SERVICE MANUAL

VN2080
Grape Harvesters

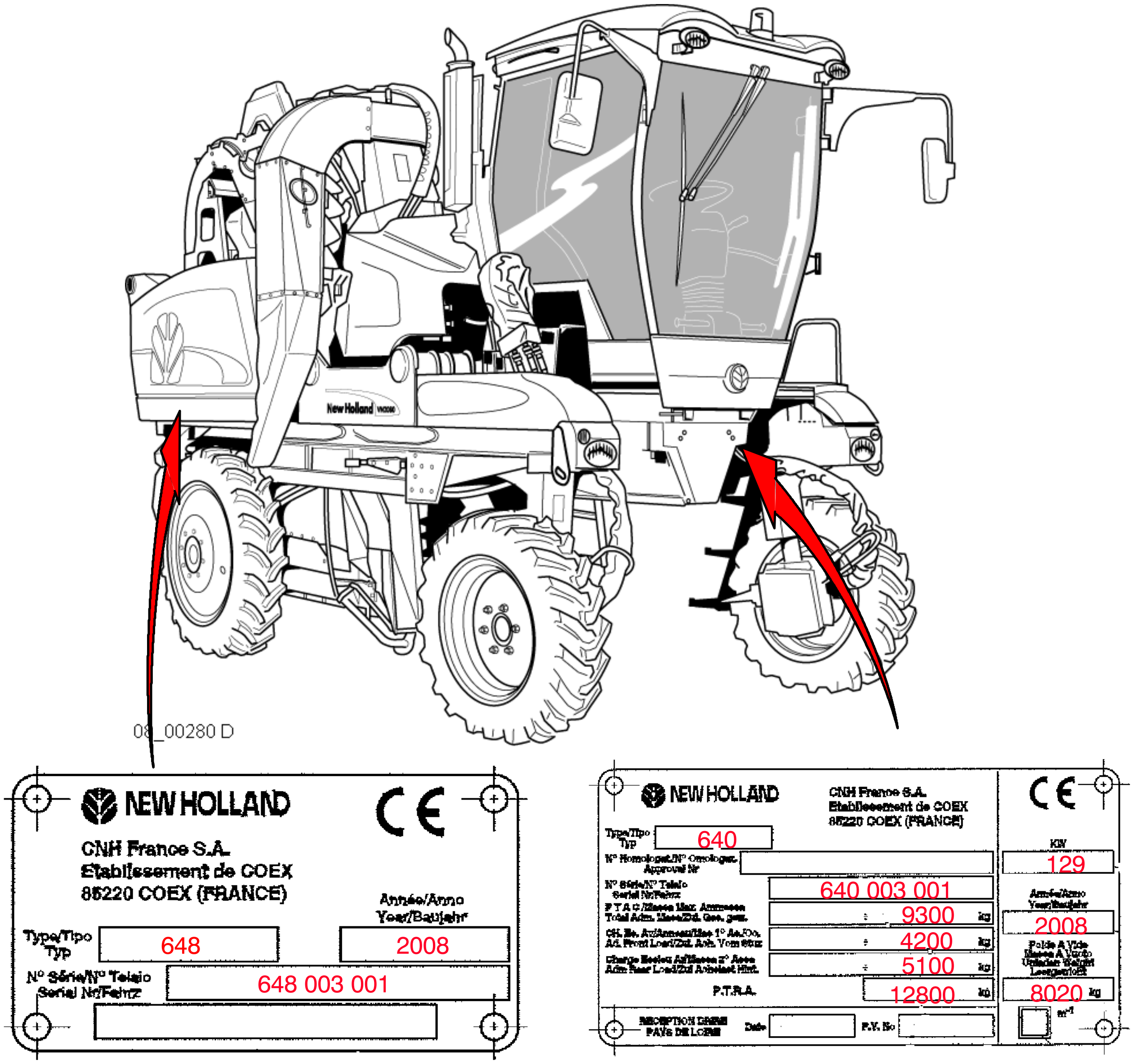
Print No. 84205118A

REPAIR MANUAL

CONTENTS

SPECIFICATIONS

CONTENTS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CNH France S.A.
Etablissement de COEX
85220 COEX (FRANCE)
Type/Tipo
Typ
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Année/Anno
Year/Baujahr
2008
N° Série/N° Telaio
Serial Nr/Fahrz
648 003 001
NEW HOLLAND
CNH France S.A.
Etablissement de COEX
85220 COEX (FRANCE)
Type/Tipo
Typ
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KW
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P.T.R.A.
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Année/Anno
Year/Baujahr
2008
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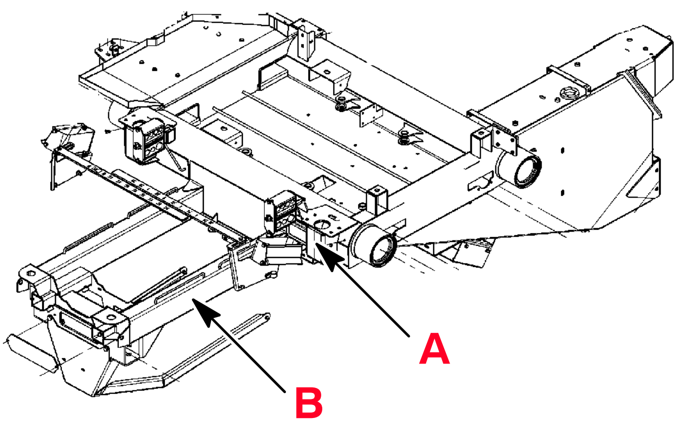

A
B

Model	Type	Serial no.	Machine number
VN 2080	640	001	001
Harvesting equipment VN2080	648	001	001

A = manufacturer's label

B = stamped frame number

REPAIR MANUAL

VN 2080: (F) 84205119A

VN 2080: (I) 84205117A

VN 2080: (Eng) 84205118A

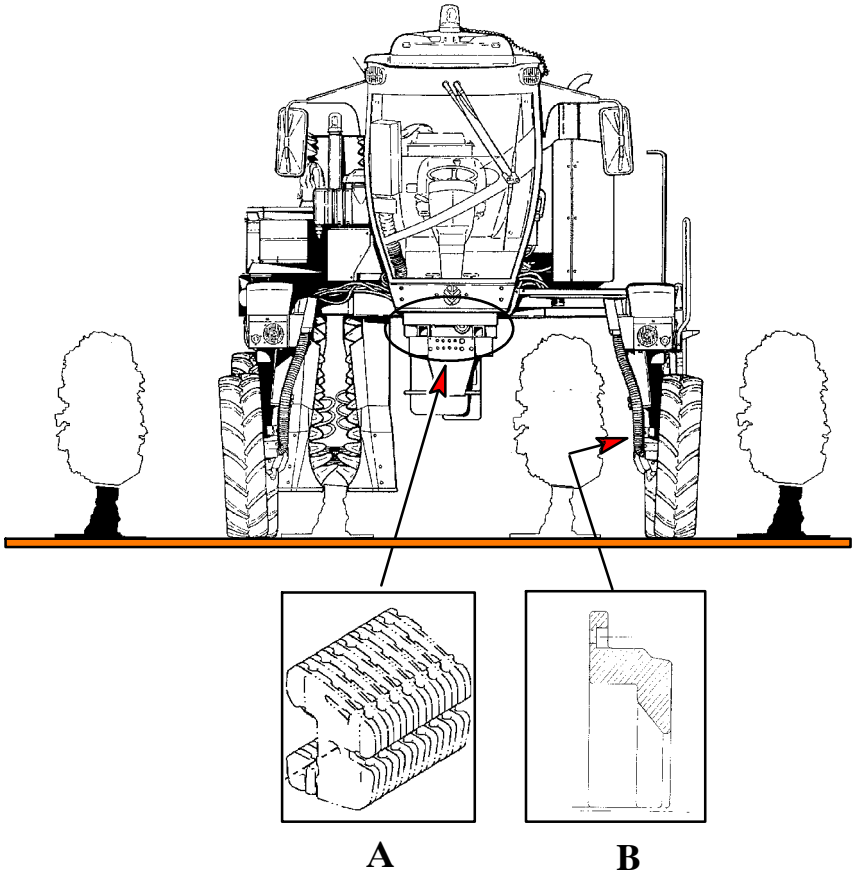
OPERATOR'S MANUAL

VN 2080: (F) 84189493

VN 2080: (I) 84189490

VN 2080: (Eng) 84189492

VN 2080: (Spa) 84189494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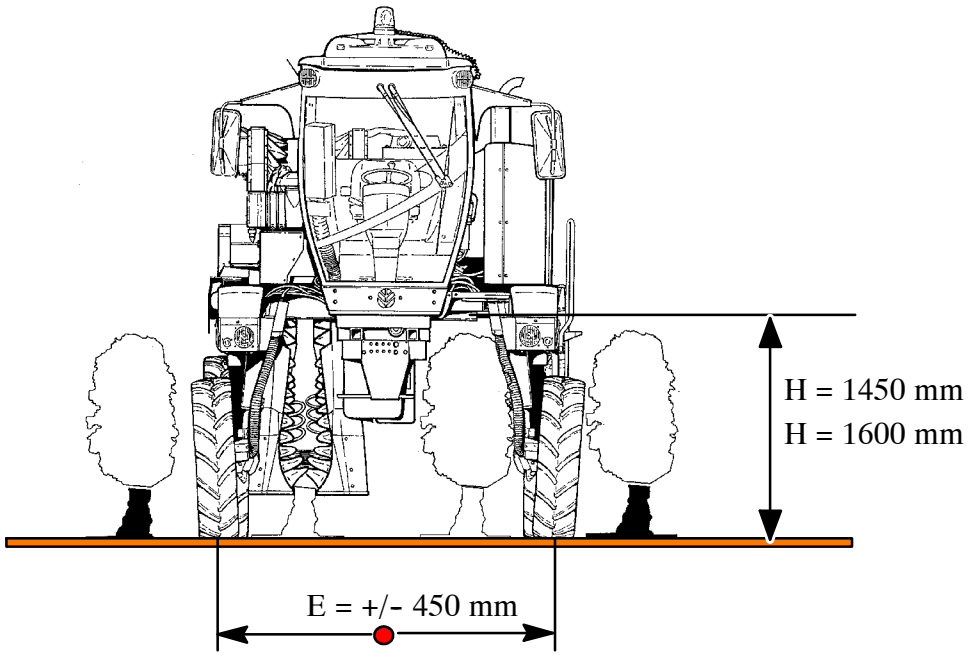

H = 1450 mm
H = 1600 mm
E = +/- 450 mm

SELF–PROPELLED MACHINE

FRAME:

VN 2080 - for vineyard gauge ranging between 0.90 and 1.50 m

- Square tubular frame, open at the back, for a fast disassembly of the harvesting header.
  - (E) Gauge, 450 mm per side, adjustable from the operator's seat
  - (H) Frame clearance: 1.45 m or 1.60 m

- No sloping correction possibility
- Max. allowed sloping: 20%
- The two front legs for wheel support are sliding and pivoting. They ensure:
  - steering in forward range, with steering angle of 80/90°
  - the hydraulic bar, with a 150–mm swinging.

- Installation of ballasts to be used on sloped grounds (see following table)
  - (A) Front support that can hold 8 ballasts, (Re.: 713185005)
  - (B) kit of 2 half–ballasts in the rear left wheel (Re.: 713022055)

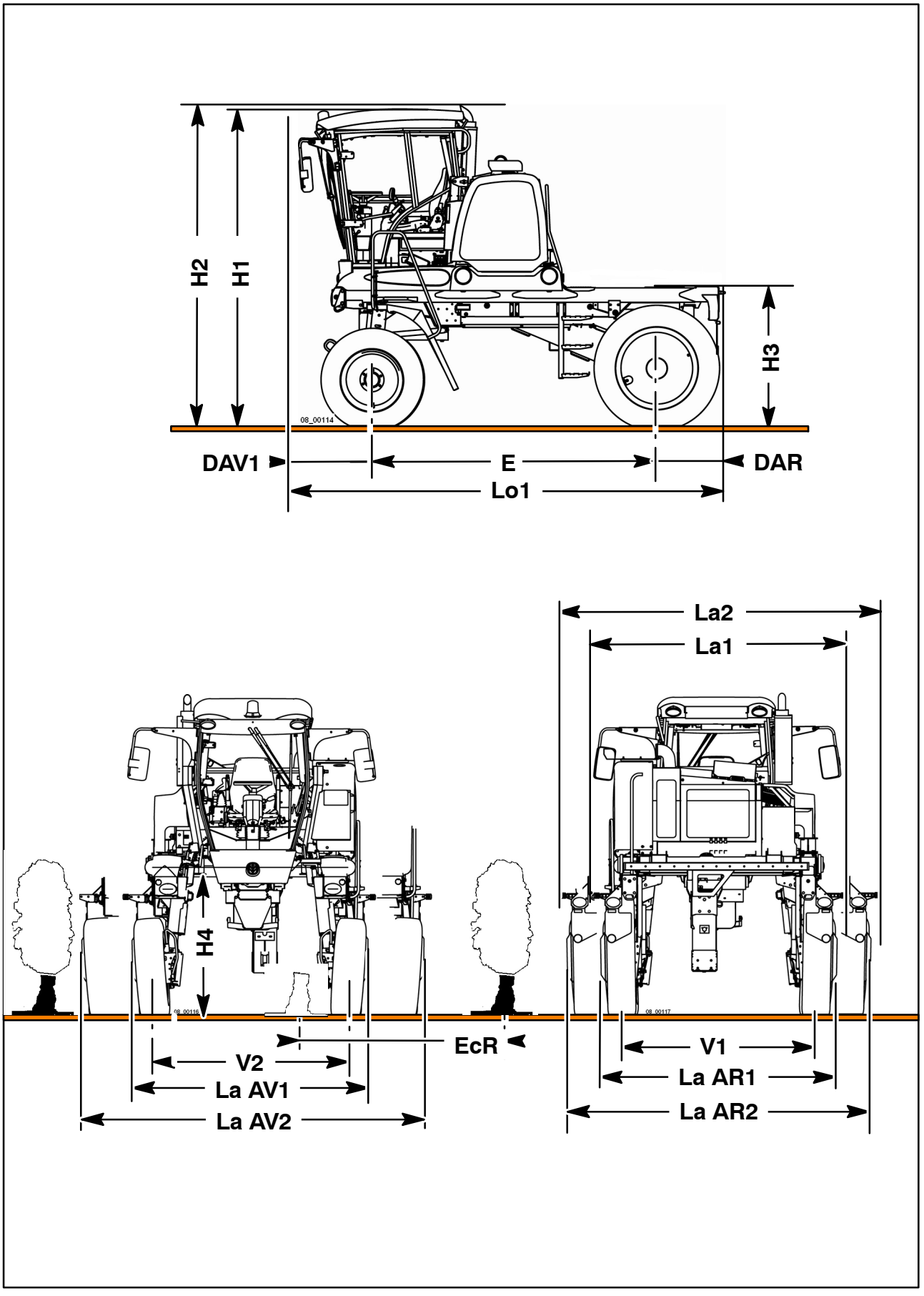
UTILISATION LIMIT IN CASE OF TILTING AND ON SLOPES

TRACTOR + HARVESTING EQUIPMENT

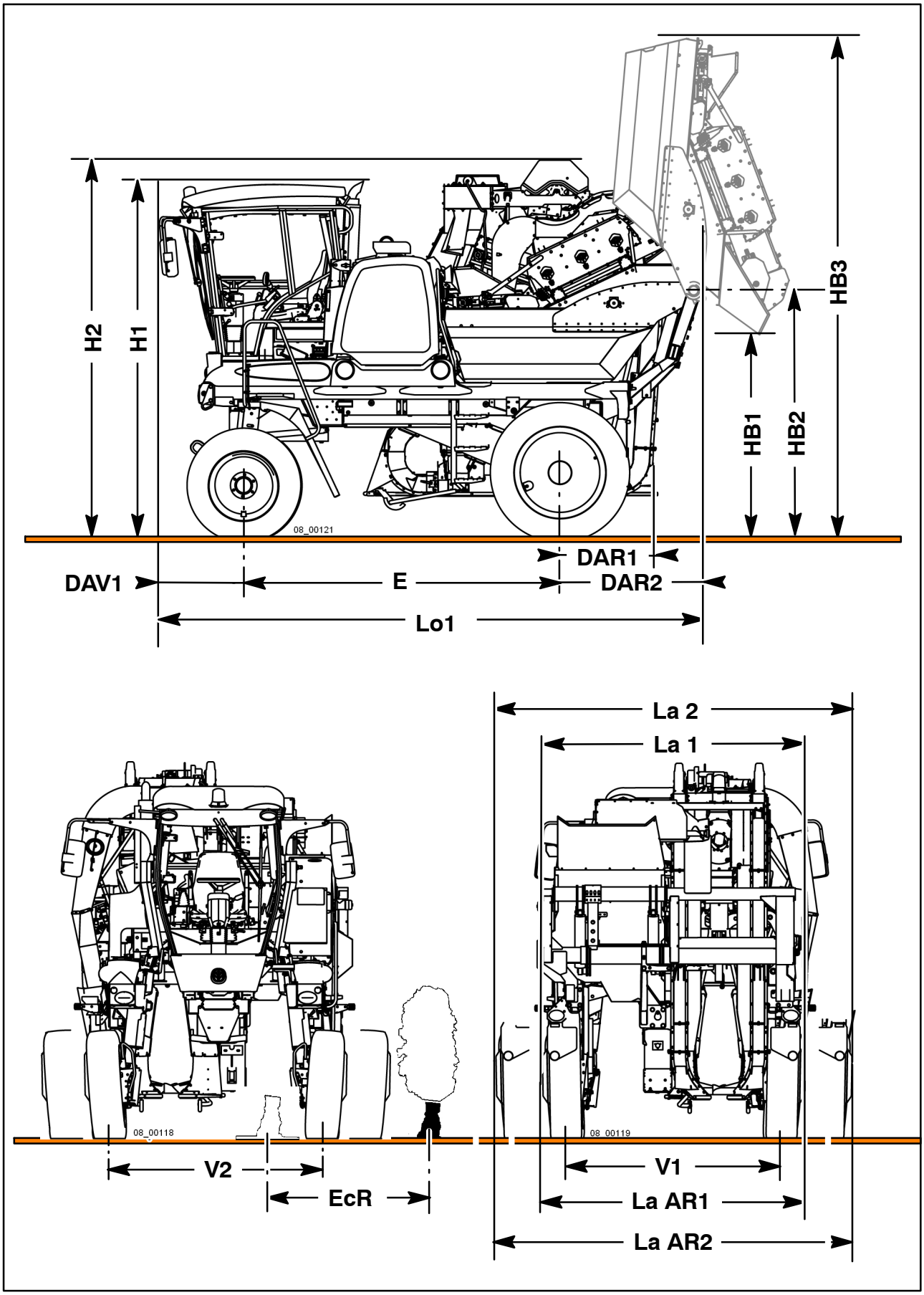
Sloping	Machine gauge	Options	Front wheel liquid ballasting	Kit of 8 ballasts - 713186005	Rear left ballast 713022055	
					Sloping from 0 to 9%	Sloping from 10 to 20%
from 0 to 9%	lower than 1.30 m	Without destemmers	○	○	○	●
		With destemmers	○	○	○	●
	higher than 1.30 m	Without destemmers	○	○	○	●
		With destemmers	○	○	○	●
from 10 to 19%	lower than 1.30 m	Without destemmers	○	○	○	●
		With destemmers	●	○	○	●
	higher than 1.30 m	Without destemmers	○	○	○	●
		With destemmers	●	●	○	●
from 20 to 39%	lower than 1.30 m	Without destemmers	●	○	○	●
		With destemmers	●	●	○	●
	higher than 1.30 m	Without destemmers	●	○	●	●
		With destemmers	●	●	●	●
from 40 to 43%	lower than 1.30 m	Without destemmers	●	●	●	●
		With destemmers	**Exceeding the machine capacity**			
	higher than 1.30 m	Without destemmers	●	●	●	●
		With destemmers	**Exceeding the machine capacity**			

Key:

- Useless ○
- Compulsory ●


H2
H1
H3
08_00114
DAV1
E
DAR
Lo1
La2
La1
H4
08_00116
08_00117
EcR
V2
La AV1
La AV2
V1
La AR1
La AR2

COMMERCIAL DESCRIPTION			VN2080(1)	VN2080(2)
Only self-propelled machine - axle clearance: **(1) = 1450; (2) = 1600**				
Code	**DIMENSIONS (mm)**			
H1	Height at the revolving beacon		3310	3460
H2	Height at the cab roof		3350	3500
H3	Height at the longitudinal members		1440	1440
H4	Axle clearance		1450	1600
EcR	For vineyard gauge		from 0.90 to 1.50 m	
La1	Max. width (min. position)Only self-propelled machine		2560	
La2	Max. width (max. position) Only self-propelled machine		3460	
V1	Extensible track	270 / 95 R32 tyres 420 / 85 R24 tyres	from 1990 to 2890 from 2140 to 3040	
V2	Extensible track	front	from 2000 to 2900	
La AR1	Outside width at the rear wheels La AR Tyres 270 / 95 R32 (V1 + Gb) La AR Tyres 270 / 95 R32 (V1 + Gb + guards) La AR Tyres 420 / 85 R24 (V1 + Gb)		 1990 + 293 = 2283 1990 + 293 + 127 = 2410 2140 + 440 = 2580	
La AR2	Outside width at the rear wheels La AR Tyres 270 / 95 R32 (V1 + Gb) La AR Tyres 270 / 95 R32 (V1 + Gb + guards) La AR Tyres 420 / 85 R24 (V1 + Gb)		 2890 + 293 = 3183 2890 + 293 + 127 = 3310 3040 + 440 = 3480	
La AV1	Outside width at the front wheels, min. position (V2 + Gb = La AV) (V2 at ground level)	 Tyres 11.2-24 T35 12PR TT	 1950 + 305 = 2255	
La AV2	Outside width at the front wheels, max. position (V2 + Gb = La AV) (V2 at ground level)	 Tyres 11.2-24 T35 12PR TT	 2850 + 305 = 3155	
Lo 1	Overall length		4390	
E	Pitch		2960	
DAV1	Front offset		780	
DAR	Rear offset	270 / 95 R32 tyres 420 / 85 R24 tyres	650 650	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H1
HB3
HB1
HB2
08_00121
DAR1
DAV1
E
DAR2
Lo1
La 2
La 1
08_00118
08_00119
V2
EcR
V1
La AR1
La AR2

COMMERCIAL DESCRIPTION			VN2080(1)	VN2080(2)
Self-propelled machine and harvesting equipment axle clearance: **(1) = 1450; (2) = 1600**				
Code	**DIMENSIONS (mm)**			
H1	Height at the revolving beacon		3350	3500
H2	Height at the cab roof		3540	3540
H4	Clearance under harvesting tunnel (on the ground)		1450	1600
La1	Max. width (min. position)Only self-propelled machine		2620	
La2	Max. width (max. position) Only self-propelled machine		3460	
ER	For vineyard gauge		from 0.90 to 1.50 m	
V1	Extensible track	270 / 95 R32 tyres 420 / 85 R24 tyres	from 2050 to 2890 from 2200 to 3040	
V2	Extensible track	front	from 2060 to 2900	
La AR1	Outside width at the rear wheels La AR Tyres 270 / 95 R32 (V1 + Gb) La AR Tyres 270 / 95 R32 (V1 + Gb + guards) La AR Tyres 420 / 85 R24 (V1 + Gb)		 2050 + 293 = 2343 2050 + 293 + 127 = 2470 2200 + 440 = 2640	
La AR2	Outside width at the rear wheels La AR Tyres 270 / 95 R32 (V1 + Gb) La AR Tyres 270 / 95 R32 (V1 + Gb + guards) La AR Tyres 420 / 85 R24 (V1 + Gb)		 2890 + 293 = 3183 2890 + 293 + 127 = 3310 3040 + 440 = 3480	
La AV1	Outside width at the front wheels, min. position (V2 + Gb = La AV) (V2 at ground level)	 Tyres 11.2 R24 Tyres 11.2-24 T35 12PR TT	22150 + 284 = 2404 2120 + 305 = 2425	
La AV2	Outside width at the front wheels, max. position (V2 + Gb = La AV) (V2 at ground level)	 Tyres 11.2 R24 Tyres 11.2-24 T35 12PR TT	 2900 + 284 = 3184 2900 + 305 = 3205	
Lo 1	Overall length		5390	
E	Pitch		2960	
DAV1	Front offset		810	
DAR1	Offset behind the harvesting equipment		920	
DAR2	Offset behind the hoppers		1620	
HB1	Clearance under tilted up hopper		1925	
HB2	Hopper tilting axle height		2310	
HB3	Max. height with lifted hopper		4687	

COMMERCIAL DESCRIPTION		VN2080(1)	VN2080(2)
Self-propelled machine axle clearance: **(1) = 1450; (2) = 1600**			
WEIGHTS			
Total authorised loaded weight on roads (kg)		9000	
Max. total allowed load on front axle (kg)		4218	
Max. total allowed load on rear axle (kg)		5106	
Unladen weight, self-propelled machine only: xxxx kg	Total	5380	5440
	Front axle	2920	2920
	Rear axle	2460	2520
Unladen weight, self-propelled machine + harvesting equipment without destemer: xxxx kg	Total	7500	7560
	Front axle	2900	2900
	Rear axle	4600	4660
Unladen weight, self-propelled machine + harvesting equipment + destemer: xxxx kg	Total	7960	8020
	Front axle	3000	3000
	Rear axle	4960	5020

THERMAL ENGINE	
Model	F4GE9684B*J601
Make	CNH
Type	Diesel
Cycle	alternated
Intake system - boost - cooler	 Turbo air/air
Stroke number	4
Cylinder number and position	6, in line
Piston diameter/stroke (mm)	104/132
Total displacement (cm^3)	6728
Gross power (ISO TR 14396) kW (CV)	129 (175)
Maximum rated speed (rpm)	2300

FEEDING / EXHAUST		
Fuel tank	Used fuel	Diesel oil
	Capacity (litres)	240
Engine feeding system		electric gas oil pump serie 004→
Dry-type air cleaner		two-stage filtration
Engine cooling	Water capacity (l)	
	Fan	blowing

COMMERCIAL DESCRIPTION	VN2080(1)	VN2080(2)
Self-propelled machine axle clearance: **(1) = 1450; (2) = 1600**		
DRIVE		
Variable delivery hydraulic pump (cm^3/rev.)	140	
Adjusted electric control	1 radar and 1 sensor	
Front wheel motor (cm^3/rev.)	934	
Rear wheel motor (cm^3/rev.)	1406 and 1170	
Max. speed (km/h) in road position (2WD)	25	
Driving in road speed	By front motors and Twin-Lock between 0 and 12 km/h	
Max. speed (km/h) in field position (4WD)	14	
Front/rear antiskid	Automatic (Twin-Lock)	
Right/left antiskid	Capacity divider operated by the left pedal in the operator's seat	
Front drive reduction	Operated by the left pedal and by a switch in the operator's seat	
Double hydraulic pump 'SAUER": speed	1,02 x speed	
- for steering and service (displacement cm^3/rev.)	14.4	
- for shaking (displacement cm^3/rev.)	19.2	
"Rexroth" hydraulic pump for extractors / conveyors (displacement cm^3/rev.)	from 0 to 45	
Hydraulic oil - Type - Reservoir total capacity	AMBRA Hydrosystem 68 77 litres	

STEERING	
Type	hydrostatic
Steering diameter (m)	7.90

BRAKING SYSTEM	
Service brake (on the four wheels)	Ensured by the hydrostatic drive
Multidisk parking brake (acting on the two rear wheels)	Guaranteed by the lever on the operator's seat and series 004→ by the neutral return of the inching lever + switch of the steering column
Front brakes	Without
Right/left independent brakes (field speed)	Ensured by the right pedal, synchronized with: - the steering in max. steering position

COMMERCIAL DESCRIPTION		VN2080(1)	VN2080(2)
Self-propelled machine axle clearance: **(1) = 1450; (2) = 1600**			
SLOPING AND TILTING			
Max. allowed sloping during work with destemmer, up to: Max. allowed sloping during work without destemmer, up to:		40% * 43% *	
Sloping indicator		By warning lights on the operator's seat	
Max. allowed tilt during work		20%	
OPERATOR'S PLATFORM			
Heated and A/C cab		yes	
Pneumatic seat (with optional seat belt)		yes	
Multi Function Handle		yes	
Dashboard		yes	
Board computer		yes	
Sound level in the operator's seat (dB(A))			
Electrically-operated rear view mirrors		2	
Rear viewing: colour camera		2	
ELECTRIC CIRCUIT			
Supply voltage (battery)		12 V / 180 Ah	
Alternator		120 A	
Switch		on negative	
LIGHTING AND WARNING LIGHTS			
High/low beams		2	
Work lights	at the front of the cab	2	
	behind the cab	2	
	in the front right tunnel	1	
	at the back of the harvesting equipment	1	
Front parking lights		2	
Rear parking lights		2	
Direction indicators:	Front	2	
	Rear	2	
Stop lights		2	
License plate light		1	
Reflex reflector:	Rear	2	
Revolving flash light		2	

- * = with ballasting depending on the gauge (see table)

MULTIPURPOSE	
Front auxiliary hydraulic block as standard outfit. It supplies, in the corresponding multipurpose mode:	
- single-acting cylinders	4
or	
- double-acting cylinder	1

COMMERCIAL DESCRIPTION	VN2080(1)	VN2080(2)
Self-propelled machine axle clearance: **(1) = 1450; (2) = 1600**		

Grape harvester	
HARVESTING HEADER	Swinging, self-aligning
Servo-steering	Warning lights on the operator's seat

SHAKING	
Number of shakers	12 supplied
Motor drive (displacement cm^3/rev.)	10.8 and reducer
Amplitude settings	not adjustable
Tunnel minimum clearance	1500
Useful harvesting height	550

RECEIVING / TRANSPORTATION		
Noria system: (BRAUD patent)	Number of buckets per chain Synchronized	54 in field speed
Stake-guide gauge:		150
Sealing length		1700
Minimum harvesting height		150
Drive: motor (displacement cm^3/rev.)		395
Central conveyor	Belt width Drive: motor (displacement cm^3/rev.) Sliding direction reversal	250 31,6 yes
Cross conveyor	Belt width Drive: motor (displacement cm^3/rev.) Sliding direction reversal	225 36 yes

COMMERCIAL DESCRIPTION		VN2080(1)	VN2080(2)
Self-propelled machine axle clearance: **(1) = 1450; (2) = 1600**			
CLEANING			
1 front extractor	Diameter	430	
	Drive: motor (displacement cm^3/rev.)	Sauer 6	
1 rear extractor	Diameter	350	
	Drive: motor (displacement cm^3/rev.)	Sauer 8	

HOPPER	
Capacity (litres)	1400
Emptying	rear
Plane harvested product division:	
Drive: motor (displacement cm cm^3/rev.)	160
- Rotation direction reverse	yes série 004→
Destemmer (variant)	
Sorting conveyor	
Belt width (mm)	450
- Drive: motor (displacement cm^3/rev.)	31,6
- Sliding direction reversal	No
Destemmer with 3 rotors:	
Width (mm)	475 (like VL hr)
Diameter (mm)	335 (like VL Std)
- Belt drive: motor (displacement cm cm^3/rev.)	59
- Rotor drive: motor (displacement cm^3/giro)	36
- Sliding direction reversal	No
Stalk ejection:	Between 2 rows of vines (it avoids the non-harvested row)

SECTION 00 - MAINTENANCE

CONTENTS

LUBRICANT AND LIQUID CAPACITIES

Item to be supplied	Quantity	Recommended product	Corresponding international classification
Self-propelled machine grease fittings		AMBRA GR 9 **grease**	Lithium-calcium grease, consistency NLGI 2
Harvesting machine grease fittings		Grease **Food type**	24 cartridges re. **62777339**
Noria ECU	1 kg		
Shaking ECU	0.5 kg	**AMBRA GR 75 MD** **NH 720 A**	Re. 661874 molybdenum bisulfide grease, consistency NLGI 2
Engine sump and filter 6-cylinder engine	16 l	Oil **AMBRA MASTER GOLD HSP** **15W - 40**	SAE 15W40 NH 330H API CI - 4 CH4 ACEA E3/E5
Reservoir	77 l	Oil AMBRA **HYDROSYSTEM 68**	ISO 68 DIN 51524 - part 2
Cooling system	20 l	AMBRA **AGRIFLU (50%) +** clean water (50%)	

THERMAL ENGINE MAINTENANCE

a) After the first 50 hours

- Let the engine run until it reaches the standard operating temperature.
- Replace diesel oil filter cartridge/s.
- Check alternator and compressor belt tension.

  Check engine tightness.

b) Every day, or every 10 hours, check:

- oil level,
- coolant level,
- the radiator core cleanliness.

c) Every 400 hours, or before each harvesting season, replace:

- engine oil,
- oil filter cartridge/s,
- diesel oil filter cartridge/s.
- Check the belt tension.
- Check the radiator core cleanliness.
- If the air filter clogging indicator comes on, clean the main cartridge by compressed air, blowing inside out.
  Be careful not to use a pressure over 6 bar; shift the nozzle downwards and hold it at about 3 cm from the paper.

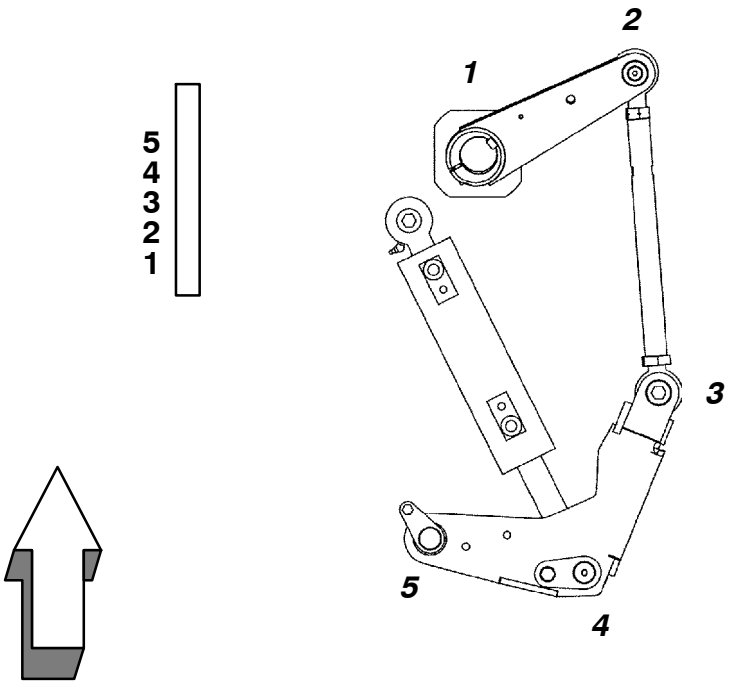
d) Only before each campaign:

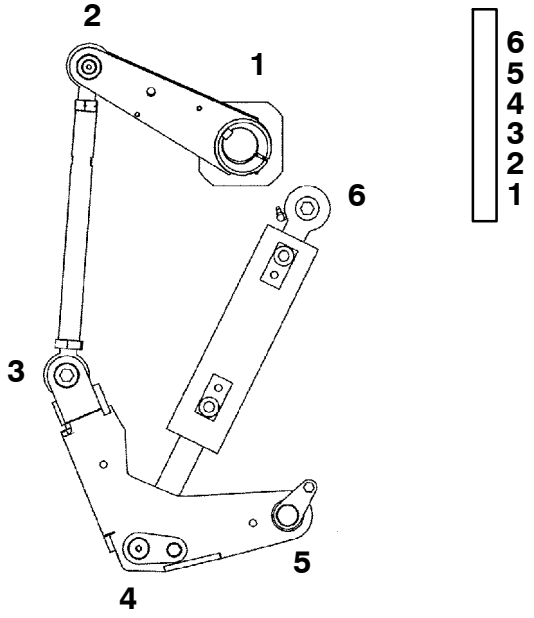
- replace the air filter main cartridge.

e) Every 1200 hours:

- adjust the tappets,
- adjust the injector setting.

NOTE: *the diesel oil filter cartridges should be replaced more often if the diesel oil conditions require it.*





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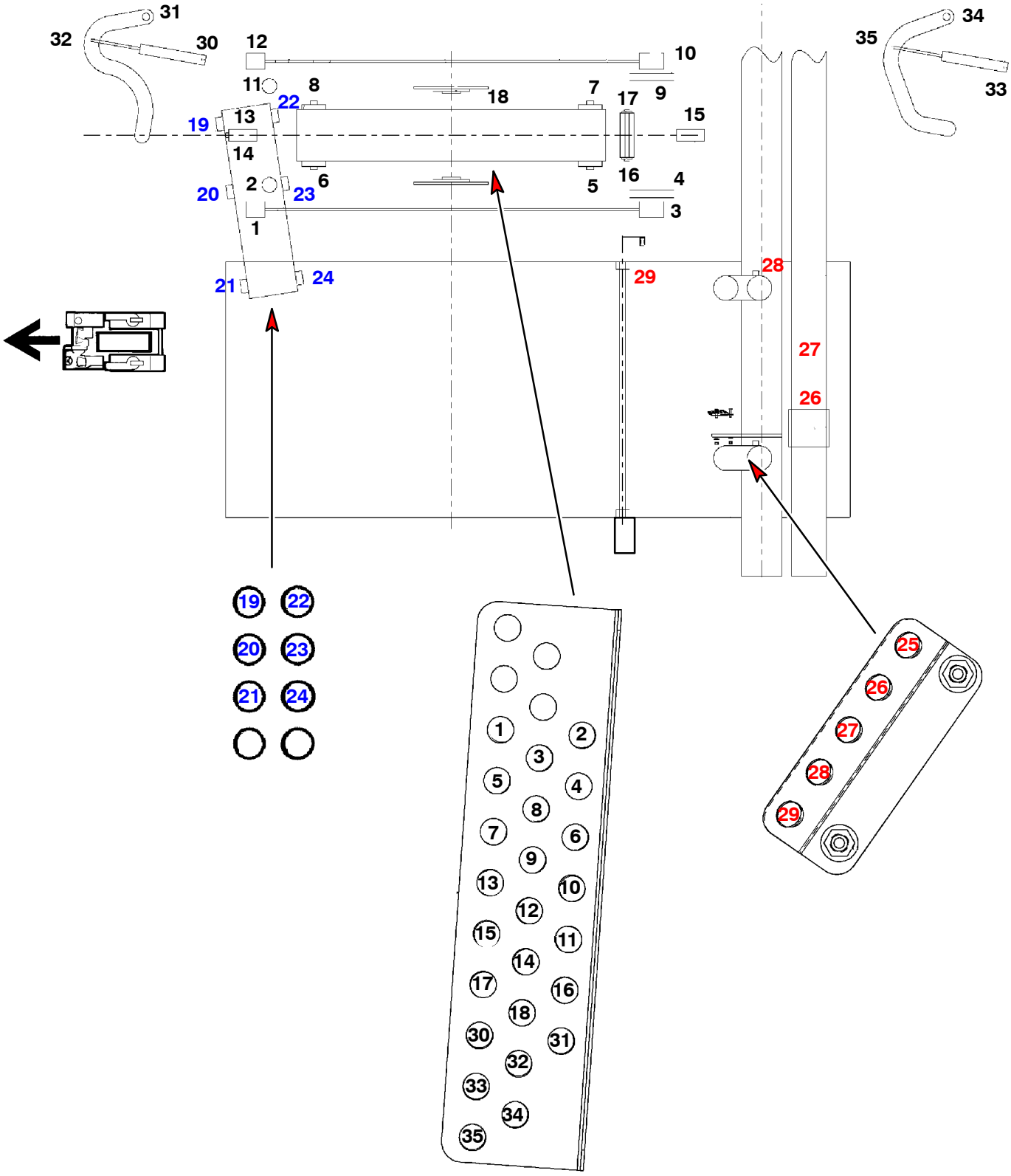
Self-propelled machine greasing

The diagram shows the relationship between greaser and bearing, position 6 is not present on the right side.

The following parts are not localised:

- 2 x 2 grease fittings on the front legs
- 2 x 2 grease fittings on the extension chutes
- 1 greaser on the steering cylinder foot, on the right side

TOTAL: 20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VN 2080

GREASING OF THE HARVESTING EQUIPMENT

On the rear left B-post

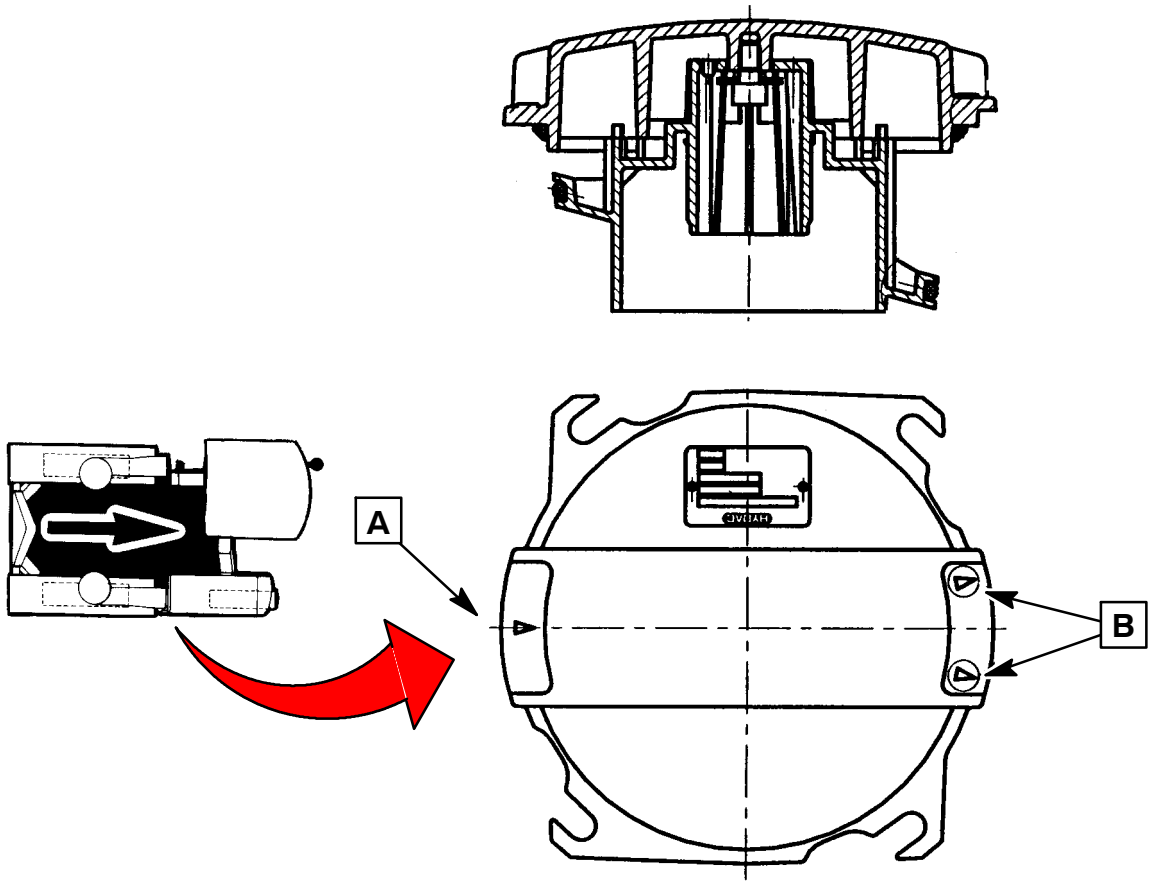
- 1) Left shaking connecting rod front bearing
- 2) Left shaking plate bearing
- 3) Left shaking connecting rod rear bearing
- 4) Shaking shaft left bearing
- 5) Central conveyor rear roller left bearing
- 6) Central conveyor front roller left bearing
- 7) Central conveyor rear roller right bearing
- 8) Central conveyor front roller right bearing
- 9) Shaking shaft right bearing
- 10) Right shaking connecting rod rear bearing
- 11) Right shaking plate bearing
- 12) Right shaking connecting rod front bearing
- 13) Harvesting equipment front pivot
- 14) Harvesting equipment front pivot
- 15) Harvesting equipment rear pivot
- 16) Rear extractor inlet roller left bearing
- 17) Rear extractor inlet roller right bearing
- 18) Noria shaft right bearing
- 30) Header front lifting cylinder foot
- 31) Pin of the header front lifting front hydraulic bar
- 32) Header front lifting cylinder rod
- 33) Header rear lifting cylinder foot
- 34) Pin of the header rear lifting front hydraulic bar
- 35) Header rear lifting cylinder rod

Placed under the cross conveyor

- 19) Cross conveyor right front bearing
- 20) Cross conveyor chute
- 21) Cross conveyor left front bearing
- 22) Cross conveyor right rear bearing
- 23) Cross conveyor chute
- 24) Cross conveyor left rear bearing

Under the rear arch

- 25) Hopper lifting cylinder stem pin
- 26) Hopper articulation bearing
- 27) Arch telescoping tube
- 28) Hopper lifting cylinder stem pin
- 29) Hopper division control shaft bearing



Hydraulic filter cover

During reassembly, **pay attention** to the assembly direction:

- the (A) side with only one arrow on the cover must be directed towards the return line,
- the (B) side with two arrows on the cover must be directed towards the intake lines.

HYDROSTATIC AND HYDRAULIC SYSTEM MAINTENANCE

1) Intake and return filter cartridge replacement

This cartridge must be replaced:

a) every 800 hours,

b) or every two years,

c) at each emptying.

2) Circuit filling - emptying

Drain the circuit every 800 hours and at least every two campaigns.

Always comply with the following precautions:

a) fill the tank completely with the recommended oil, at the end of the campaign, to avoid any condensate build-up during the intermediate season.
The filling must be made by a pump through the relevant fast fitting that filters oil during filling itself.

b) Before the following campaign and, compulsorily, before starting the thermal engine, empty the tank partially to ensure a perfect oil settling.

c) Check the oil level in the reservoir.

WARNING: *when topping oil up, use the same type used for the initial filling.*
When draining oil, work with great care and cleanliness. Clean the drain and filling holes before disassembling them, by a jet of compressed air or a clean brush and oil, so that no foreign impurities or matters enter the circuit.
Remove the drain nut under the reservoir. Empty the reservoir only.
During drain operations, replace the cartridges of the intake filter and of the return filter.

DANGER:
bleed the shaking pump (see section 35).