Ares 547 • 557 • 567 • 577
Ares 617 • 657 • 697

Use and Maintenance

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HOMOLOGATION ACCORDÉE AU
TYPE/VERSION R ANNÉE
PAR LE MINISTÈRE DE L'AGRICULTURE
SOUS LE NUMÉRO

A - IDENTIFICATION - CERTIFICATION - SAFETY

AIR CONDITIONING

The air conditioning system contains a gas which can be dangerous under certain conditions.

RECOMMENDATIONS:

Never work on the air conditioning.

If a leak occurs, prevent any concentration of the gas (in a closed building, in the cab, etc.). Avoid any contact between the gas and hot articles. Do not smoke.

IMPORTANT

It is recommended to keep a fire extinguisher and a first-aid kit ready to hand.

001hsn16

SAFETY CABS

Our safety cabs have successfully undergone the official E.E.C. and O.E.C.D. tests. As a result of these tests they have been officially approved. They fully satisfy these tests.

Consequently, CLAAS disclaims responsibility for any accident (impact or overturning) which applies loads greater than those required by the tests to the structure.

Any safety structure which has been damaged (distorted) in an accident must be replaced, not repaired.

If you want to add equipment or functions not provided as standard or available as after-sales options, always contact your CLAAS agent. It is important to obtain his advice since it is forbidden to drill, weld or cut any of the safety structure components since this would change the cab characteristics and it would then no longer have official approval.

001hsn17

ALARMS

RED "PRIMARY ALARM" LIGHTS

STOP WARNING LIGHT (1)

The flashing of the "STOP" (1) warning light with (2), (3), (10), (11), (13), (20) and (21) plus the buzzer indicates a serious defect. It is IMPERATIVE that you stop IMMEDIATELY, in respect for conditions of use and traffic.

ENGINE OIL PRESSURE WARNING LIGHT (2)

If the oil pressure warning light comes on stop immediately and check the engine oil level. If the level is too low, below the minimum marker, top up with oil. If the warning light stays on and the oil level is normal, consult your approved CLAAS agent.

HYDRAULIC FLUID PRESSURE INDICATOR (3)

If the light comes on during use, it means that there is insufficient control pressure or rear axle lubrication. Refer to your approved CLAAS repair agent.

TRANSMISSION OIL TEMPERATURE WARNING LIGHT (10)

This warning light comes on when the transmission (hydraulic) oil temperature is too high. Check the cleanliness of the oil cooler at the front of the tractor and clean if necessary. Start up again if the indicator comes on again (cooler clean), "Stop the engine immediately" . Contact your approved CLAAS repairer.

ENGINE COOLANT TEMPERATURE WARNING LIGHT (11)

If the engine coolant temperature warning light comes on, STOP THE ENGINE IMMEDIATELY. This means that there is over-heating, in this case, check the following points:

1 - Radiator and radiator grilles: Clean if there is any clogging (dust, plant material, etc).

2 - Water pump belt: Check that the belt is not loose or snapped.

3 - Coolant level in the radiator.

To carry out these operations, refer to chapter "L".

If it still overheats, contact your approved CLAAS agent.

BRAKE FLUID LEVEL WARNING LIGHT (13)

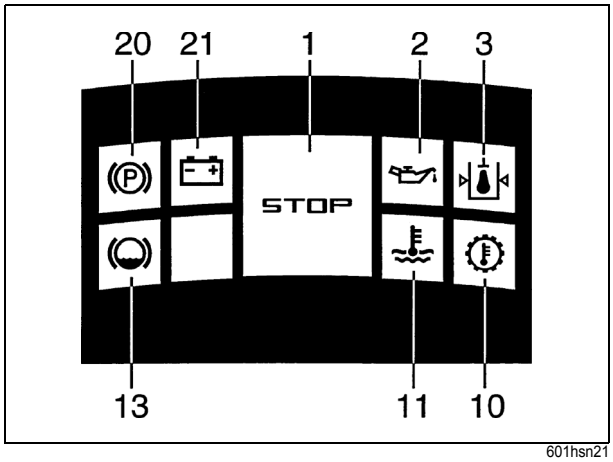
When the brake fluid level is too low,the warning light comes on. "Stop immediately" and consult your approved CLAAS agent.

HAND BRAKE WARNING LIGHT (20)

When this warning light is on it shows that the hand brake is in use . If the reverser lever is engaged in forward or reverse with the hand brake on, an alarm sounds.

BATTERY CHARGE WARNING LIGHT (21)

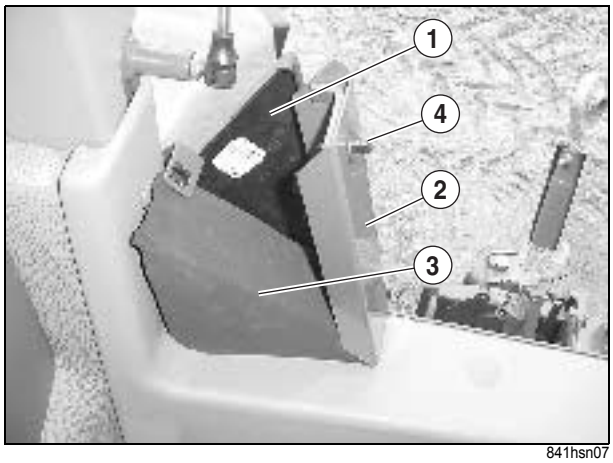
If the charging light comes on, check the condition and tension of the alternator belt. If these are normal, the alternator or regulator may be defective. Have these units checked by your CLAAS approved repairer.



601hsn21

CABLE WAYS

- A panel (1) for cables to pass through is fitted in the lower part of the rear hatch.
- Open the rear hatch.
- Give a 1/4 turn to the fast clip (4).
- Swing the crossbar (2) away.
- Remove foam (3).
- Fit the control box wiring harnesses and replace parts (1) and (2). If the harness does not take up much room, replace the block of foam (3).
- Close the rear hatch.



841hsn07

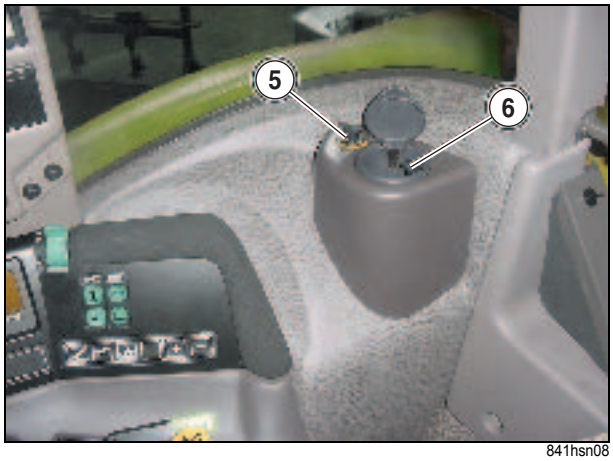
STORAGE BIN

Positioned to the left of the seat, it is used for storing papers, objects and bottles.


841msn14

CIGAR LIGHTER AND ASHTRAY

Cigar lighter (5) and ashtray (6) are positioned on the right-hand cabin console.



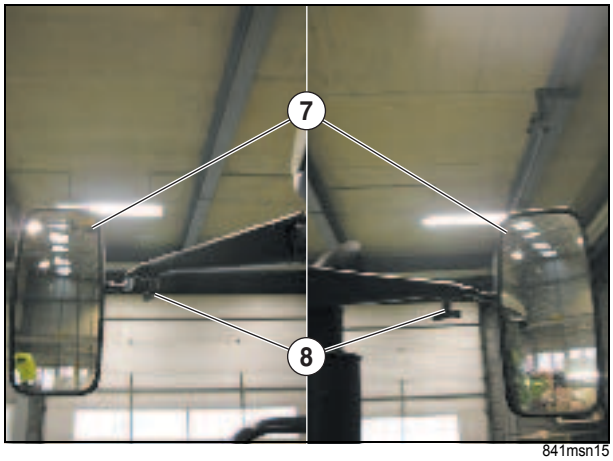
841hsn08

TELESCOPIC REAR VIEW MIRRORS

ADJUSTMENT

To extend the telescopic arm of the rear-view mirror (7), unscrew knob (8).

Before going on the road, check the mirrors are adjusted correctly. For safety reasons, make this adjustment when the tractor is stationary.



841msn15

C - ELECTRICAL SYSTEM

D - ENGINE

ARES 547 - 557 - 567 - 577 - 617 - 657

Ranges		Gears	Road speeds at 2 200 engine rpm with the following rear tyres fitted									
			16.9 R 34 480/70 R 34 540/65 R 34		18.4 R 34 520/70 R 34		16.9 R 38 480/70 R 38 540/65 R 38		18.4 R 38 600/65 R 38 520/70 R 38		650/65 R 38	
			Km/h	*m.p.h.*	Km/h	*m.p.h.*	Km/h	*m.p.h.*	Km/h	*m.p.h.*	Km/h	*m.p.h.*
Extra low	A	1	0,11	*0.07*	0,11	*0.07*	0,12	*0.07*	0,12	*0.07*	0,13	*0.08*
		2	0,13	*0.08*	0,13	*0.08*	0,14	*0.09*	0,14	*0.09*	0,15	*0.09*
		3	0,15	*0.09*	0,16	*0.10*	0,16	*0.10*	0,17	*0.10*	0,18	*0.11*
		4	0,18	*0.11*	0,19	*0.12*	0,20	*0.12*	0,20	*0.12*	0,21	*0.13*
		5	0,22	*0.13*	0,22	*0.14*	0,23	*0.14*	0,24	*0.15*	0,25	*0.16*
		6	0,26	*0.16*	0,27	*0.17*	0,28	*0.17*	0,28	*0.18*	0,30	*0.19*
	B	1	0,29	*0.18*	0,30	*0.19*	0,31	*0.19*	0,32	*0.20*	0,34	*0.21*
		2	0,35	*0.22*	0,36	*0.23*	0,37	*0.23*	0,38	*0.2*	0,41	*0.25*
		3	0,41	*0.26*	0,43	*0.26*	0,44	*0.27*	0,45	*0.28*	0,48	*0.30*
		4	0,50	*0.31*	0,51	*0.32*	0,53	*0.33*	0,54	*0.34*	0,58	*0.36*
		5	0,58	*0.36*	0,60	*0.37*	0,62	*0.39*	0,64	*0.40*	0,68	*0.42*
		6	0,70	*0.44*	0,73	*0.45*	0,75	*0.47*	0,77	*0.48*	0,82	*0.51*
	C	1	0,59	*0.37*	0,61	*0.38*	0,63	*0.39*	0,65	*0.40*	0,69	*0.43*
		2	0,71	*0.44*	0,74	*0.46*	0,76	*0.47*	0,78	*0.48*	0,83	*0.52*
		3	0,84	*0.52*	0,87	*0.54*	0,89	*0.56*	0,92	*0.57*	0,98	*0.61*
		4	1,01	*0.63*	1,04	*0.65*	1,08	*0.67*	1,10	*0.68*	1,18	*0.73*
		5	1,19	*0.74*	1,23	*0.76*	1,26	*0.79*	1,30	*0.81*	1,38	*0.86*
		6	1,43	*0.89*	1,47	*0.92*	1,52	*0.95*	1,56	*0.97*	1,66	*1.03*
	D	1	1,24	*0.77*	1,28	*0.79*	1,32	*0.82*	1,35	*0.84*	1,44	*0.90*
		2	1,49	*0.92*	1,54	*0.95*	1,59	*0.99*	1,63	*1.01*	1,74	*1.08*
		3	1,75	*1.08*	1,80	*1.12*	1,86	*1.16*	1,91	*1.19*	2,04	*1.26*
		4	2,10	*1.30*	2,17	*1.35*	2,24	*1.39*	2,30	*1.43*	2,45	*1.52*
		5	2,47	*1.53*	2,55	*1.59*	2,64	*1.64*	2,70	*1.68*	2,88	*1.79*
		6	2,97	*1.85*	3,07	*1.91*	3,17	*1.97*	3,25	*2.02*	3,47	*2.15*
Low	A	1	0,38	*0.24*	0,39	*0.24*	0,41	*0.25*	0,42	*0.26*	0,44	*0.28*
		2	0,46	*0.28*	0,47	*0.29*	0,49	*0.30*	0,50	*0.31*	0,53	*0.33*
		3	0,54	*0.33*	0,56	*0.34*	0,57	*0.36*	0,59	*0.36*	0,63	*0.39*
		4	0,65	*0.40*	0,67	*0.42*	0,69	*0.43*	0,71	*0.44*	0,75	*0.47*
		5	0,76	*0.47*	0,79	*0.49*	0,81	*0.50*	0,83	*0.52*	0,89	*0.55*
		6	0,92	*0.57*	0,95	*0.59*	0,98	*0.61*	1,00	*0.62*	1,07	*0.66*
	B	1	1,03	*0.64*	1,06	*0.66*	1,10	*0.68*	1,13	*0.70*	1,20	*0.75*
		2	1,24	*0.77*	1,28	*0.80*	1,32	*0.82*	1,35	*0.84*	1,45	*0.90*
		3	1,45	*0.90*	1,50	*0.93*	1,55	*0.96*	1,59	*0.99*	1,70	*1.05*
		4	1,75	*1.09*	1,81	*1.12*	1,87	*1.16*	1,91	*1.19*	2,04	*1.27*
		5	2,06	*1.28*	2,13	*1.32*	2,20	*1.36*	2,25	*1.40*	2,40	*1.49*
		6	2,48	*1.54*	2,56	*1.59*	2,64	*1.64*	2,71	*1.68*	2,89	*1.79*

TRANSPORT OR WORKING MODE MANAGENEMT

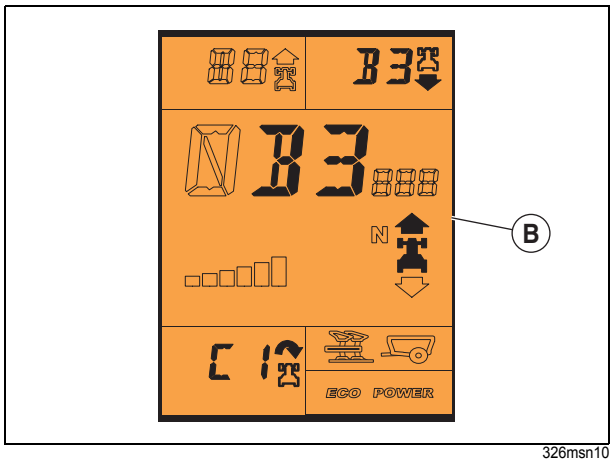
The central electronics unit "Auto 5" protects and adapts the transmission to engine rpm when changing ratios and ranges. If the engine could exceed 2 820 rpm when shifting down, an overspeed protection function prevents the change. If the engine fails to reach 85 % of its setting from 1 200 rpm, an under-rpm protection prevents shifting to a higher ratio.

The central electronics unit "Auto 5" prevents selection of the "A" range if speed is greater than 5 km/h.

In the work or transport modes, when changing ratios, the central electronics unit (Auto 5) automatically selects the most suitable ratio within the selected range.

When a ratio is engaged, the manoeuvere ratio and the ratio for the opposite direction of motion are displayed on the monitor (B).

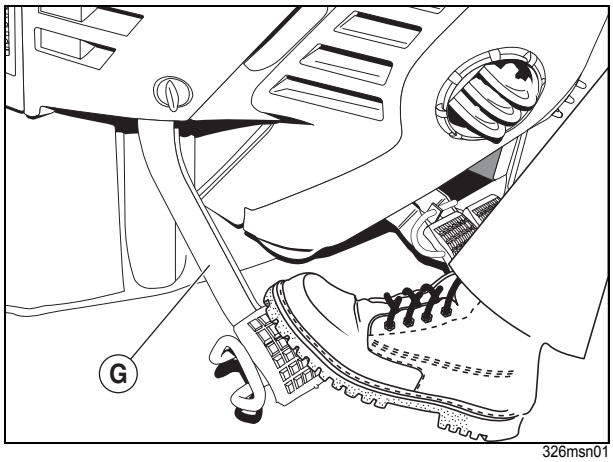
Example: "B3" forwards, "B3" reverse displayed and "C1" for the manoeuvre ratio.



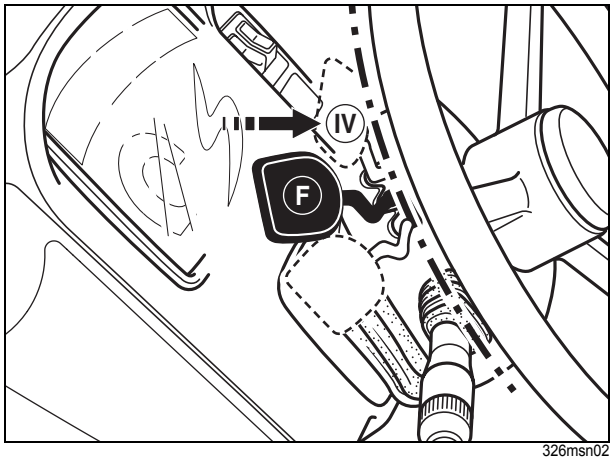
326msn10

"SPEED MATCHING" FUNCTION

This function is active between ratios "D1" and "D6" in the working and transport modes. It selects the most appropriate ratio as a function of engine rpm following declutching using pedal (G) or using reverser lever (F) in position (IV).



326msn01



326msn02

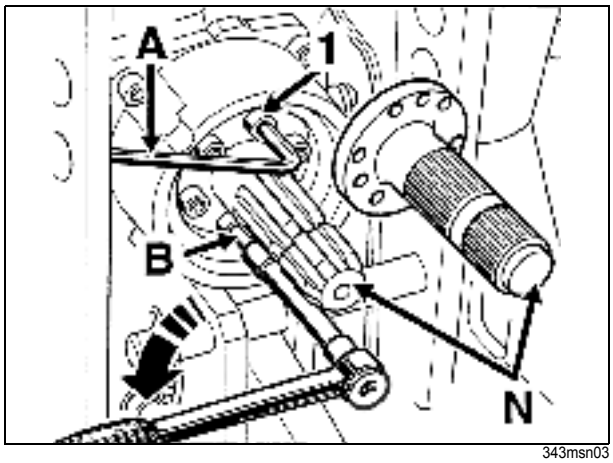
POWER TAKE-OFF END FITTING

During removal / refitting of the output shaft, the engine must be stopped and that no implement is to be attached to the rear linkage.

To remove the power take off end fitting (N) proceed as follows:

- Insert an Allen key (A) in one of the screws (1).
- Turn the shaft to jam the end of the Allen key against the right side of the coupling scale.
- Unscrew screws using wrench (B).
- Reposition the required end fitting (6 or 21 splines) using the centring studs and lightly coat the threads of screws (1) with Loctite n° 241 then tighten all screws to the recommended torque (12 to 14 daN.m) with a torque wrench .
- To secure the shaft, follow the same procedure as used to disassemble using Allen key (A), with the key jammed against the left side of the coupling scale.

Important: CLAAS is not liable for an accident caused by the non respect of the above fitting instructions.



343msn03

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G - HYDRAULICS - LINKAGE AND REAR HITCH

MODE SELECTOR

HIGH POSITION (I)

The linkage positions itself during a manouvre on the top stop as set by the adjuster (7).

STOP POSITION (II)

This position stops the linkage at any time in its travel.

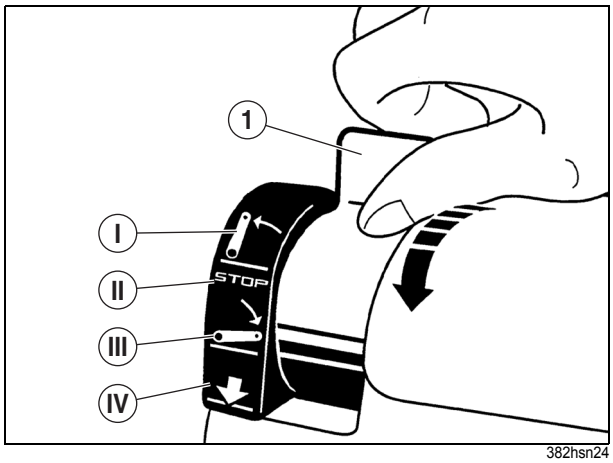
N.B.: Light upward or downward pressure on selector (1) allows the height of the linkage arms to be precisely adjusted from the STOP position.

WORKING POSITION (III)

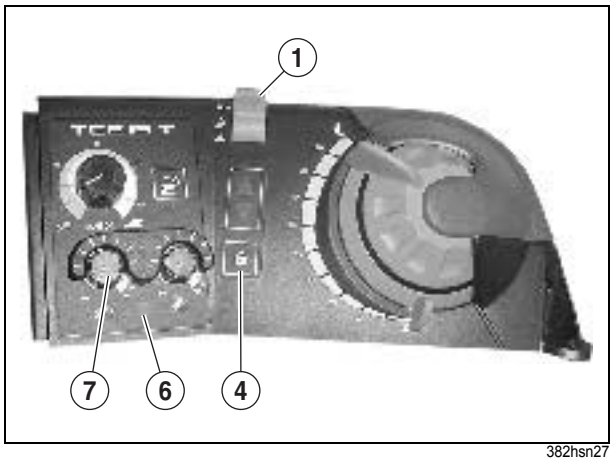
In this position the linkage arms will descend to the position chosen for operating the implement.

FAST SOIL ENTRY POSITION (IV)

In position (IV) the mode selector allows the implement to enter the soil more quickly.



382hsn24



382hsn27

TRAVELLING POSITION

This mode maintains the linkage in high position, the electronic box preventing any wrong manoeuvres during road transport (red light (6) on). This active position also activates the travel damper.

To activate the travelling position:

- Set the selector (1) to top limit (I).
- Press the button (4). The safety warning light (6) comes on.
- To de-activate the travelling position, press the button again (4). Then perform the "linkage initiation procedure" to make it operational.

REAR HITCH ADJUSTMENT INSTRUCTIONS

INFLUENCE OF HITCH GEOMETRY ON LINKAGE CAPACITY

The 3 point hitch allows the largest number of different implements to be hitched. You must identify the most appropriate hitch geometry for each application. To achieve this the following components can be adjusted:

A - Top link (upper link attachment point with respect to the centre line of the wheels and the length of the link).

B - Lower links (lower link attachment points).

C - Linkage rods (length of linkage rods).

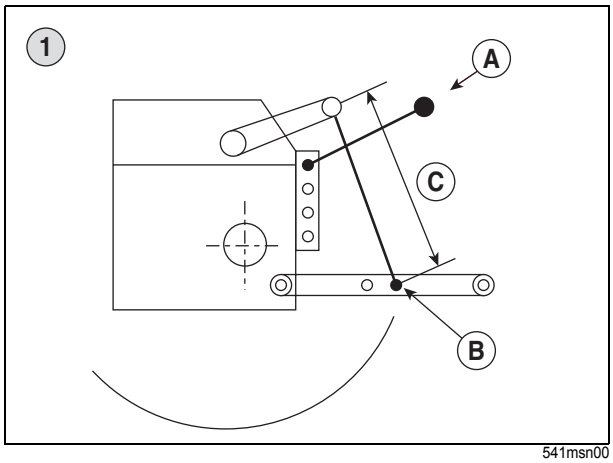
If you need maximum lift capability (heavy tool), you should aim to achieve the configuration that offers maximum mechanical advantage (1).

If the load to be lifted is not great, we indicate the hitch configuration that corresponds to the minimum mechanical advantage (2).

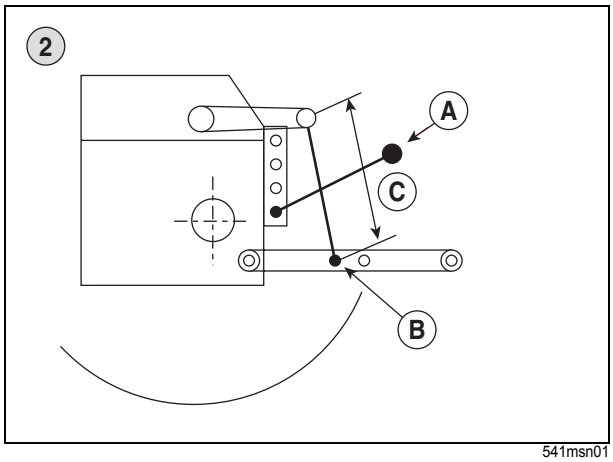
ADJUSTING LINKAGE RODS

- To increase the lift height, shorten the linkage rods.
- To obtain greater working depth, lengthen the linkage arms.
- To obtain a sideways position of the implement, adjust the rods to right or left.
- Al these adjustments are carried out using handles (1).
- Depending on the position of the centre line *1 there is:
- In (F) a high position of the lower links.
- At (G) a bottom position for the lower links.
- In (H) a floating position of the lower bars.

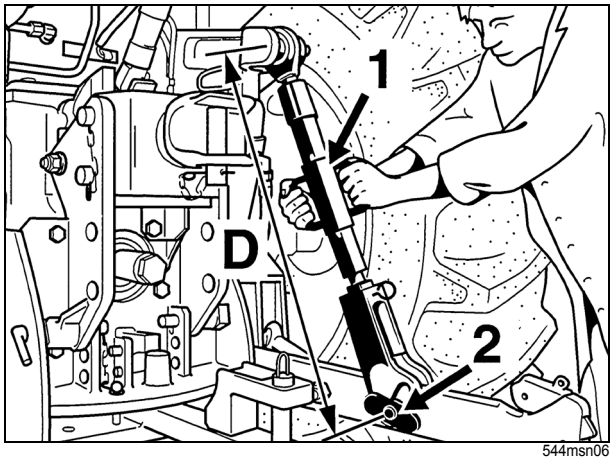
When the adjustments are complete, lock the handles (1) downwards. During adjustment you must check that the distance between the centre lines of the linkage rods (D) does not exceed 820 mm.



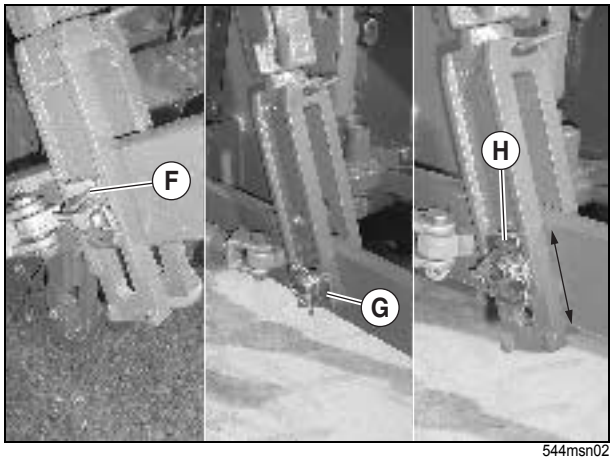
541msn00



541msn01



544msn06



544msn02

USING THE FRONT POWER TAKEOFF

START-UP

Important: The front power take-off must be started or stopped with the engine at idling speed.

- Press button (1).

N.B.: The notch (3) on the switch locks the control button (1) and avoids accidentally starting up the front power take-off.

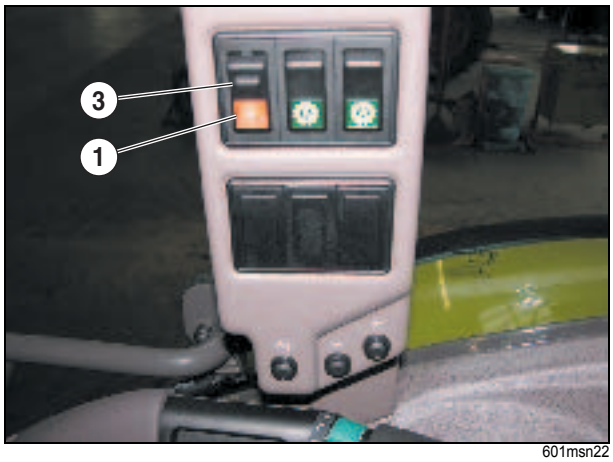
- Warning light (2) on the combination control comes on.
- Accelerate the engine.
- To visualise the front power take-off speed on the console display panel (4), press the end of control lever (5) until the warning light appears (6).

STOP

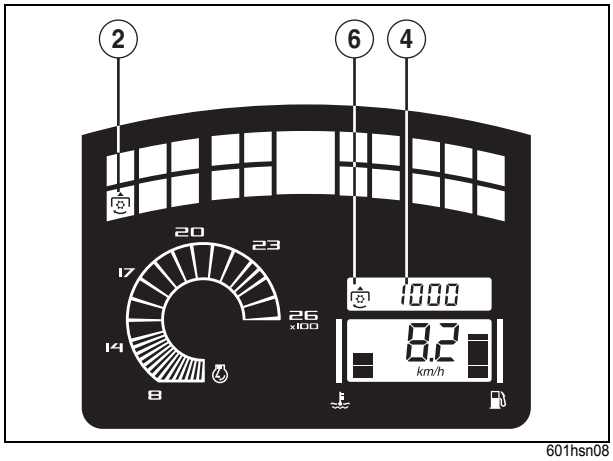
- Engine idling.
- Press button (1).
- Warning light (2) on the combination goes out.

Do not wear loose fitting clothing that might get caught in moving parts. The engine must be stopped before coupling or uncoupling the attachment's universal joint shaft. When working, all the universal joint system must be in place. When repairing, adjusting or lubricating an attachment in the field, always set the PTO lever to neutral and stop the engine. When the PTO is not being used, replace the protective cover.

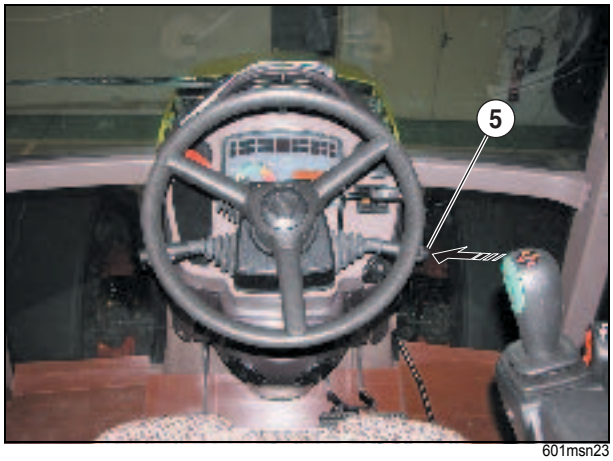
411msn05



601msn22



601hsn08



601msn23

INFOTRAC CALIBRATION PROCEDURE "OPERATING SPEED"

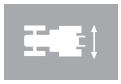
The operating speed has to be calibrated when you change the size of the rear tires or the radar (if the tractor is fitted with it).

N.B.: The original calibration is carried out with new tyres. Depending on tire wear, it is recommended to recalibrate the INFOTRAC.

Procedure

1 - Set up 2 marks 100 metres apart on a level, straight and dry metalled road.

2 - Stop the tractor at approximately 15 to 20 meters before the first marker.

3 - With key (C), put index ▼ in front of symbol  .

4 - Press key (C) for at least 3 seconds until the former calibration value and index ▲ under the "Cal" indication is displayed.

5 - Select a forward gear to suit an average speed of 7 km/h.

6 - Use the clutch and accelerator manually to keep to a stable forward speed.

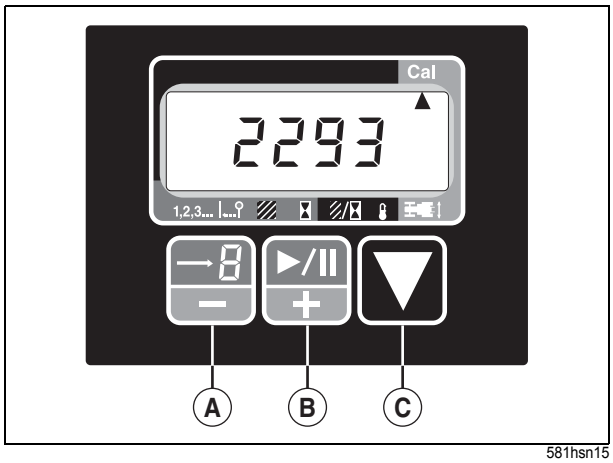
7 - When passing the first marker, press key (B), the former value disappears and a flashing value is displayed which changes proportionally to the travelled distance. This display indicates that calibration is in progress.

8 - As soon as the second marker is passed, press key (B) again.

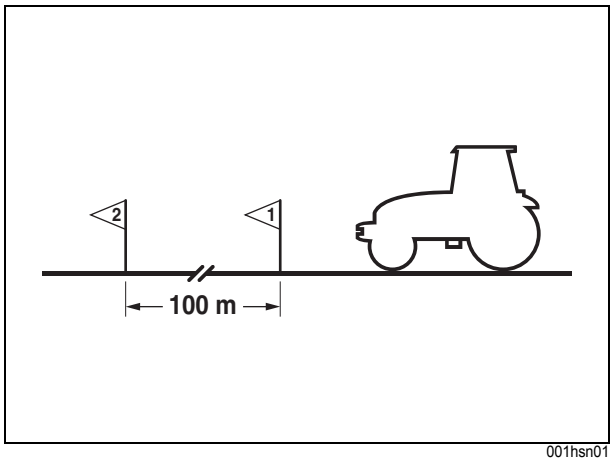
9 - Briefly pressing key (C) validates the new calibration value.

10 - Pressing key (C) again returns the display to the partial event counter function.

N.B.: If problems are encountered before calibration validation), you can quit the calibration mode by pressing key (C). In this case, the former calibration is kept. Therefore, you must restart the calibration procedure from the beginning.



581hsn15



001hsn01

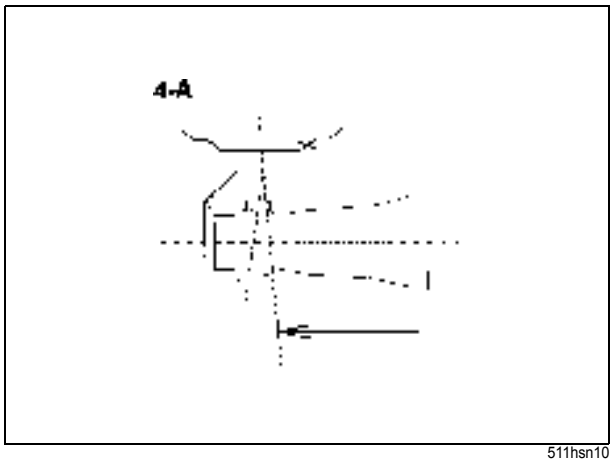
TABLES OF FRONT TRACKS

Type of front axle 20.19-8				
Normal front axle (Ares 547 and 557)				
Rims with fixed wheel disc			**Minimum track (in mm)**	**Maximum track (in mm)**
Tyres		**Type**	**4-A**	**4-B**
	11.2 R 28	W 10 – 28	**1781**	1981
	13.6 R 28	W 12 – 28	**1779**	1979
	14.9 R 24	W 12 – 24	**1741**	2021
●	14.9 R 28	W 12 – 28	**1777**	1977
	280/85 R 28	W 10 – 28	**1781**	1981
	340/85 R 28	W 12 – 28	**1779**	1979
	380/85 R 24	W 12 – 24	**1741**	2021
	380/70 R 28	W 12 – 28	**1779**	1979
●	380/85 R 28	W 12 – 28	**1777**	1977
	420/70 R 24	W 12 – 24	**1741**	2021
●	420/70 R 28	W 12 – 28	**1777**	1977
	440/65 R 24	W 12 – 24	**1741**	2021
●	440/65 R 28	W 12 – 28	**1779**	1979
	480/60 R 28	W 16 L – 28	**1800**	1960
●	480/65 R 28	W 12 – 28	**1777**	1977

● Except Ares 547.

Type of front axle 20.22-3				
Normal front axle (Ares 567 to 657)				
Rims with fixed wheel disc			**Minimum track (in mm)**	**Maximum track (in mm)**
Tyres		**Type**	**4-A**	**4-B**
●	13.6 R 28	W 12 – 28	**1779**	1979
	14.9 R 28	W 12 – 28	**1777**	1977
■	16.9 R 28	W 15 L – 28	**1806**	1950
●	340/85 R 28	W 12 – 28	**1779**	1979
●	380/70 R 28	W 12 – 28	**1779**	1979
	380/85 R 28	W 12 – 28	**1777**	1977
	420/70 R 28	W 12 – 28	**1777**	1977
■	420/85 R 28	W 15 L – 28	**1806**	1950
●	440/65 R 28	W 12 – 28	**1779**	1979
●	480/60 R 28	W 16 L – 28	**1800**	1960
	480/65 R 28	W 12 – 28	**1777**	1977
■	480/70 R 28	W 15 L – 28	**1806**	1950
■	520/60 R 28	W 18 L – 28	**1800**	1960
■	540/65 R 28	W 15 L – 28	**1806**	1950

● Except Ares 657.
■ Only Ares 657.



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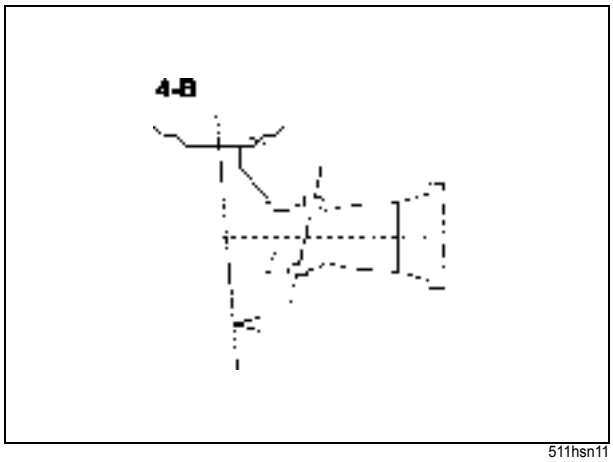


511hsn11

Delivery track in bold.

USING DEEP-WORKING IMPLEMENTS

Subsoilers,subsoilers and ditchers and trench ploughs always work at great depth.

Their design requires great tractive effort and often causes considerable overloading which in the long term can damage your tractor.

To use your tractor normally:

- Tractor ballasting must not exceed the values shown in chapter "K".
- Tyre pressures must match those shown by the manufacturers for the load being carried.
- If you have to work at less than 6 km/h carry out a preliminary test.

Operation n° 4

ENGINE AIR FILTER: CLEANING

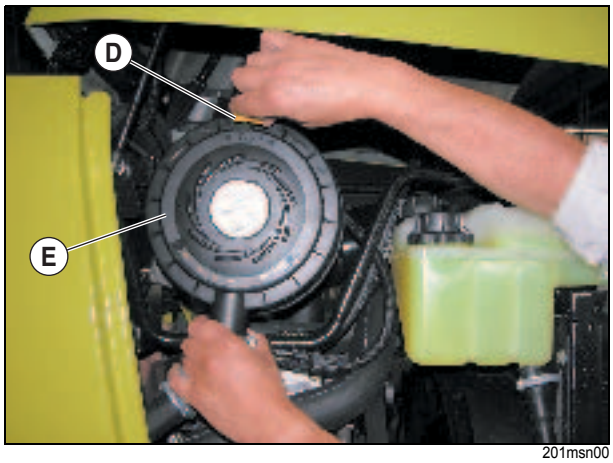
This maintenance operation has to be carried out with the greatest care, away from any dust. The long life of the engine depends on this.

- Place the tractor in a dust-free place before starting work.
- Raise the engine cover.
- Pull latch (D) and turn lid (E) anti-clockwise, to remove it.
- When the main filter (F) needs to be cleaned, tapping it with the palm of the hand removes some of the dirt.

Important: Never use a compressed air blower. Generally speaking the main filter (F) must not be damaged or distorted during the cleaning operation. Replace it if necessary.

Check carefully that cover (E) is correctly fitted on the body of the filter, then push back latch (D).

Check that the air suction ducts are in good condition and that the clips are tightly secured.



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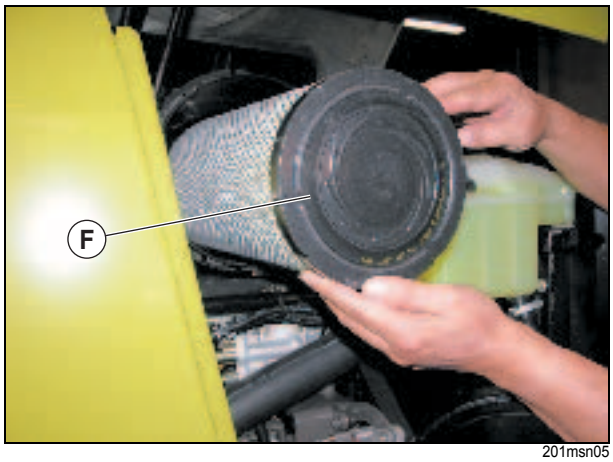

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Operation n° 5

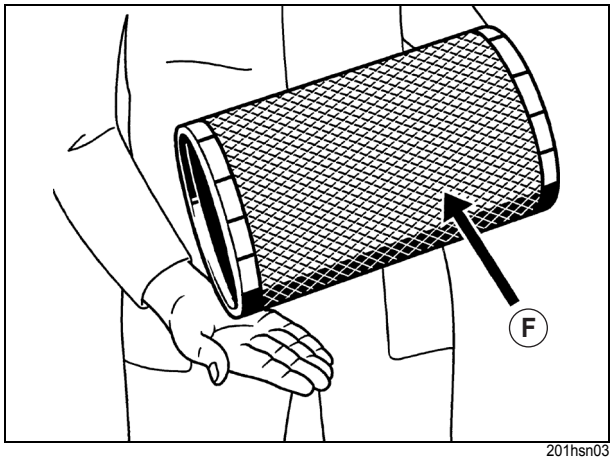
ENGINE OIL LEVEL: CHECK

N.B.: The engine has to be OFF for a minimum of 5 minutes before the oil level can be measured.

- Position the tractor on a flat horizontal surface.
- Unscrew cap (G) to clean the dipstick with a clean cloth.
- Screw the cap fully down.
- Remove the dipstick again and check the level:
  - I: Normal operating level.
  - II: Top up as soon as possible.
  - III: Top up before restarting the engine.

If the oil level drops unexpectedly or repeatedly, consult your approved CLAAS agent.

Important: Oil specifications must be respected; never top up until the level reaches the markings (II) or (III).



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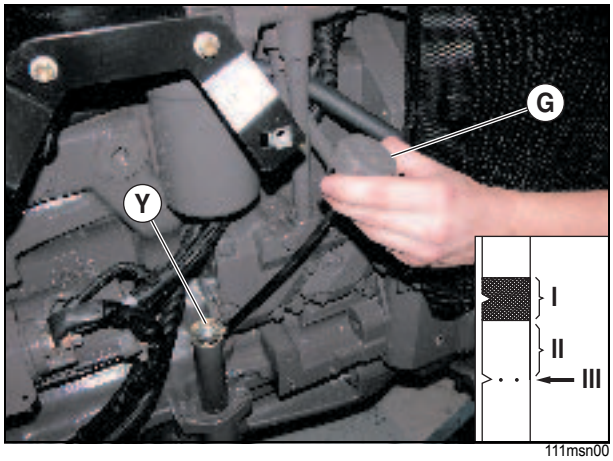

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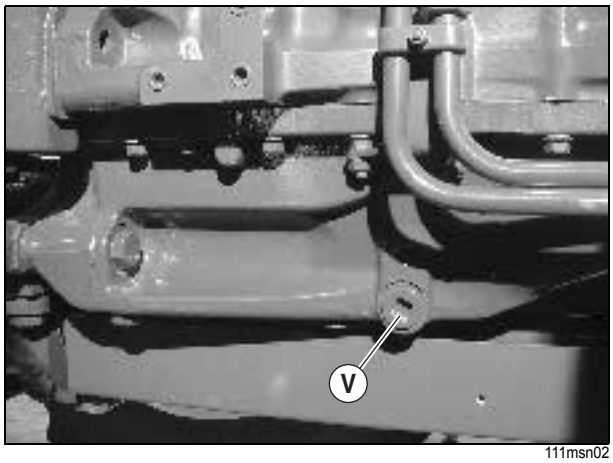
Operation n° 29

ENGINE OIL: REPLACE

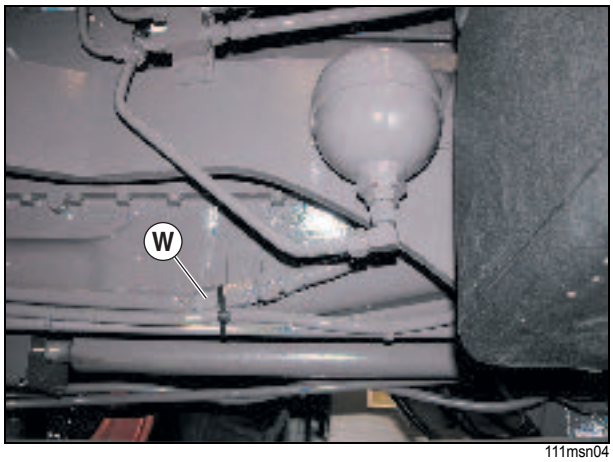
- Run the engine at a speed of 1200 rpm until it reaches its normal operating temperature.
- Stop the engine.
- Place a suitable recipient under drain plug (V) (plug (W) for tractors fitted with pneumatic braking).
- Remove the drain plug (V) or (W).

The oil is hot! Avoid getting burned!.

- While the oil is draining out, change the filter cartridges (see following operation).
- Once all the oil has drained out, replace plug (V) or (W).



111msn02

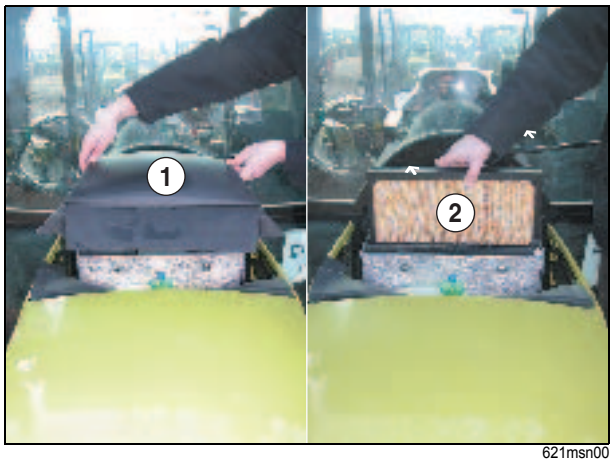


111msn04

Operation n° 43

MAIN CAB AIR FILTER: REPLACE

- Remove the air intake manifold (1) and the air filter (2).
- Replace the filter.
- Refit the air filter (2) respecting the orientation of the arrows (towards the cab).



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Operation n° 44

DIESEL FUEL FILTER: REPLACE

Replace the filter (see operation n° 3).

Operation n° 45

HYDRAULIC SYSTEM ACCUMULATOR: CHECK

- Check the accumulator pressure.

ENGINE MAINTENANCE: CHECK – REPLACE

- Adjusting the valve rockers.
- Checking the injectors.
- Replacing the coolant and the thermostat.

These operations are to be carried out by your approved CLAAS agent.

161hpn03

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