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M - OPERATIONS THAT ARE MANDATORY UNDER THE GUARANTEE

Model	Type
ARES 546	5312
ARES 556	5322
ARES 566	5332
ARES 616	8212
ARES 656	8232
ARES 696	8242

CHAPTER SYMBOLS

REF	CHAPTERS	SYMBOLS
A	IDENTIFICATION - APPROVAL	
	SAFETY	
B	CAB	
C	ELECTRICAL SYSTEM	
D	ENGINE	
E	TRANSMISSION	
F	FRONT AXLE	
G	HYDRAULICS - LINKAGE AND REAR HITCH	
H	FRONT POWER TAKE-OFF - FRONT LIFT AND FRONT TOW LINKAGE	
I	ON BOARD COMPUTER	
J	WHEELS AND TYRES	
K	DIMENSIONS, WEIGHTS, CAPACITIES AND BALLAST	
L	MAINTENANCE	
M	OPERATIONS THAT ARE MANDATORY UNDER THE GUARANTEE	

SAFETY

FOREWORD

CLAAS Tractors are designed and built to give you optimum service over many years. They are designed to provide the most comfortable and safe working conditions.

However, accidents can easily happen in agricultural work. It is important to know the dangers and how to avoid them.

We respectively draw your attention to certain aspects that merit constant attention (non exhaustive list).

PRECAUTIONS BEFORE STARTING

Caution is the best guarantee against any risk of accident.

The driver must be fully familiar with the tractor and must understand all the controls, their position and their purpose. This manual must be read carefully.

If the tractor is used by anybody other than the owner, he must be given all explanations required to allow him to work safely.

The driving position must be clean (instrument panel, steering wheel, floor and pedals).

Footsteps must be clean (no mud) to avoid slipping when climbing or descending.

Use the steps and handles provided when getting into or out of the tractor.

Before starting the engine, make sure that all controls are in the neutral position, particularly the power take-off lever.

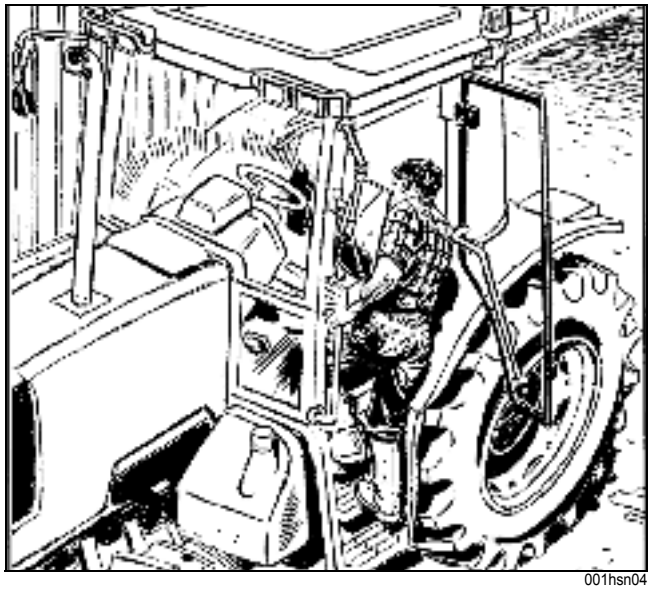
Only run the engine in well ventilated areas.

Make sure there is nobody nearby before starting the tractor.

Fully release the handbrake before starting.

Do not start work if the tractor is not working properly.

001hsn03



001hsn04

As a general rule: Make sure the unions are tight and the pipes in good condition before putting the system under pressure.

Never loosen a union when the circuit is under pressure.

For any repairs to the hydraulic system, stop the engine and lower the implement to the ground.

Maintenance - greasing: Always stop the engine.

ELECTRICAL SYSTEM

Knowledge and skill are required to work on the electrical system. If the need arises (installation of miscellaneous accessories, radio etc.) contact your approved CLAAS repair agent.

Moreover:

- Always disconnect the battery negative terminal before working on the electrical system.
- Never weld on the tractor or on a towed implement.
- Never "patch-up" electric circuits.
- ***Never replace a blown fuse with a larger calibre fuse; you could cause a fire***.
- ***Never carry out work on components such as the alternator or the fan motor when the engine is running***.
- ***If you have to carry the battery, ensure that the acid does not contact the skin; protect your eyes from splashing***.

FUEL

RE-FUELLING

Before filling the tank, always carefully clean around the fuel cap to remove any pieces of straw, twigs, etc. which could help start and then propagate a fire.

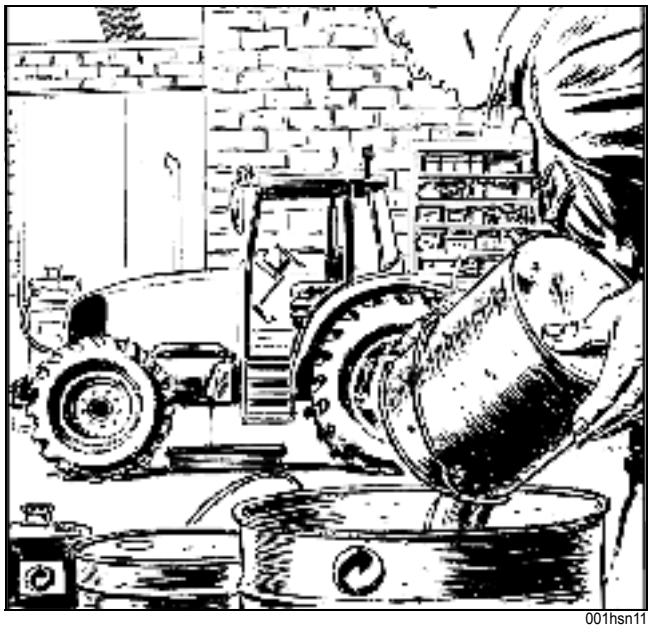
Moreover:

- ***Never fill the tanks when the engine is running or near a naked flame***.
- ***Do not smoke when filling with fuel***.

COOLANT

Do not work on the cooling system when the engine is hot (risk of burns).


001hsn10


001hsn11

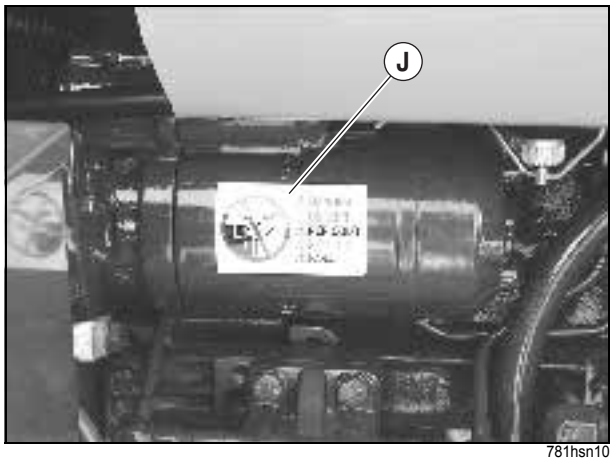
I - WARNING: Keep the linkage clear when you are using the external controls.

J - Danger: Do not place the starter terminals in contact with a tool that conducts electricity (danger of sparks).

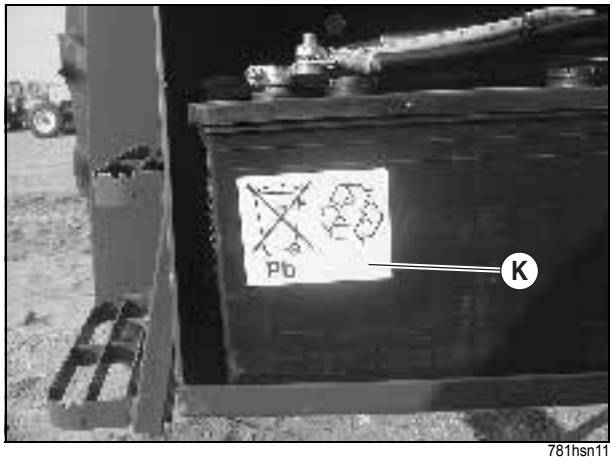
K - Do not discard a worn battery but take it to a recycling collection point.

L - Danger: To prevent any damage to the eyes, never look at the surface of the radar sensor when it is activated.

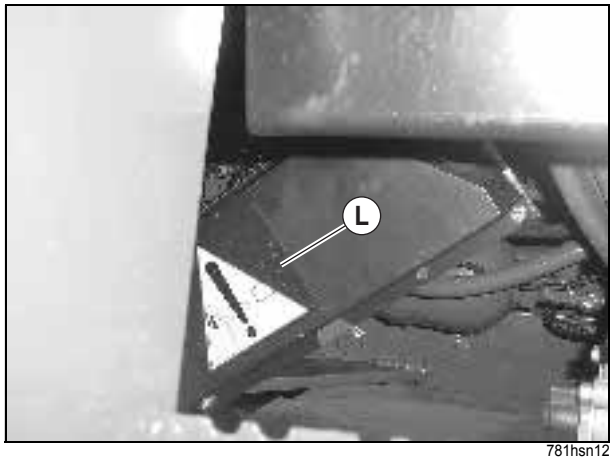
781hsn09



781hsn10

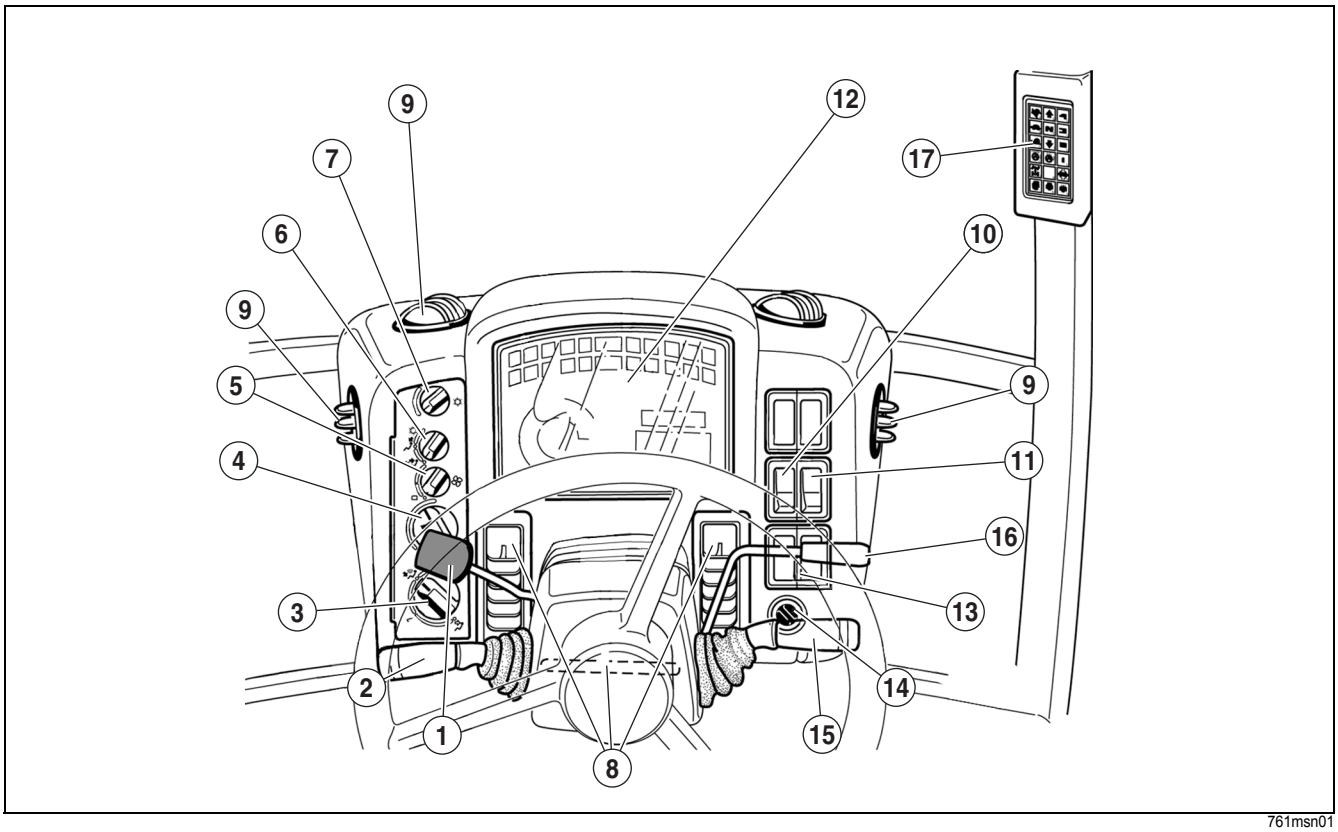


781hsn11



781hsn12

INSTRUMENTS AND CONTROLS (DASHBOARD)



761msn01

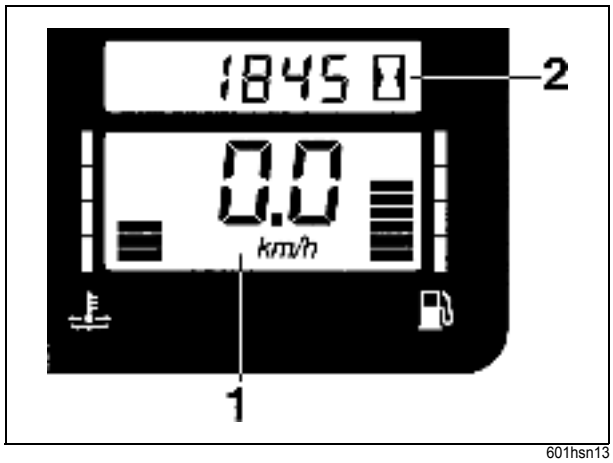
1 - Reverser lever under torque.
2 - Multifunction control:
- Direction indicators.
- Lights.
- Horn.

3 - Air distribution adjustment knob.
4 - Heating temperature adjustment knob.
5 - Fan speed adjustment knob.
6 - Heating, ventilation and air conditioning functions selector knob.
7 - Cooling temperature adjusting knob.
8 - Heating vents.
9 - Windscreen defrosting vents.
10 - Rotating beacon control switch.
11 - Hazard flasher switch.
12 - Instrument panel.
13 - Spare position.
14 - Main switch (key operated).
15 - Multifunction control:
- Front screen wiper.
- Front screen washer.
- Digital display (instrument panel).

16 - Steering wheel adjuster.
17 - Transmission display.

DIGITAL DISPLAYS

Your dashboard instrument panel is equipped with 2 digital displays (1) and (2) which allow the following information to be read accurately:



601hsn13

DIGITAL DISPLAY (1)

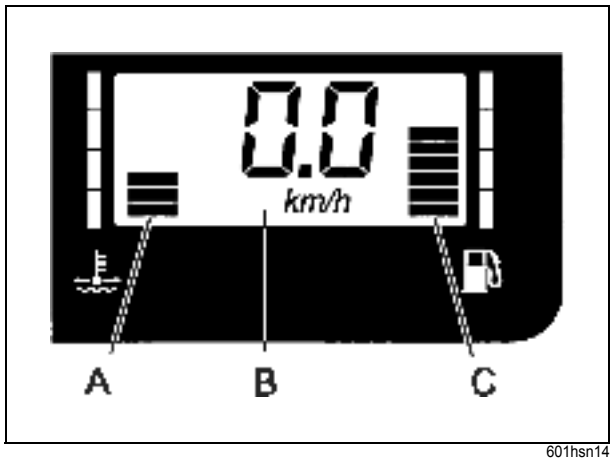
When ignition is turned on, the display (1) illuminates and indicates the following information:

A - Coolant temperature indicator.

B - Real or theoretical forward speed.

C - Fuel level indicator.

Note: If the tractor is fitted with a radar (TCE 25), digital display (1) indicates the real speed measured by the radar. If there is no radar (TCE 15 - TCE 15 T), the theoretical speed measured in the transmission is indicated.



601hsn14

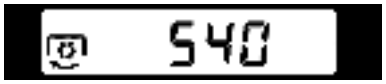
DIGITAL DISPLAY (2)

When ignition is turned on, the display (2) illuminates and indicates the number of service hours performed.

Successive pressing on the (3) key scrolls down the following information.

- Engine speed (rpm).

- Rear power take-off speed (rpm).



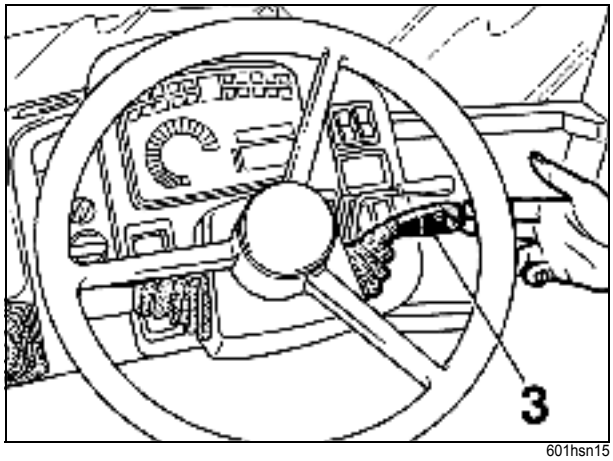
- Front power take-off speed (rpm)

- Total hour meter.

- Trip hour meter.

To reset the trip hour meter:

- Select the "trip hour meter" mode.
- Press the lever (3) for 4 seconds, automatic reset takes place.



601hsn15

NATURAL VENTILATION

SIDE WINDOW

Opening left-hand side window, can be locked in the closed position and fixed open.

OPENING ROOF (D)

Can be released from inside the cab using handle. Held open by 2 struts.

The design of the opening roof means its direction of opening can be reversed. To do this, undo the ends of the 2 struts (2), remove the hinge pins (3) then turn the opening roof round. Refit parts (2) and (3).

To alter the aperture of the opening roof, set the trunnions (4) to the (A) or (B) positions to obtain the desired aperture.

REAR OPENING WINDOW

Can be released from inside the cab using handle (6).

The panel is held in the open position by 2 struts.

The panel has a rear-view mirror (5) to make visibility of the hitch attachment easier.

WINDSCREEN SUN BLIND

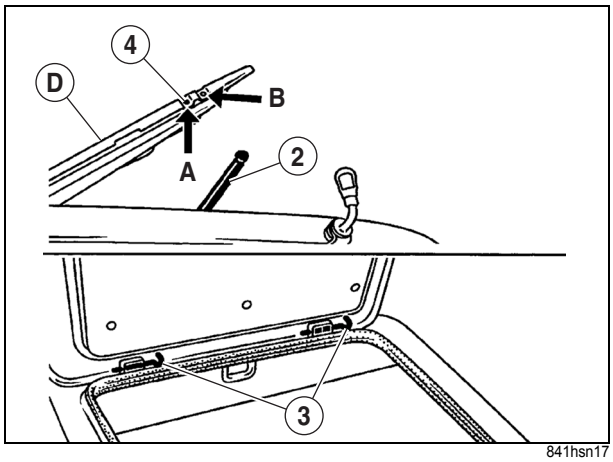
WINDSCREEN

Pull handle (8) to move the blind to the required height.

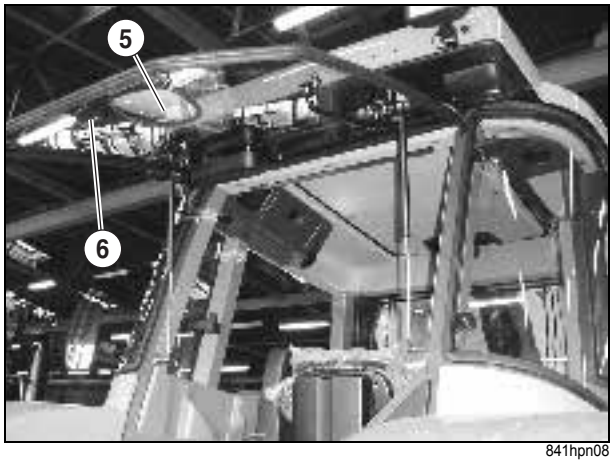
To roll the blind up, press lever (7).

When driving on the public road the doors must be closed and latched.

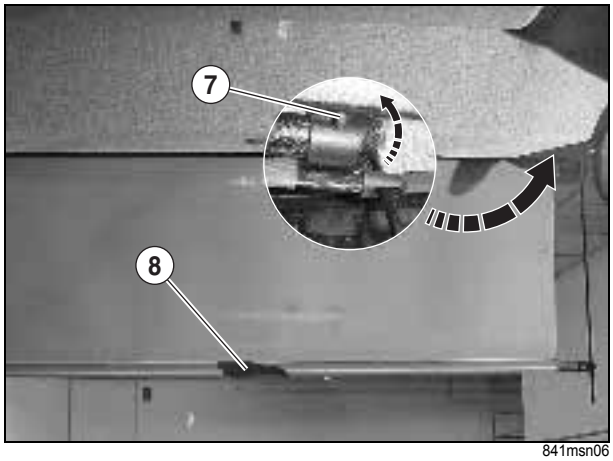
841hsn15



841hsn17



841hpn08



841msn06

CHARACTERISTICS

	ARES 546	ARES 556	ARES 566
Type	4045TRT73	4045HRT70	4045HRT71
Air intake	Turbo	Turbo + Intercooler	
Injection	Direct		
Cooling	Liquid		
Number of cylinders	4		
Cubic capacity (cm^3)	4525		
Idle speed (rpm)	850		
Maximum off-load rpm	2325		
Nominal power according to the standard ECE R24 (kW)	66,5	73,5	80,5
Maximum power according to the standard ECE R24 (kW)	70,5	76,6	84
Torque at maximum power according to the standard ECE R24 (daN.m)	33,6	34,8	40,1
Rev speed at maximum power	2000	2100	2000
Specific consumption at maximum power (g/kWh)*	234	221	220
Power at maximum torque according to standard ECE R24 (kW)	53,9	60,6	62,7
Maximum torque according to the standard ECE R24 (daN.m)	36,7	41,3	42,9
Rev speed at maximum torque	1400		
Specific consumption at maximum torque (g/kWh)*	233	224	225
Nominal PTO rpm	See chapter "E"		
Capacities	See chapter "K"		

	ARES 616	ARES 656	ARES 696
Type	6068TRT70	6068TRT71	6068TRT72
Air intake	Turbo		
Injection	Direct		
Cooling	Liquid		
Number of cylinders	6		
Cubic capacity (cm^3)	6788		
Idle speed (rpm)	850		
Maximum off-load rpm	2325		
Nominal power according to the standard ECE R24 (kW)	80,5	93	103
Maximum power according to the standard ECE R24 (kW)	84,6	97,2	107,1
Torque at maximum power according to the standard ECE R24 (daN.m)	40,4	46,4	51,1
Rev speed at maximum power	2000		
Specific consumption at maximum power (g/kWh)*	225	228	233
Power at maximum torque according to standard ECE R24 (kW)	71,8	77,3	91,9
Maximum torque according to the standard ECE R24 (daN.m)	45,7	52,7	58,5
Rev speed at maximum torque	1500	1400	1500
Specific consumption at maximum torque (g/kWh)*	226	225	229
Nominal PTO rpm	See chapter "E"		
Capacities	See chapter "K"		

** Values obtained at the power take-off.*

BLEEDING AIR FROM THE INJECTION SYSTEM

Bleed the injection system to evacuate air contained in the pipes after changing the fuel filter or after draining the tank.

To bleed the system:

1st case: After changing the fuel filter

1 - Drain range ARES 500.

2 - Drain range ARES 600.

- Loosen bleed screw (A) located on the head of the final filter.
- Activate the feed pump priming lever (B) until all the air is eliminated.
- Retighten bleed screw (A).

2nd case: After complete draining of the circuit

- Loosen fuel return pipe (C) at the injector pump.
- Operate the fuel feed pump priming lever.
- As soon as the fuel flowing out no longer contains any bubbles, tighten the fuel return pipe at a torque of 2,7 daN.m. The priming lever is spring-loaded to the normal position when released.
- Place the accelerator lever in the mid acceleration position.

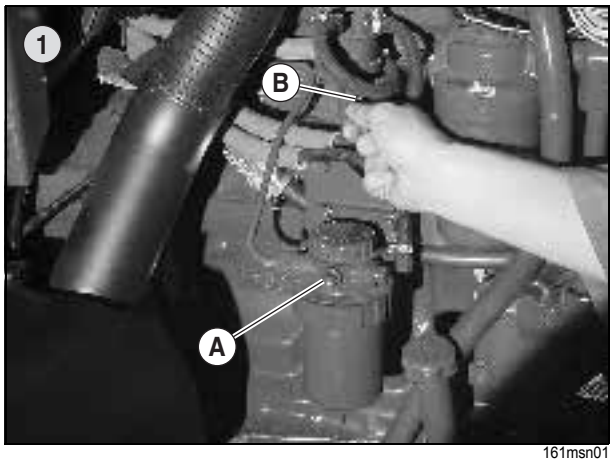
Important: Always use the correct spanner to loosen or tighten the fuel pipes at the injectors and/or injection pump to avoid damage.

1 - Using 2 spanners, loosen the fuel pipe connections (D) at the injectors.

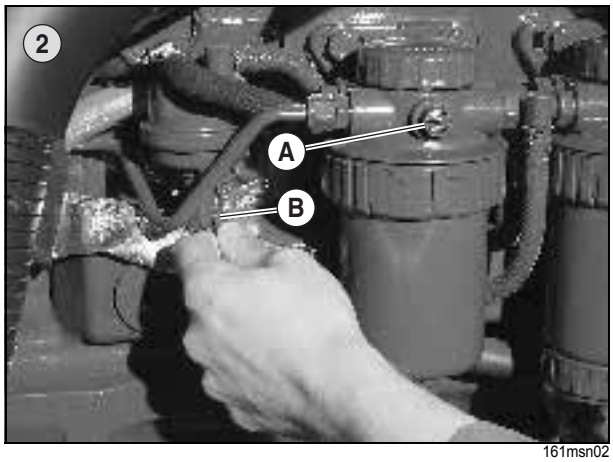
2 - Turn the ignition switch on for 15 seconds until fuel flows without air bubbles from the loosened connector. Tighten up the connection to a torque of 2,7 daN.m.

3 - Repeat this procedure on the other injectors (if necessary) until the fuel system is completely free of air.

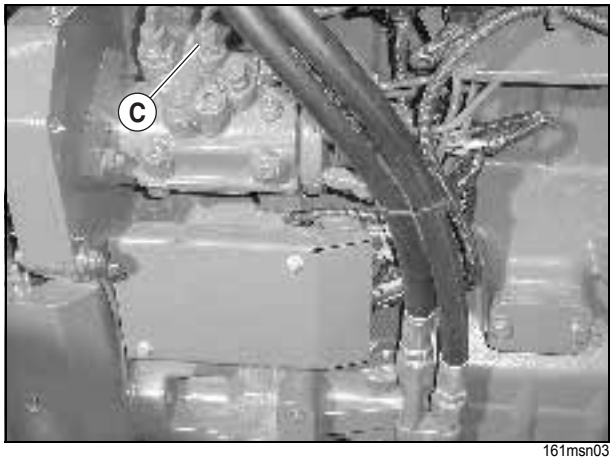
Note: If there is no resistance in the fuel pump primer lever, turn the engine using the starter until the pump operating cam is correctly located on the camshaft. Never turn the engine without ensuring that there is adequate fuel supply. If the engine still does not start, consult your approved CLAAS repairer.



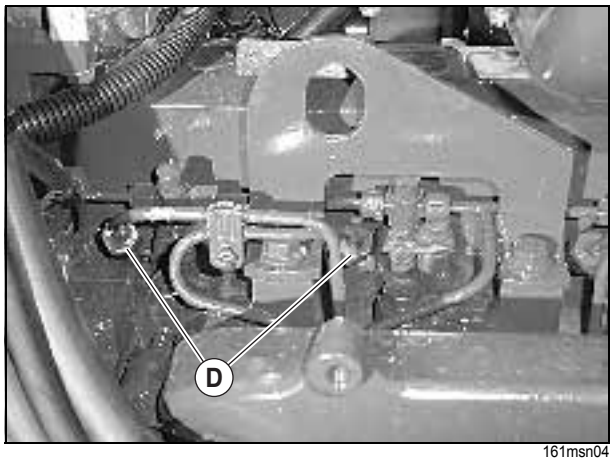
161msn01



161msn02



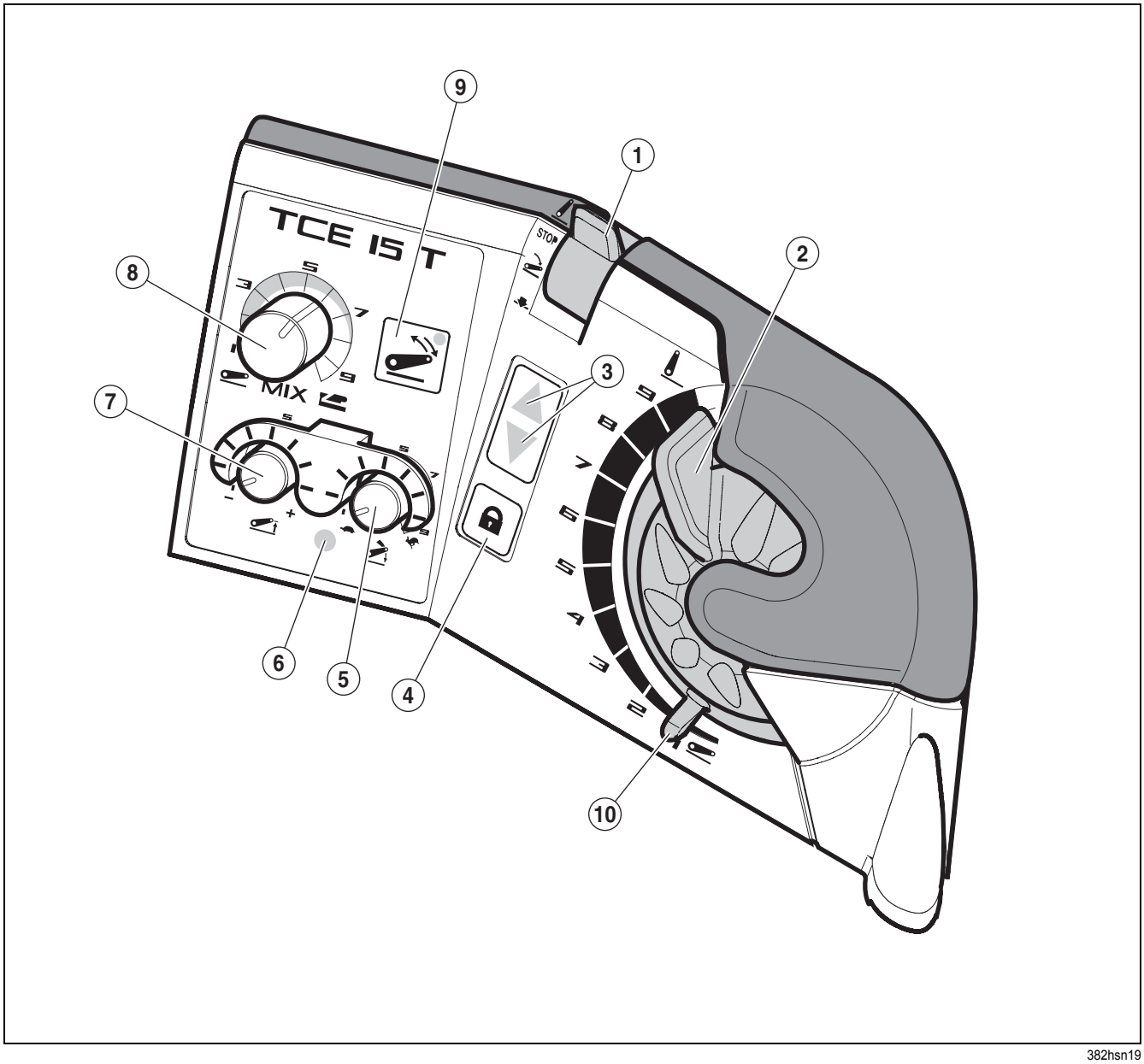
161msn03



161msn04

REAR LINKAGE TCE 15 T (ELECTRONIC TRACTO CONTROL)

DESCRIPTION OF CONTROL PANEL

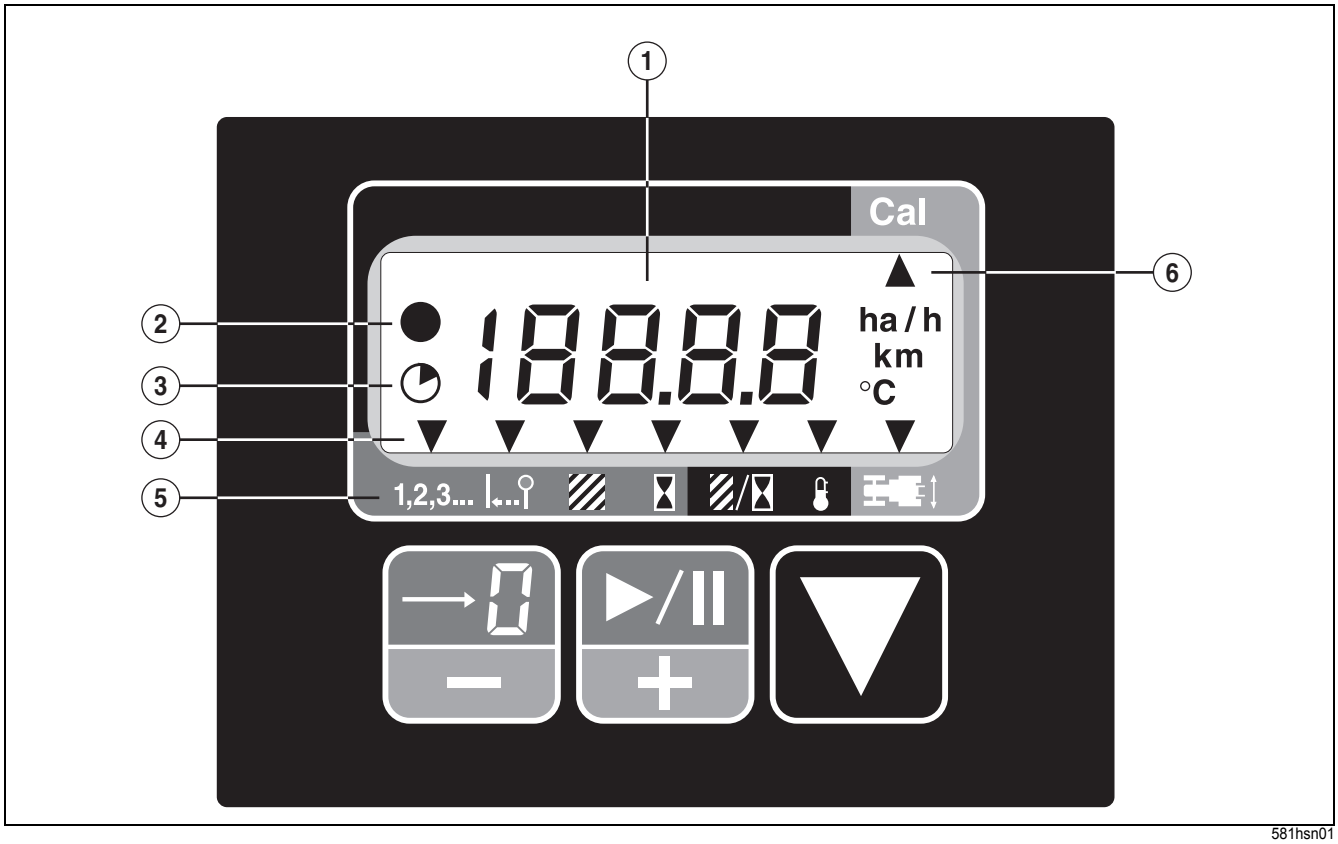


382hsn19

1 - Mode selector.
2 - Position adjustment control (work depth adjustment).
3 - Linkage motion indicator lights (up - down).
4 - Transport lock button.
5 - Descent speed adjuster.
6 - Control box safety indicator light.
7 - Upper limit adjuster.
8 - Effort/position control sensitivity adjustment button.
9 - Key to activate transport damping mode.
10 - Mechanical stop identifying the "low limit" position.

ON-BOARD COMPUTER (INFOTRAC)

DESCRIPTION



581hsn01

1 - Digital display unit

2 - Total counter symbol

3 - Partial counter symbol

4 - Selected function index

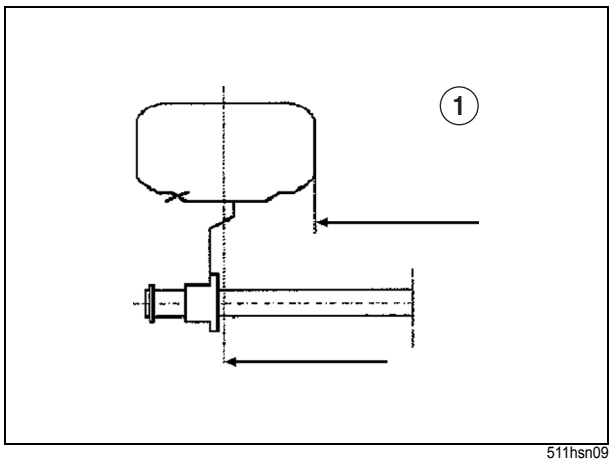
5 - Symbols of the various functions (see opposite)

6 - Calibration mode selection index

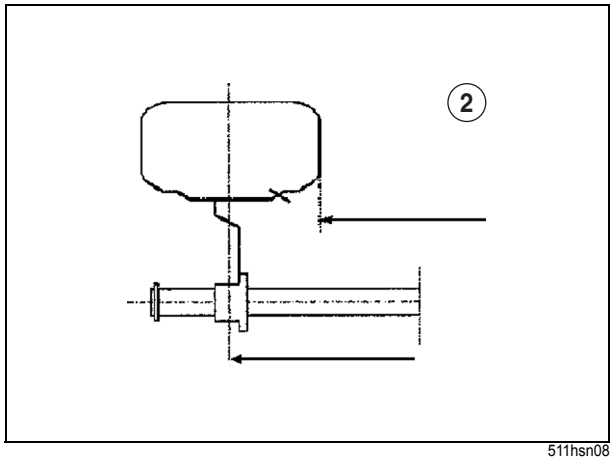
DESCRIPTION OF SYMBOLS

1,2,3...	Partial event counter / Permanent event counter
|...|	Partial travelled distance / Total travelled distance
	Partial worked surface / Total worked surface
	Partial worked time / Total worked time
	Instantaneous surface worked per hour
	Outside temperature
	Work width programming

TABLES OF REAR TRACKS



511hsn09



511hsn08

Type of rear axle: GPA 23 Smooth shafts								
ARES 696								
Rims with fixed wheel disc								
Rear tracks (in mm)								
			Position 1			**Position 2**		
Tyres	**Type**	**Make**	**Minimum**	**Delivery**	**Maximum**	**Minimum**	**Delivery**	**Maximum**
18.4R38	DWW 15L-38	b			1755		**1800**	2090
20.8R38	DWW 18L-38	b	1683	**1800**	2051	1831	**1800**	2185
460/85R38	DWW 15L-38	b			1755		**1800**	2090
520/70R38	DWW 18L-38	b		**1800**	2051	1831	**1800**	2185
520/85R38	DWW 18L-38	b	1683	**1800**	2051	1831	**1800**	2185
580/70R38	DWW 18L-38	b		**1800**	2051	1831	**1800**	2185
600/65R38	DWW 18L-38	b		**1800**	2051	1831	**1800**	2185
650/60R38	DWW 23A-38				1807		**1900**	2038
650/65R38	DWW 18L-38	b		**1800**	2051	1831	**1800**	2185

Tyre combinations							
Front	**Rear**	**546**	**556**	**566**	**616**	**656**	**696**
13,6 R 24 or 340/85 R 24	16,9 R 34 or 420/85 R 34	X					
14,9 R 24 or 380/85 R 24	18,4 R 34 or 460/85 R 34	X	X				
11,2 R 28 or 280/85 R 28	13,6 R 38 or 340/85 R 38	X	X				
13,6 R 28 or 340/85 R 28	16,9 R 38 or 420/85 R 38	X	X	X	X		
14,9 R 28 or 380/85 R 28	18,4 R 38 or 460/85 R 38		X	X	X	X	X
16,9 R 28 or 420/85 R 28	20,8 R 38 or 520/85 R 38					X	X
380/70 R 24	480/70 R 34	X					
420/70 R 24	520/70 R 34	X	X				
440/65 R 24	540/65 R 34	X					
380/70 R 28	480/70 R 38	X	X	X	X		
420/70 R 28	520/70 R 38		X	X	X	X	X
440/65 R 28	540/65 R 38	X	X	X	X		
480/65 R 28	600/65 R 38		X	X	X	X	X
480/70 R 28	580/70 R 38					X	X
540/65 R 28	650/65 R 38					X	X

a: Titan France.
b: Titan Italy or Titan.

Delivery track in bold.