CASE

PROFESSIONAL PARTNER

OPERATOR'S MANUAL

COMPACT WHEEL LOADER

21E
121E
221E
321E

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TRAVEL/WORK CONTROL LEVER

The wheel loader is equipped with a control lever (1) for travel and working operations control.

Switch (2) selects the travel direction - forward or reverse with the following positions:

- Switch (2) in central position (N) - travel direction disengaged.
  Pilot lamps (11) and (13) are off.
- Switch (2) to forward position (F) - forward travel engaged.
  Pilot lamp (11) lit.
- Switch (2) to reverse position (R) - reversing engaged.
  Pilot lamp (13) lit.

As long as the parking brake is applied, the forward and reverse functions can only be preselected, but not activated.

The forward (11) or reverse (13) directions are indicated only after the parking brake has been released.

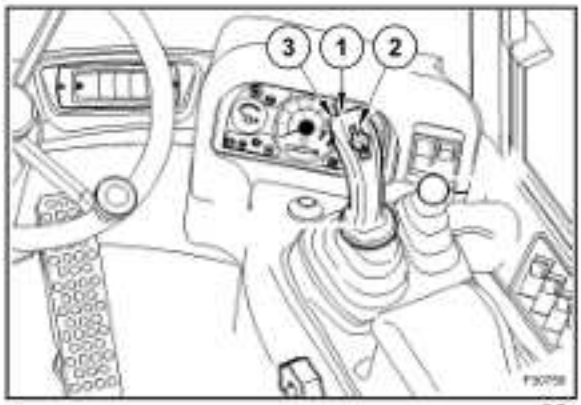
The gears can be shifted only after the parking brake has been released.

With switch (3) you can switch-over from creep speed to work speed and vice versa.

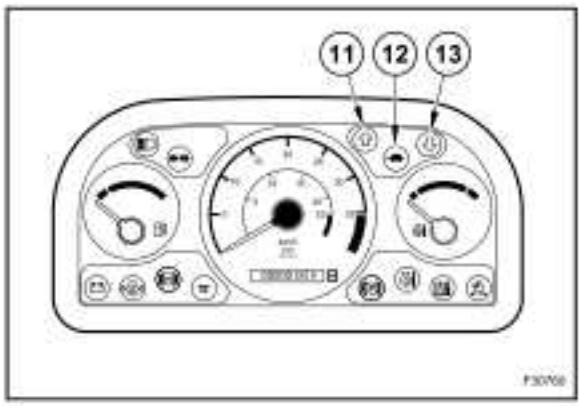
If you engage the creep speed, pilot lamp (12) lights up.

When engaging the creep speed the wheel loader movement is restricted to maximum speed allowed by this gear. This is important for work requiring low working speeds.

When the working speed is active, the creep gear range can be included automatically as required.



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BUCKET CONTROL LEVER

With control lever (A) you can carry out following operation.

Controls layout:

0 = Stop

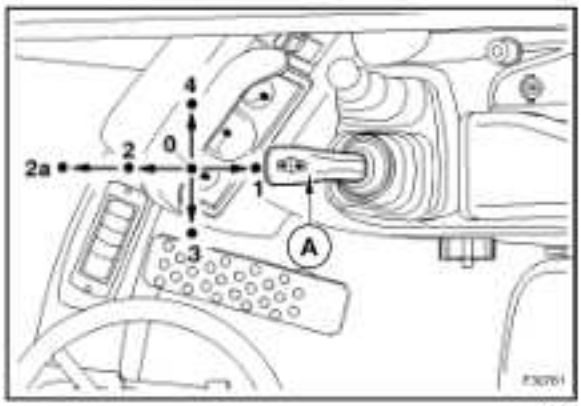
1 = Lifting

2 = Lowering

2a = Floating

3 = Back-tipping

4 = Dumping



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SERVICE AFTER 1000 HOURS

SERVICE POINTS	Check	Pressure check	Checking the level	Oil change	Replacement
Cab breather filter					■
Engine oil				▼	
Engine oil filter					■
Engine valves clearance	❒				
Fuel filter					■
Air intake system - Lines	❒				■
Air filter					■
Hydraulic oil return filter					■
Hydraulic system breather filter					■
Brake		●			
Accumulator		●			
Brake discs thickness	❒				
Battery - Electrolyte			▲		
Battery - Loaded	❒				
Battery - Clamps	❒				
Heating system filter					■
Front axle				▼	
Rear axle				▼	

CAB BREATHER FILTER - CHANGE

The filter is accessible after opening of the service door (1).

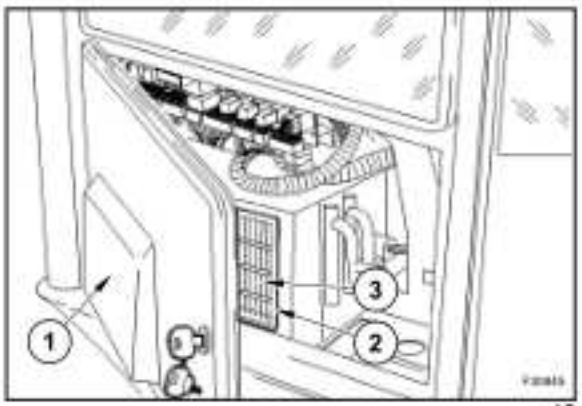
Remove the wing nuts of the filter frame and detach the frame (2).

Remove the filter element (3).

Install the new filter element (3).

Assemble the frame (2) of the filter.

Close the service door (1).



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HYDRAULIC SYSTEM

PRESSURES ADJUSTMENT

WORKING EQUIPMENT

Primary safety pressure ..... 230 bar (3335 psi)

Secondary safety pressure - side dumping cylinder bottom ..... 250 bar (3625 psi)

Secondary safety pressure - side dumping cylinder rod ..... 280 bar (4061 psi)

Secondary safety pressure - side lifting cylinder bottom ..... 280 bar (4061 psi)

TRANSMISSION

		21E	121E	221E	321E
Supply pressure (loading platform)	bar (psi)	25 (362)	27 (391)	27 (391)	27 (391)
Adjustment start	bar (psi)	50 (725)			
Adjustment end	bar (psi)	400 (5801)			
Pressure cut off	bar (psi)	430 (6236)			
Maximum pressure valve opening	bar (psi)	465 (6744)	467 (6773)	467 (6773)	467 (6773)
Hydraulic motor adjustment start	bar (psi)	255 (3698)	200 (2900)	200 (2900)	200 (2900)

PUMP AT VARIABLE DELIVERY

		21E	121E	221E	321E
System		Pump with adjustment depending on engine speed			
Type		AV4VG40DA1D2 / 32R	A4VG56DA1D2 / 32R	A4VG56DA1D2 / 32R	A4VG71DA1D2 / 32R
Volumetric delivery	cm^3/rev (in^3/rev)	40 (2.44)	56.0 (3.41)	56.0 (3.41)	71.0 (4.33)
Useful power	kW (hp)	34.4 (46.1)	38.0 (51)	38.5 (51.6)	49.0 (65.7)
Transmission through		diesel engine direct drive i = 1.0			
Service revolutions (= engine rated speed)	1/min	2300	2400	2500	2300
Maximum oil delivery	bar (psi)	88.9 (1289)	131.3 (1904)	136.9 (1986)	159.3 (2310)
Supply pressure (rotation speed at full load)	bar (psi)	25 (362)	27 (391)	27 (391)	27 (391)
Adjustment start	bar (psi)	50 (725) (at 1100 rpm)	50 (725) (at 1100 rpm)	50 (725) (at 1100 rpm)	50 (725) (at 1150 rpm)
Adjustment end	bar (psi)	400 (5801) (at 1900 rpm)	400 (5801) (at 2100 rpm)	400 (5801) (at 2100 rpm)	400 (5801) (at 1800 rpm)
Pressure cut off	bar (psi)	430 (6234)			
High pressure limiting valves - opening -	bar (psi)	465 (6744)	467 (6773)	467 (6773)	467 (6773)
Hydraulic motor adjustment start	bar (psi)	255 (3698) (at 2100 rpm)	200 (2900) (at 2300 rpm)	200 (2900) (at 2300 rpm)	210 (3045) (at 2000 rpm)
Voltage	V	12			

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