SERVICE MANUAL

WE190
WE210 - WE210 Industrial
WE230 - WE230 Industrial
Wheeled Excavators

Print No. 84291045A

NEW HOLLAND CONSTRUCTION

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mm

	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R
2000	2650	430	1250	2450	300	3000	2540	3070	3900	340	5105	1030	2530/2540	1020	8695	8685
2400	2650	430	1250	2450	300	2990	2540	3070	3900	340	5075	1030	2530/2540	1020	8670	7660
2800	2650	430	1250	2450	300	3085	2540	3070	3900	340	5065	1030	2530/2540	1020	8710	8700

in

	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R
78.74	100.39	16.92	48.03	68.90	11.81	118.11	100	118.50	153.54	13.38	175.19	38.97	99.60/ 100.00	68.89	311.41	317.91
94.48	100.39	16.92	48.03	68.90	11.81	117.71	100	118.50	153.54	13.38	176.38	38.97	99.60/ 100.00	68.89	312.59	319.09
110.23	100.39	16.92	48.03	68.90	11.81	121.45	100	118.50	153.54	13.38	176.96	38.97	99.60/ 100.00	68.89	313.19	319.68

G = track width

N = dimensions measured with blade up

O = maximum machine width with blade / with stabilizers

Dimensions measured with 10.00-20 twin tyres.

Dipper (mm) (in)	Rear blade (kg) (lb)	Rear stabilizers (kg) (lb)	Front blade and rear stabilizers (kg) (lb)	Front and rear stabilizers (kg) (lb)
2000 (78.74)	18350 (40454)	18850 (41556)	19450 (42879)	19950 (43981)
2400 (94.48)	18400 (40564)	18900 (41666)	19500 (42989)	20000 (44092)
2800 (110.23)	18450 (40674)	18950 (41777)	19550 (43100)	20050 (44202)

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3.5 TROUBLESHOOTING

EXTERNAL OIL LEAK

FAULT	POSSIBLE CAUSE	ACTION
From the breather plug.	Oil level too high.	Oil level check.
	Oil leak from motor.	Motor check.
	Oil leak from brake seals.	Replacement of brake seals.
From the central part (reductions).	Damaged O-ring.	O-ring replacement.
From the pinion shaft.	Damaged seal ring.	Seal ring replacement.
From plugs.	Damaged plug seal.	Plug seal replacement.
	Loosened plug.	Tighten the plug.
	Motor damaged inside.	Motor check.

EXCESSIVE NOISE

FAULT	POSSIBLE CAUSE	ACTION
Inside the hydraulic motor (mechanical noise).	Motor damaged inside.	Motor check.
Hydraulic noise (when reducing the motor speed).	Motor damaged inside.	Motor check.
	Malfunctioning hydraulic system.	Check the hydraulic system.
Inside the reduction gear (gear area).	Internal damage.	Check reduction gear.
Pinion output.	Damaged bearings.	Check reduction gear.
	Loosened ring nut.	Check reduction gear.

OTHER

FAULT	POSSIBLE CAUSE	ACTION
Overheating.	Low oil level.	Check the oil level and top up.
	Brake not completely open.	Check the brake opening pressure.
Insufficient engine performance.	Motor damaged inside.	Motor check.
	Malfunctioning valves.	Check the valves.

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12.4 ELECTRIC ROTOR

The electric rotor is the rotary connection between the upper structure and the undercarriage. Its internal part, called stator, is screwed to the external part of the hydraulic rotor. The stator contains the collector cups, where the cable harness is fastened, which is lead downwards through the central hole. The outer part of the electric rotor is coupled to the stator in a rotary way, and it is connected to the upper structure. The collectors, from which the cable harness for the upper cable comes out laterally, are arranged on the base plate of the outer part. The electric rotor has 16 collector rings, installed and numbered in sequence from the bottom. They are arranged as follows:

Collector 1 = parking brake

Collector 2 = creep speed

Collector 3 = output revolution sensor 1

Collector 4 = output revolution sensor 2

Collector 5 = sensor voltage supply

Collector 6 = 1st gear

Collector 7 = floating axle lock

Collector 8 = parking brake

Collector 9 = independent stabilizer control

Collector 10 = independent stabilizer control

Collector 11 = independent stabilizer control

Collector 12 = independent stabilizer control

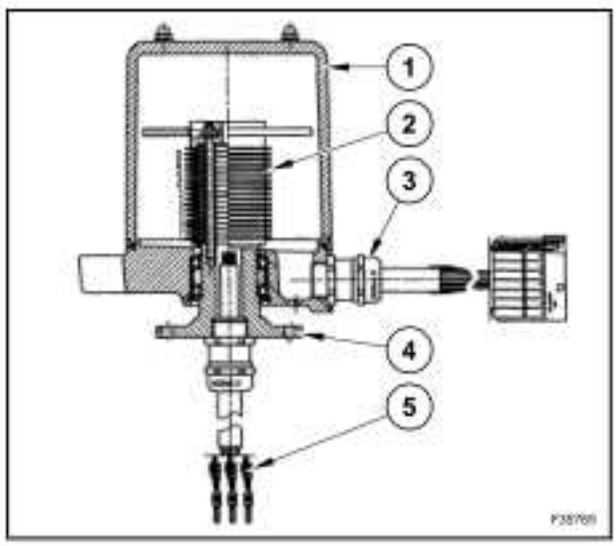
Collector 13 = free

Collector 14 = free

Collector 15 = ground

Collector 16 = ground

1. Cover
2. Stator and rotor
3. Upper structure electric harness
4. Rotary control valve connection flange
5. Undercarriage electric harness

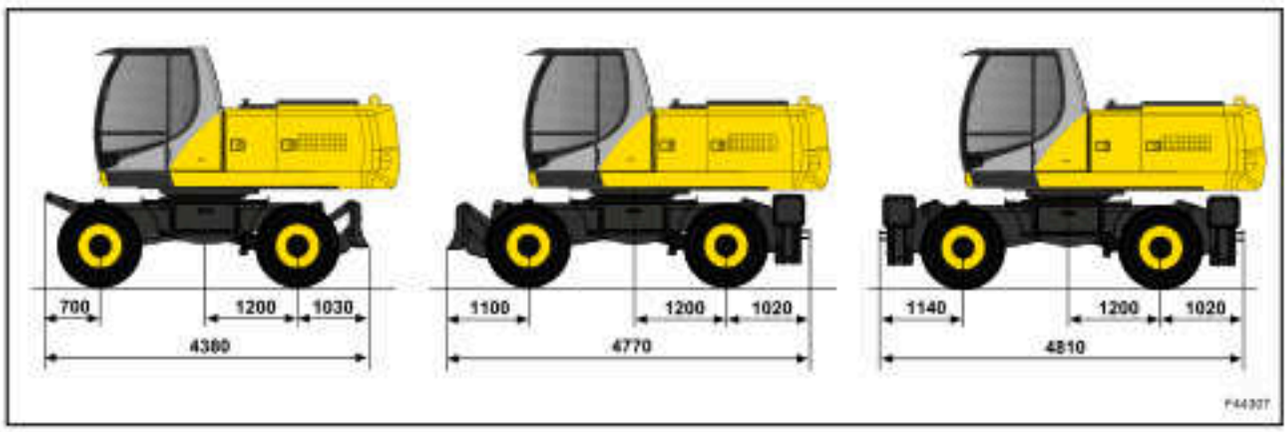


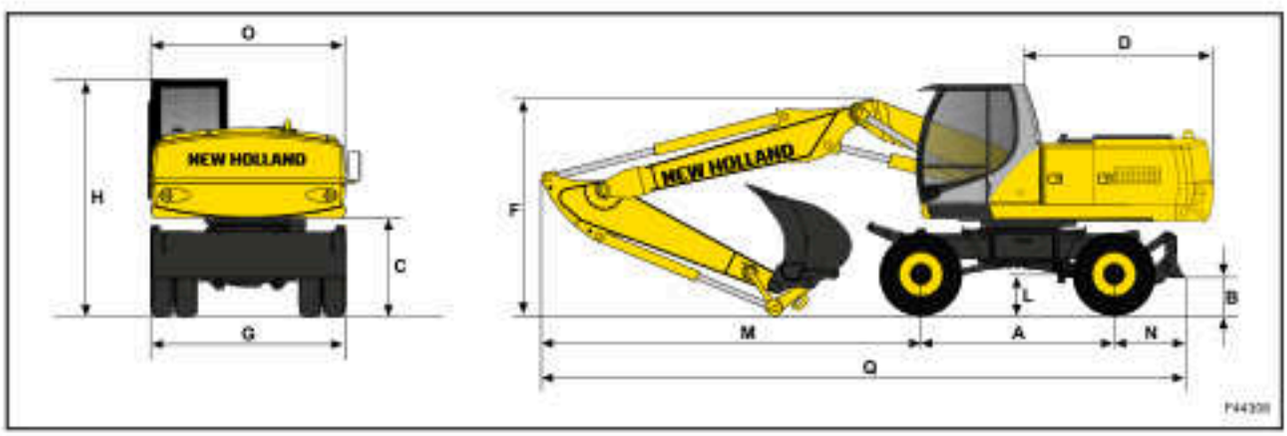
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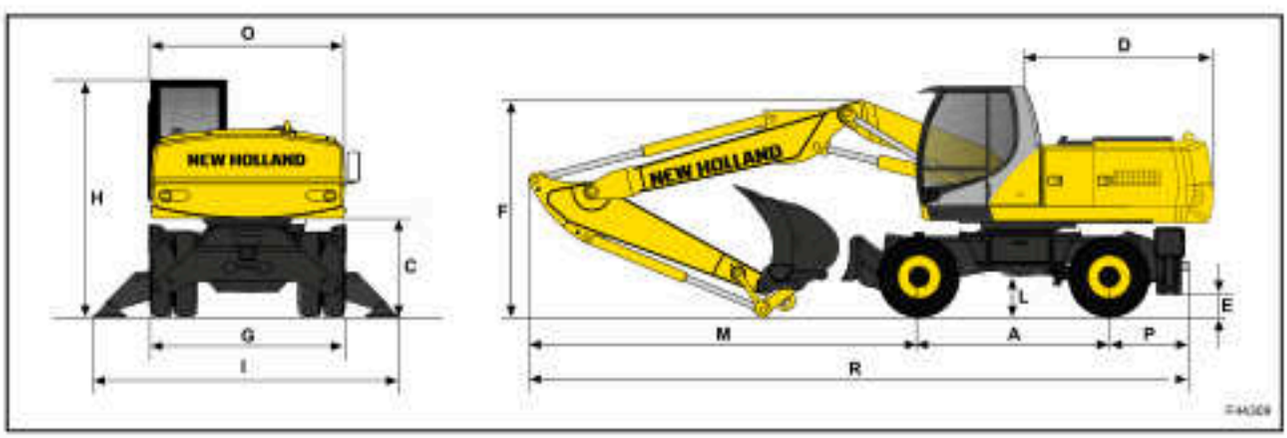
2. DIMENSIONS - OPERATING WEIGHTS

2.1 WE190 MODELS

OUTFIT WITH 2-PIECE BOOM







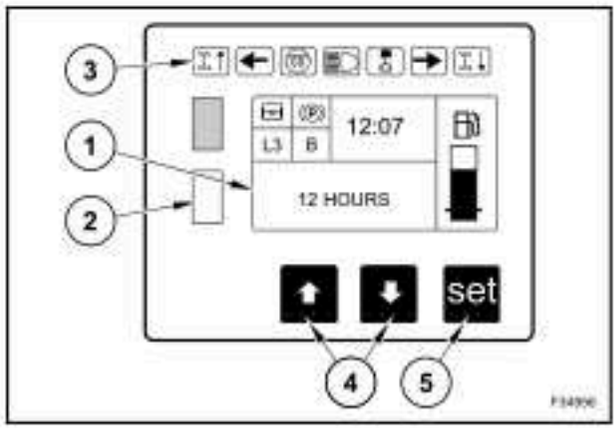
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2. COMPONENTS OF LINE 1

2.1 MULTI-FUNCTION DISPLAY

The multi-function display is equipped with:

1. A 128 x 64 pixel display
2. Two warning lamps for error messages
3. Seven control lamps
4. Two Up/Down push-buttons
5. A "Set" push-button



The inner microcontroller can be programmed by means of the A10 x 4 diagnostics socket for line 1.

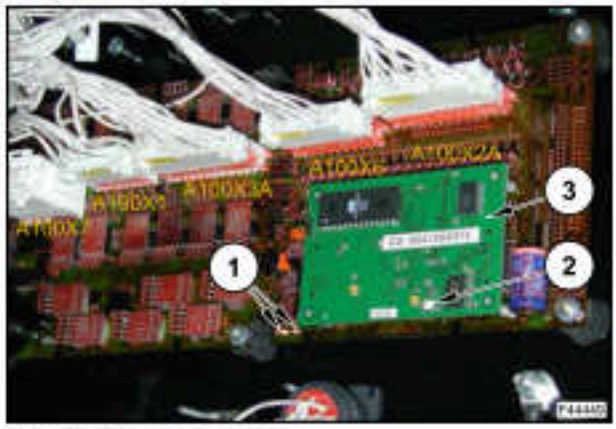
It is programmable with a software for the programme and another software for texts, graphics and languages.

2.2 CENTRAL UNIT

The central unit performs the following functions:

- master function for switching components on and off;
- system status monitoring, buzzer control;
- control of the machine electrics;
- control of speed actuator motor;
- gearshift, creep speed, floating axle;
- travel speed sensing with failure detection of double sensor, calibration;
- start-up immobilizer.

The central unit is switched on by the starter switch key through the power relay. On the plate a double orange lamp should light up. Another green lamp should flash if the microprocessor operates regularly. The central unit boots and supplies the units connected to it at 15b. During the activation of the hazard warning system (with ignition off), the central unit is also switched on, however without booting. The lamp on the plate flashes at high frequency. The scanning signal, during the lamp flashing, is generated by a component of the control unit.



1. Flashing leds: orange
2. Flashing leds: green
3. Module with microcontroller

CONNECTORS

A100x1, 15 pins
A100x7, 16 pins
A100x3A, 24 pins
A100x6, 20 pins
A100x2A, 24 pins

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