

SERVICE MANUAL

VL5060 / VL5080 / VL5090
VL6040 / VL6050 / VL6060 / VL6070 / VL6080 / VL6090
VM3080 / VM3090 / VM4090
VN2090
Grape Harvesters

Print No. 84189523B



Document content

This document contains:

- all documentation for machines VL 6040, 6050, 6060, 6070, 6080, 6090; VL 5090; VM 4090, 3090 and VN 2090
- **Starting only from series 013** for the models VL 5080 and 5060; VM 3080 (these machines are equipped with "ELTEC" panel)
- VM3080H: means high machine (Alsace)
- VL6050, 6070, 6080 high machines (Italy)
- **Only starting from series 664, 660, 656042; 636013; 650011; 655, 653, 633, 635018**, installation of the "ROPS" cab

Machine name change Correspondence

Previous name	New name
VL 660 Up to series 024	VL 6090 Starting from series 025
VL 640 Up to series 022	VL 6080 Starting from series 023
VL 630 Up to series 022	VL 6070 Starting from series 023
VL 620 Up to series 021	VL 6060 Starting from series 022
VL 610 Up to series 021	VL 6050 Starting from series 022
VL 600 Up to series 004	VL 6040 Starting from series 005
VL 570 Up to series 008	VL 5090 Starting from series 009
VM 460 Up to series 008	VM 4090 Starting from series 009
VM 370 Up to series 008	VM 3090 Starting from series 009
VN 300 Up to series 003	VN 2090 Starting from series 004
VL 550 Up to series 008	VL 5080 Starting from series 009
VL 540 Up to series 008	VL 5060 Starting from series 009
VL 530 Up to series 008	
VM 340 Up to series 008	VM 3080 Starting from series 009

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REPAIR MANUAL

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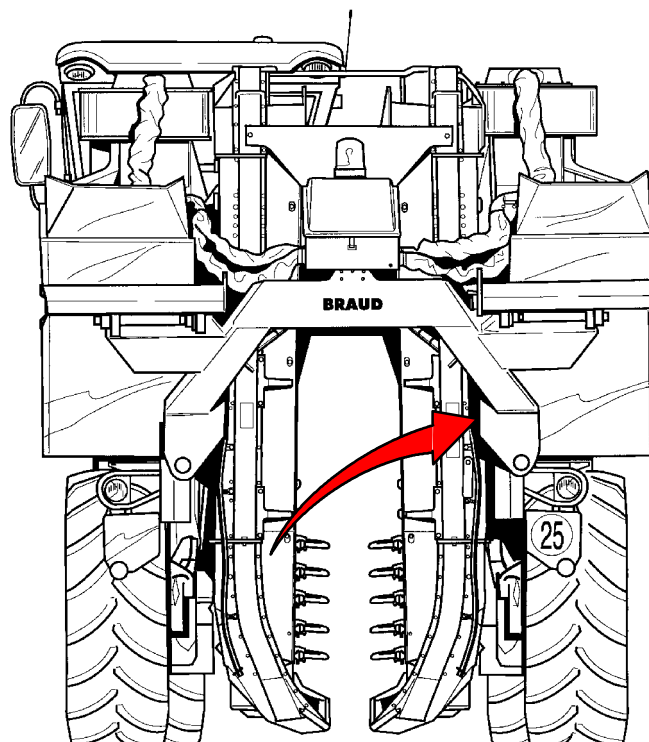
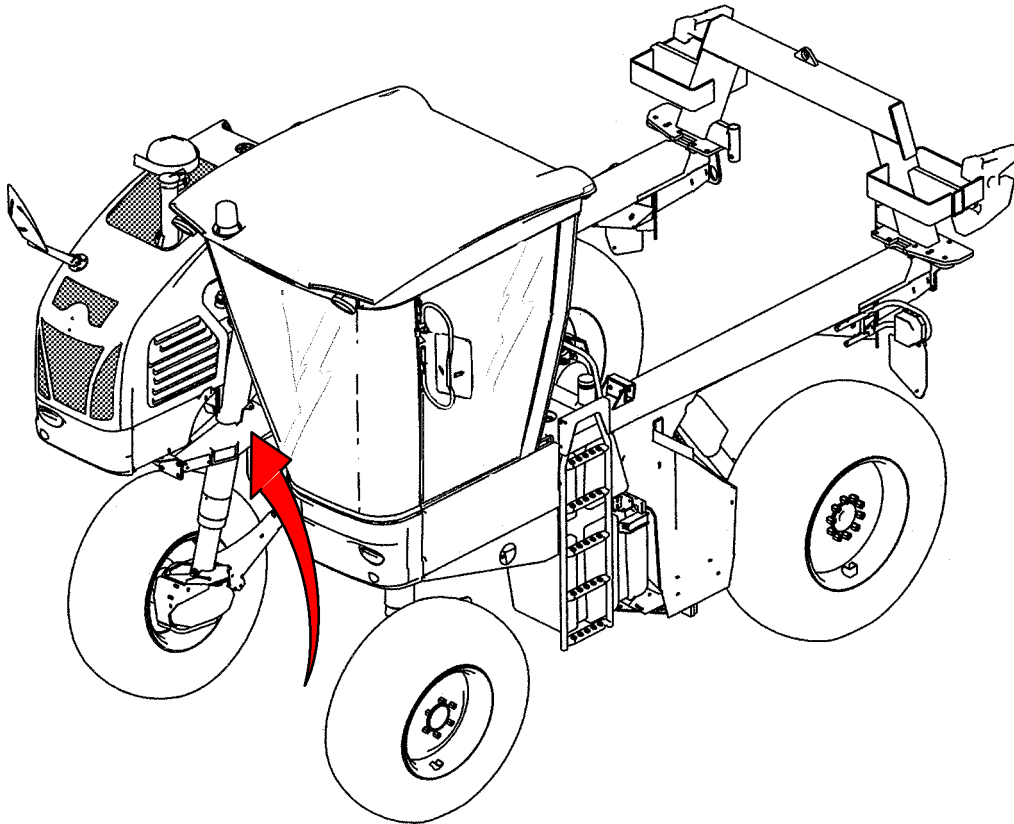
SPECIFICATIONS

Chapter 1

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VM 3080H = High version



B 01 /10

MACHINE IDENTIFICATION DATA

Model	Type	Serial no.	Machine number
VL 6090	664	025	001
VL 6080	660	023	001
VL 6070	660	023	001
VL 6060	656	022	001
VL 6050	656	022	001
VL 6040	650	004	001
VM 4090	636	009	001
VL 5090	655	009	001
VL 5080	653	013	001
VL 5060	653	013	001
VM 3090	635	009	001
VM 3080	633	013	001
VN 2090	643	001	001

New numbering starting from the installation of cabs with roll-over-protection structure "ROPS"

H A G	00	664	E	00	042	001
COEX code	Free = 00	Type	Code letter	Free	Series	Number

Models 6080; 6070 and 6050 come in high version as well (for Italy)

Note: the harvesting equipment number is the same as the self-propelled machine one.

A = manufacturer's label

B = stamped frame number. This number is the same as the one of the plate, excluding models VM 3080H (Alsace), that also include the letter H

OPERATOR'S MANUAL

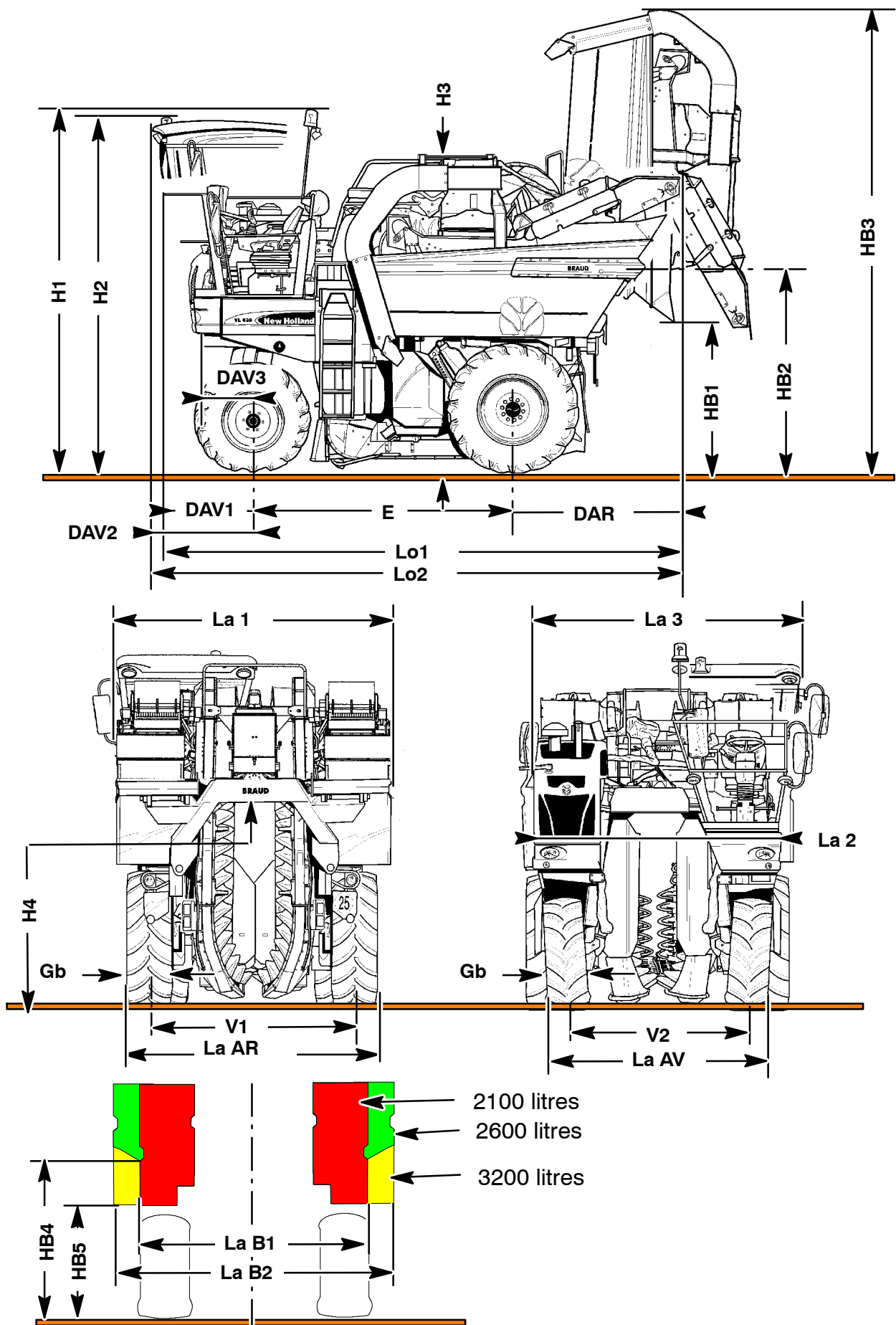
VL 6040, from 6050 to 6090 and VM 4090: 84171520 (F)

VL 5090, 5080, 5060 and VM 3090, 3080: 84155261 (F)

VN 2090: 87612978 (F)

REPAIR MANUAL

French: 84189524, English: 84189523, Italian: 84189522, Spanish: 84189525, German: 84189526



COMMERCIAL DESCRIPTION			From VL6040 to 6090	VM4090
Code	DIMENSIONS (mm)			
H1	Height:	without cab		
H2	(harvesting equipment on the ground)	with/cab at the revolving beacon	3635 (3870*)	
H3	Harvesting equipment height at the railings without (with) destemmers		3380 (3520)(3590*)	
H4	Clearance under the harvesting equipment		from 2000 to 2600 2260 from 2760*)	
HB1	Clearance under tilted up hoppers		1710 (1950*)	
HB2	Tilting axle height		2100 (2350*)	
HB3	Max. height with lifted hoppers		5150	
HB4	Clearance under the frame hoppers, 2600 litres		1840	
HB5	Clearance under the frame hoppers, 3200 litres		1415 (1670*)	
E	Pitch		2850	
La1	Max. width at the hoppers	hoppers, 2100 litres 2100 litres + cab 2600 litres or 3200 litres	2800 (1) 3000 3000	2720 (2) 2800
La2	Max. width from cover to cover	Only self-propelled machine	2590	2390
La3	Max. width from cab top to right cover	Only self-propelled machine	2830	2630
LaB1	Hopper width	2100 litres	2530	2330
LaB2		2600 litres	3000	2800
		3200 litres	3000	
La	Outer width at the rear		(*) (3)	(4)
AR	wheels: (V1 + Gb = La AR)	Tyres 420/85 R28 Tyres 480 / 70 R 28 Tyres 540/65 R28 Tyres 600/55-30.5	2160 + 454 = 2614 2260 + 480 = 2740 2340 + 540 = 2880 (2468 + 540 + 3008*) 2360 + 600 = 2960	1790 + 454 = 2244 1860 + 480 = 2340
La	Outer width at the front	Tyres 420 / 70 R24	1930 + 420 = 2350	1730 + 420 = 2150
AV	wheel level on ground: (V2 + Gb = La AV) (V2 at ground level)	Tyres 13.6 R24	1930 + 350 = 2280	1730 + 350 = 2150
Lo1	Max. length	without cab	5360 (5510)	
Lo2	without (with) destemmers	with/cab	5490 (5650)	
DAV1	Front offset	without cab	930	
DAV2		with/cab	1070	
DAV3	Offset of front supports for multipurpose		277	
DAR	Rear offset without (with) destemmers		1570 (1730)	

Note: in road position, the noria is at 190 mm from the ground

(1) Tyres 420/85 R28

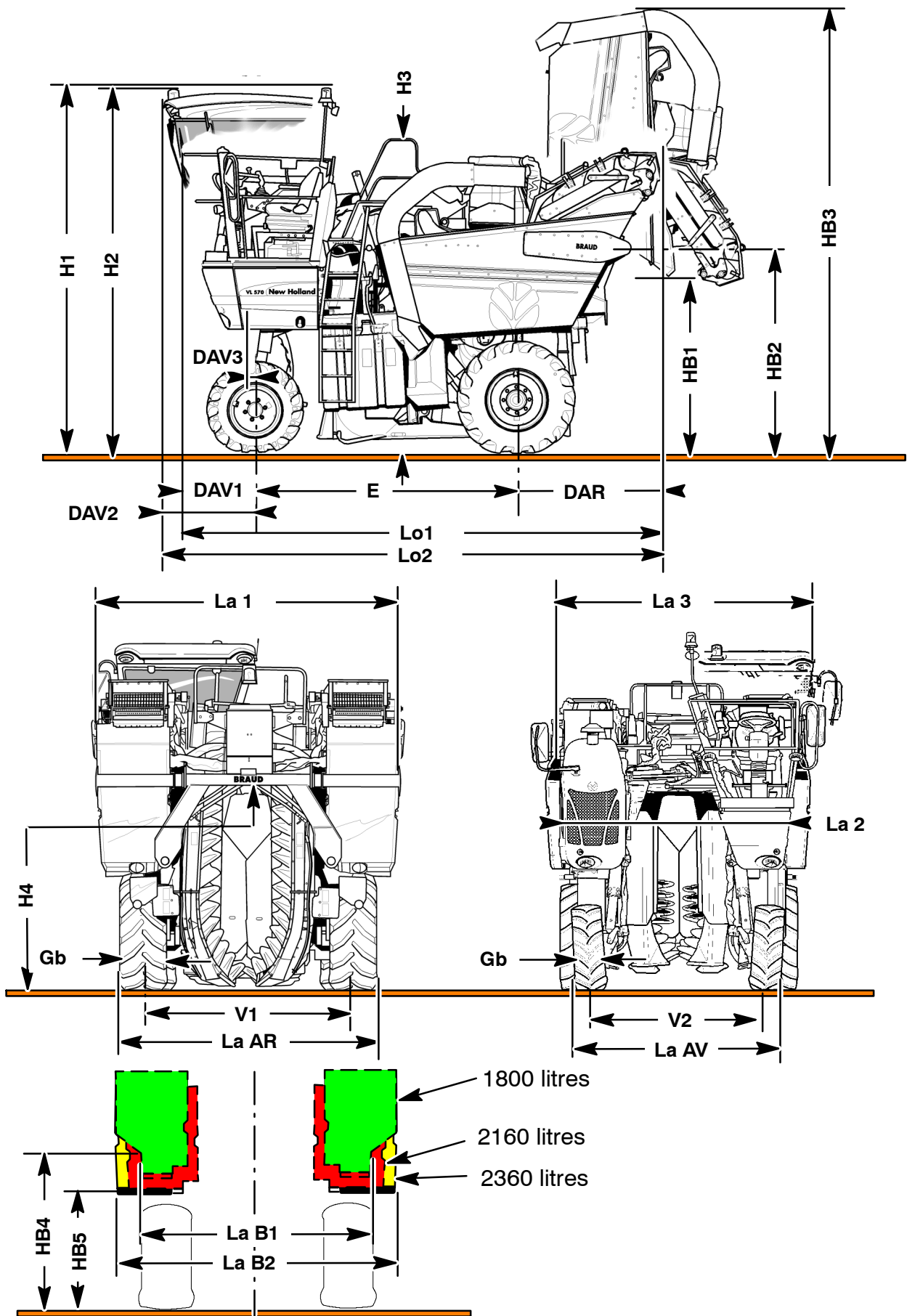
(3) Bearings on large track

(2) Tyres 480/70 R28

(4) Bearings on narrow track

(*) large track = narrow track + 160 mm

(----*) values detected for raised VL (Italy)



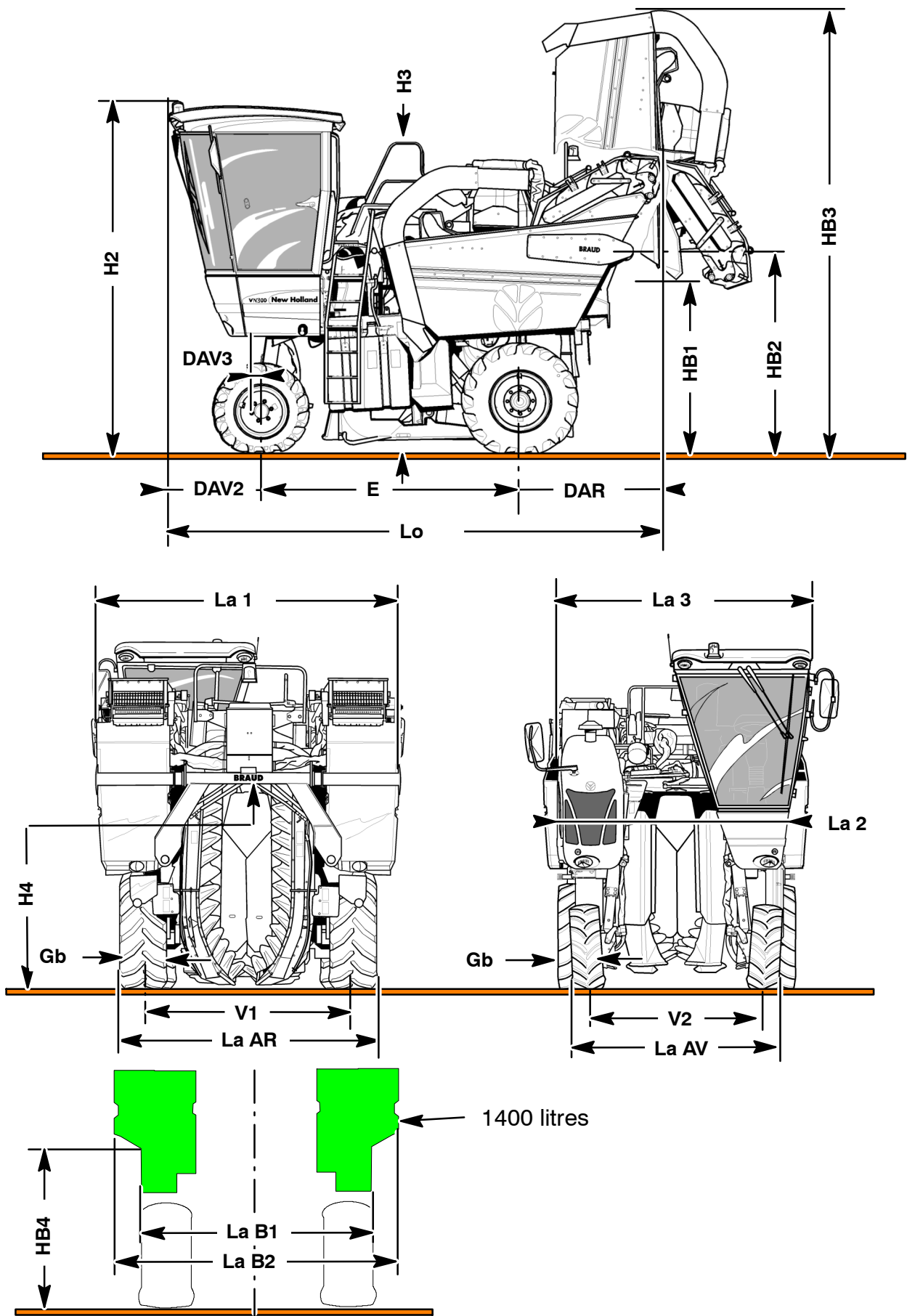
COMMERCIAL DESCRIPTION			VL5090/VL5080, 5070, 5060	VM3090 / 3080
Code	DIMENSIONS (mm)			
H1	Height:	without cab (at the revolving beacon)	3160 (3745)	3040 (3615)
H2	(harvesting equipment on the ground)	with cab at the revolving beacon	3605	3475
H3	Harvesting equipment height at the railings		3285	3185
H4	Clearance under the harvesting equipment		from 1950 to 2450	from 1800 to 2300
HB1	Clearance under tilted up hoppers		1830 / 1730	1700 / 1600
HB2	Tilting axle height		2110	1980
HB3	Max. height with lifted hoppers		4620	4490
HB4	Clearance under the frame hoppers, 1800 litres		1700	1550
HB5	Clearance under the frame hoppers, 2160 litres		----	1150
	hoppers, 2360 litres		1150	----
E	Pitch		2760	
La1	Max. width at the hoppers	hoppers, 2360 litres	3000	2800
		2360 litres + cab	3000	2800
La2	Max. width from cover to cover	Only self-propelled machine	2540	2340
La3	Max. width from cab top to right cover	Only self-propelled machine	2750	2540
LaB1	Hopper width	1800 litres	2480	2290
LaB2		2160 litres	----	2800
		2360 litres	3000	----
La AR	Outer width at the rear wheels: (V1 + Gb = La AR)	Tyres 11.2 R 24 (1)	----	1680 + 291 = 1971
		Tyres 11.2-24 T35	----	1680 + 305 = 1985
		Tyres 340/85 R24	----	1780 + 366 = 2146
		Tyres 420 / 70 R24	2090 + 431 = 2521	----
		Tyres 460/70 R24	2120 + 462 = 2582	----
		Tyres 480/65 R24 (2)	2120 + 484 = 2604	----
La AV	Outer width at the front wheel level on ground: (V2 + Gb = La AV) (V2 at ground level)	Tyres 280/70 R20		1720 + 275 = 1995
		Tyres 320/70 R20	1920 + 315 = 2235	1720 + 315 = 2035
Lo1	Max. length without (with) destemmers	without cab	4900 (5090)	
Lo2		with cab	4990 (5180)	
DAV1	Front offset	without cab	880	
DAV2		with cab	970	
DAV3	Offset of front supports for multipurpose		40	
DAR	Rear offset without (with) destemmers		1260 (1450)	

NOTE:

in road position, the noria is at 200 mm from the ground

(1) not produced anymore

(2) an additional equipment with destemmers on a VL5090 machine equipped with 480 / 65 R 24 tyres is not allowed.



COMMERCIAL DESCRIPTION		VN2090	VM 3080 H
Code	DIMENSIONS (mm)		
H1	Height: without cab		3160 (3745)
H2	(harvesting equipment on the ground) with cab at the revolving beacon	3475	3605
H3	Harvesting equipment height to the railings	3025	3285
H4	Clearance under the harvesting equipment	from 1500 to 2000	1950 to 2450
HB1	Clearance under tilted up hoppers (under the destemmers)	1735 (1570)	
HB2	Tilting axle height	1965	2110
HB3	Max. height with lifted hoppers	4490	
HB4	Clearance under the frame hoppers, 1400 litres	1340	1150
E	Pitch	2740	2760
La1	Max. width at the hoppers	2400	
La2	Max. width from cover to cover Only self-propelled machine	2090	2340
La3	Max. width from cab top to right cover Only self-propelled machine	2300	
LaB1 LaB2	Hopper width	2017 2400	
La AR	Outer width at the rear wheels: (V1 + Gb = La AR) Tyres 340/85 R24	1540 + 365 = 1905	1780 + 366 = 2146
La AV	Outer width at the front wheel level on ground: (V2 + Gb = La AV) Tyres 320/70 R20 (V2 at ground level)	1480 + 315 = 1795	1720 + 275 = 1995
Lo	Max. length without (with) destemmers with cab	4930 (5210)	
DAV1 DAV2	Front offset without cab with cab	980	
DAV3	Offset of front supports for multipurpose	40	
DAR	Rear offset without (with) destemmers	1210 (1490)	

NOTE: in road position, the noria is at 200 mm from the ground

VM 3080 H = high machine, without destemmer option

COMMERCIAL DESCRIPTION		From VL6040 to 6090	VM4090
WEIGHTS			
PTAC - Total allowed weight under load (kg) (1) (2)		from 9200 to 10500	from 9200 to 9600
Allowed partition (2)	Front axle (kg)	from 3980 to 4200	from 3980 to 4200
	Rear axle (kg)	from 5380 to 7300	from 5380 to 5540
Empty weight (kg) with harvesting equipment VL6040 (from VL6050 to 6090)		8200 (8660)	8660
- with hoppers (litres), standard wheels and cab, but without destemmers and without lower extractors.		2600	2200
- with destemmers, add (kg)		460	460
(1) up to 10000 kg for VL6040 and up to 10500 kg for VL from 6050 to 6090			
(2) depending on the tyres and on the load index			
FEEDING / EXHAUST			
Fuel tank	Used fuel Capacity (litres)	Diesel fuel 250	
Engine (cylinders)		6	4
- ISO power (kW/CV)		VL6050 and 6060 = 107/145	94/128
- Displacement = 1125 cm ³ /cylinder		VL6070 and 6080 = 120/160	
		VL6090 = 129/175	
Empty operating speed +/- 50 (rpm)		2500	2500
Air filter	Make Type	DONALDSON ELB 12-0265	
Engine cooling	Water capacity (litres) Fan	Sucking	
Cooling fan Ø (mm)		610	584
DRIVE			
Pump for engine fan	Make Displacement (cm ³ /rev.) Empty operating speed (rpm) Capacity (l/minute), output 0.9	SAUER 17 (1.02 x engine speed) 38	
Fan motor	Make Displacement (cm ³ /rev.)	SAUER 12.2	
Variable displacement inch- ing hydraulic pump	Make Type Total displacement (cm ³ /rev.)	REXROTH A4VG from 0 to 105	

COMMERCIAL DESCRIPTION		From VL6040 to 6090	VM4090
DRIVE (follows)			
Priming pump	Displacement (cm³/rev.)	26	
	Capacity (l/minute), output 0.9	58.5	
Front wheel motor	Make	POCLAIN	
	Type	MS 08	
	Displacement (cm³/rev.)	1043	
Rear wheel motor	Make	POCLAIN	
	Type	MSE 18	
	Displacement (cm³/rev.)	2636 (1406/1230)	
Max. speed (km/h) in road position		25 km/h	
Max. speed in field position		12	
Hydraulic oil			
Capacity (litres)	Reservoir	65	
Oil type	New Holland	Hydrosystem 68 Hydrosystem 68 BIO S	
Conveyor and extractor pump	Make	REXROTH	
	Displacement (cm³/rev.)	"Load sensing" from 0 to 45	
	Empty operating speed (rpm)	2500 (see engine speed)	
	Capacity (l/minute), output 0.9	101.2	
Shaking pump	Make	SAUER	
	Displacement (cm³/rev.)	22	
	Empty operating speed (rpm)	2500 (see engine speed)	
	Capacity (l/minute), output 0.9	49.5	
Pump for steering/lifting/hoppers	Make	SAUER	
	Displacement (cm³/rev.)	14	
	Empty operating speed (rpm)	(1.02 x engine speed)	
	Capacity (l/minute), output 0.9	32	
STEERING		Hydrostatic	
Type		EATON QAMP 146 cm³/rev.	
BRAKING SYSTEM			
Service brake		Supplied by the hydrostatic transmission	
Parking brake (acting on both rear wheels)		Operated by ONE pedal and by the steering	
Park brake		Operated by left manual lever	

COMMERCIAL DESCRIPTION		From VL6040 to 6090	VM4090
TILTING CORRECTION		30%	
PLATFORM CAB			
Heated and A/C cab		Depending on the model	
Activated charcoal filter		Optional	
Board computer		●	
Grand-Luxe seat			
Pneumatic seat		●	
Multifunctional handle		●	
LIGHTING AND WARNING LIGHTS			
High/low beams		2	
Front parking lights		2	
Rear parking lights		2	
Direction indicator warning lights	Front	2	
	Rear	2	
	Side	2	
Stop lights		2	
License plate light		1	
Reflector	Rear	2	
Revolving beacon		2	
Supply voltage	(V)	12	
Alternator	(A)	120	
Battery	(Ah)	180	
Starting presetting	(A)	1000	



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COMMERCIAL DESCRIPTION		VL6040	From VL6050 to 6090	VM4090
HARVESTING EQUIPMENT				
HARVESTING HEADER				
Harvesting header hour counter		No	Yes	
Type		Swinging, self-aligning		
System		SDC shaking		
Number of shakers		14		
Straight/elbow connecting rod		13/1		
Shaking start	Motor manufacturer	EATON	SAUER	
	Displacement (cm³/rev.)	46	22	
	Control unit:		1/4	
	- ratio		AMBRA GR75MD 1.2 kg	
	- grease			
	Chain:	●		
Toe-in adjustable from the operator's seat		No	yes	
Amplitude settings		4 or 3		
Min. clearance under the frame (mm)		2000		
Grape harvesting useful height (mm)		1650		
Harvesting tunnel width (mm)		500		
Noria system	Buckets per chain	63		61
	Type	XXL		small
	Synchronization	in field speed		
	Drive gears:	16/59		
Width of flexible stake-guides (mm)		from 195 to 265		from 165 to 235
Tightness length (mm)		2100		
Harvesting min. height (mm)		150		
Operation	Motor manufacturer	EATON		
	Displacement (cm³/rev.)	500		
Harvesting conveyors	Width (mm)	600		
	Max. operating speed rpm	about 750		
	Reverse	yes		
Single operation	Motor manufacturer	EATON		
	Displacement (cm³/rev.)	31.6		

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