BRAUD SB65 REPAIR MANUAL

NEW HOLLAND
SERVICE

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01 /2002 – **R1-02/03**

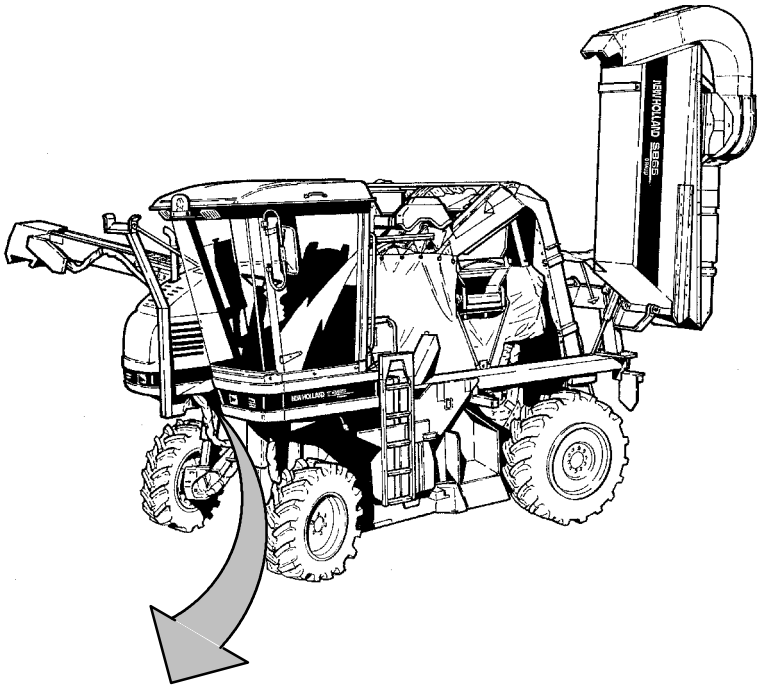
REPAIR MANUAL

CONTENT

SPECIFICATIONS

Chapter 1

CONTENT



NEW HOLLAND

NEW HOLLAND BRAUD S.A.
85220 COEX (FRANCE)

CE

Type/Tipo
Typ

KW

N° Homologat./N° Omologaz.
Approval Nr

N° Serie/N° Telaio
Serial Nr/Fahrz

Annee/Anno
Year/Baujahr

PTAC/Massa max. Ammessa
Total Adm. Mass./Zul. Ges. Gew. + kg

Ch. Es. Av/Anneau/Mas. 1° As./Oc.
Ad. Front Load/Zul. Ach. Vom Stuz. + kg

Charge Essieu Ar/Massa 2° Asse
Adm. Rear Load/Zul Achslast Hint. + kg

Poids A Vide
Massa A Vuoto
Unladen Weight
Leergewicht

Charge Remorquable/Massa Rimorchiabile
Permissible Towable Mass/Zul. Anhangelast kg

kg

RECEPTION DRIRE
PAYS DE LOIRE

Date

P.V.N°

m^{-1}

669 001 001

R1-02/03

MACHINE IDENTIFICATION

Model	Type	Serial no.	Machine no. in the series
SB 65	669	001	001

A = Manufacturer's label

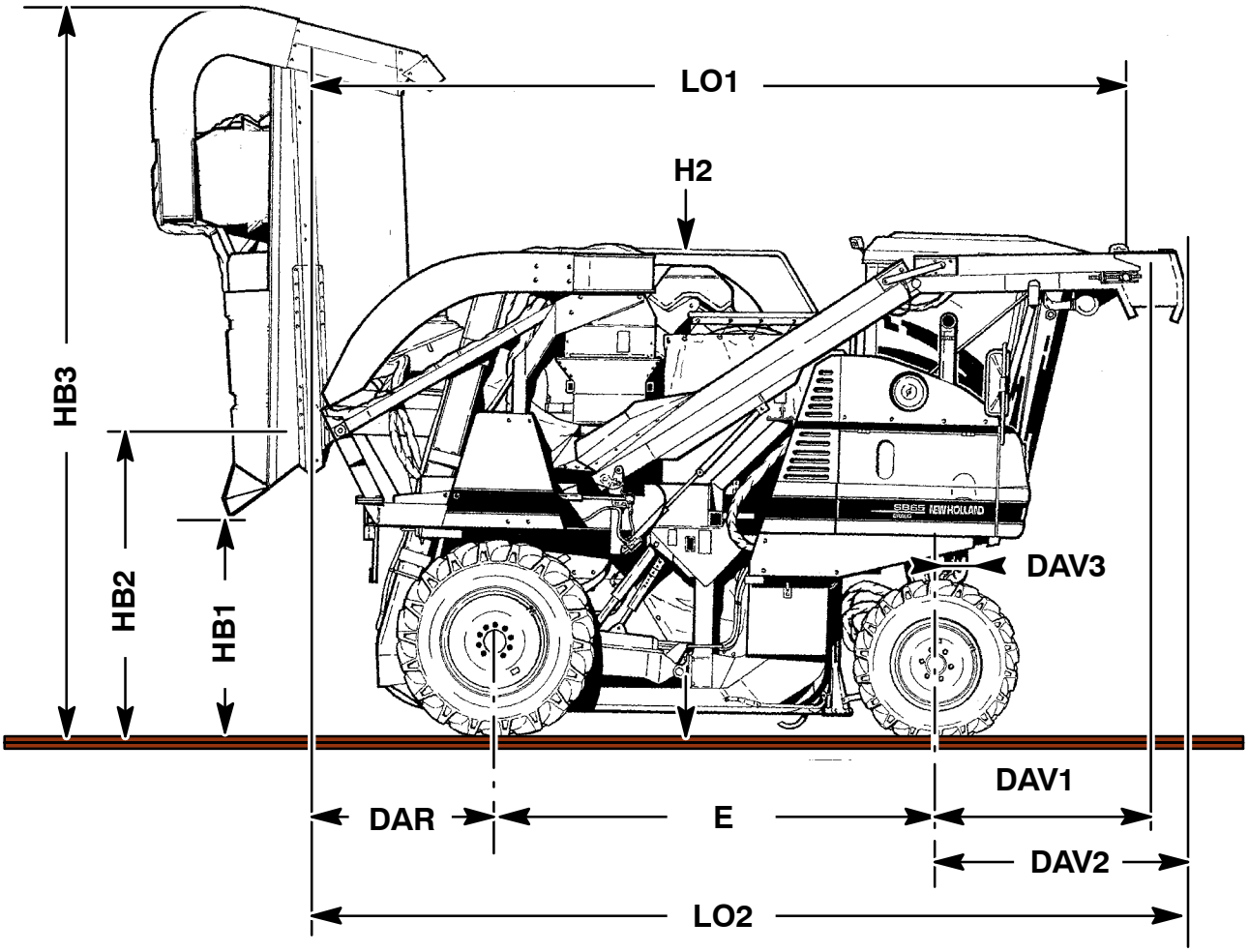
B = Frame number stamped

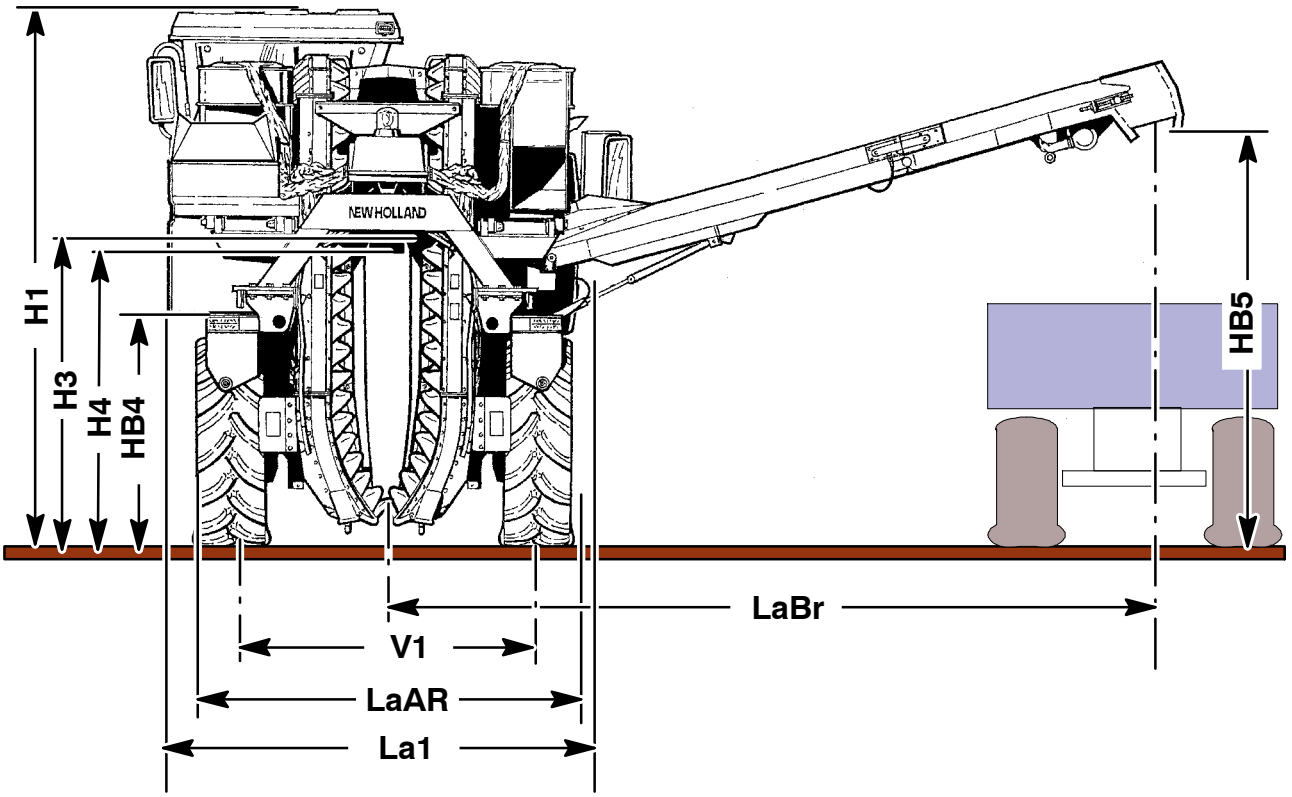
OPERATOR'S MANUAL

Reference: 604 80 170 00 (I)
604 80 171 00 (GB)
604 80 172 00 (F)
604 80 173 00 (SP)

SPARE PART CATALOGUE

Reference: 604 81 060 00


LO1
H2
HB3
HB2
HB1
DAV3
DAV1
DAR
E
DAV2
LO2

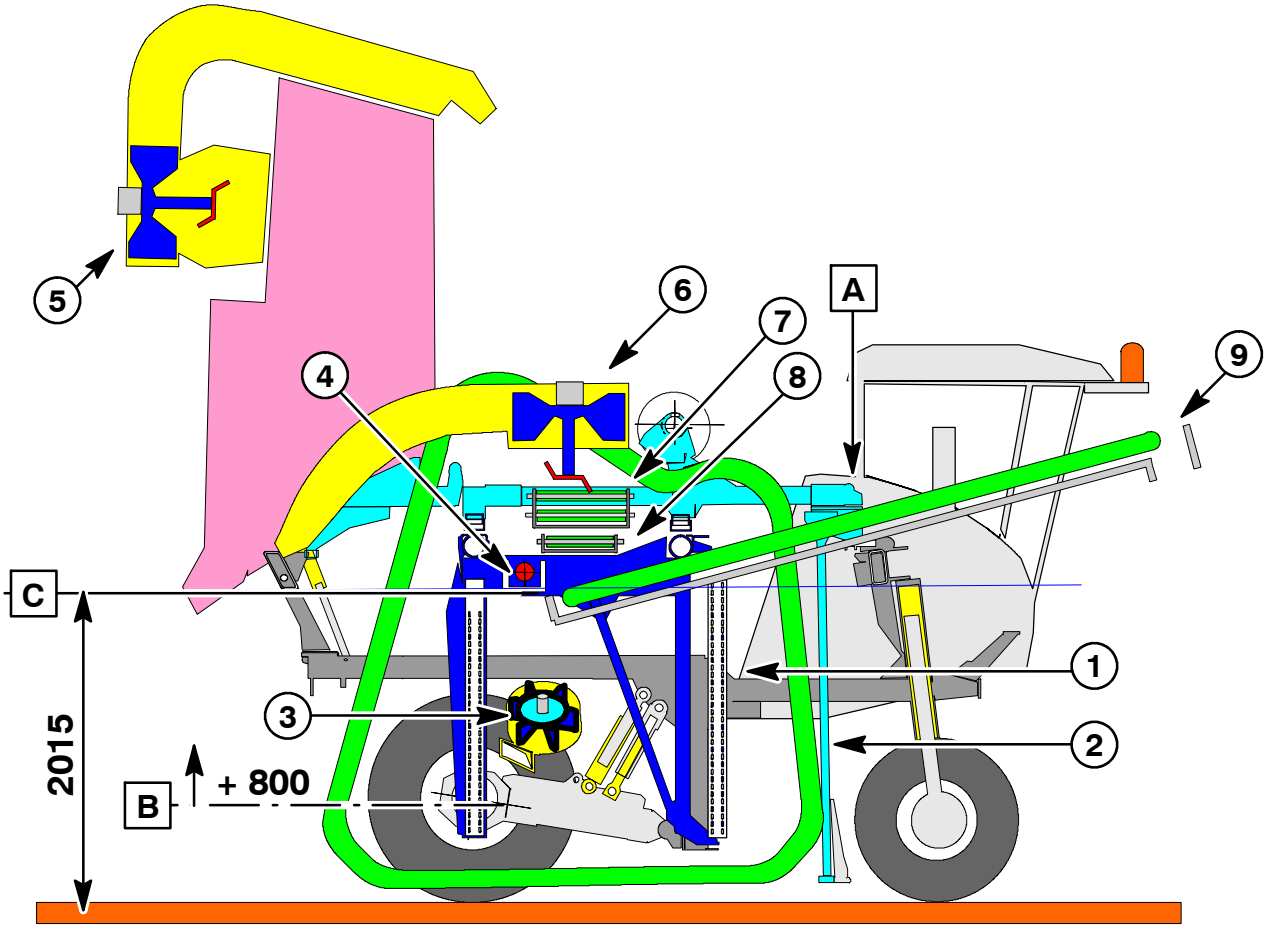

NEW HOLLAND
H1
H3
H4
HB4
HB5
LaBr
V1
LaAR
La1

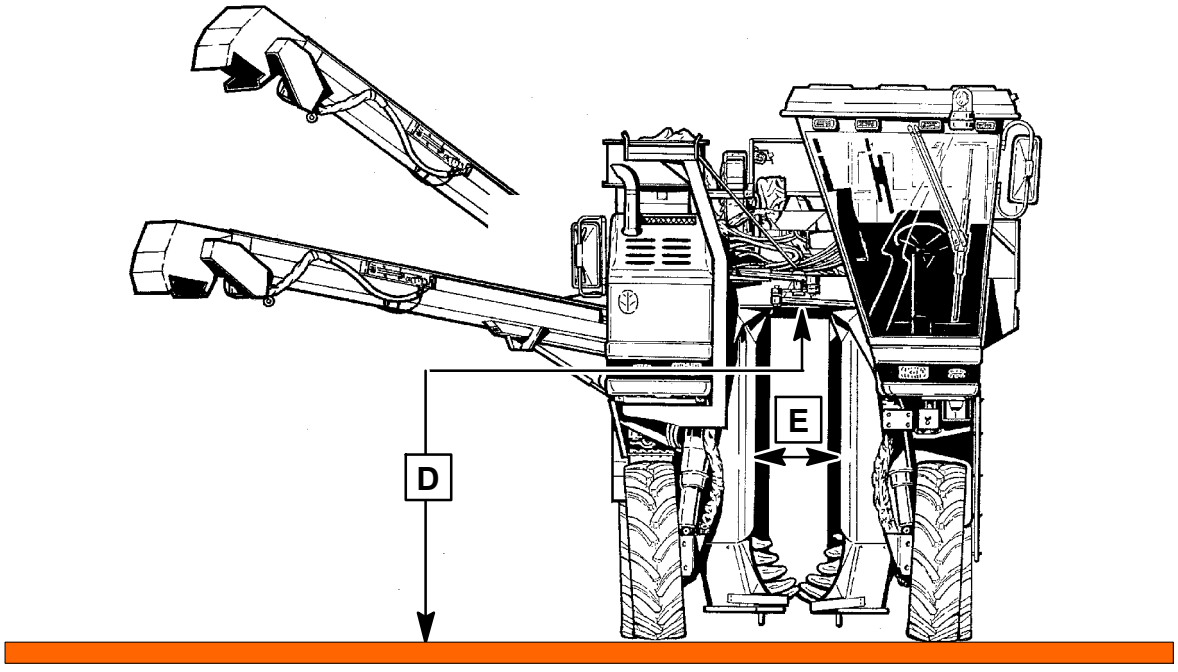
R1-02/03

COMMERCIAL DESCRIPTION			SB65 (1)
Self-propelled unit			
Code	**DIMENSIONS (mm)**		
H1	Height: (Lowered harvesting equipment)	with cab	3605
H2	Harvesting equipment height	to the railings	3520
H3	Clearance under beam	min.	2015
		max.	2815
H4	Harvesting equipment clearance under tunnel	min.	2015
		max.	2815
HB1	Clearance under tilted up containers		1660
HB2	Tilting axle height		2080
HB3	Max. height with lifted hopper		5270
HB4	Height under clearance	1600 l hopper	1375
HB5	Height under emptying link		1325 to 4010
La1	Max. width 1600 l hopper and emptying link in road position		3140
LaBr	Link movement		from 4210 to 6440
V1	Rear track		2420
V2	Front track		2130
La AR	Outer width at the rear wheel level: (V1 + Gb = La AR)	Tyres 480 / 70 R 28 Tyres 540 / 65 R 28	2425 + 480 = 2905 2510 + 540 = 3050
La AV	Outer width at the front wheel level on ground: (V2 + Gb = La AV) (V2 at ground level)	Tyres 420 / 70 R 24	2130 + 420 = 2550
E	Wheelbase		3180
Lo 1 Lo 2	Overall length	at the cab front link end	6090 6540
DAV1 DAV2	Front offset:	at the cab front link end	1320 1750
DAV3	Tool fixing offset		280
DAR	Rear offset		1610

- (1) SB65 version with hopper and emptying link

R1-02/03





R1-02/03

SB65 EMPTYING CONVEYOR ON THE RIGHT SIDE AND LEFT HOPPER

A Central cross beam of the harvesting equipment with 200–mm rise
B Sloping correction, 800 mm
C Shaking slide drive enables a clearance under the cover of 2015 mm, with harvesting equipment in low position
D Clearance height
under the frame beam,
min. 2015 mm
max. 2815 mm
E Clearance width
at the leaves entry, 700 mm

1 Shaking frame

- shaking plates
  34 holes, useful height 1650 mm,
- 24 shakers
  22 straight link rods
  2 elbow link rods
- 240–mm extension

2 Norias

- 67 buckets with long spout,
- clearance in the stake–guide,
  195 ÷ 400 mm

3 Lower extractors

- diameter 430 mm
- independent stalk choppers, released in washing position

4 Slide drive

- shaking control

5 Left hopper

- capacity 1600 liters
- extractor, diameter 638 mm, with removable stalk chopper.
- leaf evacuation chute, on the side

6 Extractor of the emptying conveyors

- extractor, diameter 638 mm, with removable stalk chopper.
- leaf evacuation chute, at the back

7 Harvesting conveyors

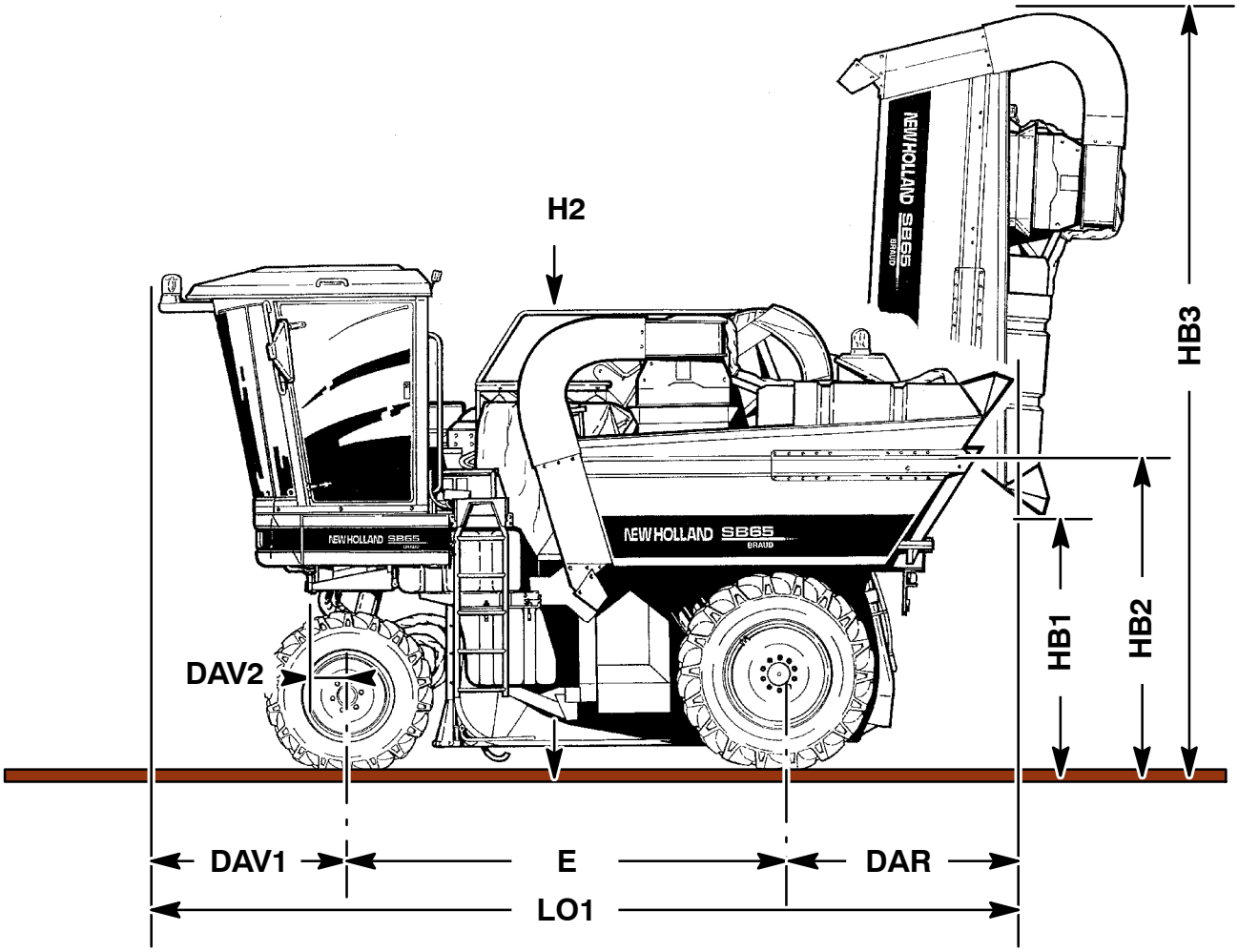
- width 600 mm

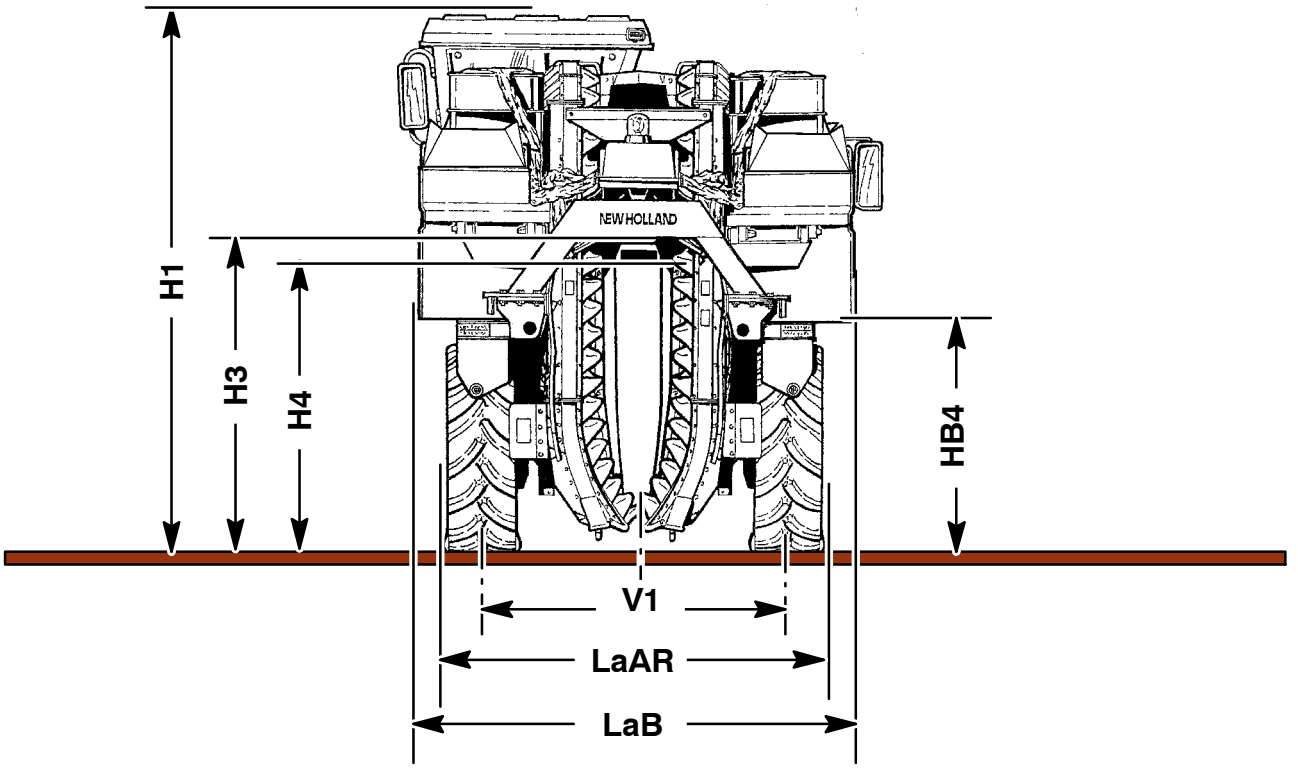
8 Transfer conveyor

- width 600 mm

9 Side emptying conveyor

- width 350 mm
- tilting height under the conveyor, 1320 ÷ 4100 mm


H2
HB3
HB1
HB2
DAV2
DAV1
E
DAR
LO1
NEW HOLLAND SB65

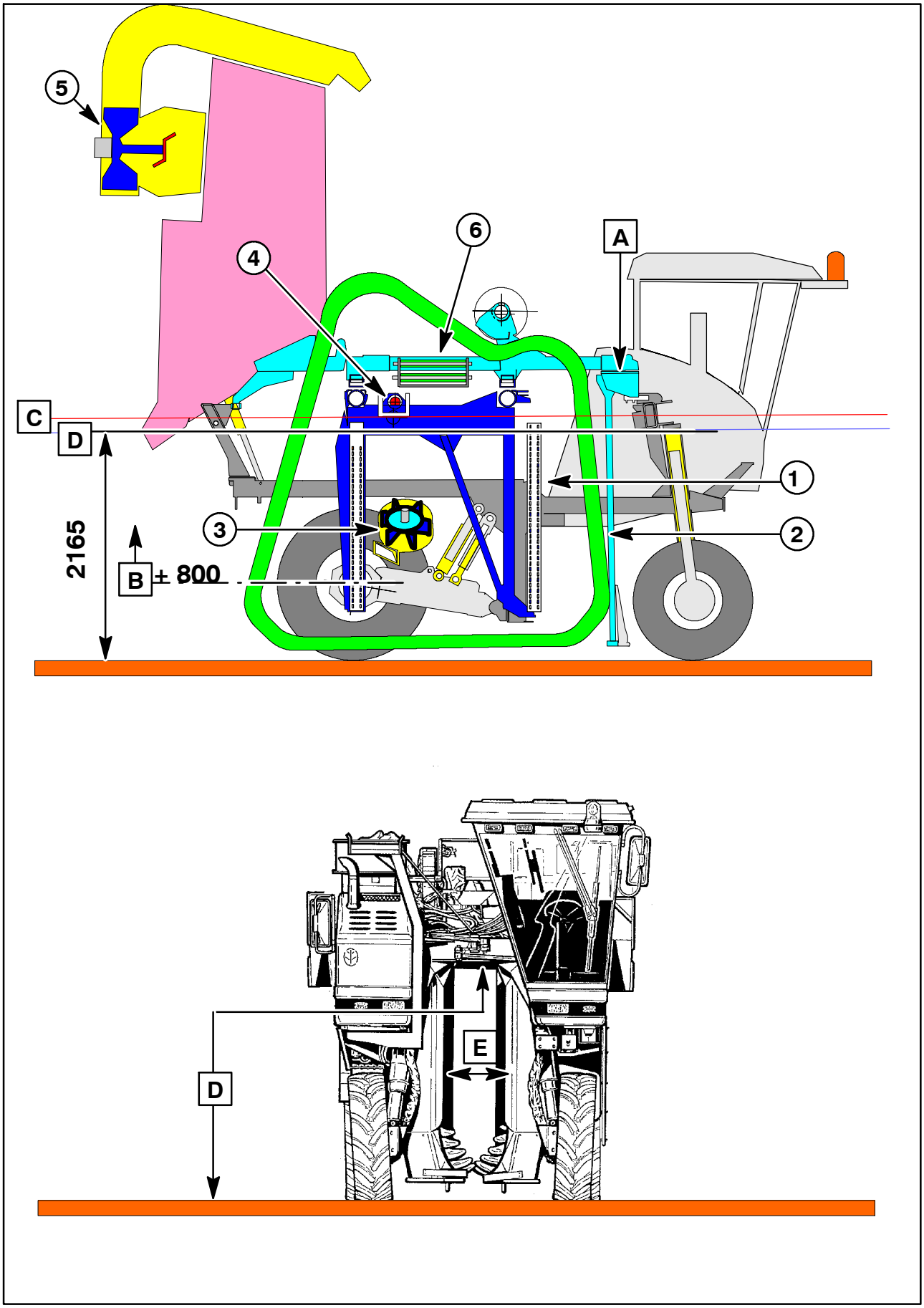

H1
H3
H4
HB4
V1
LaAR
LaB
NEW HOLLAND

R1-02/03

COMMERCIAL DESCRIPTION			SB65 (2)	SB65 (3)
Self-propelled unit				
Code	**DIMENSIONS (mm)**			
	Height:			
H1	(Lowered harvesting equipment)	with cab	3605	3740
H2	Harvesting equipment height	to the railings	3520	3520
H3	Clearance under beam	min.	2015	2215
	Harvesting equipment	max.	2815	2815
H4	Harvesting equipment clearance under tunnel		2165	2165
HB1	Clearance under tilted up containers		1860	2080
HB2	Tilting axle height		2080	2310
HB3	Max. height with lifted hopper		5270	5500
HB4	Height under clearance	1600 l hopper	1375	1600
LaB	Max. width of hoppers 2x1600 l		3220	
V1	Rear track		2420	
V2	Front track		2130	
La AR	Outer width at the rear wheel level: (V1 + Gb = La AR)	Tyres 480 / 70 R 28 Tyres 420 / 70 R 28	2425 + 480 = 2905 2510 + 540 = 3050	
La AV	Outer width at the front wheel level on ground: (V2 + Gb = La AV) (V2 at ground level)	Tyres 420 / 70 R 24	2130 + 420 = 2550	
E	Wheelbase		3180	
Lo 1	Overall length	at the cab front	6090	
DAV1	Front offset:	at the cab front	1300	
DAV2	Tool fixing offset		280	
DAR	Rear offset		1610	

- (2) SB65 low version, with two hoppers, axle clearance 2.00 m
- (3) SB65 high version with two hoppers, axle clearance 2.20 m

R1-02/03



R1-02/03

SB65 WITH TWO HOPPERS, LOW VERSION
AXLE CLEARANCE 2.00 m

A Central cross beam of the harvesting equipment with 200-mm rise
B Sloping correction, 800 mm
C Sliding shaking transmission to get a clearance by 2165 mm under the cover, with harvesting equipment in low position.
D Max. clearance height limited
by the frame front beam
and by the rear cross-piece
at min. 2015 mm
max. 2815 mm
E Clearance width at the leaves entry: 700 mm

1 Shaking frame

- shaking plates
  34 holes, useful height 1650 mm,
- 24 shakers
  22 straight link rods
  2 elbow link rods
- 240-mm extension

2 Norias

- 67 buckets with long spout,
- clearance in the stake-guide,
  195 ÷ 400 mm

3 Lower extractors

- diameter 430 mm
- independent stalk choppers,
  released in washing position

4 Slide drive

- shaking control

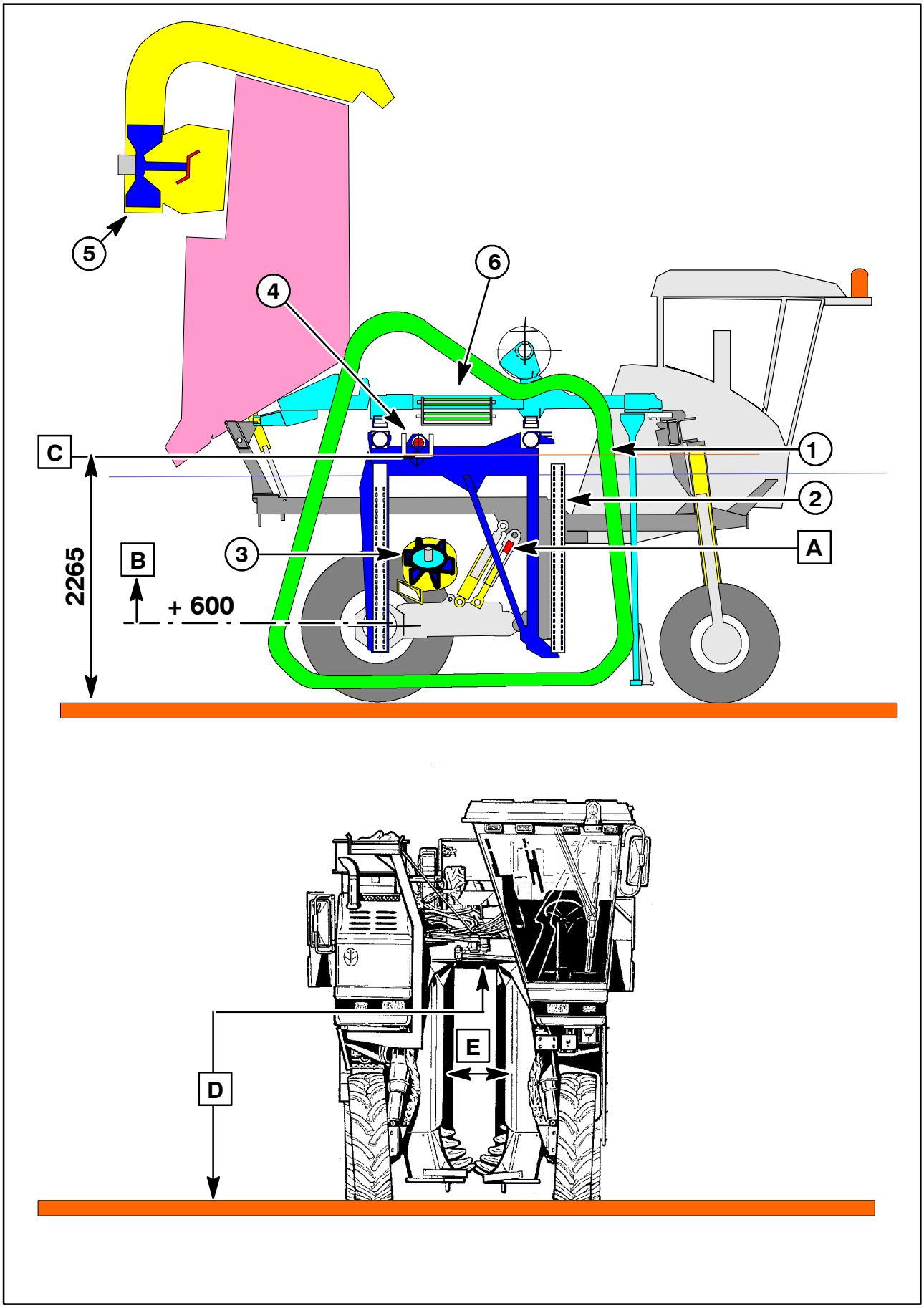
5 Left and right hoppers

- capacity 1600 liters
- extractor, diameter 460 mm, with removable stalk chopper.
- leaf evacuation chute, on the side
- leaf evacuation chute, at the back

7 Harvesting conveyors

- width 600 mm

R1-02/03



R1-02/03

SB65 WITH TWO HOPPERS, HIGH VERSION AXLE CLEARANCE 2.20 m

A Retainer, 100 mm, increasing the frame height by 200 mm
B Sloping correction, 600 mm
C Sliding shaking transmission to get a clearance by 2265 mm under the cover, with harvesting equipment in low position.
D Max. clearance height limited
by the frame front beam
and by the rear cross-piece
at min. 2215 mm
max. 2815 mm
E Clearance width at the leaves entry: 700 mm

1 Shaking frame

- shaking plates
  34 holes, useful height 1650 mm,
- 24 shakers
  22 straight link rods
  2 elbow link rods
- 240-mm extension

2 Norias

- 67 buckets with long spout,
- clearance in the stake-guide,
  195 ÷ 400 mm
- clearance (E) in the entry sheets,
  700 mm

3 Lift retainer

4 Lower extractors

- diameter 430 mm
- independent stalk choppers,
  released in washing position

5 Sliding drive

- shaking control

6 Left and right hoppers

- capacity 1600 liters
- extractor, diameter 460 mm, with removable stalk chopper.
- leaf evacuation chute, on the side
- leaf evacuation chute, at the back

7 Harvesting conveyors

- width 600 mm

R1-02/03

COMMERCIAL DESCRIPTION		SB65 (1)	SB65 (2)	SB65 (3)
WEIGHT				
Total allowed loaded weight (kg)		9420	9280	
Max. load allowed on	front axle (kg)	4200		
	rear axle (kg)	5500		
Unladen weight:	Total	9200 to 9420		
	Front axle	4060 to 4160		
	Rear axle	5200 to 5260		
Weight of one wheel (kg)	420/70 R 24	120		
	480/70 R 28	175		
Engine weight (kg)		510		
FEEDING/EXHAUST				
Fuel tank	Used fuel	Diesel oil		
	Capacity (litres)	225		
Engine feeding system		Direct injection		
Air filter	Make	DONALDSON		
	Type	ELB 10-0057		
Engine cooling	Water capacity (litres)	20		
	Fan	sucking		
Cooling fan ∅ (mm)		610		
DRIVE				
Pump for engine fan	Make	SAUER		
	Displacement (cm^3/rev.)	17		
	Empty operating speed (rpm)	2325 (93% of engine speed)		
	Capacity (l/minute), output 0.9	35		
Fan motor	Make	SAUER		
	Displacement (cm^3/rev.)	12.2		
Variable displacement hydraulic pump (adjusted for a maximum forward speed of 24.5 km/h).	Make	SAUER		
	Type	90R100		
	Displacement (cm^3/rev.)	0 to 45		

- (1) SB65 version with hopper and emptying link
- (2) SB65 low version, with two hoppers, axle clearance 2.00 m
- (3) SB65 high version with two hoppers, axle clearance 2.20 m

COMMERCIAL DESCRIPTION		SB65 (1)	SB65 (2)	SB65 (3)
DRIVE (follows)				
Priming pump	Displacement (cm3/rev.)	26		
	Capacity (l/minute), output 0.9	57.3		
Front wheel motor	Make	POCLAIN		
	Type	MS 08		
	Displacement (cm3/rev.)	934		
Rear wheel motor	Make	POCLAIN		
	Type	MSE 18		
	Displacement (cm3/rev.)	2500 (1406/1084)		
Max. speed (km/h) in road position		24.5 km/h		
Max. speed (km/h) in field position		11		
Hydraulic oil				
Capacity l/minute	Total	180		
	Hydraulic oil reservoir	65		
Oil type		NEW HOLLAND: Hydrosystem 68		
Extractor pump and conveyors	Make	VICKERS		
	Displacement (cm3/rev.)	”Load sensing” from 0 to 45		
	Empty operating speed rpm	2500 (see engine rpm)		
	Capacity (l/minute), output 0.9	101.2		
Pump for hopper shaking	Make	SAUER		
	Displacement (cm3/rev.)	25		
	Empty operating speed rpm	2500 (see engine rpm)		
	Capacity (l/minute), output 0.9	56		
Steering/lift/hopper pump	Make	SAUER		
	Displacement (cm3/rev.)	16		
	Empty operating speed rpm	2325 (93% of engine speed)		
	Capacity (l/minute), output 0.9	29		
STEERING		**Hydrostatic**		
Type		EATON QAMP 145 cm3/rev.		
BRAKING				
Service brake		supplied by the hydrostatic transmission		
Parking brake (acting on the two rear wheels)		Operated by two pedals and by the steering		
Steering brake		Operated by lever		

COMMERCIAL DESCRIPTION		SB65 (1)	SB65 (2)	SB65 (3)
TILTING CORRECTION		33%		25%
PLATFORM CAB				
Heated and air-conditioned cab		●		
Activated charcoal filter		Optional		
On-board computer		●		
Grand-Luxe seat		●		
Pneumatic seat		●		
Multi-function lever		●		
A/C compressor	Manufacturer / Model	Sanden U 4643		
	Gas R 134a (g)	1900		
	Oil SP20 or SK 20	FIAT LUBRIFICANTI LBAR 134		
	cm^3	Add 125 g		
LIGHTING AND WARNING LIGHTS				
High/low beams		2		
Front position lights		2		
Rear position lights		2		
Direction indicators	Front	2		
	Rear	2		
	Side	2		
Stop lights		2		
License plate light		1		
Reflector	Rear	2		
Revolving beacon	with cab	2		
Supply voltage		12 V		

R1-02/03

COMMERCIAL DESCRIPTION		SB65 (1)	SB65 (2)	SB65 (3)
HARVESTING EQUIPMENT				
HARVESTING HEADER				
Type		Swinging, self-aligning		
System		Shaking, SDC		
Number of shakers		24 standard		
Straight/elbow connecting rod		22/2		
Shaking drive	Engine manufacturer	EATON		
	Displacement (cm3/rev.)	59		
Shaking amplitude settings		3		
Clearance min. under frame (mm)		2015	2215	
Grape harvesting total height (mm)		1650		
Passage through the leaves, adjustable from: (mm)		-20 to + 220		
RECEIVING / TRANSPORTATION				
Noria system	Buckets per chain	67		
	synchronized	in field speed		
Width of flexible stake-guides (mm)		from 195 to 400		
Tightness length (mm)		2400		
Harvesting min. height (mm)		150		180
Drive	Engine manufacturer	EATON		
	Displacement (cm3/rev.)	500		
Harvesting conveyors	Width (mm)	600		
	Max. operating speed rpm	about 750		
	Reverse	yes		
Single operation	Engine manufacturer	EATON		
	Displacement (cm3/rev.)	31.6		

- (1) SB65 version with hopper and emptying link
- (2) SB65 low version, with two hoppers, axle clearance 2.00 m
- (3) SB65 high version with two hoppers, axle clearance 2.20 m
- (4) according to the model

R1-02/03

COMMERCIAL DESCRIPTION		SB65 (1)	SB65 (2)	SB65 (3)
CLEANING				
2 upper extractors with removable stalk choppers	Diameter (mm)	460 / 638 (4)		
	Drive	hydraulic		
	Engine manufacturer	SAUER		
	Displacement (cm^3/rev.)	11		
2 lower extractor with	Diameter	430		
	Drive	Hydraulic		
	Engine manufacturer	SAUER		
	Displacement (cm^3/rev.)	6 / (8.4)		
2 independent stalk choppers	Drive	Hydraulic		
	Engine manufacturer	EATON		
	Displacement (cm^3/rev.)	8.2		
	Direction of rotation	reverse to the wheels		
CONTAINERS				
Capacity	Standard	1600	2 x 1600	
Electrically-operated distribution auger		Control independent of the harvesting equipment		

- (1) SB65 version with hopper and emptying link
- (2) SB65 low version, with two hoppers, axle clearance 2.00 m
- (3) SB65 high version with two hoppers, axle clearance 2.20 m
- (4) according to the model

SECTION 00 - MAINTENANCE

Chapter 1

CONTENT

SUPPLIES
LUBRICANTS AND FLUIDS

Item to be serviced	Quantity dm^3 (liters)	Suggested product	International classification
Self-propelled greasing points		Grease **AMBRA GR 9**	Lithium-calcium based grease, consistency NLGI 2
Harvesting machine greasers		Grease **Food type**	24 cartridges re. **62777339**
Noria drive housing	1		
Engine sump and filter/s 6-cylinder engine	15	Oil **AMBRA SUPER GOLD 15W - 40**	SAE 15W40 CCMC - D4 APICF - 4/SG MIL- L - 2104 E
Hydraulic oil reservoir	65	Oil **HYDROSYSTEM 68**	ISO 68 DIN 51524 - part 2
Cooling system	20	AMBRA **AGRIFLU (50%) +** Clean water (50%)	

MACHINE WASHING

To avoid the building up of sugar and dirt in the harvesting equipment and to preserve the grape harvesting quality, the machine must be washed once or several times a day, and above all at the end of the work.

The self-propelled washing must take place with standstill thermal engine; anyway, for cleaning the harvesting equipment in the best way, it is necessary to start the norias, the conveyors and the extractors, after having positioned the machine in a stable place. **This is anyway a departure from the general safety requirements specified in the manual.**

This operation calls for **close attention** and **strict adherence** to the following rules:

- first of all, this operation must be made by **a single operator,** skilled in the control of this machine.
- The machine should be placed in a **stable** cleaning area, preferably on a level concrete floor measuring at least 5x8 m, provided with drainage facilities and consistent with current environmental protection regulations.

The cleaning area should be equipped with the following:

- a hose with min. diameter 30 mm, long enough to enable the washing all around the machine;
- a sufficient flow of water to provide a 2-m jet, or alternatively a heavy-duty pumping unit with 3 to 4 m^3 capacity water storage tank;
- an adjustable nozzle to direct the water jet to about 5 m;
- an approx. 3.5-m high ladder and an approx. 0.70-m long hook.

NOTE: *the use of a high pressure cleaning machine is definitely not recommended.*

PREPARING THE MACHINE FOR THE WASHING AT THE END OF THE CAMPAIGN

Before emptying the last hoppers, stop the thermal engine.

- Get off the driver's seat and, from inside the harvesting machine, scroll the harvested product gathered around the shaking plates and the rear frame into the buckets.
- Make an inspection all the machine round and, starting from the ground, remove any impurities or deposits sticking to the surfaces.
- Climb onto the driver's seat, start the thermal engine, the extractors, the conveyors and the norias in washing position. Run the engine for 10 seconds, then empty the hoppers.

WASHING (in the washing area)

After entering the washing area, lower the machine to 10 cm from the ground and tilt the containers fully. Make sure the inching lever is in neutral, engage the hand brake, stop the thermal engine, get off the tractor and position the hopper safety stops.

- Place the ladder at the rear of the machine and climb onto the rear arch. Using the hook, pull off any vine shoots built up or sticking to and around the plastic safety cover.

- Shift the ladder and lay it against the pipe where the side plates are fastened, so as to release the elastics holding the plates and make the residues behind fall down.
  Make sure the plate upper part folds correctly against the lower one, to prevent it from being trapped in the hoppers during the tilting.
  This operation must be carried out on both machine sides.

- Remove the ladder and the hopper stops.

- Detach the elastics from the rear sealing plates and remove any debris trapped behind.

- Remove any plastic plugs sealing the lower rear part of the norias.

- Climb onto the driver's seat and operate the engine at medium speed, lower the hoppers, engage the extractors and conveyors, then place the norias in the washing position.

- Get off from the tractor, leaving the harvesting machine working parts in operation.

CAUTION: this is anyway a departure from the general safety requirements specified in the manual.

- Open the water supply valve, pick up the hose without the nozzle and climb onto the harvesting machine operating platform located behind the driving position. From here, thoroughly wash the top of the machine, the conveyors, the hopper levelling augers, norias, etc. for about 10 minutes.
- Get off the machine and, starting from the ground, clean the inside of the tunnel from the front of the harvesting machine:
  - plates, shaking frame, shakers;
  - then, inject water into the front LH and RH baffles through the holes provided.
- Now go to the back of the machine, remove the saloon doors and clean the rear part of the harvesting machine tunnel:
  - shaker frame assembly, paying special attention to the shaker link rods.
  - the plates and the lower sealing sheets.
- Inject water through the side openings in the conveyor housings.
- Spray a lot of water in the hoods of the lower extractors, remaining at a sufficient distance from the stalk choppers.

DANGER: the extractor rotors are fitted with stalk chopper knives.
Do not try and fit the pipe or the nozzle when the thermal engine is running.

- Now wash the rear outer part of the machine, carefully cleaning the inside of the deflectors. Inject water into the rear LH and RH baffles through the holes provided.

- Lay down the hose (shutting off the water supply if necessary) and climb onto the tractor. Raise the RH hopper for about 50 cm or just enough to uncover the fan suction hood.

- Place the left hopper in the same position.

- Increase the engine speed to maximum.

- Get off the tractor, retrieve the hose and climb onto the harvesting machine platform. Wash the inside of the extractor fans by flooding them with water, one after another, at 7-second intervals.

- Get off the harvesting machine platform, close the water supply, climb onto the tractor and stop the harvesting functions (extractor fans, conveyors and norias).

Option

At this stage you can check the extractor chutes for cleanliness by opening the inspection doors provided. First make sure that the stalk choppers have come to a complete stop.

- Operate the machine to empty the hoppers and return to the washing area.

- Raise the machine to mid-height and tilt the hoppers completely, **stop the thermal engine** and engage the parking brake.

- Get off the tractor, fit the nozzle to the water hose and open the water supply valve. One side after the other, direct the jet toward and around each conveyor, paying special attention to the lateral opening of the conveyor housings, to the plates, etc...

- From the back side of the machine, wash the hoppers and the hopper auger ends.

  - Inspect the machine again and wash the wheel links, the wheels, the safety covers, the lower extractor outlets, the cab, etc..
  - Shut off the water supply and open the conveyor housing inspection hatches through the harvesting machine tunnel.

- Climb onto the tractor, start the engine and set it to idling. Lower the machine keeping the hoppers lifted, start the extractors, the conveyors, the shaking and norias in washing position. Operate the machine for 2 to 3 minutes to allow the water to drain off.

After cleaning has been completed, the machine will be ready for daily lubrication.

NOTE: *after the greasing, remember to reposition the inspection doors, side covers, etc. which were opened during the washing operations.*