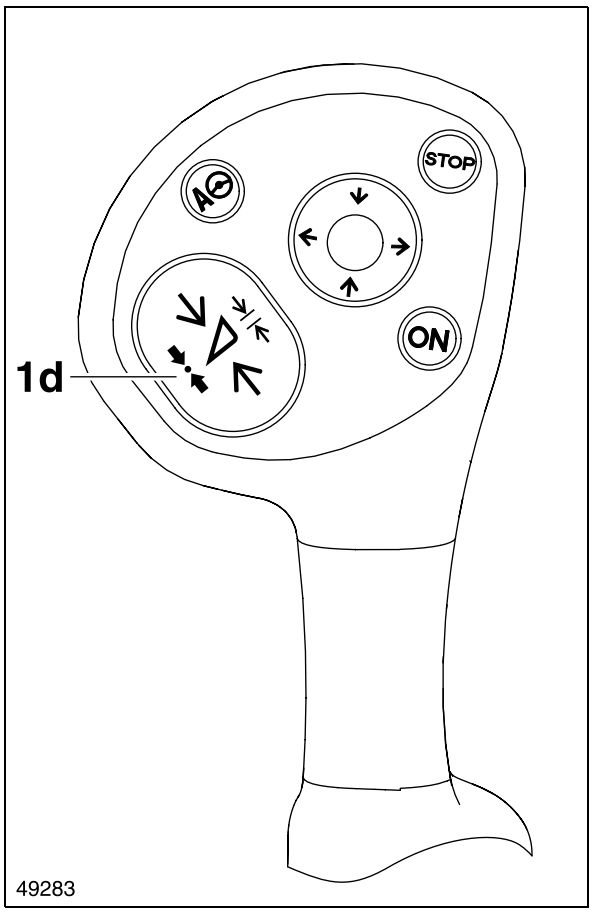

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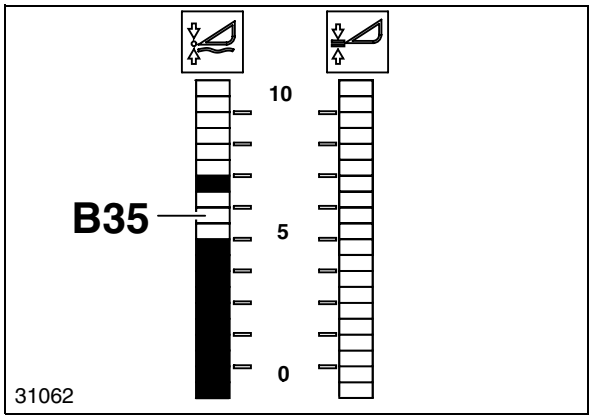


7

Starting up the CLAAS Auto Contour System

Before starting the Auto Contour System for the first time, or if the cutterbar is replaced, i. e. from a maize picker head to cereals cutterbar, then it is necessary to make the system «learn» the end stops. Please also refer to group 8 «IMO».

1. Start the engine. Switch on the safety rocker switch (28) and then engage threshing mechanism and the cutterbar.
2. Turn rotary switch (A) to an additional cutting height (for example to pos. «7»).
3. Start Auto Contour:
   Press the button (1d) on the multi-function lever once.

   Auto Contour is activated. The indicator lamp (1d) is on.

The cutterbar will now go to the cutting height selected on rotary switch (A). The header will go up to the height or down to it, depending on whether the cutterbar is above or below the cutting height selected.

(Fig. 4, 5, 6)

Display B35:

The display B35 shows the cutting height or the pressure exerted by the cutterbar on the ground.

A low level indicates a low cutting height or high ground pressure

A high level indicates a high cutting height or low ground pressure

(Fig. 7)

SIEVE CHART AND SUGGESTED COMBINE ADJUSTMENTS

Sieve chart

Sieves / hole sizes	Crop	Depressed sieves
Lower flat sieve, 2.5 mm ○	Poppy seed / Sesame	
Lower flat sieve, 4.5 mm ○	Linseed or Flax / Rape or Canola / Clover	
Lower flat sieve, 7 mm ○	Rape / Lupins / Caraway Seed / Linseed or Flax	
Lower flat sieve, 12 mm ○	Millet / Grass Seed / Lupines / Durra / Sorghum	
Lower sieve, 16 mm ○	Sunflowers / Maize / Broad Beans / Peas	
Lower sieve, 18 mm ○ Lower sieve, 18 mm ○	Broad Beans / Maize Broad Beans / Maize	X
Lower sieve, 20 mm ○	Broad Beans / Maize	X
Upper sieve, 16 mm ○ *	Special sieve for Maize	
Upper sieve, 18 mm ○ *	Maize	
Upper sieve, 20 mm ○	Maize	X
Graepel sieve, 80 / 40	Corn Cob Mix (CCM)	
Frogmouth sieve, deep toothed	Maize	
* Web plates may be fitted on the screens for better material guiding (not for 3-D).		

Problem	Possible cause and / or remedy
Irregular speed variation of machine	1. Check and readjust belt-drive clutch of the main drive. 2. Have tightness of belt tensioner cylinder of threshing mechanism drive checked. 3. Have the low-pressure hydraulic system checked. 4. Have the engine checked (see engine problems).
Stones and other foreign matter causing damage to threshing parts	1. Clean stone trap regularly. 2. Do not cut unnecessarily low on stony grounds.
Excessive belt wear	1. Adjust belt tensioners correctly. 2. Clean and remove rust from V-belt pulleys. 3. Clean and grease the sliding faces of the variable speed pulleys. 4. Clean oiled up belts with a soapy solution.
Insufficient threshing action	1. Reduce drum to concave clearance. 2. Increase drum speed. 3. Engage disawner plates. 4. Correct basic adjustment of concave. 5. Repair or replace worn out threshing parts (rasp bars, concave). 6. Use special threshing equipment if required.
Insufficient disawning	1. Reduce drum to concave clearance. 2. Increase drum speed. 3. Engage disawner plates. 4. Wait for crop to be fully ripened. 5. Check basic adjustment of concave. 6. Check for worn or damaged rasp bars and concave.
Grain cracking	1. Reduce drum speed. 2. Increase drum to concave clearance. 3. Disengage disawner plates. 4. Adjust tension of elevator chains. 5. Reduce amount of kernels in the returns. 6. Reduce drum speed for delicate crops by use of optional equipment. (threshing drum two-step variable speed drive).
Unbalance	1. Clean dirty threshing drum. 2. Remove dust accumulations from belt pulleys. 3. Have damaged threshing drum repaired. 4. Check impeller drum for damage. 5. Check knives of straw chopper.

Lubrication

The oil in the engine, hydraulic systems and transmissions must be changed at the specified intervals. Use only the recommended types of oil. Lubricate the machine with good quality grease only, e. g. multi-purpose grease Shell Retinax A EP 2.

Clean dirt from the grease nipples before greasing. Lubricate the machine at regular intervals in accordance with the Lubrication Chart.

ENVIRONMENT!

Lubricants and fuels must be stored in suitable containers and disposed of in a way that is harmless to the environment and in accordance with existing anti-pollution regulations.

DANGER!

Be careful when draining hot oil – beware of burns!

Maintenance Operations	Service intervals									
	Before the harvest	Daily	After the first 40 Working hours	After the first 100 Working hours	Every 50 Working hours	Every 100 Working hours	Every 250 Working hours	Annually = every 500 working hrs.	As required	After the harvest
REMOVE DIRT ACCUMULATIONS FROM:										
– Return pan, sieve pan, combine performance monitor sensors									●	
– Auger beds, space above cleaning fan, preparation floor, threshing concave, sieves		●								
– Engine area, exhaust system, transmission / gearbox areas, brakes, hydrostatic ground drive system		●								

TRANSMISSION / BRAKES

ENVIRONMENT!

Dispose of used oil in a manner that is harmless to the environment and in accordance with existing anti-pollution regulations.

NOTE!

Oil grades and oil capacities – see page 10.2.4, *Lubricants charts*.

For oil level checks, the machine must be horizontal and the oil must be up to the lower edge of the bore of the control plug.

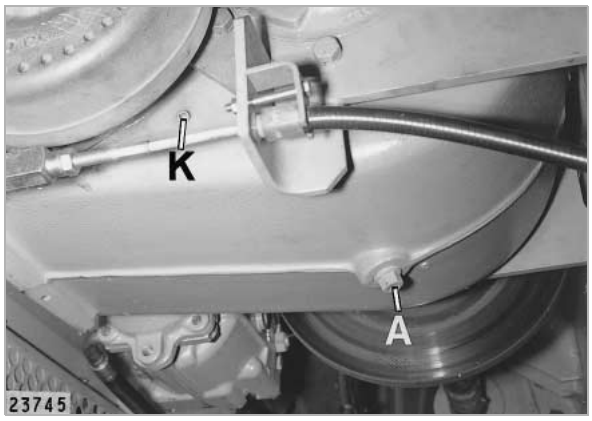
After oil level checks and / or changing the oil, tighten all the plugs again securely.

Transmission gearbox

Checking the oil level

K = Oil level check plug

(Fig. 1)

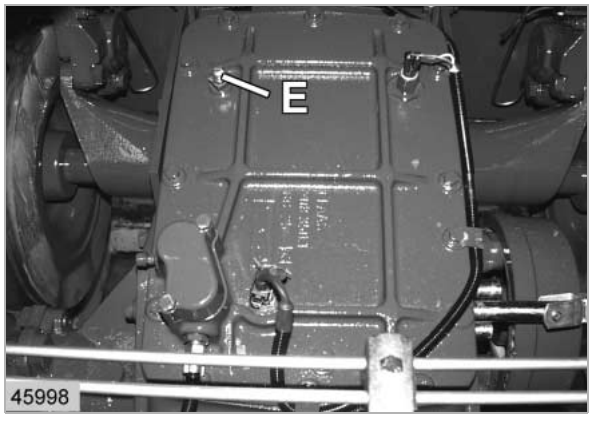


1

Oil change

A = Oil drain plug with magnet
E = Oil filler plug and gearbox breather

(Fig. 1, 2)



2

DRIVE BELTS / DRIVE CHAINS – BASIC MACHINE

General notes

Figures (1 and 2) show the overview of the belt and chain drives.

ATTENTION!

When the belts are removed and during prolonged standstills of the machine, protect the grooves and running surfaces of the drive belts in the pulleys against corrosion.

Before fitting the belts again, clean the grooves and running surfaces in the pulleys.

DANGER!

Caution when carrying out installation work on the variable-speed pulleys. Never put your hands between the pulley halves – Danger of accidents!

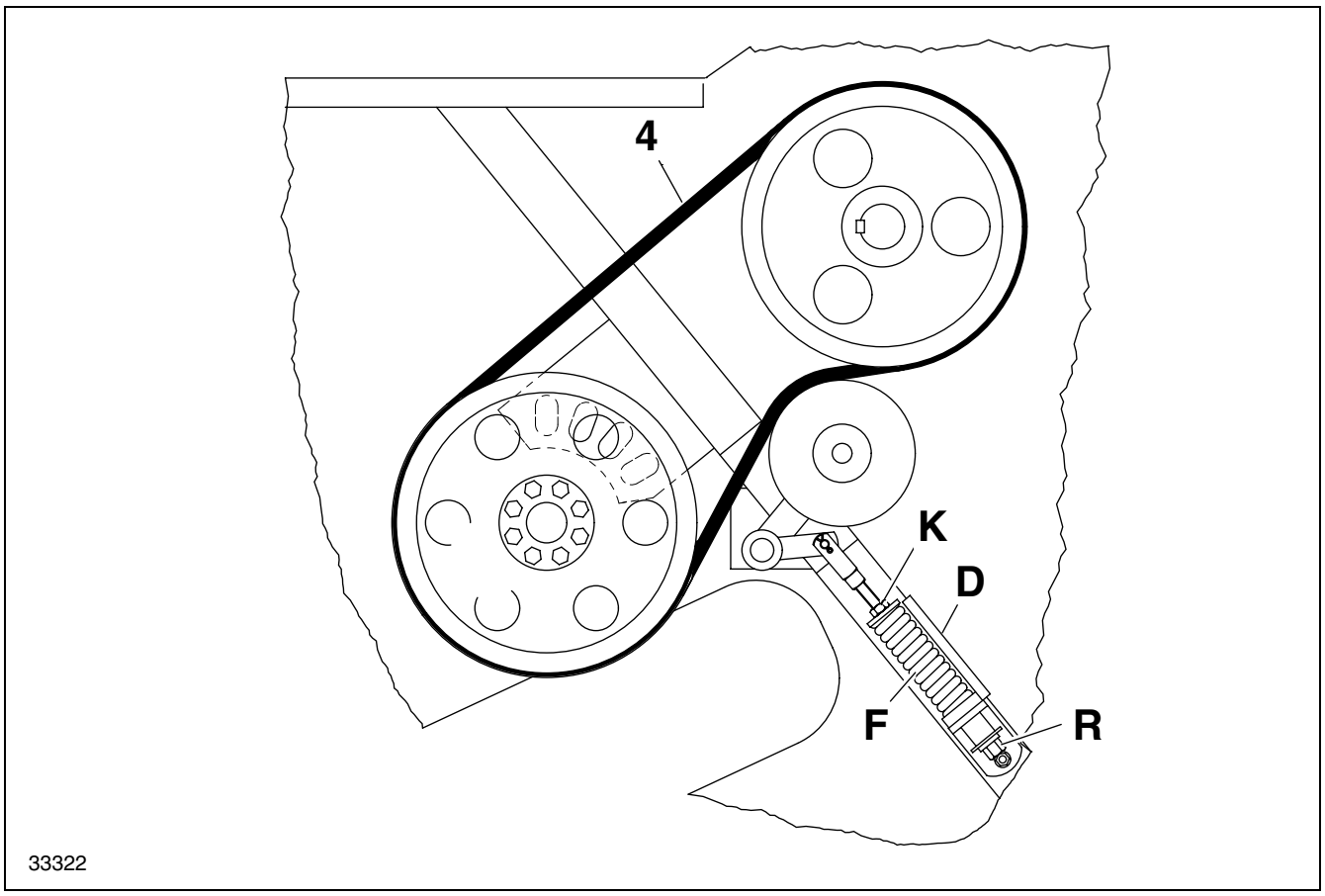
NOTE!

Use special tools for fitting and removing the variable speed drive belts.

For variable-speed pulleys which move easily, the pulley halves can be pressed apart or blocked using a special bolt BM 12 x 180 DIN 564-8.8 (Part No. 236 302.0).

This special bolt is referred to in the following text as (B).

If the pulley halves are difficult to move, use two bolts. If possible, always open the variable-speed pulleys with the drives still running and then switch off the engine and drives.



14

Removing the impeller drive belt (4)

DANGER!

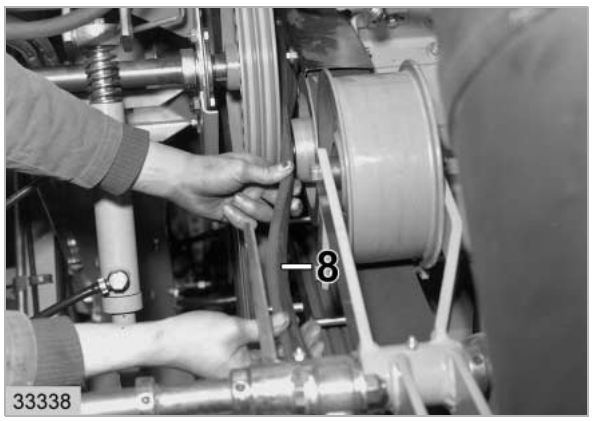
Switch off the engine and turn off the battery isolating switch!

– Remove cutterbar intermediate drive belt (5).
– Remove speed control belt (3, if provided).
– Remove cutterbar drive belt (1, if provided).

Relieving the tension of impeller drive belt (4):

DANGER!

To avoid **risk of personal injury**, follow the correct order of assembly!



34

Place drive belt (8) between grain tank unloading drive pulley and the bearing plate.

Now remove belt (8) from engine output assembly.

Remove belt cover and belt (8).

(Fig. 34)

Installing and adjusting the intermediate drive belt for grain tank unloading (8)

1. Install belt (8).
2. Mount jockey pulley (T) with a tightening torque of **130 Nm**.
3. Pre-tension belt (8) by pushing the jockey pulley (T) downwards and adjust the belt guide assembly:

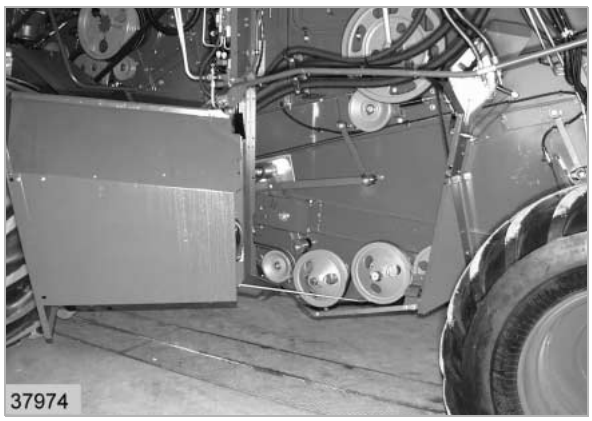
   Z = 5 – 7 mm
   W = 10 mm
   V = 3 mm
4. Install drive belt (9) on engine output assembly (M).
5. Push lever (E) to the inside on the shaft up to the set collar and arrest using the second set collar. Hang in hydraulic cylinder (Z) on the lever.

(Fig. 32, 33, 34)

When the engine is running, a constant pressure of 20 bar is applied to the rod end of the low-pressure hydraulic cylinder through port (Q). This disengages the grain tank unloading by way of jockey pulley (S).

When the grain tank unloading is engaged, 20 bar oil pressure is also applied to the face end (P) of the piston. The oil pressure thus acts on the larger piston area and tensions the drive belt by way of the jockey pulley (S).

(Fig. 32)



50

51

Removing the sieve pan drive belt (15)

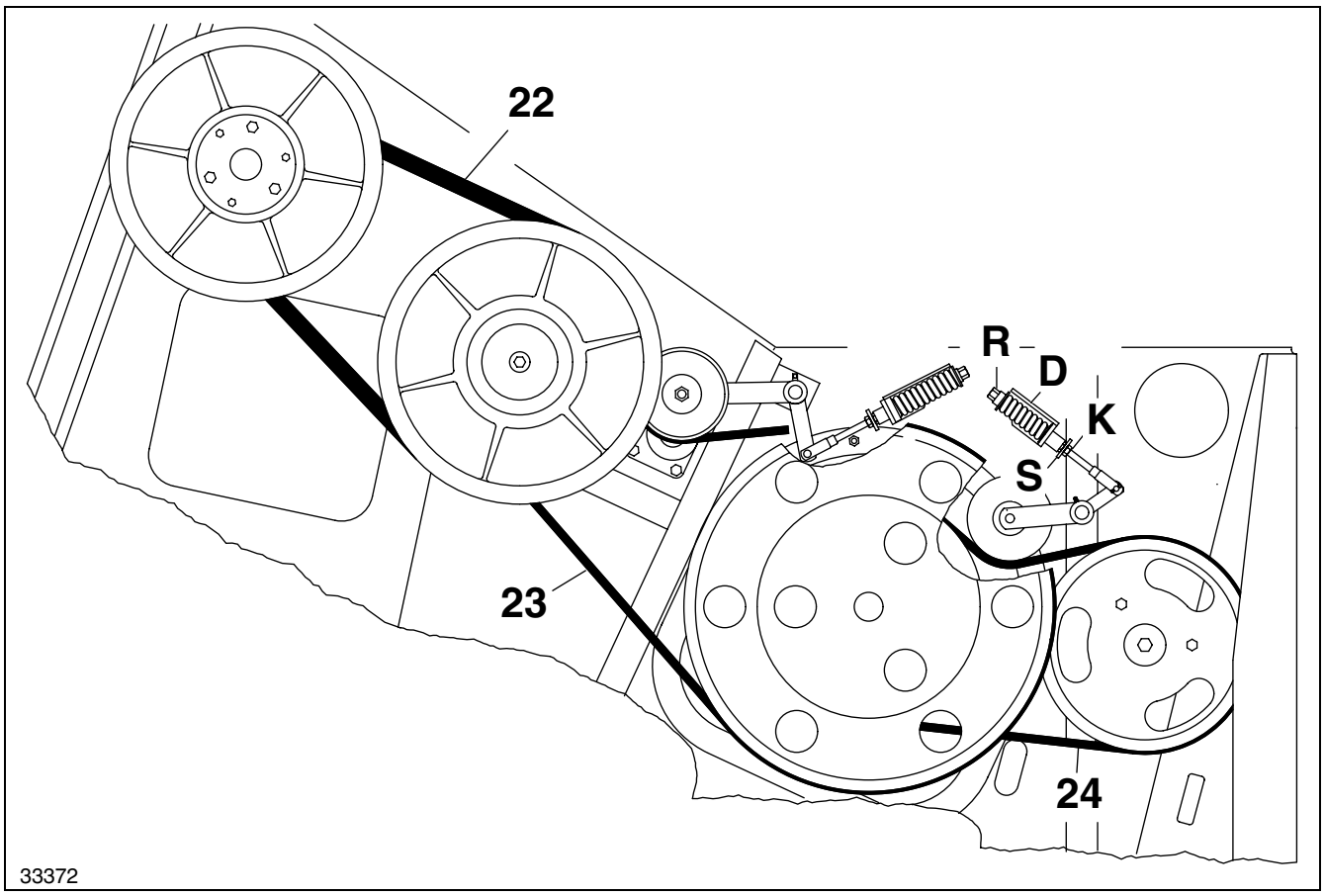
DANGER!

Switch off the engine and turn off the battery isolating switch!

Folding the battery box / tool cabinet open:

The cabinet may be folded open for better accessibility. To do this, unscrew the two hexagon bolts (S).

(Fig. 50, 51)



64

Removing the accelerator drive belt (24)

DANGER!

Switch off the engine and turn off the battery isolating switch!

Remove the threshing mechanism variable speed drive belt (22).

Remove threshing drum drive belt (23).

Relieve the tension of accelerator drive belt (24):

DANGER!

Pay particular attention when unscrewing the spring guide tube (R) so that it does not come out too far. **Risk of personal injury!**

FIRE EXTINGUISHER

1

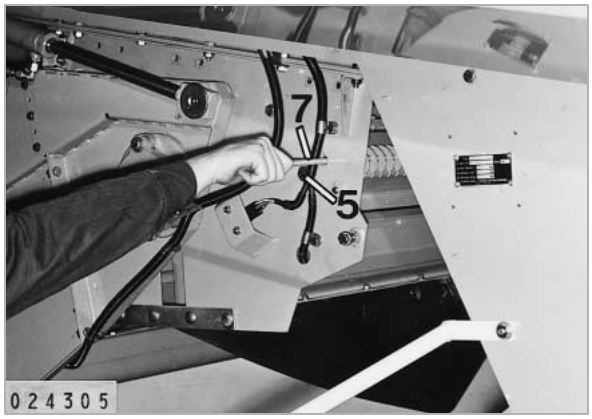
Fire extinguisher

If possible, have the fire extinguisher checked for serviceable condition annually, failing this every two years at the most. (The date of manufacture or the date of the final inspection on the fire extinguisher should serve as the reference date for inspection purposes.)

Inspection intervals may be different in other countries. If this is the case, the instructions governing the use of fire extinguishers in these countries shall apply.

(Fig. 1)

11



12

13

Replacing the stationary knives

Loosen hexagon head bolts (6) on both sides.

Remove hexagon head bolt (5) on both sides.

Remove the spring clip from rod (7) on the right-hand side of the machine.

Swing the knife carrier all the way down and pull out rod (7) as far as necessary through the bore in the chopper side panel.

The knives can be changed with the rod in this position.

After replacing the knives, push in the rod again and secure. Retighten all mounting bolts.

(Fig. 11, 12, 13)

IMPORTANT MAINTENANCE INSTRUCTIONS

Important maintenance instructions and safety rules

DANGER!

Repair, maintenance and cleaning work and the elimination of malfunctions should only be performed with the drives switched off and the engine stopped. Remove the ignition key.

Always turn off the battery isolating switch when working on engine!

The efficiency of the combine depends essentially on the care given to the engine. Periodical checking, lubrication and cleaning of the engine are therefore of vital importance.

Observe the engine manufacturer's operating manual!

Cooling water and air intake hoses

Check condition and security of coolant and air intake hoses every 50 operating hours.

Replace coolant hoses and non-metallic parts of air intake system every 2 years.

Check engine, radiator and exhaust system daily for dirt and clean if necessary.

Coolant

The engine cooling system has been filled with a mixture of corrosion inhibiting anti-freeze and water at the factory.

The coolant consists of 50% corrosion inhibiting anti-freeze and 50% water.

This ensures frost protection down to approx. -37 °C. See also lubricants chart and information provided by the engine manufacturer.

Belts

All V-belts must be kept properly tensioned at all times.

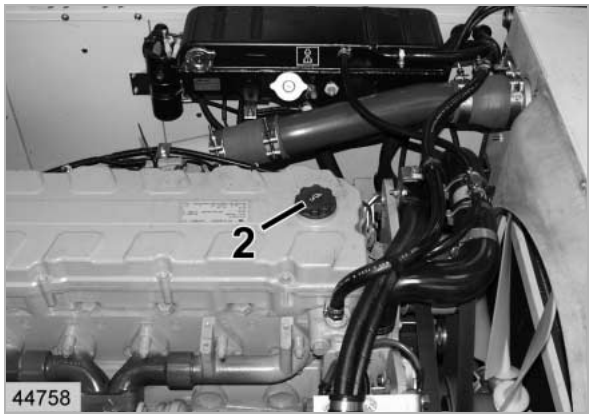
Check the tension of new belts after the first 2 or 3 hours of operation and retension, if necessary.

Cleaning the engine compartment and hazard areas

Thoroughly clean the engine area, and in particular the exhaust system and the area around the brakes, transmission, gearboxes etc. to prevent fire hazards.

If the material harvested is extremely dry and in heavy dust conditions, check the points and areas named more often and clean, if necessary.

CATERPILLAR C9



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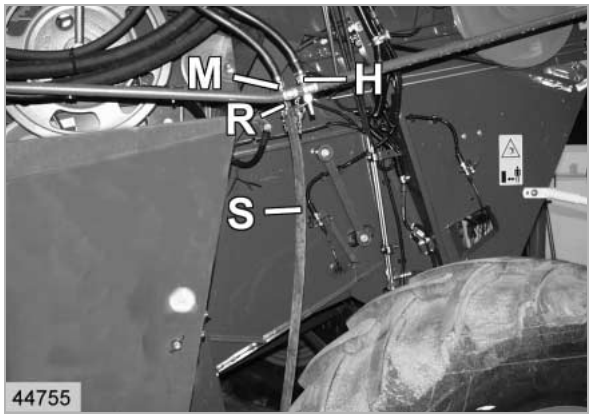
CATERPILLAR 3126 B

15



16

Draining the old oil

Remove fill plug (2) from oil filler neck on the engine.

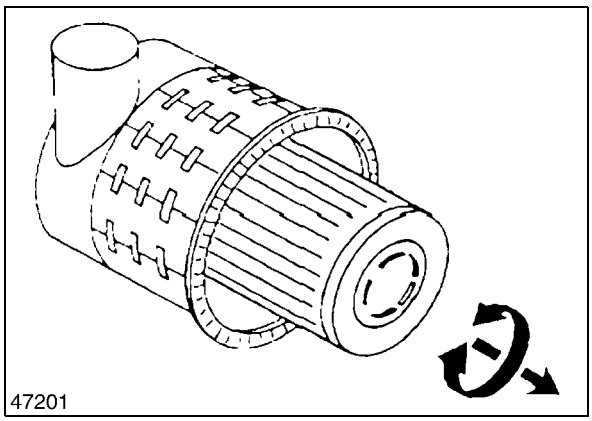
Fit a suitable hose (S) to engine oil drain fitting (M). Slightly loosen nut (R) and collect the used oil in a sufficiently large container (for oil quantity – see page 11.2.2, *Lubricants chart*).

After draining the engine oil, tighten nut (R) on the oil drain fitting again. Remove hose (S).

H = Hydraulic oil drain fitting
M = Engine oil drain fitting

(Fig. 14, 15, 16)

5



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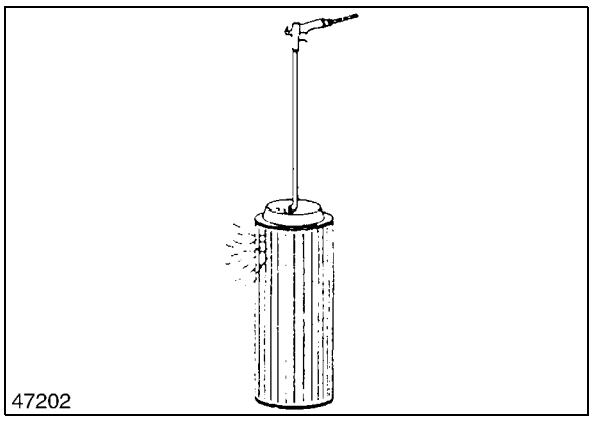


7

Carefully pull out main cartridge (F) using slight rotating movements.

ATTENTION!

Never attempt to wash out or brush out main cartridge. No dust is allowed on the inside of the main cartridge during blowing out.

The main cartridge can be cleaned as follows:

NOTE!

As minor damage is often difficult to identify or cannot be identified at all, we recommend using new main cartridges every time to protect the engine.

No warranty is accepted for cleaned main cartridges.

To clean the main cartridge, place a tube on a compressed air gun. The tube must be long enough to reach the bottom of the main cartridge.

Carefully blow out the main cartridge with dry air (5 bar max.) from the inside to the outside by moving the tube up and down in the main cartridge until no more dust is produced.

With machines not equipped with a compressed air system, clean the main cartridge temporarily by slightly knocking on the inside of the hand. It is useful to carry a new main cartridge along.

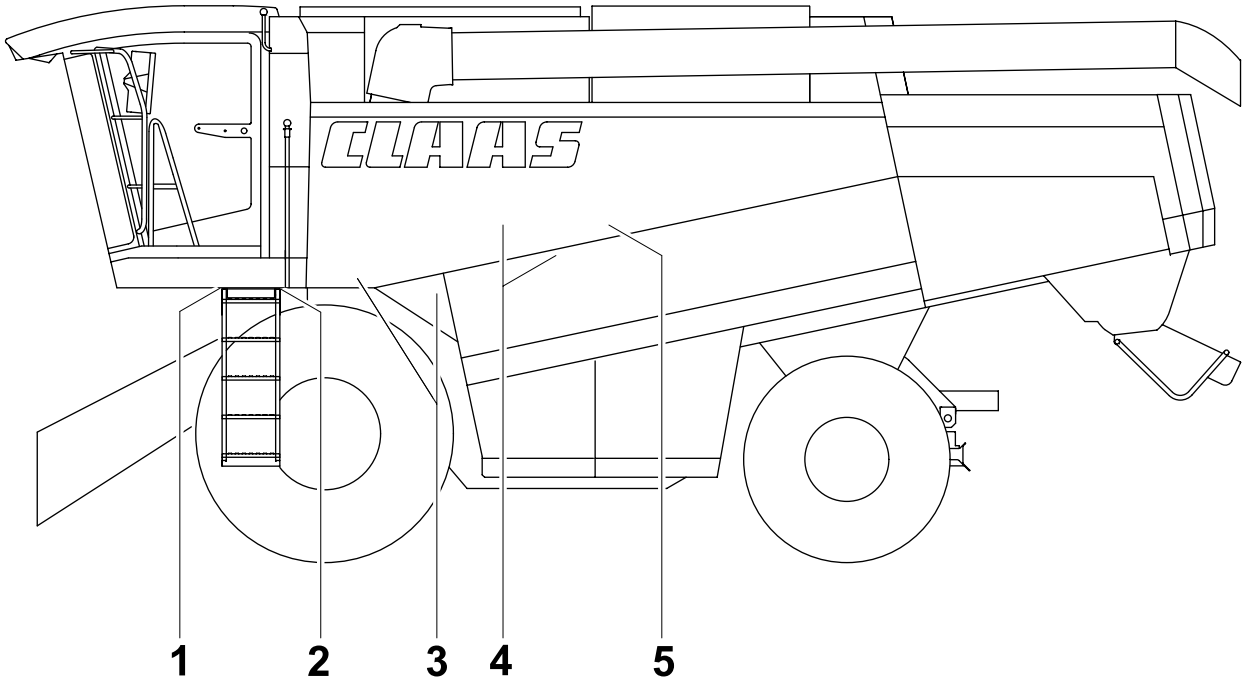
ATTENTION!

Heavy knocking or upsetting will deform the main cartridge, resulting in leaks at the filter seat.

Replace main cartridge once a year and when damaged.

(Fig. 5, 6, 7)

12
Lubrication chart



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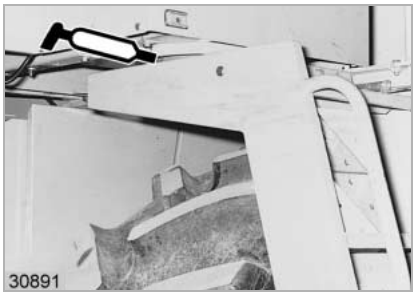

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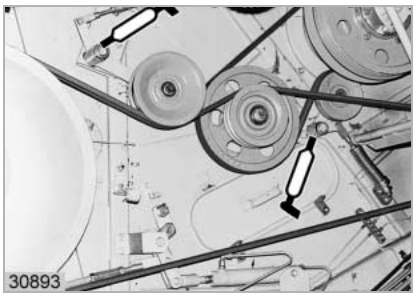

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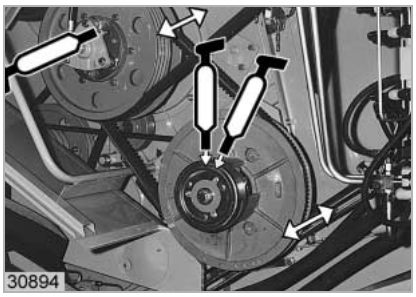

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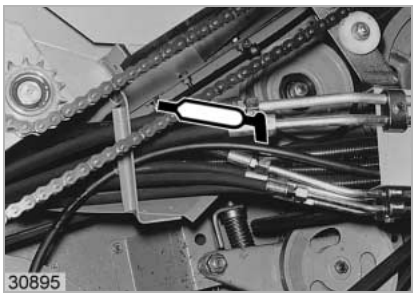

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