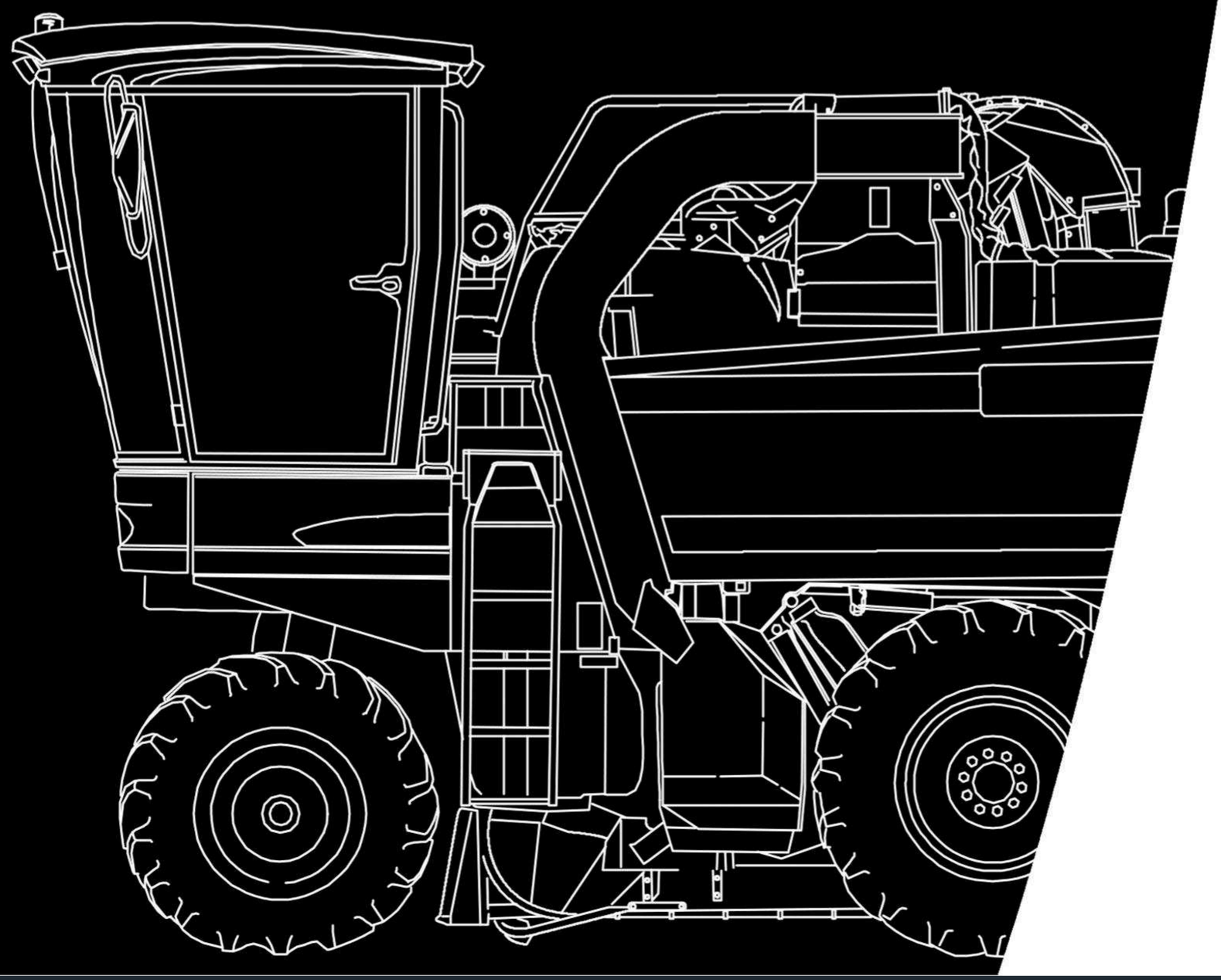
REPAIR MANUAL

NEW HOLLAND

VM3080
VL5060
VL5070
VL5080



NEW HOLLAND

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REPAIR MANUAL

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NOTE: *corresponding to machines starting from series 002.*

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Chapter 1 - TIER 2 engine

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Chapter 1 bis - TIER 3 engine

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ENGINE TROUBLESHOOTING

(follows)

Fault	Possible causes	Corrective procedures
	8. Faulty charge pump.	Replace the charge pump.
	9. Irregular valve-to-tappet clearance.	Adjust the valve-to-tappet clearance.
	10. Low compression.	Check the compressor and the engine, if necessary.
	11. Air filter clogged.	Clean and replace the filter element, as necessary.
	12. Wrongly adjusted link rod between throttle and injection pump.	Adjust the link rod length.
	13. Wrongly adjusted max. speed screw on the injection pump.	Adjust the max. speed screw.
The engine makes knocking noises.	1. Faulty or partly clogged injectors.	Clean and overhaul the injectors; adjust the pressure.
	2. Dirt in the fuel supply circuit.	Clean the fuel supply circuit and replace the damaged lines. Clean the injection pump, if required.
	3. Incorrect injection pump timing.	Adjust the injection pump timing.
	4. Crankshaft seizure due to excessive clearance of stops or main/big end bearings, or too high end float.	Re-grind crankshaft journals and crankpins. Place oversized thrust washers and bearings.
	5. Unbalanced crankshaft.	Check crankshaft alignment and balance; replace, if necessary.
	6. Loose flywheel fastening bolts.	Replace the loose bolts and tighten the new bolts to the specified starting torque and then to the angle torque values.
	7. Missing parallelism between bushing small and big end axes.	Straighten the connecting rods and check the axis parallelism; replace the connecting rods, if required.
	8. Piston seizure due to irregular wear.	Rebore the cylinder liners and fit oversized pistons.
	9. Noisy piston pins due to a high clearance between piston gudgeon pins and bushing small end. Loosen bushings in small end.	Fit oversized piston pins, rebore piston seats and small end bushings. Replace the bushings with new ones.
	10. Timing system noisy.	Check for broken springs or excessive play between valve stems and guides, tappets and bores. Adjust valve clearance.

(continues on the next page)

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SENSORS AND PROBES

FIG. 1
SPEED SENSORS (marked 19, 20, 21, 22 and 59 on the diagrams) and HARVESTING EQUIPMENT HEIGHT (marked 36 on the diagram) and SHAKING SAFETY (26)

a) Adjustments

The distance (b) between the sensor and the metal ground depends on the type of sensor and the relevant diameter.

Re.	Detail	Type	Adjust. (b)
(19)	Shaking	M12-PNP (yellow)	4 mm
(20)	Conveyor	M12-PNP (yellow)	4 mm
(21)	Upper extractor	M12-PNP (yellow)	4 mm
(22)	Lower extractor	M12-PNP (yellow)	4 mm
(26)	Shaking safety	M18-PNP (yellow)	6 mm
(36)	Harvesting equipment height	M18-PNP (yellow)	4 mm
(59)	Inching	M12-PNP (yellow)	4 mm

b) Control

The end of these "TURCK" sensors is yellow; they can detect both steel and stainless steel.

The detection area is 12 mm for M18 and 8 mm for M12. They must be thus adjusted within this range, apart from (36) that detect a round cable and must be adjusted closer.

When the metal is before the probe, the LED (a) switches on and the signal (black cable) becomes + 11 V.

If there is no metal ground before the probe, the signal will be about 1.5-2 V.

FIG. 2
PRESSURE SENSORS (references 12, 34, 68)

These sensors can be adjusted through the screw re. B located between the two terminals. To adjust them, install a pressure gauge on the hydraulic circuit and compare the conditions of the warning light or the indicator with the pressure.

(12) Priming pressure, it turns the warning light on when below 15/17 bar (it was 6 bar on the first machines).

(34) braking reduction pressure, it changes the condition of the warning light at about 17 bar.

(68) switching-on pressure of the stop lights at about 60 bar.

FIG. 3
INCHING SENSOR

This sensor detects the 40 teeth of a special crown.

NOTE: *during the installation of the inching sensor, adjust the support as close as possible to the disk or the pins and the sensor at 2-3 mm. It will be retracted vs. the support.*

FIG. 4: OIL TEMPERATURE PROBE (69)

NOTE: this probe is installed on the lifting/steering pump intake manifold and must be directed. To this purpose, the inspection lid (a) must be directed at 90 degrees towards the motor. To this purpose, use 18.5x30 washers, thickness 0.4 mm, re. 87653515.

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FIRST LIGHTING AND SIGNALLING CIRCUIT

Card A Self-propelled machine electric card, located at the back of the platform

SA12 Spline of the harvesting equipment cable harness

O/33 Free location in the harvesting equipment connector for additional lights (2x55 W)

38 Stop lights

39 Harvesting equipment work lights

40 Work light switch

41 Self-propelled machine work lights

42 Revolving beacon switch

43 Rear revolving beacon

68 Reverse pressure probe to switch on the stop lights from 60 bar

89 Windscreen washer motor

125 Front work lights on railings

126 Revolving beacon on railings

127 Rear work light on railings

J Harvesting equipment work light relay

I Self-propelled machine work light relay

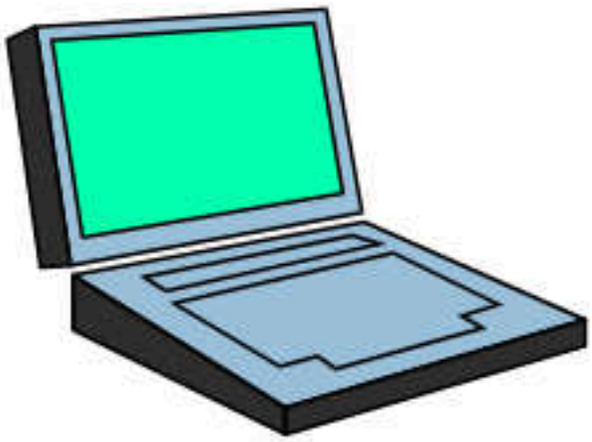
H Revolving beacon relay

Note: *the splines shown are common grounds inside the lights, not inner weldings of the cable harnesses.*

- *The connectors (L) and* ***(C)*** *are connected to the railing cable harness, or to the cab cable harness (see section 50).*

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PANEL PROGRAMME LOADING
Logic or power card



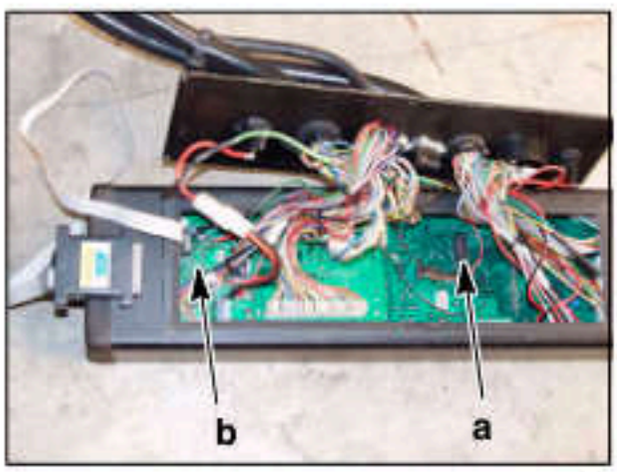
Loading of the new programme on the PC

To be installed using a CD-ROM. The PC should feature at least Windows 98.

Install the updating file as well.
This new programme is called:
- **VL5080 PW . hex** corresponding to the power card.
- **VL5080 dis. hex** corresponding to the logic card.

(E.g.: **VL5080 dis._F hex** is the updating of the logic card, revision F).

PC connection to the card:



1

- open the back of the panel and connect the special cable between PC and:
  - connector **(a)** for the logic card
  - connector **(b)** for the power card

NOTE: danger, it is absolutely required to connect the cable between the card and the PC, then switch the PC on before powering the machine. If this procedure is not complied with, the PC serial port could be destroyed.



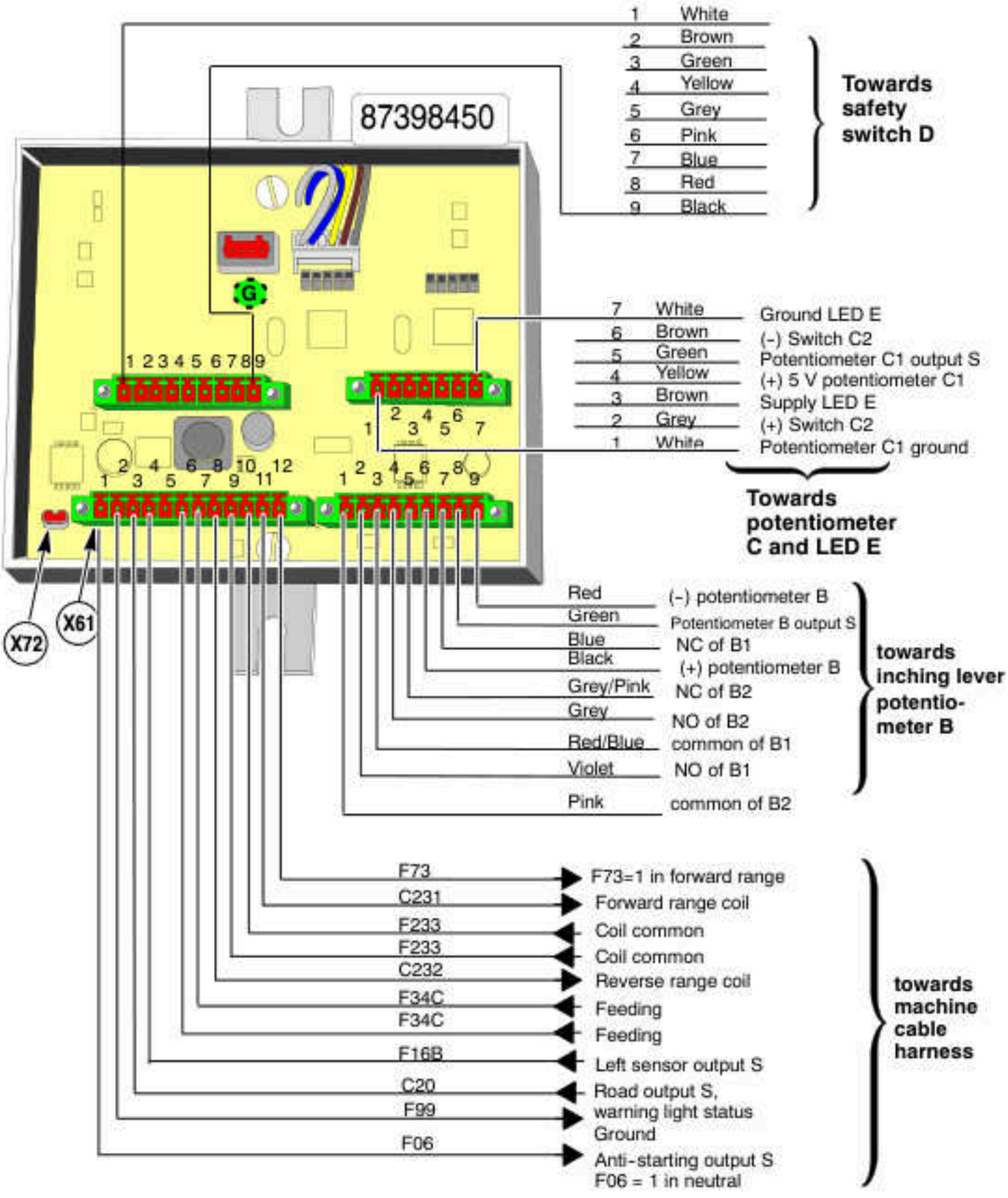
2

- Power the machine before running the PC programme.
- Double click on "ATMEL" to run the software.

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Connection



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