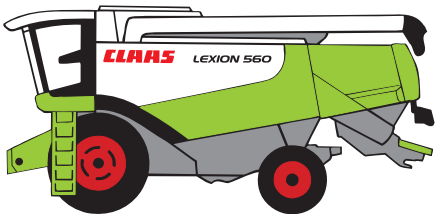

LEXION 560 / 550
LEXION 540 / 540 C
LEXION 530 / 520 / 510

Operator's Manual

Contents

3
General Information

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Safety Rules

SAFETY DECALS WITH PICTORIALS

Those hazard points of a machine that cannot be removed by design or protective measures are marked with safety decals. These safety decals help to alert persons to hazards which can cause personal injury.

The safety decals consist of 2 parts. The first part shows the hazard inside a warning triangle. The second part shows how to avoid injuries and accidents by proper behaviour.

The pictures on the safety decals use so-called pictograms which allow their language-independent use. As far as possible, the safety decals are positioned directly next to the hazard point.

The explanation of the safety decals as well as the representation of the proper location on the machine is given in the Safety precautions chapter of the present Operator's Manual.

Genuine CLAAS safety decals carry the CLAAS part code and a production date.

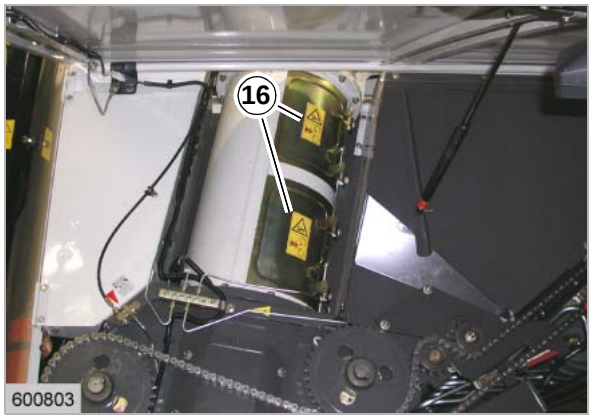
Danger!

Hazard points on the machine

Danger of injury and mortal danger!

– Safety decals that are damaged or unrecognisable must be replaced immediately by new ones.

– When parts that have decals are replaced, always make sure to install the relevant new decals with each new part.



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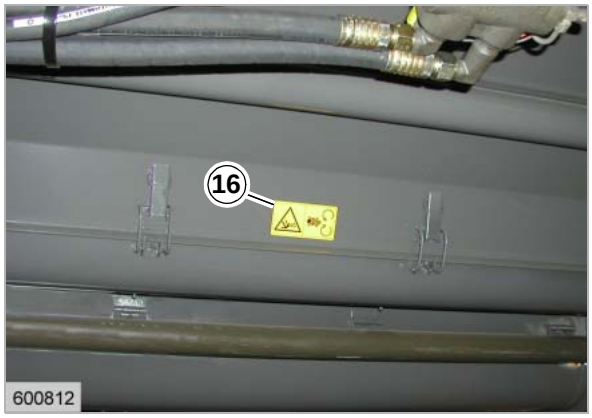

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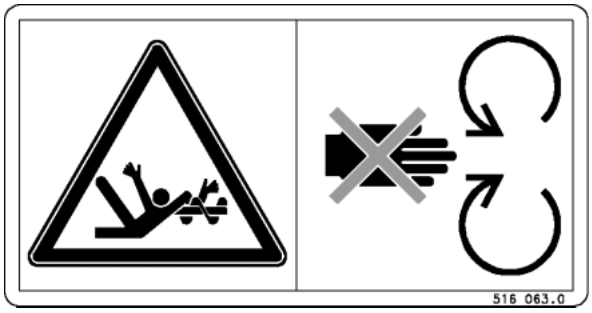
0516 033.0 (16)

Keep hands away from rotating augers.

(Fig. 35, 36, 37)



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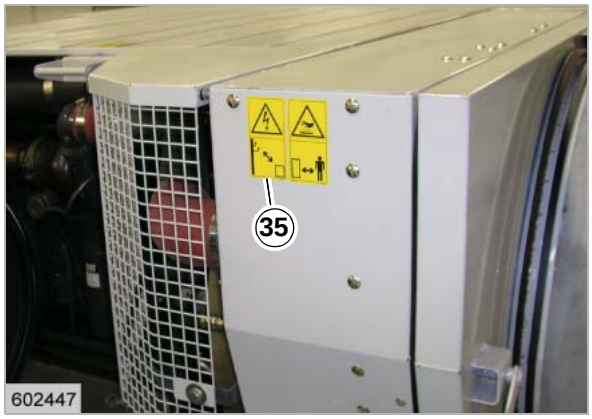
0516 063.0 (16)

Keep hands away from rotating augers.

(Fig. 38, 39, 40)



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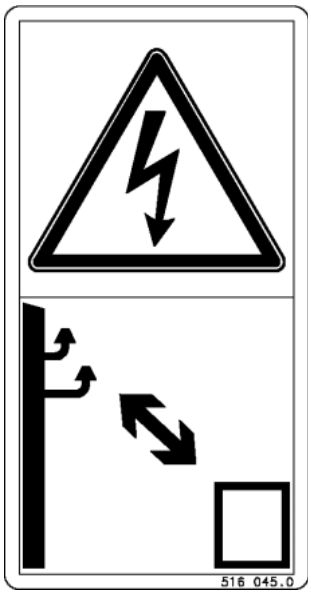

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0516 045.0 (35)

Avoid contact with overhead high tension power lines. Stay well clear.

(Fig. 73, 74, 75)

CLAAS LEXION 560 / 550 / 540 / 540 C

Engine	LEXION 560 CATERPILLAR C-13	LEXION 560 CATERPILLAR C-10
Cubic capacity [litres]	12.5	10.3
Maximum no-load speed [rpm]	2184^{+20}_{-30}	2184^{+20}_{-30}
Rated speed [rpm]	2100	2100
Average idle speed (1/2) [rpm]	1450	1450
Slow idling speed [rpm]	1200 ± 20	1200 ± 20
Reduced speed [rpm] in 3rd gear at 20 km/h	1568 ± 10	1568 ± 10
Reduced speed [rpm] in 3rd gear at 25 km/h	1960 ± 10	1960 ± 10
Engine output at rated speed	2100 rpm	2100 rpm
Power (EWG 80/1296) kW (HP)	283 (385)	266 (362)
Power (ECE R 24)	265 (360)	250 (340)
Coolant	approx. 45.0 litres	approx. 40.0 litres
Alternator	160 A / 12 V	160 A / 12 V
Battery	12 volts, 210 Ah	12 volts, 210 Ah
Fuel tank capacity	800 litres	800 litres

Engine	LEXION 550 CATERPILLAR C-9 exhaust gas class 2	LEXION 550 CATERPILLAR C-9 exhaust gas class 3a
Cubic capacity [litres]	8.8	8.8
Maximum no-load speed [rpm]	2184^{+20}_{-30}	2184^{+20}_{-30}
Rated speed [rpm]	2100	2100
Average idle speed (1/2) [rpm]	1450	1450
Slow idling speed [rpm]	1200 ± 20	1200 ± 20
Reduced speed [rpm] in 3rd gear at 20 km/h	1568 ± 10	1568 ± 10
Reduced speed [rpm] in 3rd gear at 25 km/h	1960 ± 10	1960 ± 10
Engine output at rated speed	2100 rpm	2100 rpm
Power (EWG 80/1296) kW (HP)	249 (339)	258 (350)
Power (ECE R 24)	236 (321)	243 (330)
Coolant	approx. 52.0 litres	approx. 40.0 litres
Alternator	160 A / 12 V	160 A / 12 V
Battery	12 volts, 210 Ah	12 volts, 210 Ah
Fuel tank capacity	800 litres	800 litres

CLAAS LEXION 530 / 520

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

Cutterbar

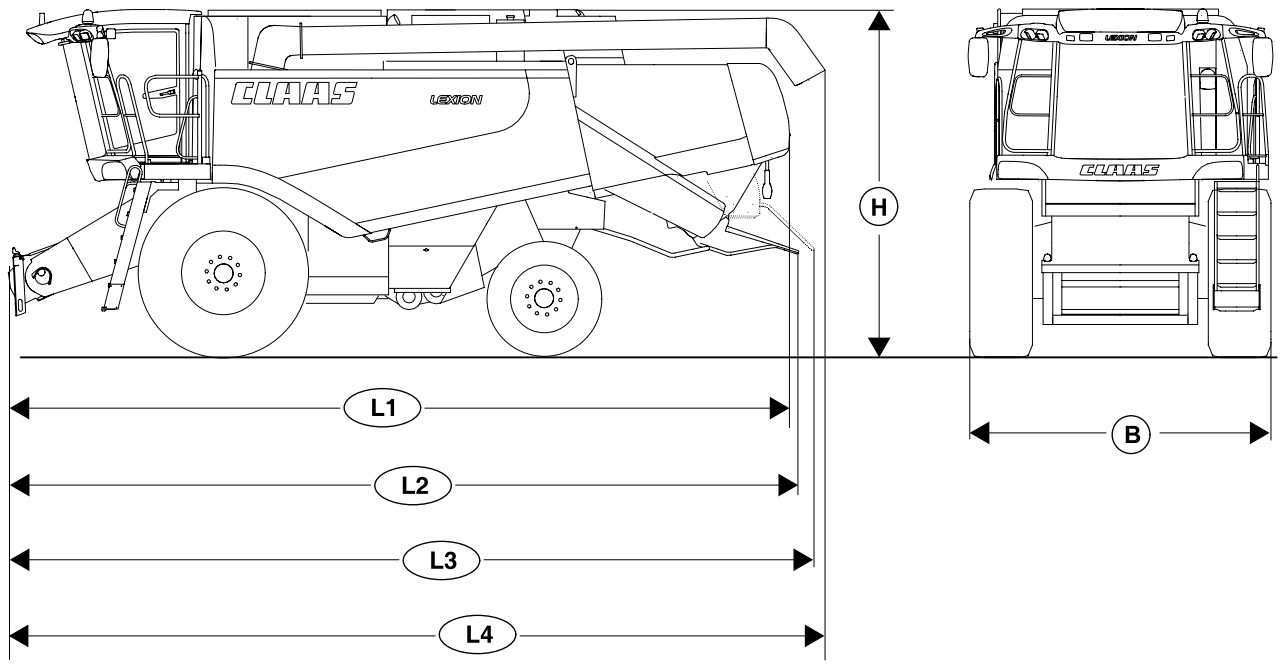
For specifications of cutterbars – see Operator's Manual "LEXION Cutterbars"

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 (bottom edge of cutterbar skids)	
– Cutterbar with Auto Contour	980 mm* with cutterbar floatation springs 1270 mm* with cutterbar floatation springs blocked
– Cutterbar without Auto Contour	950 mm* with cutterbar floatation springs 1240 mm* with cutterbar floatation springs blocked
	* Depending on tyre manufacturer, deviations of up to -50 mm are possible
Feeder housing	chain conveyor
Cutterbar clutch	electro-hydraulic operated

Threshing mechanism

Stone trap	standard
Threshing concave	electro-hydraulical instant adjustment, width 1420 mm
– Preconcave	3 segments, interchangeable
– When small stone trap is fitted	for grain and similar size crops: 7 bars, 6 rows of perforations wire N10, 10 x 35 for maize and similar size crops: no bars, 6 rows of perforations 19 x 40
– When large stone trap is fitted	5 bars, 4 rows of perforations wire N10 for maize and similar size crops: no bars, 4 rows of perforations 19 x 40
Disawning	
– Main concave	1 bolt-on two-piece threshing segment
– Preconcave	2 engageable disawner plates
Main concave	3 bars, 3 rows of perforations 12 x 32 (preconcave)
	wire concave N18, 13 bars, 13 rows of perforations
	wire concave N10, 13 bars, 13 rows of perforations
Accelerator	paddle drum ∅ 450 mm with wear caps

CLAAS LEXION 530 / 520



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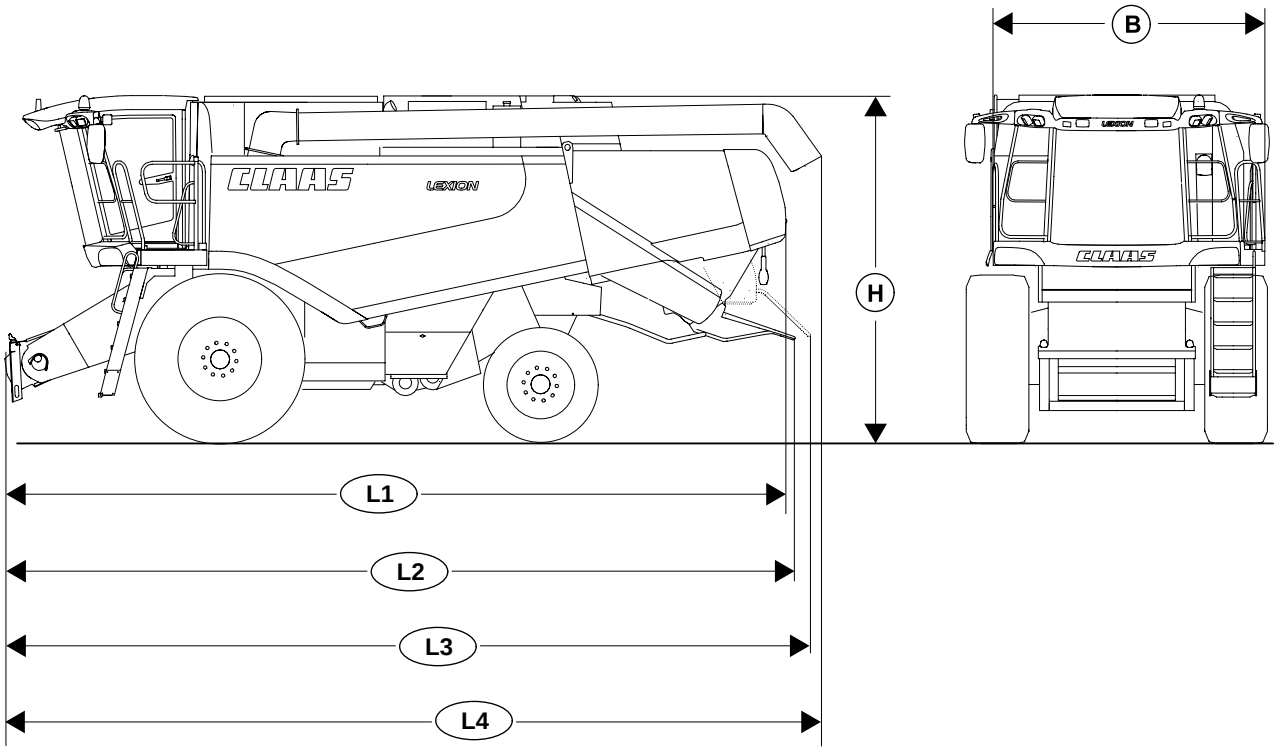
		Transport position	Working position
LENGTH	**with cutterbar 4.5 m, folding**		
	with folding cutterbar	11420 mm	–
	length of front end up to steering wheel centre	3490 mm	–
	with cutterbar 5.4 m, folding		
	with folding cutterbar	11630 mm	–
	length of front end up to steering wheel centre	4120 mm	–
	with Conspeed		
	length of front end from steering wheel	3700 mm	–
	centre with 6-row Conspeed	11540 mm	–
	length of front end from steering wheel	3820 mm	–
	centre with 8-row Conspeed	11670 mm	–
	all lengths to back edge of rear hood		

Weights

The total weight of the machine can be determined by adding together the weights according to the options fitted. See also "Front attachments" and "Additional weight on rear axle tyres".

Basic machine (components fitted: no front attachment, no chopper and chaff spreader, full fuel tank)	13220 kg
Single weights:	
Straw chopper	+ 520 kg
Chaff spreader	+ 120 kg
Straw spreader	+ 100 kg
Rear wheel drive axle	+ 400 kg

CLAAS LEXION 510



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Transport position / Working position

		Transport position	Working position
WIDTH B	Body width	3000 mm	
	Machine width with tyres – see page 5.3.6, *Combine dimensions*		–
	With cutterbar or maize picker head *– see Operator's Manual for front attachment*		
HEIGHT H	Top edge of grain tank	3870 mm	4295 mm
	Bottom edge of grain tank unloading tube nozzle, short	–	3960 mm
	Bottom edge of grain tank unloading tube nozzle, long	–	4170 mm
	Bottom edge of grain tank unloading tube nozzle, extra long	–	4280 mm
LENGTH	Basic machine (Height of bottom edge of feeder housing 500 mm)		
L1	Up to rear edge of rear panel	8780 mm	–
L2	Up to rear edge of straw chopper cover	8800 mm	–
L3	Up to rear edge of straw spreader safety frame	9060 mm	–
L4	Up to rear edge of grain tank unloading tube nozzle, extra long	9200 mm	–
	With cutterbar 4.5 m, folding		
	With folding cutterbar	11420 mm	–
	Length of front end up to steering wheel centre	3490 mm	–
	With cutterbar 5.4 m, folding		
	With folding cutterbar	11630 mm	–
	Length of front end up to steering wheel centre	4120 mm	–

Putting the automatic air conditioner into operation

Danger!

Important instructions regarding the air conditioning system:

1. Avoid any contact with refrigerant!
2. If refrigerant splashes into the eyes, consult a doctor immediately!
3. Have maintenance and repair work carried out by specialist air conditioning system workshops only.
4. Do not weld on or in the vicinity of refrigerant circuit components. – **Danger of poisoning!**
5. Maximum ambient temperature for refrigerant 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 engine).

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

Automatic climate control self-test:

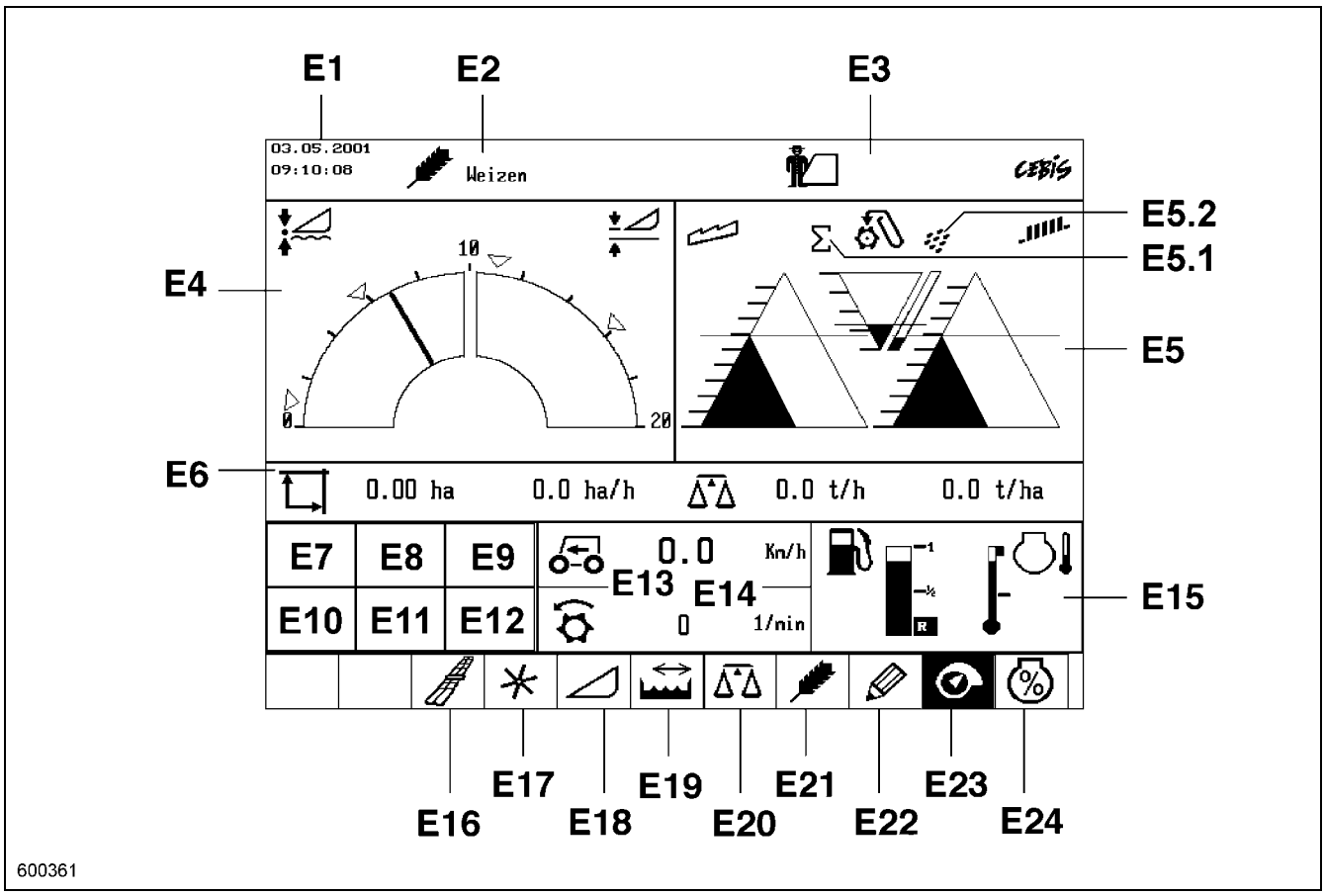
After start-up, the controller carries out a self-test. The self-test takes about 20 seconds.

Note:

To avoid incorrect temperature control by the automatic air conditioning system, close refrigerating box lid (7, Fig. 1) immediately after use.

Malfunction, possible cause or remedy – air conditioner system

Malfunction	Possible cause or remedy
Air conditioner system is switched off automatically. The symbol ❄ then appears on the display.	1. Extremely high outside temperature. Let system cool down, then switch on again. Close the doors and windows.
Air conditioner system does not cool. Only uncooled air comes out of air vent.	1. Magnetic clutch not engaging. Have clutch replaced. 2. V-belt not tight enough. Tension or replace V-belt. 3. Cable connections loose. Tighten loose or disconnected cables. 4. Fuses (F 33) blown. Replace the corresponding fuse. 5. Compressor not pumping refrigerant. Expansion valve iced. The saturation of the moisture indicator has been reached. Have filter receiver drier replaced by new one. For this, the refrigerant has to be discharged from the system and then recharged.
Cool air blown through air vent into cab. But air flow is insufficient to cool the cab.	1. Evaporator in cab roof blocked. Clean evaporator. 2. Evaporator defective. Install new evaporator (have air conditioner system discharged and then recharged with refrigerant). 3. Condenser (in front of the radiator) is soiled. Clean condenser. 4. Refrigerant level too low. The white ball does not float and is at the bottom of the sight glass. Have the air conditioning system inspected by qualified refrigeration service. 5. Outside air getting into the cab. Close windows and doors completely.
Air conditioner provides cool air for a time, then discharges warm air again.	1. Ice forming inside the expansion valve. Up to serial no. ...: The filter receiver drier is saturated when the blue ball has turned pink. Have filter receiver drier replaced by new one. (Drain air conditioner and have it filled again.) From serial no. ...: The filter receiver drier is saturated when the orange ball has lost its colour. Have filter receiver drier replaced by new one. (Drain air conditioner and have it filled again.)



4

Screen
(harvest display)

E 1 Date / Time
E 2 Crop
E 3 Customer's name
E 4 Cutting height indicator
E 5 Display of grain losses and alarms
E 6 Menu bar
E 7 Window – see page 8.2.4
E 8 Window – see page 8.2.4
E 9 Window – see page 8.2.4
E 10 Window – see page 8.2.4
E 11 Window – see page 8.2.4
E 12 Window – see page 8.2.4
E 13 Ground speed
E 14 Configurable display
(e.g. threshing drum speed)
E 15 Settings display field
E 16 Whole crop harvesting
E 17 Preset reel values
E 18 Front attachment preset values
E 19 Partial width steps
E 20 Yield measuring
E 21 Crop selection
E 22 Recording
E 23 Settings
E 24 Engine loading

(Fig. 4)

Fuses

Designation	Fuse	Position in central terminal compartment
F 41	Warning beacon	Y 2
F 42	12V horn / wiper and washer system	V 3
F 43	Side light, left-hand	W 6
F 44	Side light, right-hand	V 6
F 45	Left-hand main beam relay	U 6
F 46	Left-hand dipped beam relay	S 6
F 47	Right-hand main beam relay	U-V 6
F 48	Right-hand dipped beam relay	R 6
F 49	VARIO table adjustment	T 6
F 50	Grain tank extension	P 6
F 51	Ignition, diagnosis plug	A6
F 52	Instrument lighting	X 2
F 53	Returns lighting	O 6
F 54	Uni-spreader control / Autopilot module	A9
F 55	Work light switch	U 2
F 56	Spare module	H 2
F 57	Spare module	J 2
F 58	Spare (plug H)	O 2
F 59	Engine diagnosis	G 7
F 60	12V low-pressure / high-pressure socket outlets	T-U 2
F 61	Sidefinder	T-U 3
F 62	Outside railing work lights relay	V 2
F 63	12V potentiometers	A5
F 64	12V speed sensors	P 2
F 65	Spare relay 40A incl. 12 / 30A	F 6
F 66	12V RIO deflector adjustment / radial spreader	L 6
F 67	RIO Rotor flaps / rotor variator	A4
F 68	Wheel position work lights	I-J 2
F 69	Cooling box 12V socket outlet	G-H 6
F 70	Ignition switch back-up fuse	Y 3
F 71	Sieve adjustment 12 V module	A2
F 72	Ground drive hydraulics brake valve	M 2
F 73	Stubble lighting	X 9
F 74	12V constant plus for radio / CB radio	Z 3
F 75	Ignition, transmission controller	D 2
F 76	Maintenance light	J 6
F 77	Front attachment electronic unit plus	K 2
F 78	Diagnosis DAIMLER CHRYSLER terminal 15	P-Q 6
F 79	12V module A15 (DC)	Y 6

1

LIGHTING AND SOCKET OUTLETS

Headlights, working lights, mirrors

A = Stubble lighting

B = Drive lights

C = Parking light

D = Turn flasher (right / left)

E = Drive lights with folding front attachments (switchable from **B** to **E**).

F = Work light for working area ahead

G = Front attachment lighting

H = Front attachment lighting, left-hand and right-hand centre area

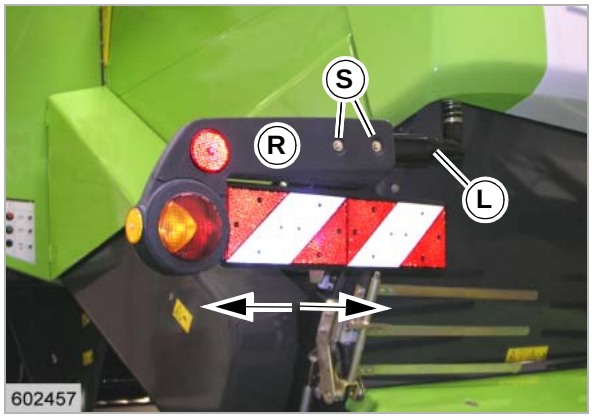
I = Front attachment lighting, left-hand and right-hand outer area

J = Lighting (Sidefinder)

K = Mirror

L = Side view mirror

(Fig. 1)



26

Positioning the taillights

The taillights (R) can be adjusted to suit excess widths.

Caution!

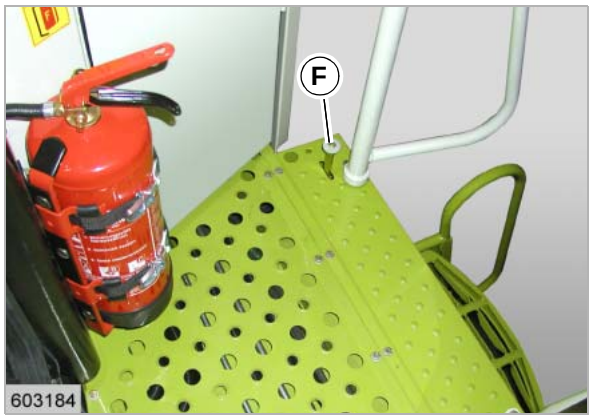
The position of the taillight (R) depends on the machine width over the tyres. The outer taillight edge should be positioned as close as possible to the outer tyre edge. The taillight must not project beyond the tyres!

– Unscrew the hex. bolts (S). Move the taillights (R) accordingly on the lamp bracket (L).
– Re-insert the hex. bolts and screw in tightly.

Carry out this procedure on both sides.

(Fig. 21, 26)

20



21

22

23

Adjusting the ladder:

When adjusting from the ground, pull lever (H) on the ladder downward.

When adjusting from the operator's platform, unlock the ladder by actuating the foot pedal (F) and rotate the ladder railing (G) correspondingly.

Danger!

The ladder must always engage in the selected position.

(Fig. 19, 20, 21, 22)

Swivelling the ladder
(from serial no. ...)

Danger!

Operate the ladder only when the machine is stationary!

Ensure that the ladder is in the front position before starting to drive the machine (Fig. 23).

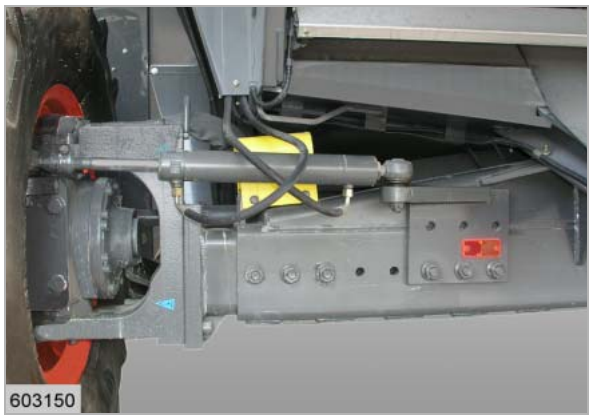
Always ensure that the ladder is in the side position before climbing up or down the ladder (Fig. 24).

REAR AXLES

A basic distinction is made between three different types of axles.

1. Adjustable rear drive axle
   (2.60 m – 3.20 m)

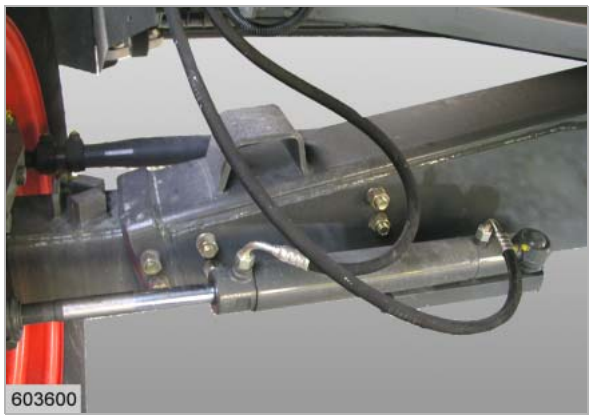
(Fig. 1)



1

2. Rear axle
   (3.04 m)

(Fig. 2)



2

3. Adjustable rear axle
   (2.54 m – 2.99 m)

(Fig. 3)

3

Caution!

The text below describes the necessary work steps before putting the axles into operation.

(Fig. 1, 2, 3)

Adjusting the track width

The rear axle can be adjusted to four positions.

Rear axle position	Flange dimension		Number of visible bores **Z**
1	**A**	= 2540 mm	–
2	**B**	= 2690 mm	2
3	**C**	= 2840 mm	4
4	**D**	= 2990 mm	6

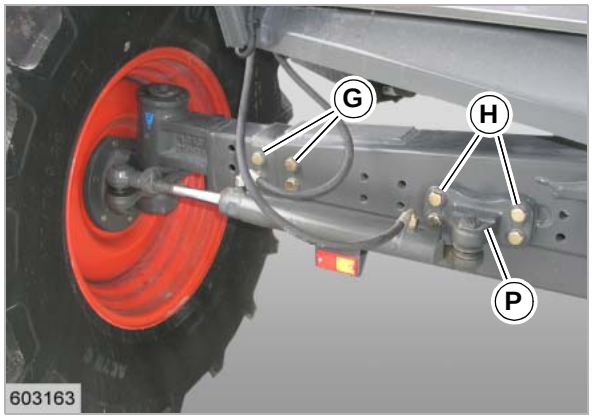
Caution!

The allowed flange dimensions for the corresponding rear drive axle tyres can be taken from the tables on page 5.1.9 and following.

Width over tyres + 208 mm in each case

Dimensions with wheels fitted and flange width adjustment – see "Specifications".

When delivered ex works, the rear axle is set to transport position (position 1).



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1. Slightly raise the machine at the rear until the rear axle wheels only have slight ground contact.

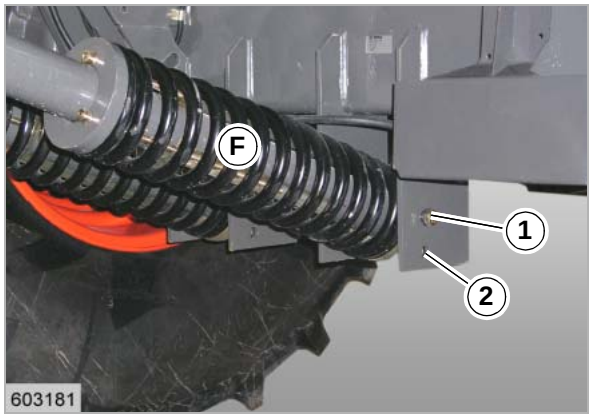
Danger!

No persons are allowed on the machine during work under the jacked-up combine. Ensure that the hoisting device has sufficient capacity and stands firmly.

2. First remove hex. bolts (G and H) of the axle and steering cylinder mounting on one side only.

(Fig. 15)

CUTTERBAR HYDRAULIC CYLINDERS



1

Attaching cutterbar hydraulic cylinders

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

The cutterbar floatation 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 9.1.3, *Front attachment floatation springs*.

When using other cutterbar sizes, the number of cutterbar cylinders must be adapted (see table).

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

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

(Fig. 1)

Number of cutterbar cylinders

Number of cutterbar cylinders LEXION 530 / 520 / 510	Cutterbar cylinder diameter	Spring diameter	Cutterbar cylinder
	mm	mm	Number
Vario cutterbar 5.4 m – 6.0 m	55	23	2
Vario cutterbar 6.6 m – 9.0 m	55	23	3
Rigid cutterbar 4.5 m – 5.4 m	55	23	2
Rigid cutterbar 6.0 m	55	23	2
Rigid cutterbar 6.0 m with rape attachment	55	23	3
Rigid cutterbar 9.0 m	55	23	3
4.5 m folding cutterbar	55	23	2
5.4 m folding cutterbar	55	23	3
Soy bean cutterbar 6.6 m – 9.0 m	55	23	3
Rake-up 3.9 m	55	23	2
Maize picker Conspeed 6-row	55	23	3
Maize picker Conspeed 8-row	55	23	3

DRIVING THE COMBINE

1

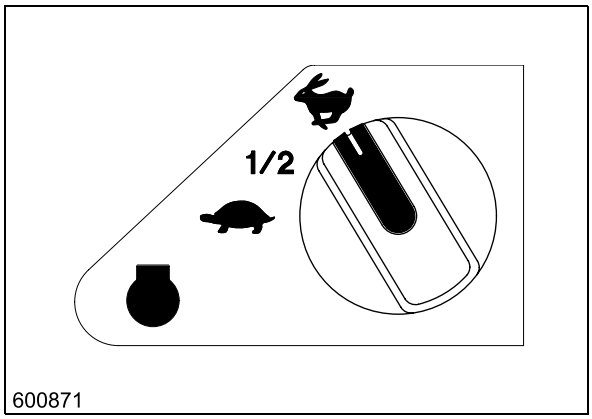
Danger!

For road travel with a raised front attachment the safety switch (34) must be switched off.

Before leaving the combine harvester, ensure that the front attachment has been completely lowered, the engine has been switched off and the ignition key has been removed.

Do not drive in 3rd gear on gradients of more than 7%. Never disengage a gear and/or shift gears on a slope or let the machine roll.

(Fig. 1)



2

Engine speed rotary switch

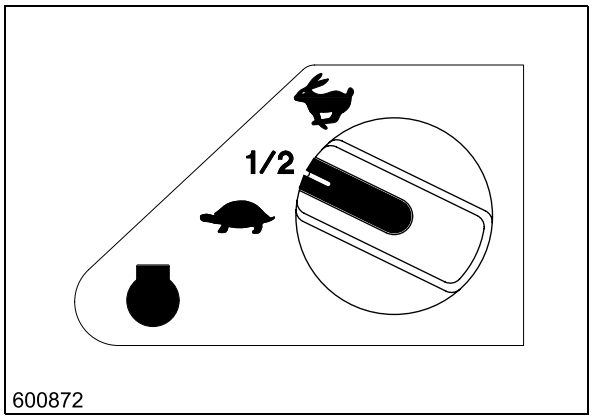
Function of rotary switch (32):

= slow idling speed

1/2 = average idle speed

= maximum no-load speed

(Fig. 1, 2)



3

Average engine idle speed

For unloading the grain tank and for manoeuvring, e.g. when picking up a front attachment, the speed switch (32) can be set to position **1/2**. To this end, the front attachment must be disengaged.

Note: When engaging the 3rd gear with the switch in the position and the threshing mechanism disengaged, the engine speed is automatically reduced.

During work, the rotary switch (32) must always be in the position.

(Fig. 2, 3)

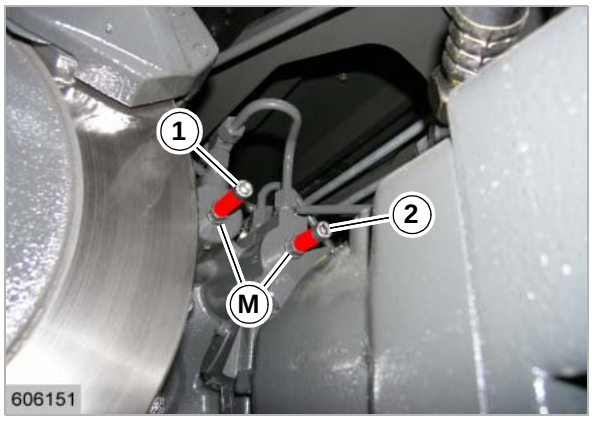
Adjusting the initial gearbox position
(the gearbox can be shifted electro-hydraulically again)

This procedure must be applied when the gears were set to neutral manually.

Turn back the hex. socket head bolts to the specified dimensions or replace them by new bolts with pre-assembled plastic sleeves.

Danger!

Stop the diesel engine and switch off the battery isolating switch. Secure the machine so it will not roll away!



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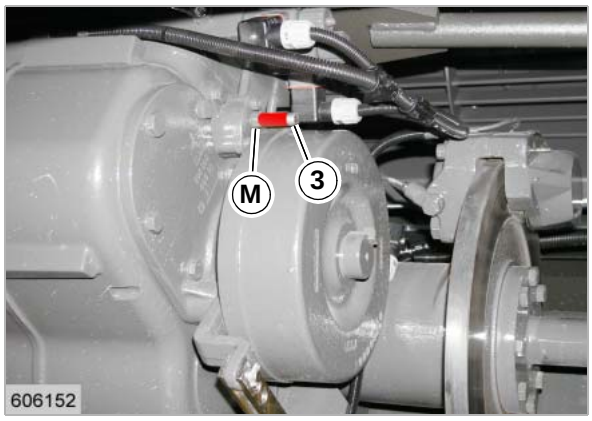


19

Required tools:
One open-ended spanner 13 mm and a hex. socket screw wrench 6 mm.

Setting the 1st gear back to its initial position:

Socket head bolt (1) M 8 x 50, dimension (A)
spare part no. 000 768 946 0
length of plastic sleeve (B = 33 mm)

Slacken off the sealing nut (M) and turn hex. socket head bolt (1) back to the dimension (B = 33+1 mm). Tighten sealing nut.

(Fig. 18, 20)

Setting the 2nd gear back to its initial position:

Socket head bolt (2) M 8 x 45, dimension (C)
spare part no. 000 768 947 0
length of plastic sleeve (D = 27 mm)

Slacken off the sealing nut (M) and turn hex. socket head bolt (2) back to the dimension (D = 27+1 mm). Tighten sealing nut.

(Fig. 18, 20)

Setting the 3rd gear back to its initial position:

Socket head bolt M 8 x 47.5, dimension (E)
spare part no. 000 768 948 0
length of plastic sleeve (F = 27 mm)

Slacken off the sealing nut (M) and turn hex. socket head bolt (3) back to the dimension (F = 27+1 mm). Tighten sealing nut.

(Fig. 19, 20)

The initial condition has now been restored.

Fine adjustment

Tightening the lock nut =
the combine will drive more closely to the crop edge.

Loosening the lock nut =
the combine will drive at a greater distance from the crop edge.

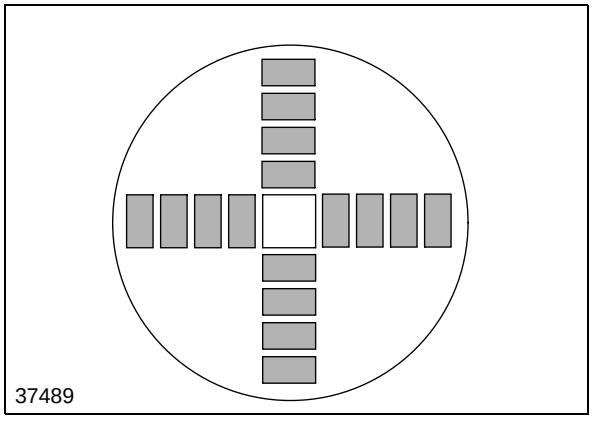
Correct the adjustment after the first travel if required until the optimum distance from the crop edge has been achieved.

Note!

The compression spring (F) on the eye bolt must be tensioned at all times. If necessary, readjust the hex. nuts (M).

The bolts at (A) must be firmly tightened and must not rattle.

(Fig. 9, 10, 11)

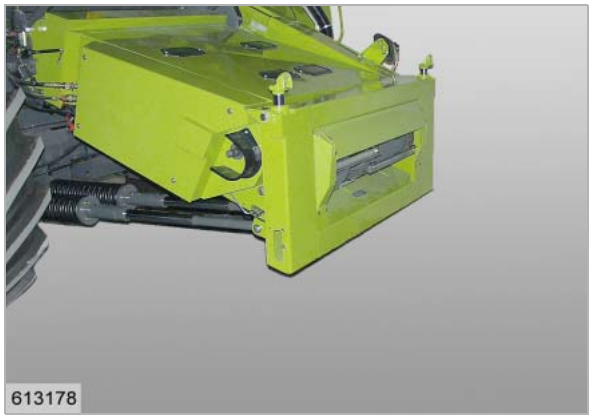


12

Laser sensor (crop edge has moved out of visible range)

When all LEDs light up during field use, the laser sensor has lost the crop edge from its visual range. The combine must now be steered manually and be driven to a crop edge.

(Fig. 12)



6

Adjusting the cutterbar cross levelling hydraulic cylinder

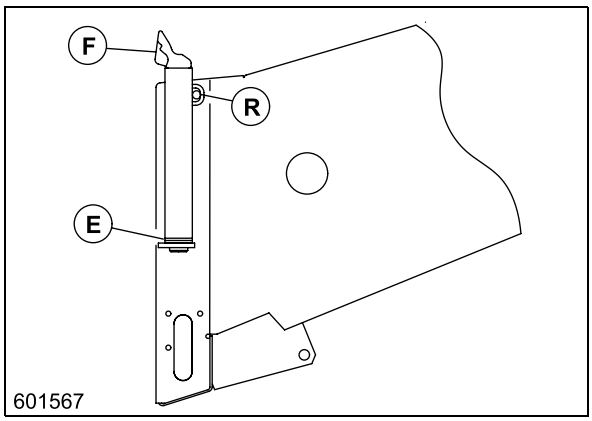
(from serial no. ...)

Machines equipped with Auto Contour

If hydraulic cylinders do not have the same centre positions:

– Bleeding the hydraulic cylinder – see page 10.3.7, *Bleeding the cutterbar cross levelling hydraulic cylinder (from serial no. ...)*.

(Fig. 6)



7

Aligning the coupling pin

(machines without Auto Contour)

Aligning the coupling pin sets the cutterbar in parallel with the drive axle.

Before putting the combine into operation for the first time, check horizontal position of cutterbar.

If required, the cutterbar position can be modified by relocating the washers (E) below the coupling pins. Two washers each (43 x 53 x 3) are enclosed in the shipping package.

This is done as follows:

Drive the combine with the cutterbar attached on a flat, even surface. Lower the cutterbar onto the ground.

First remove the washers under the coupling pin (F) on the higher side. To do this, unscrew the hex. bolt (R) and raise the coupling pin slightly.

After removing the washers, bolt down the coupling pin again and fit the cutterbar.

If this is not yet sufficient, the washers removed can be added on the opposite side.

(Fig. 7)

8

Operation CEBIS

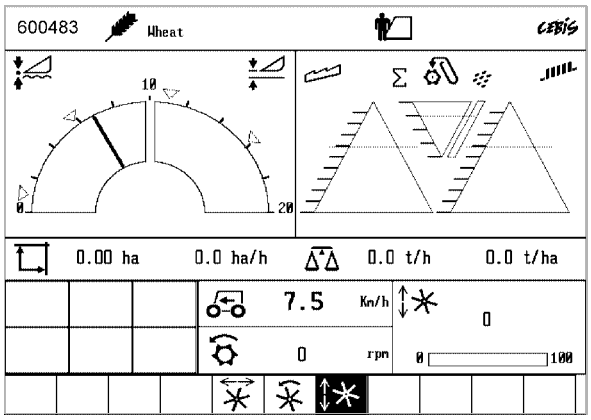
Version 8.1

PRIOR-TO-INITIAL OPERATION

Before operating the system for the first time, carry out the following adjustments or have the system learn the settings and check the settings. Basic settings of the machine are installed by CLAAS.

The following steps have to be carried out by the user:

1. Selection of language	(Page 8.2.77:	CEBIS / Language / German, English, 3rd language)
2. Measuring units	(Page 8.2.81:	CEBIS / Measuring units / Distance travelled, Area, Yield, Time display, Fuel)
3. Speeds	(Page 8.2.65:	SPEEDS / Learning speeds, Learning max. no-load speed)
4. Tachometer settings	(Page 8.2.69:	TACHOMETER / set Impulses/100m or carry out a Calibration run)
5. Autopilot settings	(Page 8.2.71:	TACHOMETER / set the sensitvity for the Autopilot, Learn Zero ATP-front attachment and Zero steering)
6. Cutterbar related settings	(Page 8.2.57:	CUTTERBAR / Lern cutterbar height limits, set Partial width proportions, set Working position and Working width)
7. Returns display	(Page 8.2.75:	SEPARATION / set the graphical returns display limit, Lern zero returns)
8. Yield meter (LEM)	(Page 8.2.29 / 8.2.33:	YIELD MEASUREMENT / carry out Zero yield and Zero angle)



18

Reel height

Here the reel height can be set with the cutterbar automatics activated (see section: Cutterbar / Cutterbar automatics, path: ADJUSTMENTS / CUTTERBAR / CUTTERBAR AUTOMATICS).

Set the desired reel height using the +/- keys (C6 or C7) or keys (M1 or M2) on the multi-function handle. The reel height established to be correct can also be learned by CEBIS at any time by pressing one of the CAC keys (M9 or M10) for approx. 3 sec.

Note: When button (M9 or M10) is pressed for 3 sec., the following set values will be saved: cutting height, advance speed of reel, reel horizontal position and cutterbar table length (with Vario-cutterbar only).

(Fig. 1, 17, 18)

Preparation for yield measurement

The first thing to do is to make sure that the calibration factor, weight per litre and the moisture setting for the respective crop are correct. The weight per litre should be determined 1 to 3 times using the grain weight tester, while harvesting in uniform crops. Should the weight per litre vary dramatically, then more frequent weight readings will have to be taken.

1. Finding the weight per litre:

   Since the **LEM** measures a volume, the weight per litre must be determined, in order to calculate the real weight. When starting to harvest a crop, the machine shoul be set with the standard settings which are stored under the actual crop type. Now the weight per litre should be determined approx. 3 times to obtain a exact setting factor. This value should then be entered accordingly. Depending on the fluctuation of yield, the weight per litre should be determined for each grain tank full.

   To determine the weight per litre fill the container to the top, ensuring that the content is not packed down. Any grains standing proud above the top lid, should be lightly brushed away with ones finger. Now hang the container on the grain weight tester scale and read the weight per litre.

   Never enter the weight per litre in order to calibrate the yield measurement!

   IMPORTANT: First the weight per litre must be determined correctly. If then the measuring accuracy is not acceptable, a »Test-weighing« must be carried out or the calibration factor can be adjusted manually, if the constant fluctuation of yield is known.

   To determine the exact weight per litre, the grain weight tester must be calibrated. Hang the empty container on the weight tester and set the scale to »0 g«. To do that, hold the weight tester so that the scale itself comes out towards the top.

2. Test-weighing / Weight measured:

   To correct a setting independent of weight per litre the calibration factor is changed. This makes up for any differences and increases the accuracy.

   Calibrating using »Test-weiging«:

   First empty the grain tank. Then start the menu »Test-weighing«. The display »Measured« should read now 0,0 t. Once combining is started, the »Measured« value (t) should increase. The »Test-weighing« procedure can be left in operation either one or several grain tranks full.

   It is important that once »Test-weighing« has been stopped, all grain is unloaded from the grain tank and that the whole quantity of grain harvested during the »Test-weighing« period is weighed on a calibrated weigh bridge. Once the »Test-weighing« procedure has been stopped and the grain tank is emptied, the combining can continue as normal.

   Open now the menu »Weight measured«. Pressing the OK key inputs the value established by the »Test-weighing« procedure. This figure is displayed in the »Measured« value section. Correct this value by means of the +/- keys once the exact weight from the weigh bridge is available (scale ticket) and press »OK«. The data will then be recalculated, the calibration factor will be automatically adjusted and the yield meter corrected accordingly.

   Calibrating directly:

   If the total yield of a particular area is known and differences exist (no »Test-weighing«), then the calibration factor can be corrected directly using the +/- keys.

   For example:

   Calibration factor = 0.90
   The terminal shows = 5% too low
   New calibration factor = old calibration factor + 5%
   = 0.90 x 1.05
   = 0.945

   New calibration factor to be adjusted = 0.95

Moisture measurement ON/OFF, moisture correction, storage moisture

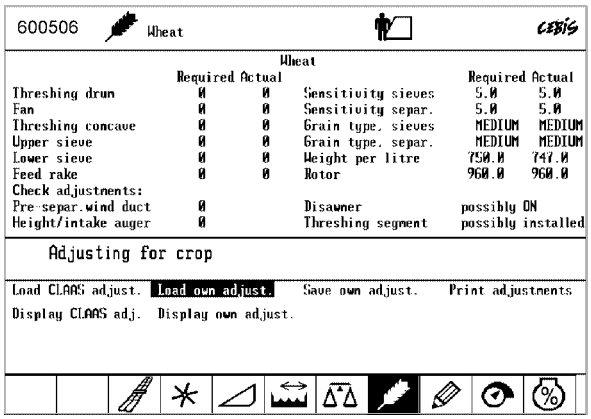
From the menu »Moisture mesaurement ON/OFF« the moisture mesuring system cvan be activated or deactivated by use of the +/- keys.

Calibration of the moisture meter can be corrected in the menu »Moisture correction« by using the +/- keys.

In the menu »Storage moisture« the wanted storage moisture content of the grain currently being harvested can be set. This allows the system to calculate and display the yield with respect to the moisture content of the grain after drying.

Quick guide to accurate measuring data

1. Determine the weight per litre.
2. Should this not be accurate enough, carry out the »Test-weighing« procedure or correct the calibration factor manually.



54

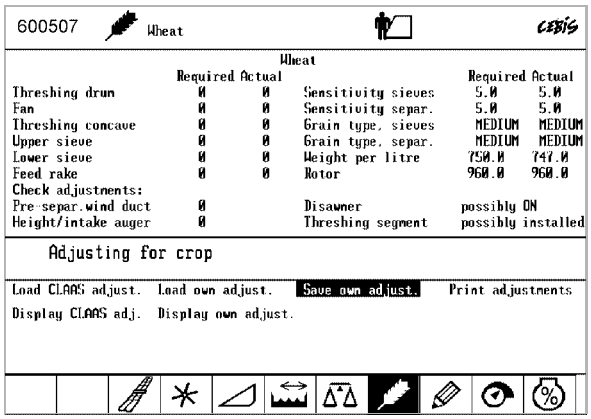
Load own adjustments

Activate by pressing the OK key (C1)

Threshing mechanism and cutterbar must be engaged, the engine must run at max. speed no-load. In this menu your own machine settings will be activated. Pressing the OK key (C1) sets the machine for the crop selected. The values will be displayed.

Note the message »Check adjustments:« in the lower section of the screen. These settings will not be carried out automatically, but must be performed manually.

(Fig. 53, 54)



55

Save own adjustments

Activate by pressing the OK key (C1)

Threshing mechanism and cutterbar must be engaged, the machine must run at max. speed no-load.

In this menu CEBIS learns the machine adjustments (threshing drum, concave, fan settings etc.) which you have found most suitable. With the machine adjusted for the current crop, press the OK key (C1) to save the adjustments.

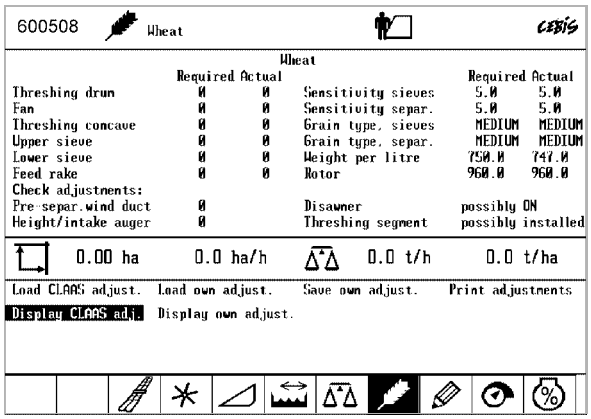
(Fig. 53, 55)

Print machine adjustments

Activate by pressing the OK key (C1)

Pressing the OK key (C1) prints the momentary machine adjustments for the current crop.

(Fig. 53, 55)



56

Display of CLAAS adjustments

Activate by pressing the OK key (C1)

Pressing the OK key (C1) displays the momentary CLAAS machine adjustments for the current crop.

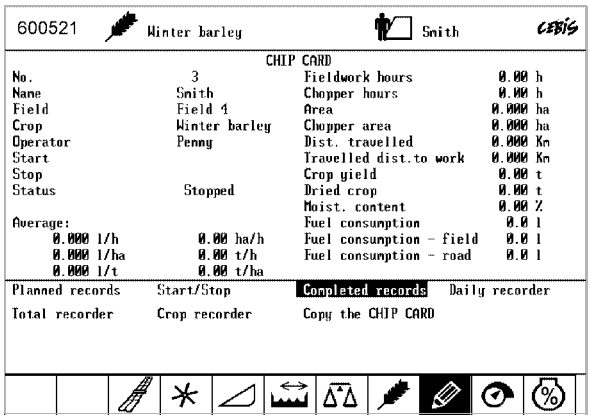
(Fig. 53, 56)

Display of own adjustments

Activate by pressing the OK key (C1)

When the OK key (C1) is pressed, this menu displays the machine adjustments you found best for the current crops and which were saved in the memory.

(Fig. 53, 56)



71

Completed work records

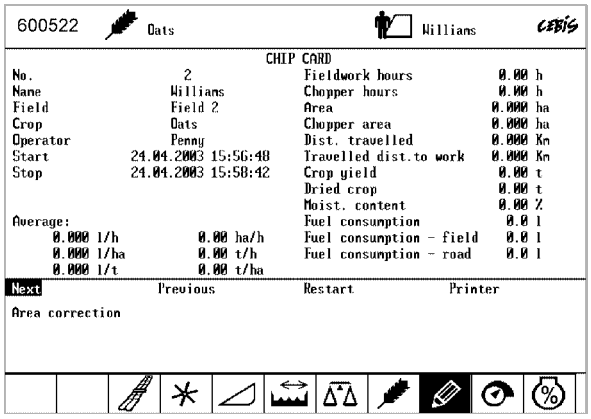
Activate by pressing the OK key (C1)

In this menu topic the completed work records (field-work hours, distance travelled, area, yield and fuel consumption) can be individually displayed, restarted and/or printed.

SUBMENU OPTIONS:

Next / Previous / Restart / Printer / Area correction

(Fig. 70, 71)



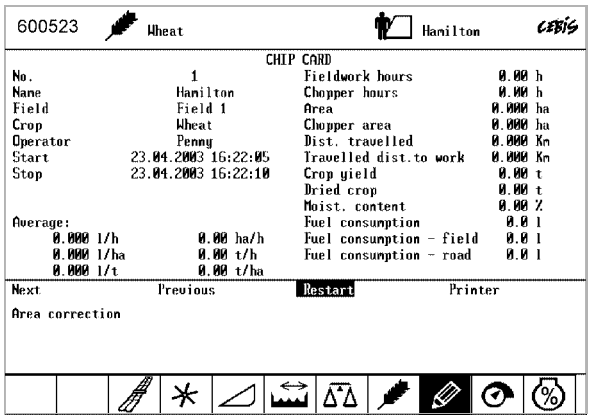
72

Next or previous completed work record

Activate by pressing the OK key (C1)

Press the OK key (C1) to call up the previous and/or next completed work records for the purpose of viewing and/or restarting.

(Fig. 70, 72)



73

Restart a completed work record

Activate by pressing the OK key (C1)

In this menu topic a completed, i.e. stopped work record can be restarted at any time, provided that a chip card is inserted, by pressing the OK key (C1) and the work record display is shown again.

Printer

Activate by pressing the OK key (C1)

In this menu topic a completed work record can be printed by pressing the OK key (C1).

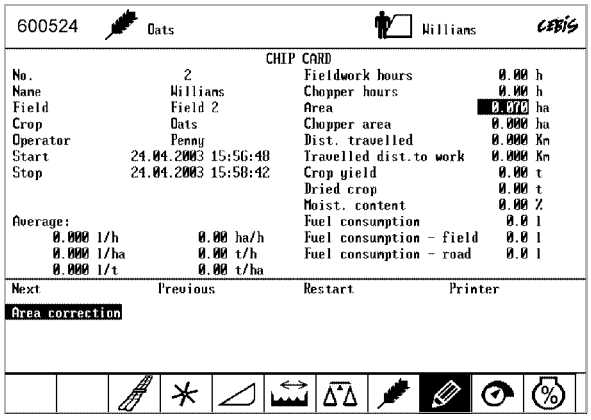
(Fig. 70, 71, 73)

Area correction

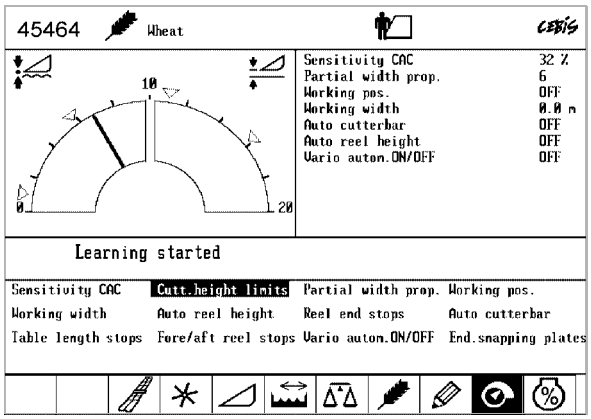
Activate by pressing the OK key (C1)

Pressing the OK key (C1) in a completed work record activates the display »Area« and the accumulated area figure can be manually corrected with the +/- keys (C6 or C 7).

(Fig. 1, 70, 74)



74



92

Cutterbar upper and lower limits

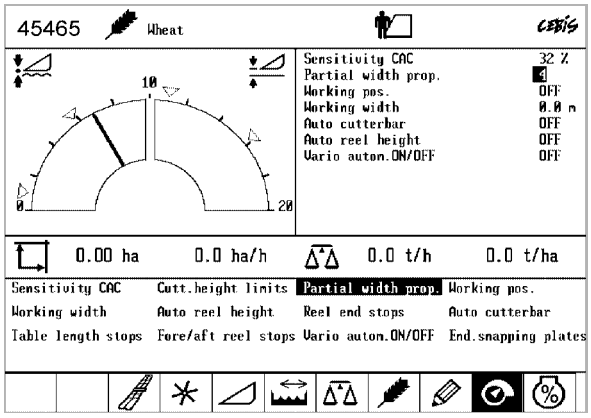
Make the system learn the upper and lower limits of the cutterbar as follows. Ensure that the threshing mechanism and the cutterbar are engaged for this:

NOTE:

LEXION Montana: extend axle cylinders up to 75% and adjust the cutting angle so taht the cutterbar table position is parallel to the ground!

Activate the menu topic by pressing the OK key (C1). The information displayed on the screen tells you how to proceed.

(Fig. 91, 92)



93

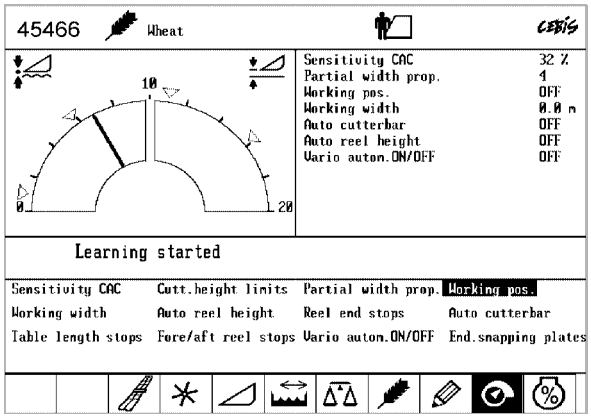
Partial width proportions

Activate by pressing the OK key (C1)

Use the +/- keys (C6 or C7) to enter the desired partial width proportions (4, 5, 6, 7 or 8 proportions) and confirm with the OK key (C1).

We recommend using 4 proportions for cutterbars, 4 proportions for 4-row or 8-row maize heads, 5 proportions for 5-row maize heads and 6 proportions for 6-row maize heads. For correct area calculations, set for partial width in the harvest display too, so that the system realizes that the full working width is not used. The system automatically returns to the full working width when the cutterbar is lifted.

(Fig. 1, 91, 93)



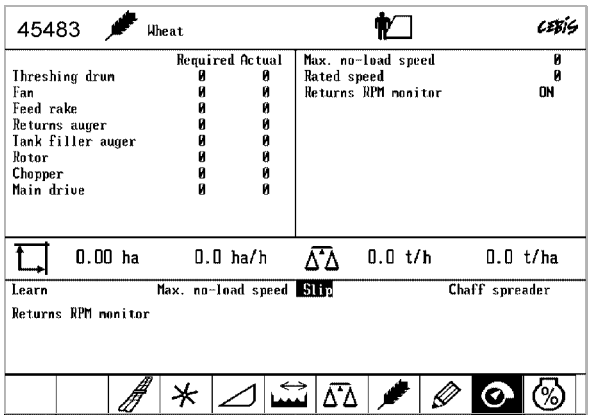
94

Working position

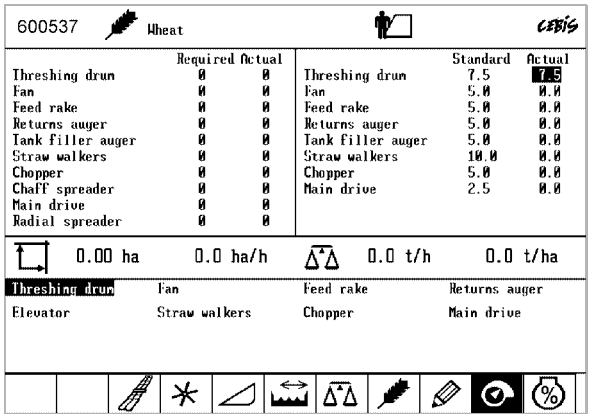
Activate by pressing the OK key (C1)

The display »Learning started« appears and the actual or desired cutterbar lift height setting is loaded to mark the cutterbar's operating and out-of-work position. This setting makes CEBIS recognize when the cutterbar is lifted out of work to ensure correct area calculations. CEBIS then interrupts the area calculations and automatically resets the system from partial width (if in use) to full working width.

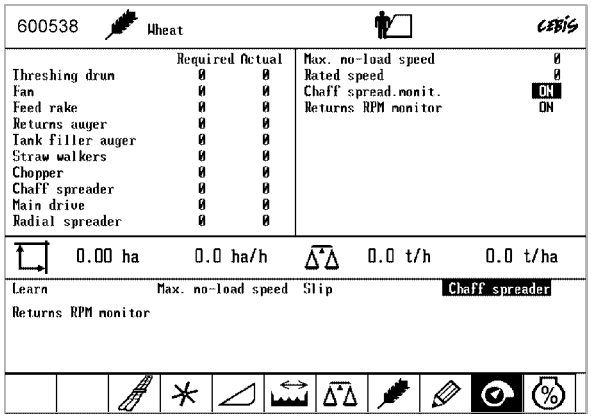
(Fig. 91, 94)



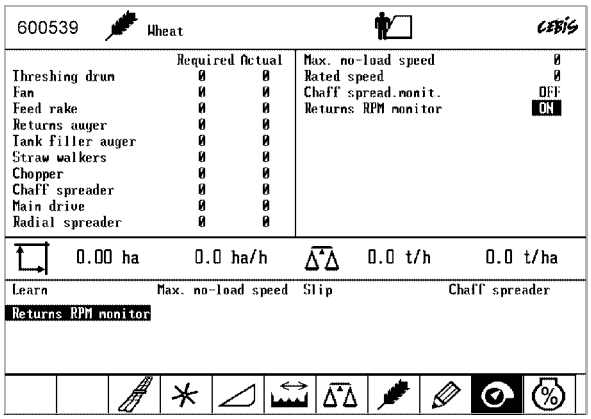
111



112



113



114

Belt slip limit indicator

Activate by pressing the OK key (C1)

Select the operating components with the cursor keys (C4 or C5) and confirm. Enter percentage of slip (X%) to be monitored using the +/- keys (C6 or C7).

Guide:

Threshing drum = 7,5%
Main drive = 2,5%
Straw walkers = 10,0%
Other components = 5,0%

Excessive belt slip means overloading and/or incorrectly tensioned, worn or damaged belts. Check belt tension regularly (see menu: MAINTENANCE). Immediately replace a worn or damaged belt.

SUBMENU OPTIONS (rotor machine):

Threshing drum / Fan / Feeder chain / Returns auger / Tank filler auger / Rotor / Chopper / Main drive

SUBMENU OPTIONS (straw walker machine):

Threshing drum / Fan / Feeder chain / Returns auger / Tank filler auger / Straw walkers / Chopper / Main drive

(Fig. 1, 110, 111, 112)

Chaff spreader speed monitor

Activate by pressing the OK key (C1)

Use the +/- keys (C6 or C7) to switch the chaff spreader speed monitor on or off to prevent the respective alarm being triggered if a chaff spreader has not been installed, or if the chaff spreader is removed.

Should a chaff spreader be fitted, or refitted to the machine, and a speed has been detected, then the monitoring for that will automatically be switched "ON".

(Fig. 1, 110, 113)

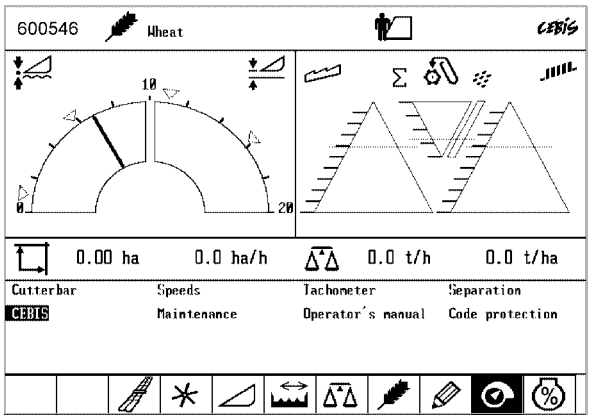
Returns elevator speed monitor

Activate by pressing the OK key (C1)

Use the +/- keys (C6 or C7) to switch the returns elevator speed monitor on or off to prevent the respective alarm being triggered if, for instance, the elevator chain has been removed for maize harvest.

Should an elevator chain be fitted, or refitted to the machine, and a speed has been detected, then the monitoring for that will automatically be switched "ON".

(Fig. 1, 110, 114)



133

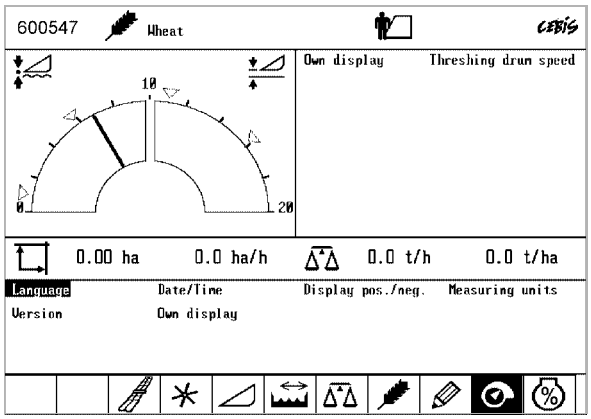
CEBIS

This menu topic is used to select the national language, change the date and time, set the display mode of the monitor to light or dark and select the measuring units (metric or imperial). In addition you will find information on the CEBIS version installed in your machine.

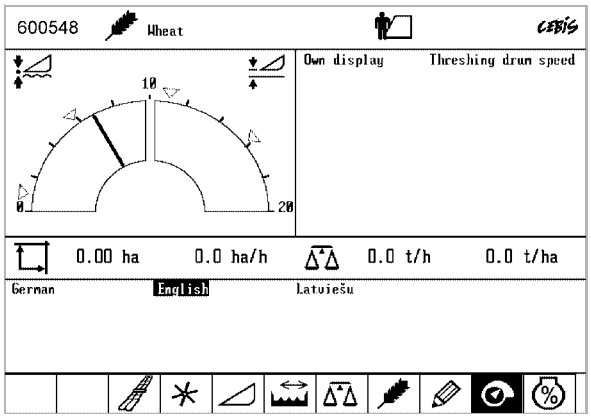
SUBMENU OPTIONS:

Language	Date/Time	Display pos./neg.
Measuring units	Version	Own display

(Fig. 132, 133)



134



135

Language

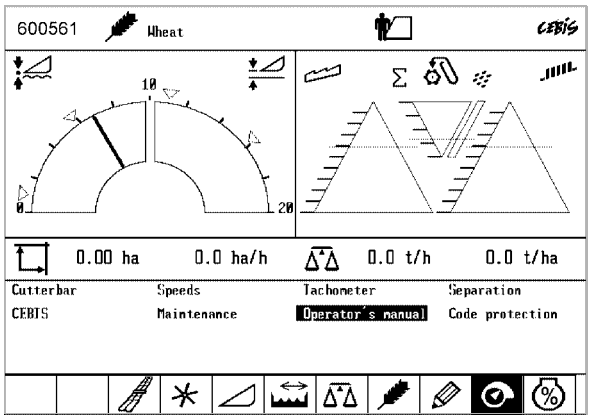
Activate by pressing the OK key (C1)

Select the desired language by pressing the cursor keys (C4 or C5) and confirm with OK key (C1). You can choose between German, English and any other language.

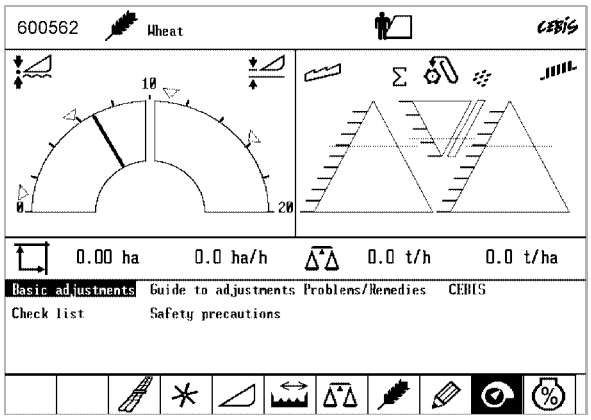
SUBMENU OPTIONS:

German English French

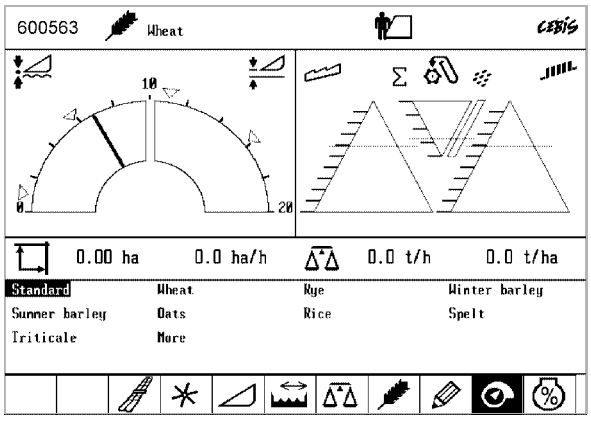
(Fig. 1, 132, 134, 135)



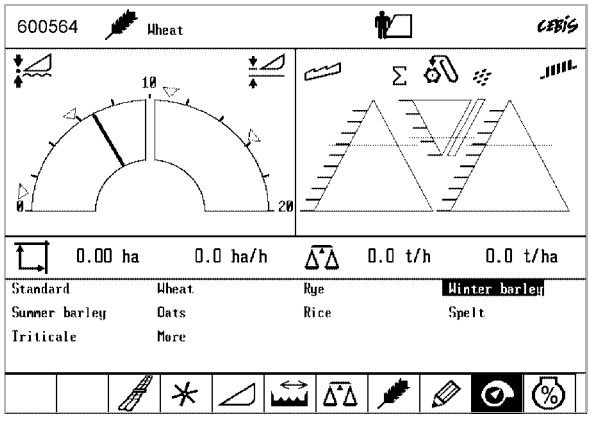
156



157



158



159

Operator's manual

Activate by pressing the OK key (C1).

This menu provides information on basic adjustments for 24 different crops, essential component adjustments, solutions to problems and a CEBIS operator's manual.

SUBMENU OPTIONS:

Basic adjustments Guide to adjustments
Problems/remedies CEBIS Check list
Safety precautions

(Fig. 155, 156)

Basic settings

Activate by pressing the OK key (C1)

This menu is used to bring up and print standard adjustments for all crops and specific combine adjustments for different crops.

The adjustments apply to normal harvest conditions. Slightly changing these adjustments in damp or dry conditions can improve the machine's performance.

SUBMENU OPTIONS:

General standard settings Specific standard settings

(Fig. 155, 157)

Standard settings:

Activate by pressing the OK key (C1)

This menu displays standard settings for the individual components of the machine for all crops. The settings can be printed.

The adjustments apply to normal harvesting conditions. Slightly changing these adjustments in damp or dry conditions can improve the machine's performance.

(Fig. 155, 158)

Specific standard settings:

Activate by pressing the OK key (C1)

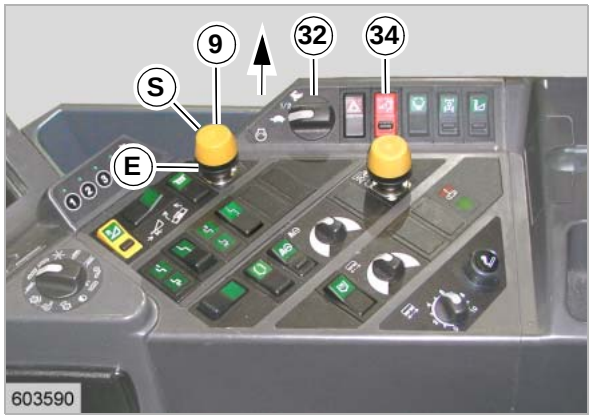
This menu is used to display standard settings for the crop being harvested. A print-out can be obtained.

The adjustments apply to normal harvesting conditions. Slightly changing these adjustments in damp or dry conditions can improve the machine's performance.

(Fig. 155, 159)

PROBLEMS / REMEDIES - YIELD METER

Problems	Remedies
Yield readings are too high	1. Check the installed crop data. 2. Check the weight per litre. 3. Carry out a »Set zero yield« with the machine at max. speed no-load. 4. If necessary, correct the calibration factor. 5. Check the optics of the yield sensors (sender & receiver of the light emitting barrier). If the optics are damaged in any way then it is imperative to replace them. Service life of the optics is approx. 500 working hours, depending on lens quality and crops harvested.
Yield readings are too low	1. Check the installed cropp data. 2. Check the weight per litre. 3. If necessary, correct the calibration factor. 4. Check the optics of the yield sensors (sender & receiver of the light emitting barrier). If the optics are damaged in any way then it is imperative to replace them. Service life of the optics is approx. 500 working hours, depending on lens quality and crops harvested.
Yield (t/ha) not correctly displayed	1. Check whether the area monitoring system is working correctly. If necessary, make the system learn again »Impulses/100m« and/or the cutterbar width. 2. Check if the setting of the »Working position« is correct, and if necessary relearn it. 3. Check the installed cropp data. 4. Check the weight per litre. 5. Carry out a »Set zero yield« with the machine at max. speed no-load. 6. If necessary, correct the calibration factor. 7. Check the optics of the yield sensors (sender & receiver of the light emitting barrier). If the optics are damaged in any way then it is imperative to replace them. Service life of the optics is approx. 500 working hours, depending on lens quality and crops harvested.
Alarm »Yield meter is dirty«	1. Clean the optics from the yield sensors (sender & receiver). 2. Check the LED operation of the yield sensors: Sender => constant green LED Receiver => red LED flashing each time an elevator paddle passes Should one of the LED's not be operating, check the cables, connectors and if all OK replace the respective sensor.
Alarm »Yield meter defective«	Should one of the LED's not be operating, check the cables, connectors and if all OK replace the respective sensor.
Alarm »Measuring range of moisture sensor is exceeded«	1. Clean the sensor optics. If not OK, crop moisture is possibly too high (maize). 2. Should this alarm appear allthough the sensor optics are clean and dry, the cables and connectors must be checked.
Alarm »Moisture sensor defective«	1. Check cables and conntectors. 2. Relearn »Set zero angle« if necessary.



16

Engaging the front attachment

(switch console, up to serial no. ...)

Start engine, actuate master safety switch (34) and engage threshing mechanism. The engine speed rotary switch (32) is set to lower idle speed.

The front attachment ON / OFF switch (9) allows engaging and disengaging the front attachment.

Attention!

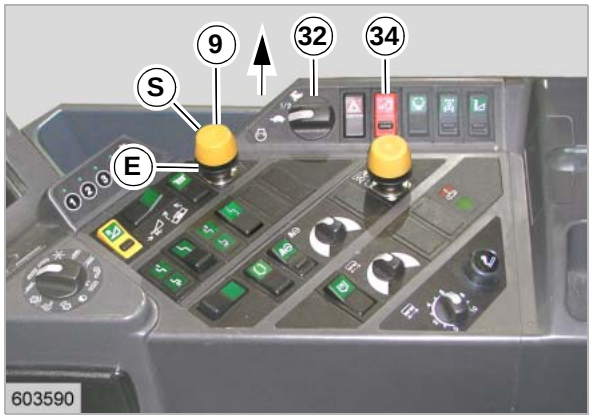
If there is any crop material in the front attachment and/or the feed rake conveyor, engage the front attachment with the engine running at max. no-load speed.

Engaging the front attachment:

Press unlocking ring (E) and the knob (S) together and lift them together. The front attachment is engaged.

The unlocking ring (E) and the knob (S) drop downwards after engaging.

(Fig. 16)



17

Engaging the front attachment

(switch console, from serial no. ...)

Start engine, actuate master safety switch (34) and engage threshing mechanism. The engine speed rotary switch (32) is set to lower idle speed.

The front attachment ON / OFF switch (9) allows engaging and disengaging the front attachment.

Attention!

If there is any crop material in the front attachment and/or the feed rake conveyor, engage the front attachment with the engine running at max. no-load speed.

Engaging the front attachment:

Press unlocking ring (E) and switch knob (S) together, lift them together and hold it at that position for 7 seconds max.

The unlocking ring (E) and the knob (S) drop downwards after engaging. The front attachment is engaged.

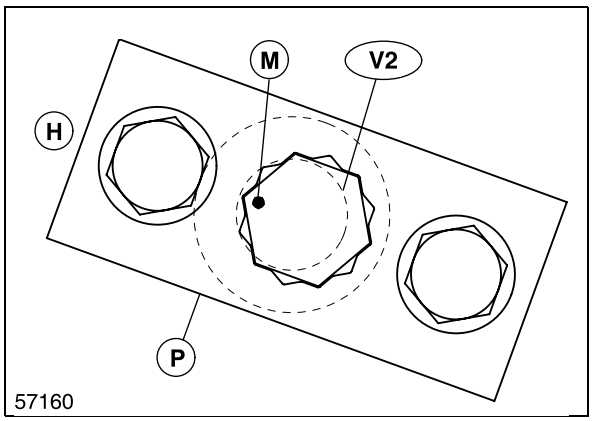
(Fig. 17)

3. Checking the basic concave settings:

   Measure the basic setting. To do this, the hydraulic cylinders must be bled and the concave moved to the closest position.

   The cylinder length (L1), the turnbuckle length (L2) and the length of the linkage (L4) must be adjusted according to the specified dimensions.

   (Fig. 21–24)

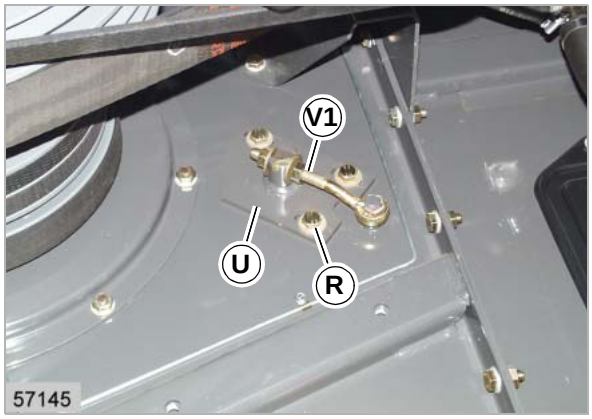


13

When in basic position, the marking (M) shows to the rear (H) = 0 position.

The basic position of the hex. bolts (R) is in the centre of the elongated hole.

(Fig. 13, 14)



14

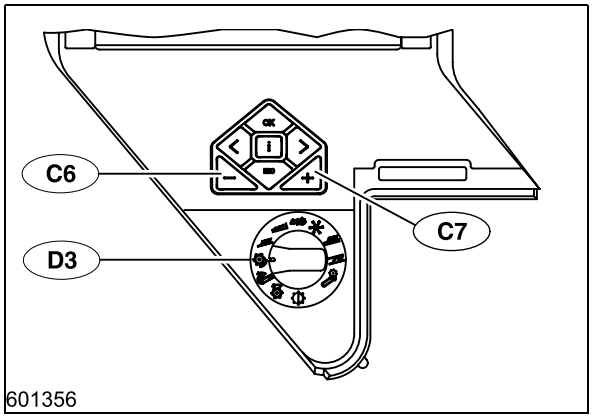
4. Check free movement of threshing drum:

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

Danger!

Now stop the engine!

Turn the accelerator and the threshing drum by hand.



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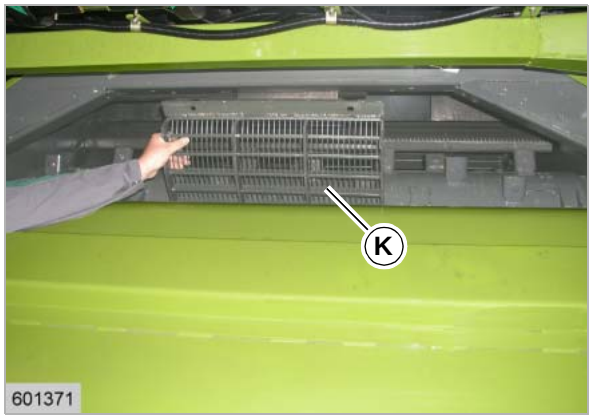
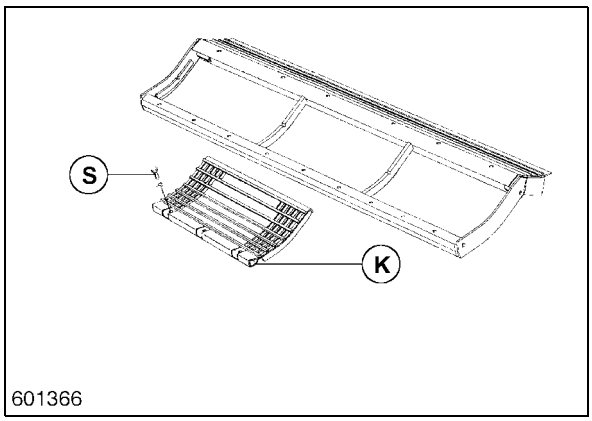


33



34

Clean the segment guides in the concave prior to installing the segments (K).

Insert the segments and bolt them down.

Install drum inspection cover (T).

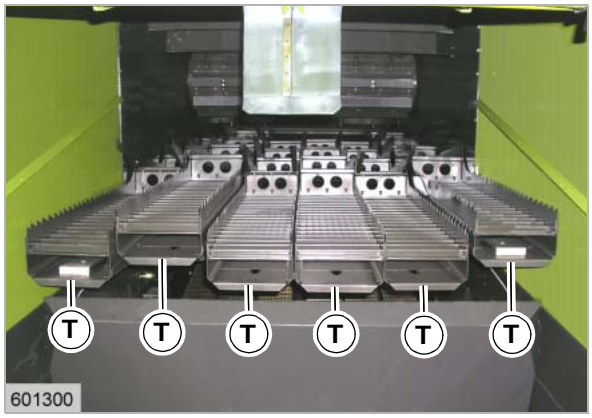
Move concave segment to the desired position.

(Fig. 31–34)

STRAW WALKER

Danger!

Repair, service and cleaning work and the elimination of malfunctions should only be performed with the drives stopped and the engine switched off. Remove the ignition key (main switch key).



1

Straw walker

The straw walker racks separate the last grains from the straw and guide the straw to the rear panel.

The separated grains reach the preparation floor via the under-walker trough and the return pan.

The under-walker pockets (T) can be cleaned through the folded-up back wall of the rear panel.

(Fig. 1)

2

Cleaning the straw walker

Danger!

Before entering the straw walker compartment stop the engine and turn off the battery isolating switch.

Ensure that no other person can restart the engine.

Check the straw walkers more frequently when working in moist and very weedy straw.

Clean straw walkers if necessary.

The straw walker compartment can be accessed through a hatch (L) on the machine roof and through a door (K) on the right side of the machine.

(Fig. 2, 3)

3

Frogmouth sieves

The frogmouth sieves can be adjusted to suit all sizes of grain.

When adjusting the upper sieve, the rear portion of the upper sieve (i.e. returns passthrough area) is adjusted by the same amount.

The rear portion of the upper sieve must always be manually set (this also applies to electric sieve adjustment).

Electric sieve adjustment

During operation the sieves can be adjusted from the operator's platform. See page 8.2.75, *Upper and lower sieve adjustment*

Changing the setting of the rear portion of the upper sieve (the returns-pass-through area), from that of the front portion, must be performed manually, if necessary.

5

Adjusting sieves manually:

Switch 4 = upper sieve adjustment
Switch 5 = lower sieve adjustment

If necessary, the sieves can be adjusted manually.

Adjustment is only possible with the engine running.

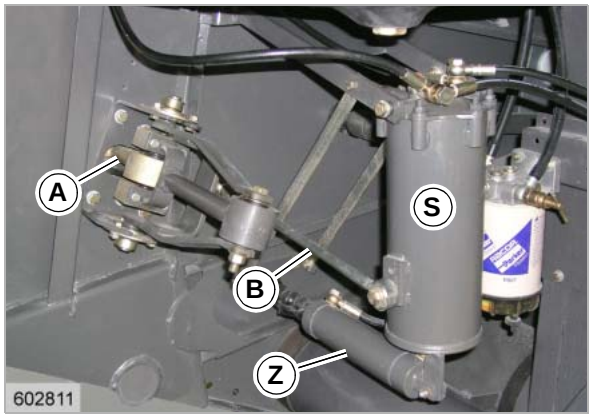
(Fig. 5)

Dynamic slope compensation

(3-D cleaning system)

The dynamic slope compensation moves the upper sieve in three directions:

1. back and forth
2. up and down
3. sideways, "up the slope"



33

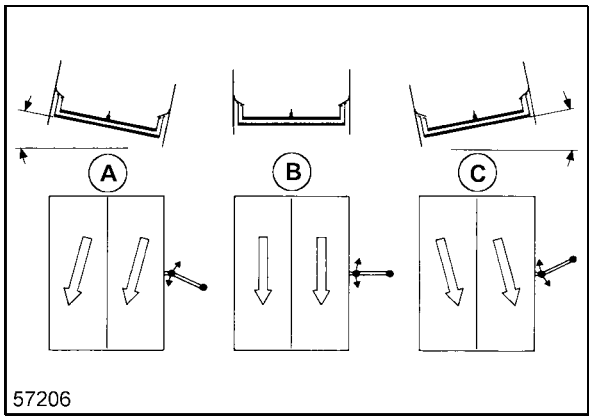
The 3-D design uses an additional pivot arm (A), which connects to the right side of the upper sieve.

As the degree of slope changes, control unit (S) automatically sets this pivot arm at different angles to the upper sieve by way of hydraulic cylinder (Z) and link rod (B).

As the slope gets steeper, the sideways thrust of the upper sieve becomes stronger, moving the material "up the slope".

Divisions on sieves are no longer required.

(Fig. 33)



34

Position of machine:

A = left hand slope
B = on flat level ground
C = right hand slope

(Fig. 34)

14

Grain tank unloading tube

The grain tank unloading tube is swung in and out by hydraulic cylinder (A).

A lock-up valve unit inside the hydraulic cylinder avoids unwanted movements of the grain tank unloading tube.

(Fig. 14)

15

Swinging the grain tank unloading tube out and in

Danger!

Ensure that no-one is in the swing area during swinging of the unloading tube.

During transport on public roads and lanes, the grain tank unloading tube must be completely swung in and rest on support (1).

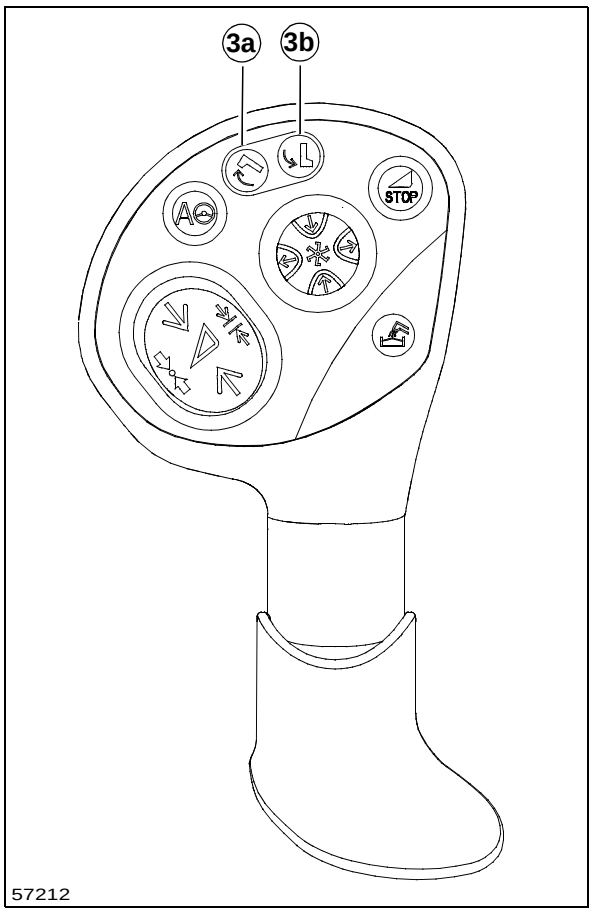
Swinging the grain tank unloading tube:

Start the engine and switch on master safety switch.

3a = Swing out unloading tube

1. When pushbutton (3a) is actuated for less than 1 second **with the unloading tube fully swung in**, the unloading tube will swing out and stops when the pushbutton (3a) is released.
2. When pushbutton (3a) is actuated for more than 1 second **with the unloading tube fully swung in**, the unloading tube will swing out completely even when the pushbutton (3a) is released (20 seconds).
   Another brief actuation of pushbutton (3a) stops the swinging-out movement.
3. When pushbutton (3a) is actuated **with the unloading tube slightly swung out**, the unloading tube will swing out completely even when the pushbutton (3a) is released (20 seconds).
   Another brief actuation of pushbutton (3a) stops the swinging-out movement.

(Fig. 15, 16)



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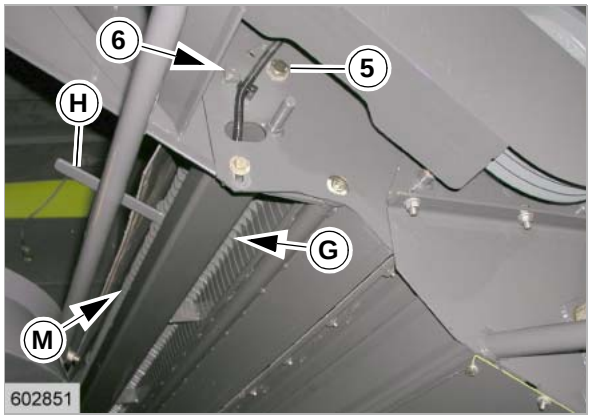

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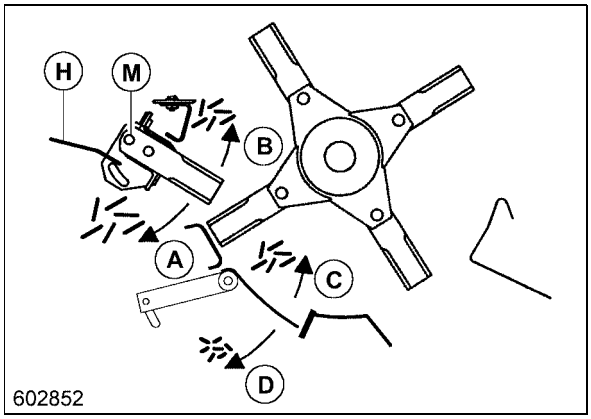


12

Adjusting the length of cut

Danger!

Stop the engine and switch off the battery isolating switch.

The length of cut can be altered by turning the knife carrier (M). To do this loosen hex. bolts (5 and 6) on both sides of the chopper. Fold out lever (H) and adjust the knife carrier.

Direction A = longer cut
Direction B = shorter cut

After adjustment tighten hex. bolts (5 and 6) again on both sides. Fold in lever (H).

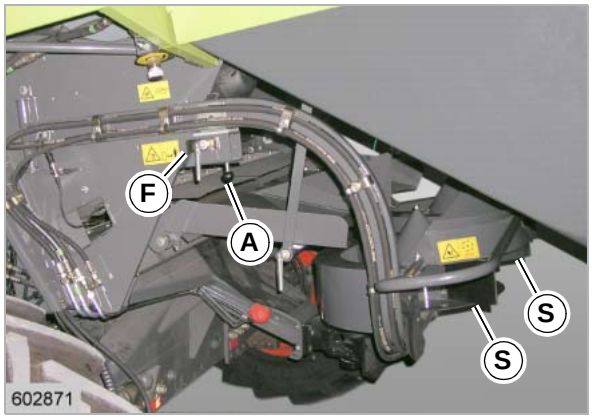
For operation in rape seed it is recommended to adjust the knife carrier all the way down.

Danger!

With the knife carrier fully folded down (direction A), there is a danger of injury at the fixed, stationary knives (G).

☞ Wear gloves.

(Fig. 11, 12)



5

Pull the bolts (A) downwards and fold the two chaff spreader halves (S) to the outside.

When folding open, the bars (D) catch automatically.

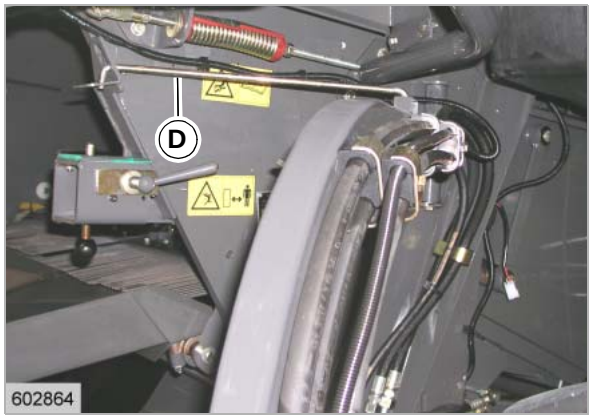
Attention!

Careful driving of the machine solely to determine the sieve pan losses is possible with the chaff spreader halves (S) folded open **and the bars (D) engaged**.

When doing so, observe the following rules:

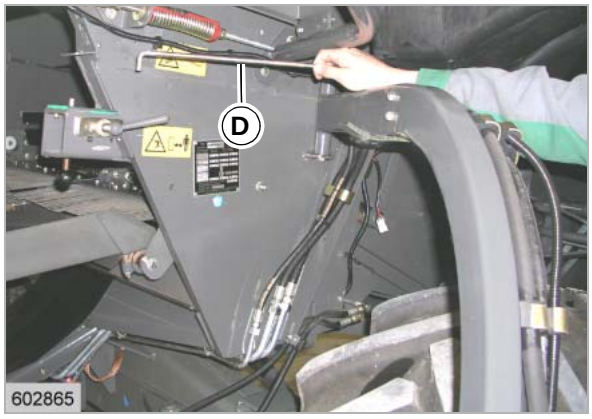
- ☞ The rear wheels must be set to straight-ahead travel.
- ☞ The machine must not be steered.
- ☞ The machine must not be driven over potholes.
- ☞ The machine must not be heavily accelerated or decelerated.

Otherwise, damage to tyres and the chaff spreader may result.



6

(Fig. 5, 6)



7

Folding the chaff spreader open completely:

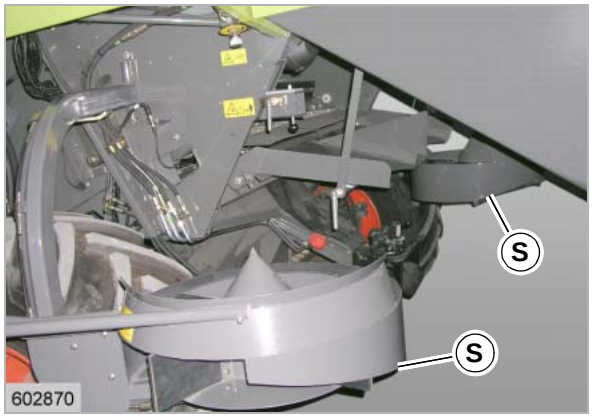
To do this, unhinge the bars (D) from the machine side wall and fold the chaff spreader open completely.

When the chaff spreader is folded open, the chaff spreader halves (S) touch the rear axle wheels.

Attention!

When the chaff spreader halves (S) are folded open completely, the machine must neither be driven nor steered.

Otherwise, damage to tyres and the chaff spreader may result.



8

(Fig. 7, 8)

Suggested combine adjustments LEXION 560 – 510

(standard cleaning system)

Type 584 / 583 / 582 / 580 Standard cleaning system	Rice equipment Steel half-tracks	Rape table					
Crop	0 = no 1 = yes	0 = no 1 = yes					
Wheat	0	0					
Rye	0	0					
Winter barley	0	0					
Spring barley	0	0					
Oats	0	0					
Rice	1	0					
Spelt	0	0					
Triticale	0	0					
Field beans	0	0					
Dwarf beans	0	0					
Peas	0	0					
Soybeans	0	0					
Sunflowers	0	0					
Grain maize	0	0					
CCM/Maize concave	0	0					
Rape / Bird rape	0	1					
Millet	0	0					
Linseed	0	0					
Clover / Lucerne	0	0					
Common meadow grass	0	0					
Ryegrass	0	0					
Meadow fescue	0	0					
Cocksfoot	0	0					
Blow out							

Malfunction	Possible cause or remedy
– Grain losses over the straw walkers	1. Adjust tension on drive belts of finger drum drive. 2. Adjust tension on drive belts of straw walker drive. 3. Ensure even crop feed to the threshing mechanism (cutterbar). 4. Clean concave and space behind the concave. 5. Reduce returns by properly setting the cleaning stage. 6. Clean dirty straw walkers and the under-walker return floor. 7. Reduce threshing drum speed and set the concave to a narrower position. 8. Reduce ground speed. 9. Set the deflector curtain above the straw walkers properly. 10. Replace the deflector curtain above the straw walkers.
– Grain losses over cleaning	1. Avoid heavy build-up of material. 2. Increase air blast to meet crop conditions. 3. Adjust wind boards to correct position. 4. Decrease drum speed when short straw overloads the sieve pan. 5. Check fan variable speed pulleys for smooth operation. 6. Open the frogmouth sieve extension part of the upper frogmouth sieve more. 7. Adjust frogmouth sieve gaps wider open and increase wind blast. 8. Avoid excessive returns. 9. Clean upper and finishing sieves and preparation floor. 10. Reduce ground speed.

Air conditioner

Danger!

Avoid any contact with liquid refrigerant! If refrigerant splashes into the eyes, consult a doctor immediately!

Maintenance and repair work must only be carried out by expert personnel!

Do not weld any components of the refrigerant circuit and or in the immediate vicinity of any parts of the refrigerant circuit.
– Danger of poisoning!

The air conditioner may only be installed, repaired and serviced by refrigerant service specialists specifically trained for this task!

Attention!

Check the cabin filters, evaporator in the cab roof and the condenser in front of the water cooler regularly for dirt, debris and trash and clean as required.

Note!

Maximum ambient temperature for refrigerant is 80 °C!

Environment!

Refrigerants pollute the environment if vented to the atmosphere. Therefore, please take appropriate precautions when working on the air conditioner.

Refrigerant must always be discharged by use of the correct recovery equipment prior to the repair work to prevent it from venting to the atmosphere.

HYDRAULIC SYSTEM

Danger!

Before performing any work on the hydraulic system, always shut off the engine, remove ignition key and ensure that the combine harvester cannot roll away (apply parking brake, place wheel chock in front of or behind wheels).

Note!

Oil change and oil level check intervals – see page 10.2.1, *Maintenance schedules*.

Accumulators

Danger!

Be especially careful when working on the accumulators!

Accumulators are under high pressure!

Observe safety instructions – see page 4.1.6, *Hydraulic system*.

Checking the oil level

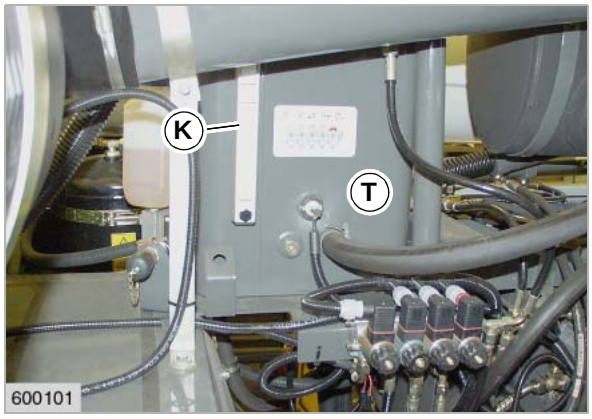
Note!

Fully lower front attachment and reel and fold in grain tank unloading tube prior to checking the oil level.

The hydraulic oil level must be visible in the sight glass between the oil level check marks (K).

T = Hydraulic oil reservoir

(Fig. 1)



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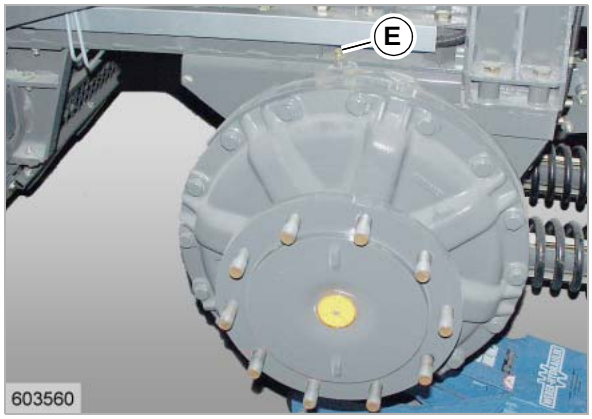

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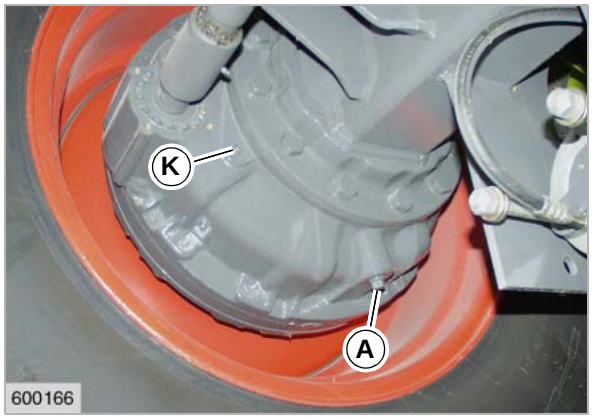


8

Final drive gearbox

(planetary gear)

Checking the oil level

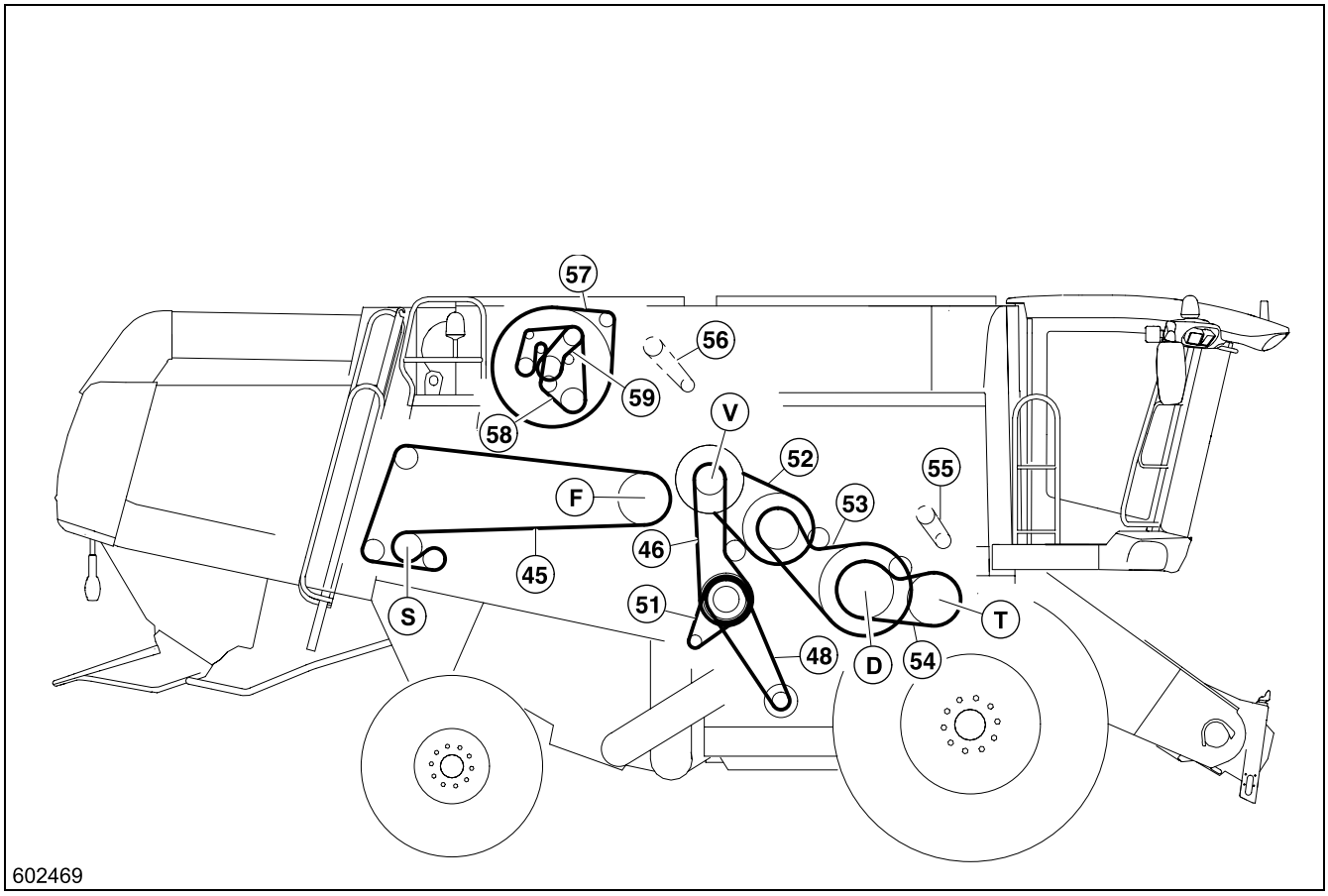
K = Oil level check plug

Oil change

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

Clean magnetic plug in oil drain plug at every oil change.

(Fig. 7, 8)



2

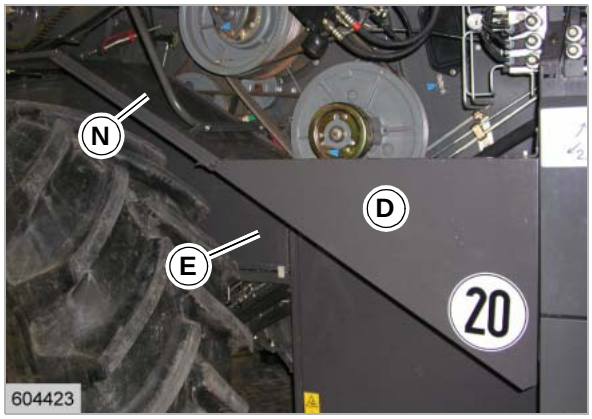
Drive system diagram, right-hand side

Drive belts, drive chains

40 Blank
41 Blank
42 Blank
43 Blank
44 Blank
45 Finger roller drive
46 Fan drive 1st step
47 blank
48 Fan variable-speed drive 2nd step
49 Blank
50 Blank
51 Rotary chaff screen suction blower drive
52 Threshing mechanism variable-speed drive
53 Threshing drum drive
54 Accelerator drive
55 Returns auger drive
56 Grain tank filler auger drive
57 Rotary chaff screen drive
58 Alternator / air-conditioner compressor / water pump drive
59 Fan drive

V = Main intermediate drive shaft
D = Threshing drum
T = Accelerator
S = Straw walker drive shaft

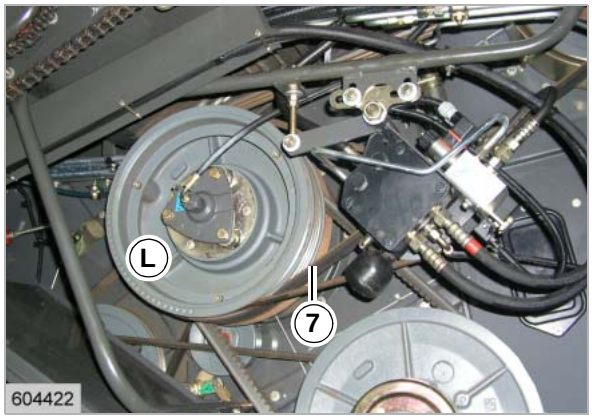
(Fig. 2)



20

2. Unlock guards (D), (E) and (N) at the quick-release fasteners and remove them.

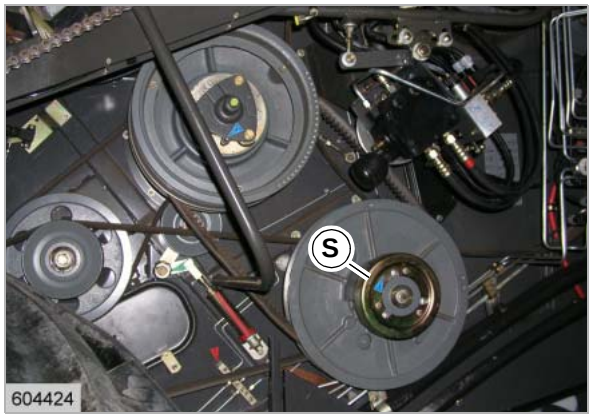
(Fig. 20)



21

3. Remove belt (6) from V-belt pulley (L) – see page 10.7.19, *Removing the belt (6)*.
4. Remove belt (7) from V-belt pulley (L) – see page 10.7.21, *Removing the belt (7)*.

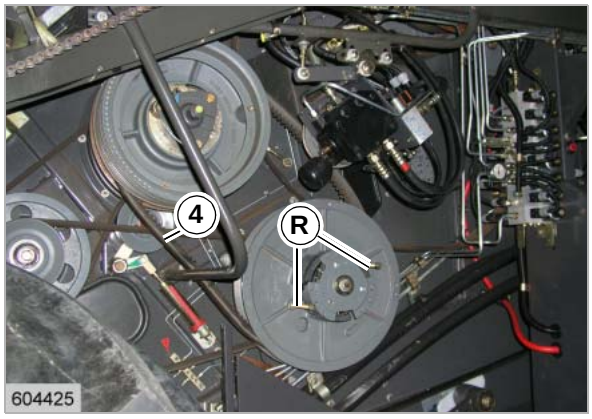
(Fig. 21)



22

5. Unscrew guard (S).

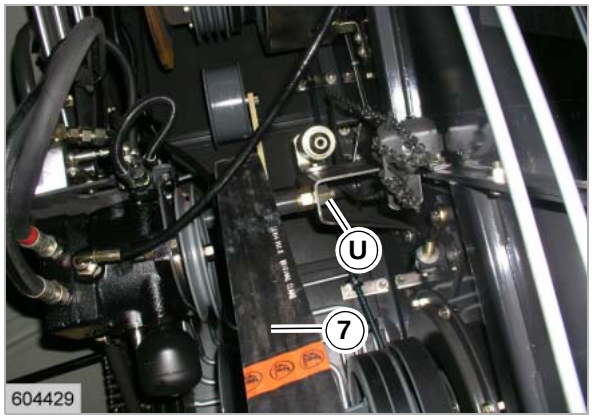
(Fig. 22)



23

6. Screw in two bolts (R) BM 12 x 180 DIN 564-8.8 (spare part no. 0236 302.0) through the tapped hole of the front pulley half until the variable-speed drive is fully spread apart.
7. Remove belt (4).

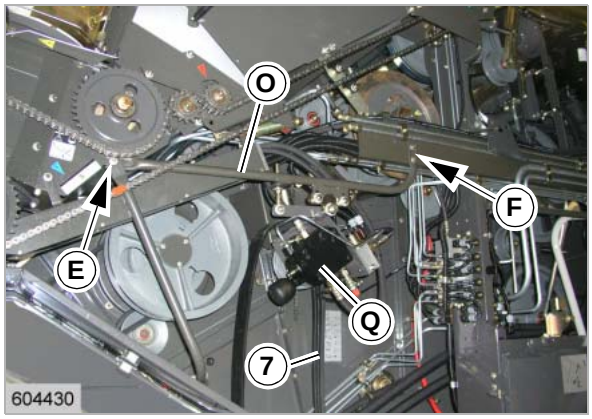
(Fig. 19, 23)



41

7. Unscrew nut (U).

(Fig. 36, 41)



42

8. Slacken off holding tube (O) at (E) and unscrew it at (F).
9. Pull off reel drive (Q) until belt (7) can be removed.
10. Remove belt (7).

(Fig. 41, 42)

Installing the belt (7)

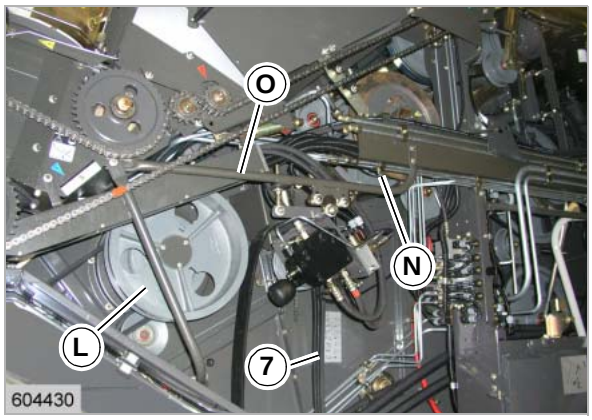
Danger!

Carry out work on the front attachment and/ or on the machine only with the drive OFF and the diesel engine OFF.

– Diesel engine OFF!

– Remove the ignition key!

– Remove the key of the battery isolating switch!



43

1. Install belt (7) on the V-belt pulleys (L) and (N).

(Fig. 43)

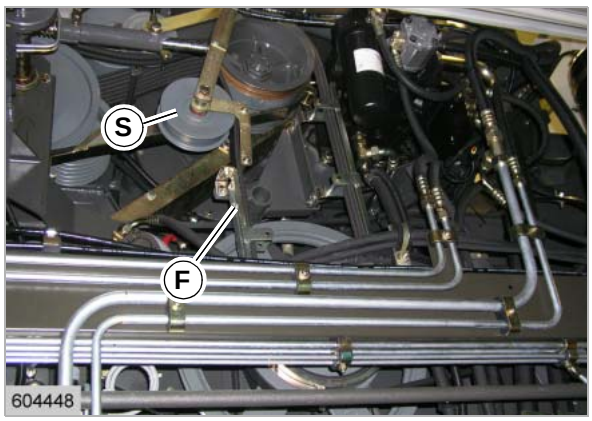
Caution!

While adjusting the belt guides, jockey pulley (S) must be pressed firmly against belt (9).

9. Tighten all the bolts.

(Fig. 54, 62, 63)

10. Install belt (18) – see page 10.7.55, *Installing the belt (18)*.
11. *Removing the belt (10)*, see page 10.7.34.
12. *Installing the belt (12)*, see page 10.7.42.
13. *Installing the belt (8)*, see page 10.7.27.
14. Install belt (7) – see page 10.7.23, *Installing the belt (7)*.
15. *Installing the belt (6)*, see page 10.7.20.
16. Carry out a test run and check belt tension.



81

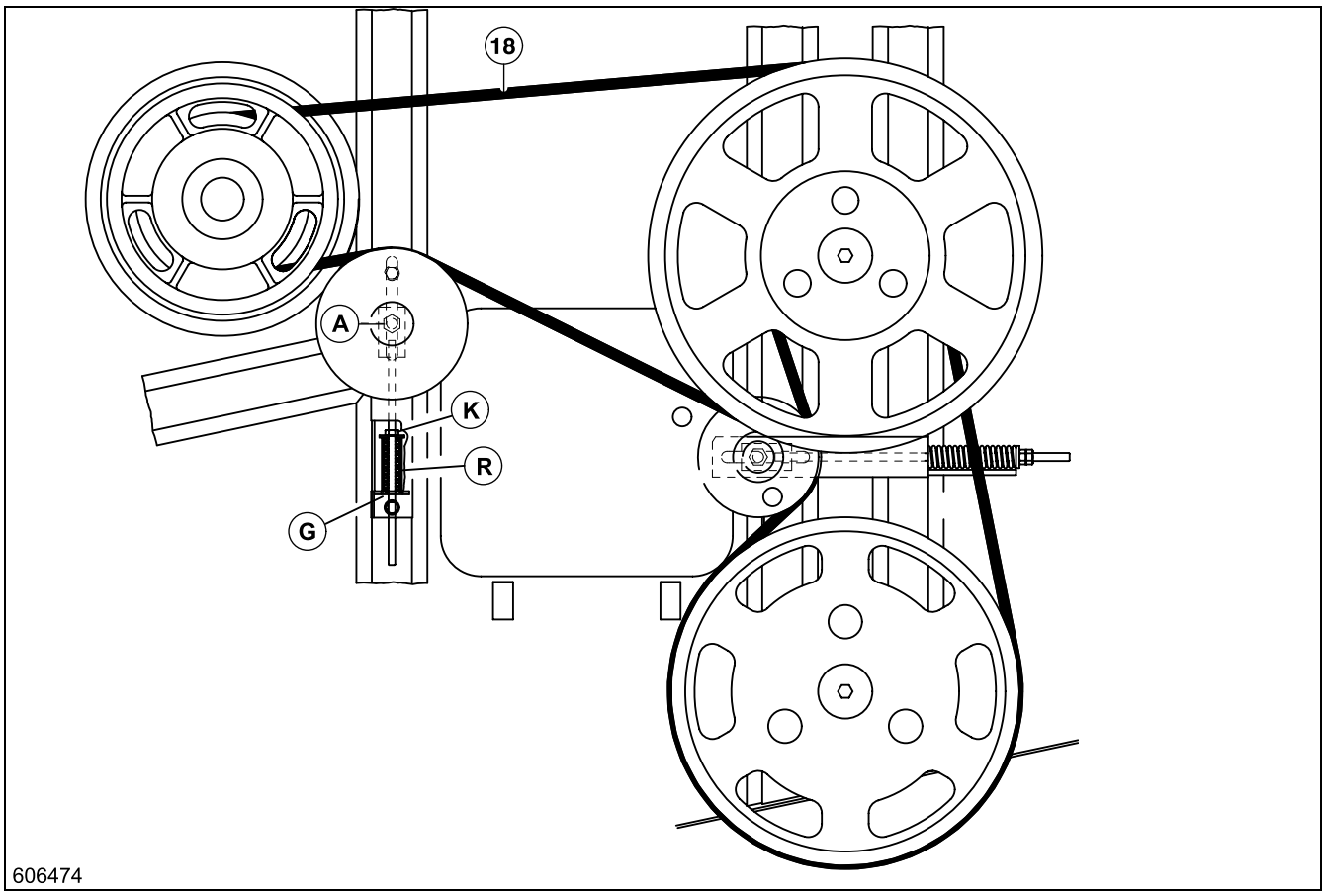
4. Bolt down the belt guide (F) hand-tight for the time being.
5. Adjust belt guide (F) at (M), (N) and (O) so that with the belt tensioned, the dimension (W) is **4 – 6 mm** between the belt back and the belt guide.

Caution!

While adjusting the belt guide (F), jockey pulley (S) must be pressed firmly against belt (12).

6. Tighten all the bolts.
7. Carry out a test run and check belt tension.

(Fig. 76, 81)



99

Removing the belt (18)

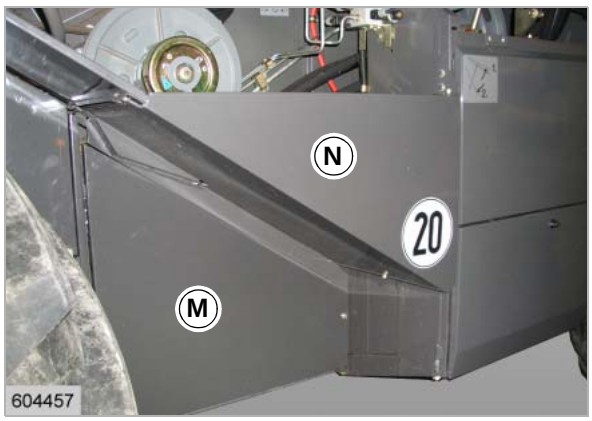
Danger!

Carry out work on the front attachment and/ or on the machine only with the drive OFF and the diesel engine OFF.

– Diesel engine OFF!

– Remove the ignition key!

– Remove the key of the battery isolating switch!

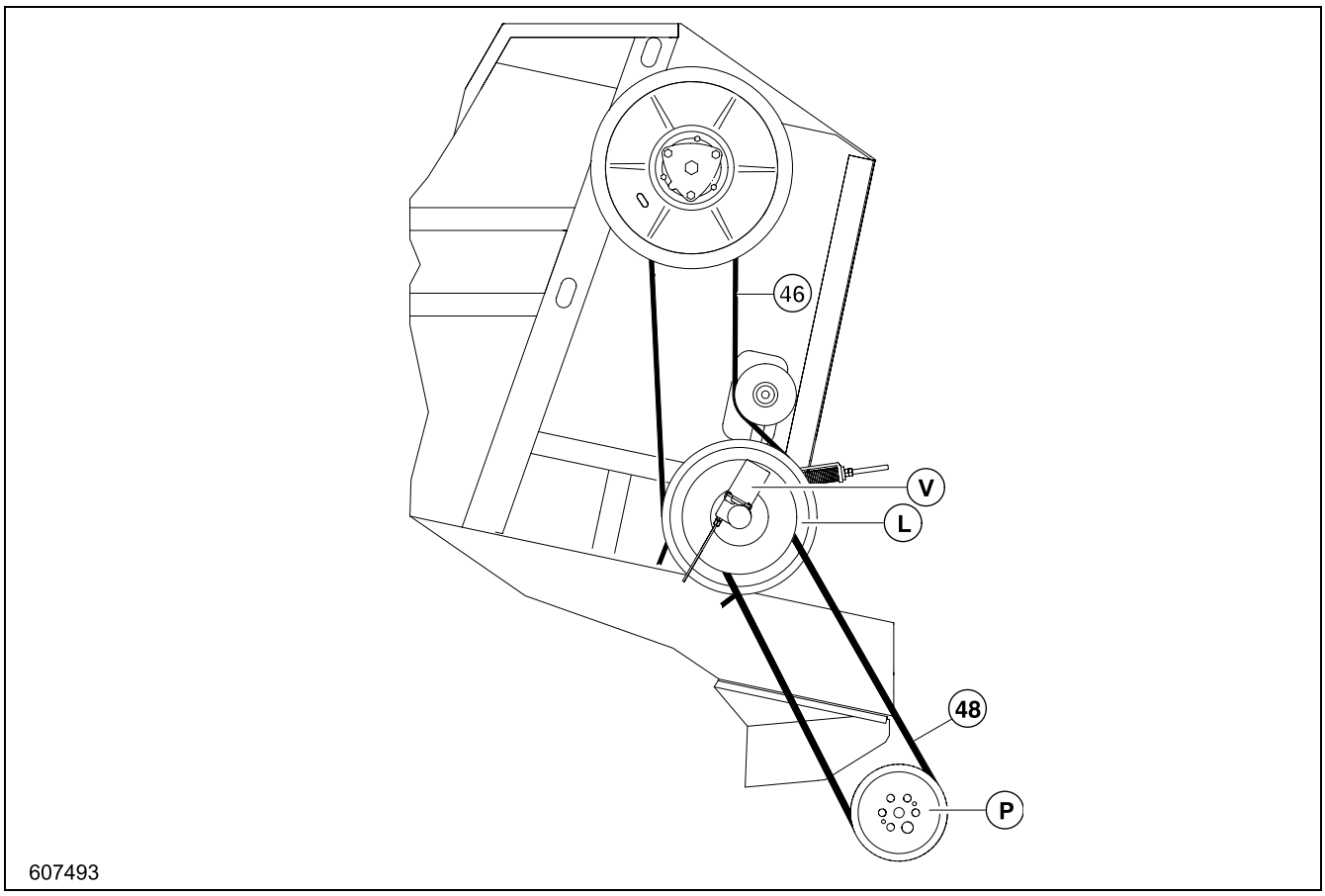


120

8. Install protective cover (M) and (N) and lock its quick-release couplings.

(Fig. 120)

9. *Installing the belt (22)*, see page 10.7.65.
10. Install belt (19) – see page 10.7.57, *Installing the belt (19)*.
11. Carry out a test run and check belt tension.



135

Removing the belt (48)

1. With the engine running and the threshing mechanism engaged, set the variable-speed drive to minimum speed.

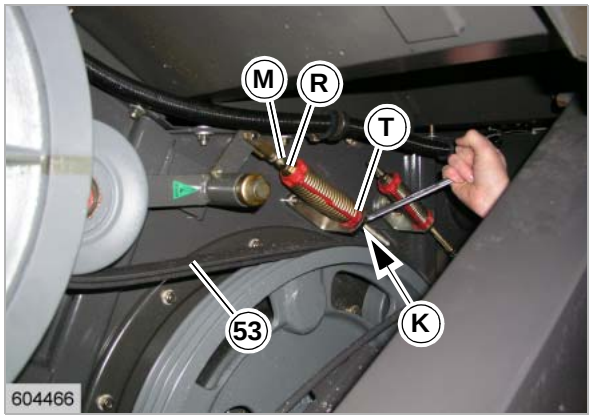
Danger!

Carry out work on the front attachment and/ or on the machine only with the drive OFF and the diesel engine OFF.

– Diesel engine OFF!

– Remove the ignition key!

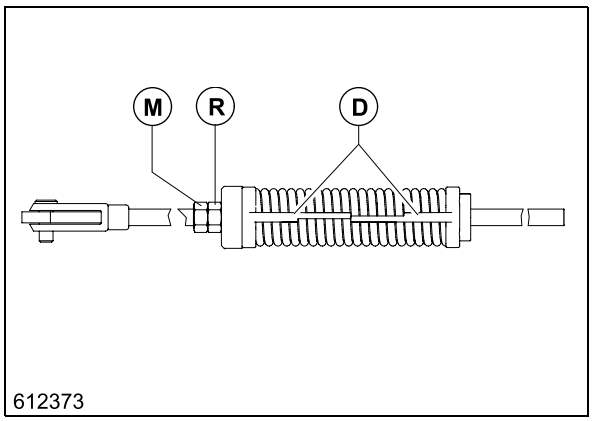
– Remove the key of the battery isolating switch!



154

1. Install belt (53).
2. Unscrew the flange nut (K).

(Fig. 149, 154)



155

3. Adjusting the spring-loaded cylinder:

   Adjust the nuts (M) and (R) so that the ends of both gauge rods (D) face each other without play. Jam nuts (M) and (R).

   Spring length = **138 mm**

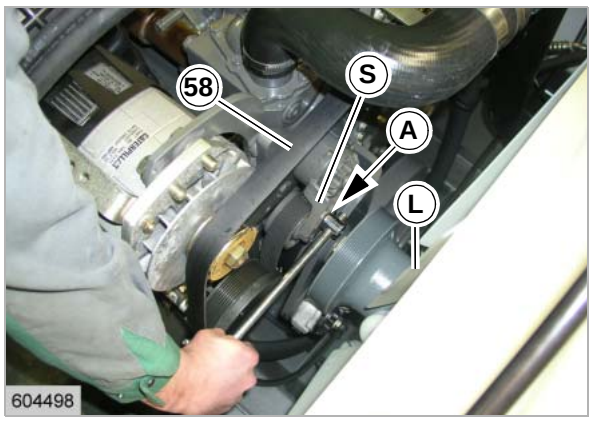
(Fig. 149, 154, 155)

156

4. Install protective cover (W) and lock its quick-release couplings.

(Fig. 156)

5. Install belt (52) – see page 10.7.79, *Installing the belt (52)*.
6. Carry out a test run and check belt tension.



177

2. Insert a suitable tool, e.g. a ratchet with ½" square drive, into the V-belt tensioner (S) at (A).
3. Push back the V-belt tensioner (S) against the spring force and remove belt (58) from the V-belt pulleys.
4. Guide V-belt tensioner (S) back slowly.

Danger!

The V-belt tensioner (S) is retained by a high spring force **– Danger of injury!**

5. Remove belt (58) over the fan blade (L).

(Fig. 176, 177)

Installing belt (58)

(CATERPILLAR C9 / 3126 B)

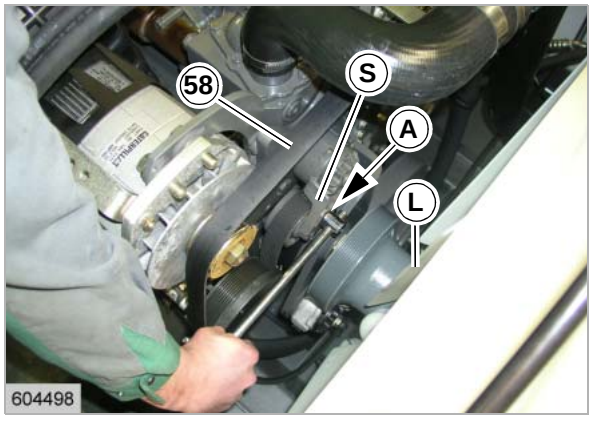
Danger!

Carry out work on the front attachment and/ or on the machine only with the drive OFF and the diesel engine OFF.

– Diesel engine OFF!

– Remove the ignition key!

– Remove the key of the battery isolating switch!



178

1. Guide belt (58) over the fan blade (L) and install it.
2. Push back the V-belt tensioner (S) against the spring force, using a suitable tool at (A) and install belt (58) on the V-belt pulleys.
3. Guide V-belt tensioner (S) back slowly.

Danger!

The V-belt tensioner (S) is retained by a high spring force **– Danger of injury!**

(Fig. 176, 178)

4. *Installing the belt (59)*, see page 10.7.97.
5. Carry out a test run and check belt tension.

Oil for the compressor

– see page 10.2.4, *Lubricants charts*.

Note!

The oil level in the compressor can only be checked or topped up when repairs are undertaken or the filter receiver drier is replaced.

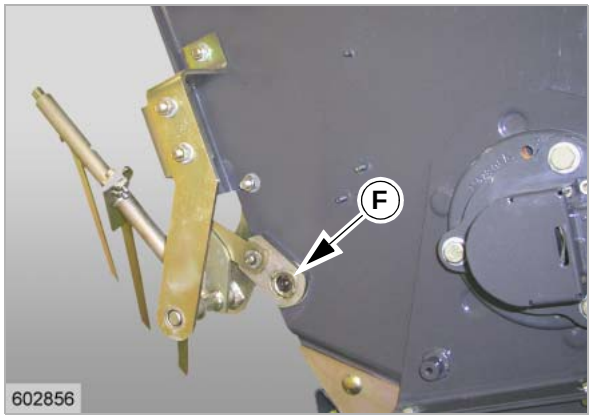
To do this, the compressor must be drained.

Maintenance work before the harvest

1. Check that all the compressor mounting bolts are securely tightened.
2. Check all clutch mounting bolts for tightness.
3. Inspect hoses for wear and abrasion – particularly at elbows and hose clamps.
4. Check that the condenser and evaporator are not clogged or soiled. Clean, when necessary.
5. Check moisture indicator for a change of colour.

Attention!

If the ball has already changed its colour, the filter receiver drier must be replaced immediately as otherwise the system may be damaged due to the formation of acid.



6

Installing the straw guide plate.

(2 persons are required)

Lift the straw guide plate (E) into the chopper.

Attention!

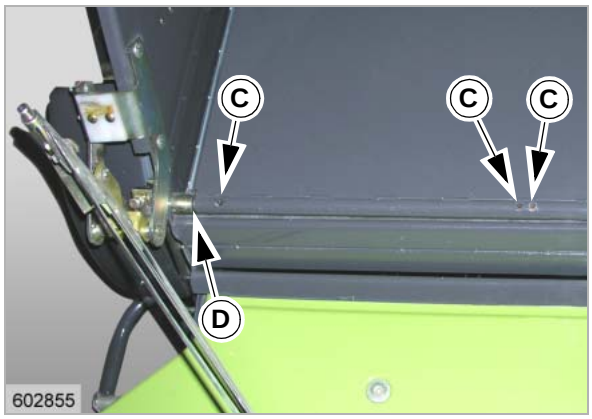
Secure the straw guide plate (E) so it will not slip downward.

☞ Back up straw guide plate (E).

Push in pin (G).

Bolt the cheese-head screw (F) into position.

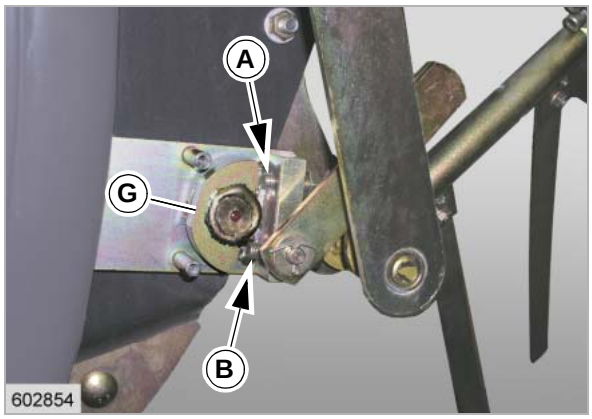
(Fig. 1, 3, 6)



7

Bolt the cheese-head screws (C) into position.

(Fig. 7)



8

Setting the straw guide plate to swathing position:

Bolt the hex. bolt (A) against the contact face of pin (G) until the straw guide plate (E) makes proper contact at the upper edge. Jam hex. bolt (A).

(Fig. 1, 8)

IMPORTANT MAINTENANCE INSTRUCTIONS

Important maintenance instructions and safety rules

Danger!

Repair, service and cleaning work and the elimination of malfunctions should only be performed with the drives stopped and the engine switched off. Remove the ignition key (main switch key)!

Always turn off the battery isolating switch before carrying any work on the 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 system hoses every 50 hours of operation.

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

Check cleanliness of the engine, radiator and exhaust system daily and clean, if necessary.

Coolant

The engine cooling system has been filled with a mixture of corrosion / frost protection and water at the factory.

The coolant consists of 50% corrosion / frost protection and 50% water.

This ensures frost protection down to approx. -37 °C. Also refer to the specifications of the engine manufacturer.

Coolant for CAT engines – see *Lubricants chart CATERPILLAR C-10 / C-9 / 3126 B, exhaust gas class 2*, page 11.2.2
– see *Lubricants chart CATERPILLAR C-13, C-9, C-6.6, exhaust gas class 3a*, page 11.2.4

Belts

V-belts are tensioned by spring-loaded jockey pulleys.

Check condition of V-belts before starting the harvest and replace if necessary.

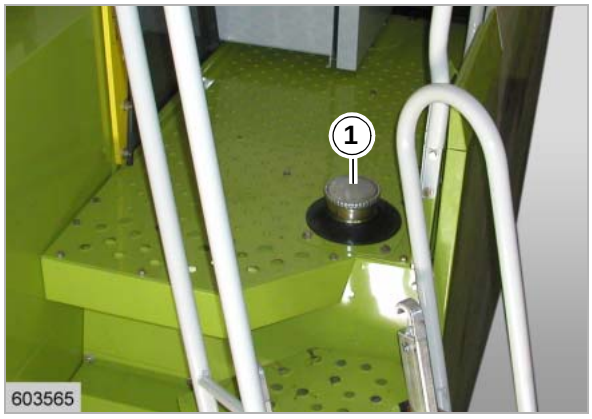
FUEL SYSTEM / ENGINE OIL

Fuel system

Danger!

Observe the specified quality requirements for oils and fuel. Store oils and fuel only in approved containers!

Only fill up the fuel tank with the engine switched off **– DO NOT SMOKE!**



1

Fuel tank

For fuel tank capacity see "Specifications".

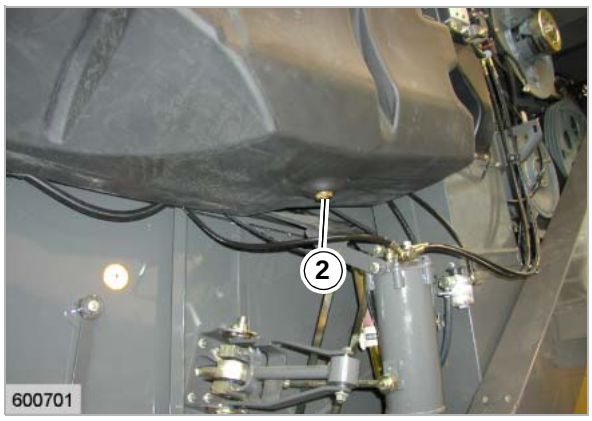
An electrical fuel gauge is located in the monitor on the operator's platform.

Use clean fuel only. Clean the sieve in the tank filler neck (1) from time to time with diesel fuel. Renew the sieve if damaged. Close the filler cap tightly after refuelling.

Refuel the combine immediately after finishing work, as this will reduce the formation of condensed water in the fuel tank.

Drain off any condensed water and dirt particles which may have collected at the drain plug (2).

(Fig. 1, 2)



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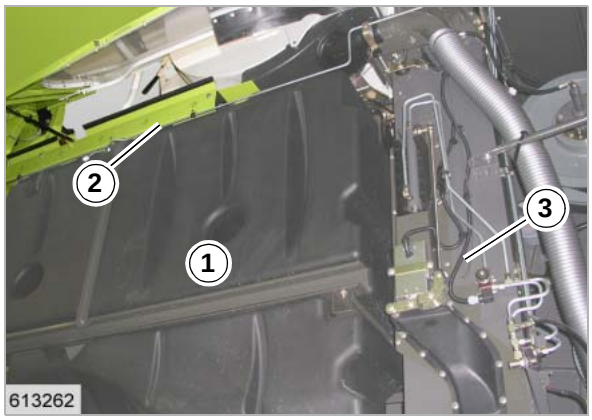


3

Fuel tank breather
(from serial no. ...)

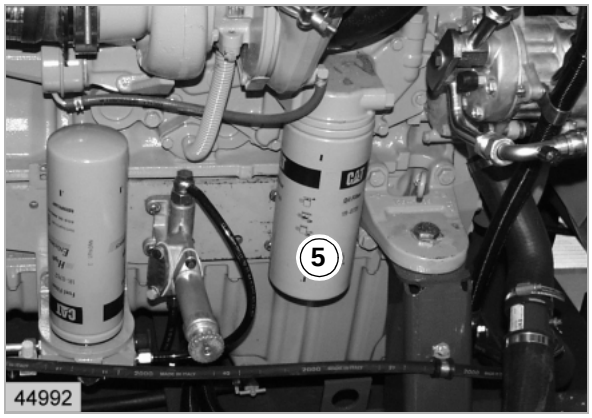
The fuel tank (1) has an additional breather.

The breathing valve is located at position (2) and is connected with a breathing hose (3).

Dust may collect at the end of the breathing hose (3). The breathing hose must be cleaned accordingly.

(Fig. 3)

CATERPILLAR 3126 B



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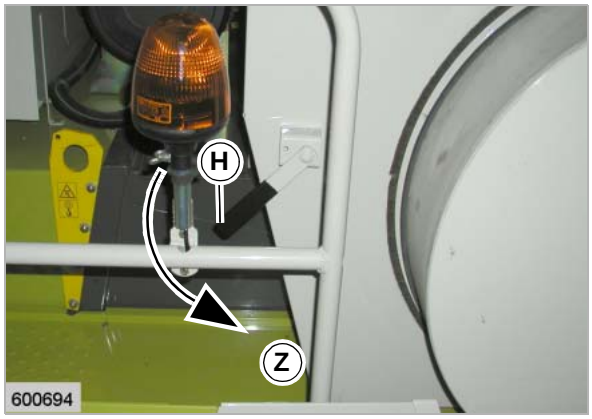
CATERPILLAR C-6.6

28



13

Cleaning the radiator

If possible, clean the radiator only when the engine is cold.

Blow out the radiator with compressed air (max. 5 bar) from the outside to the inside.

Attention!

Ensure not to damage the fins.

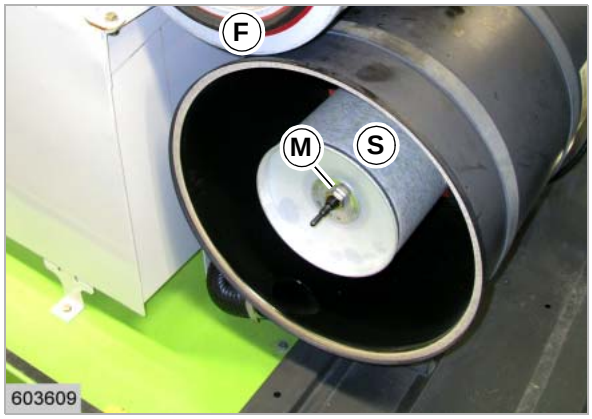
Keep the engine running over a short period of time.

Then, **with the engine shut down** and, if possible, cold, clean the engine compartment by blowing out.

After completing maintenance work, swing oil cooler back into position and lock it.

Swing down the rotary chaff screen and lock with the locking lever. To do this, press the lever (H) in direction (Z).

(Fig. 13)



19

Removing and installing safety cartridge (metal housing)

– Remove main cartridge (F) – see page 11.6.5, *Removing the air filter main cartridge*.

– Remove safety cartridge (S).

  To do this unscrew hex. nut (M) and pull out safety cartridge (S).

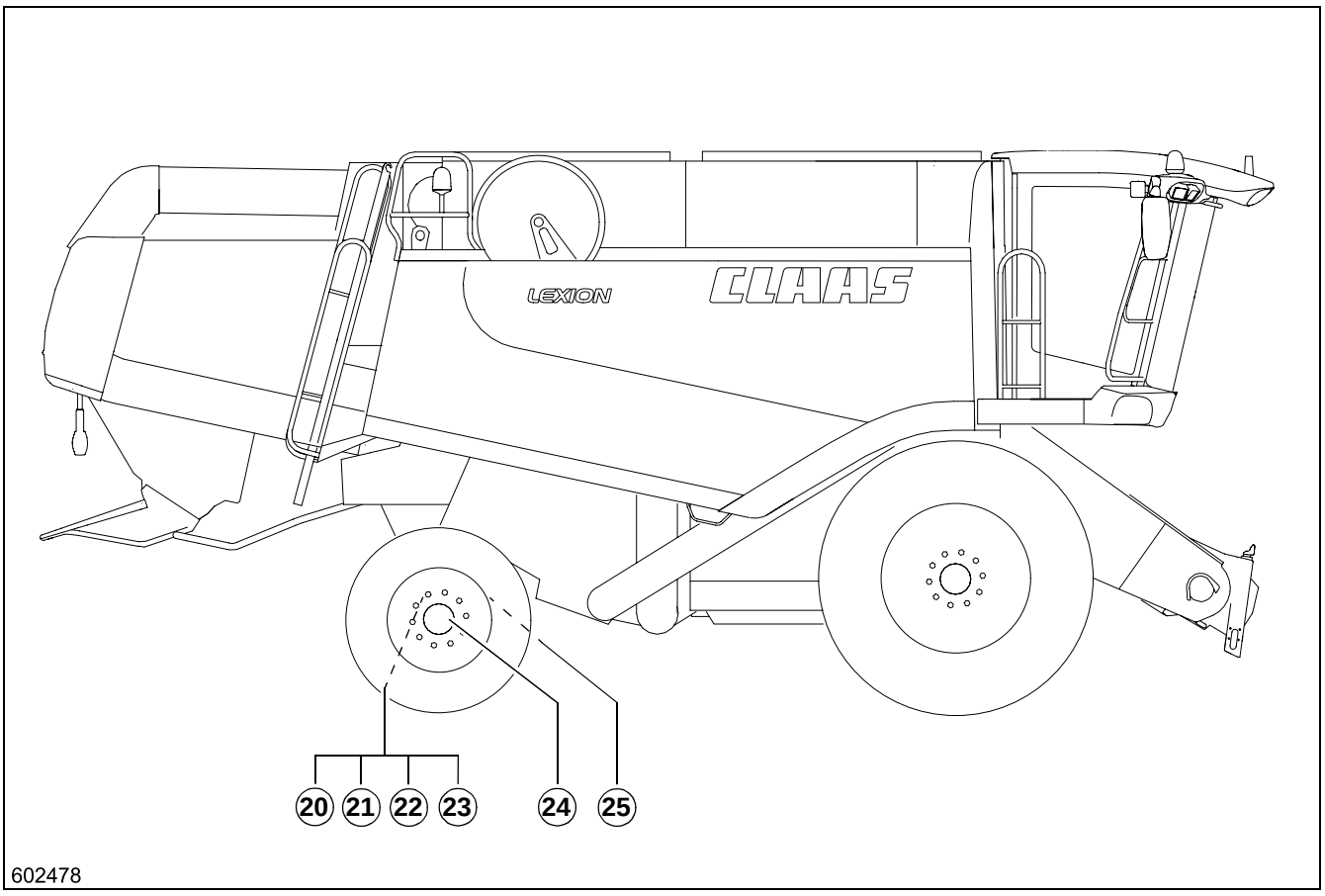
– Clean the filter housing thoroughly.

– Insert a new safety cartridge.

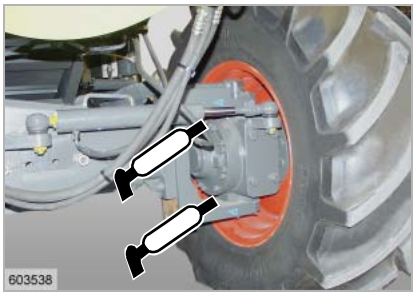
– Install a cleaned or new main cartridge (F) – see page 11.6.7, *Installing the air filter main cartridge*.

(Fig. 19)

12
Lubrication chart



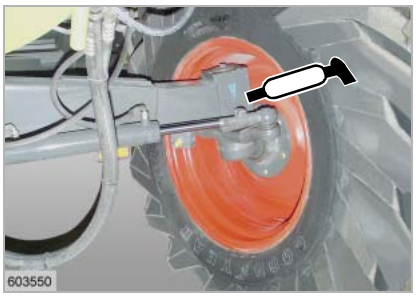
h100



20

21

22



23

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