

ADDRESSEES	: Distributors and service points
VEHICLE MODEL	: CX45 MY2020
MANUAL CHAPTER	: 10.21 Body and accessories – Instruments
DATE	: October 25th, 2019
SUBJECT	: Optimization of instrument panel wake-up circuit

APPLICATION

This work procedure applies to the following CX.. MY2020 vehicles:

Vehicle model	Construction number
CX45 MY2020	81463, 81541 → 81558, 81579 81581 → 81582, 81584 → 81587, 81590 → 81591

DESCRIPTION:

Van Hool has found a problem in the wake-up process of the new digital instrument panel. To address this issue, ABC Companies should modify the above mentioned vehicles before delivery according to the step-by-step instructions mentioned in this work procedure.

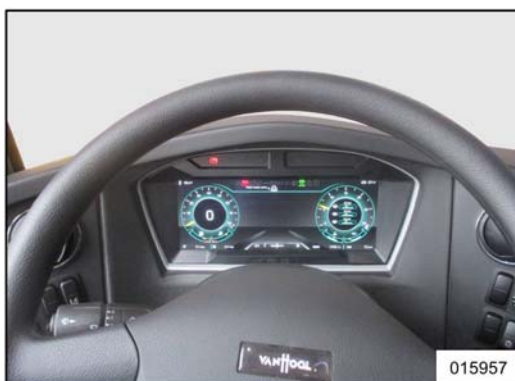


Figure 1: Digital instrument panel on CX.. MY2020 units

JOB QUALIFICATION:

The task has to be carried out by an experienced automotive technician, trained in electrical works.

JOB TIME:

3 hours

JOB CODE:

O21144V

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COMPONENTS:

Components of retrofit kit VH11700111

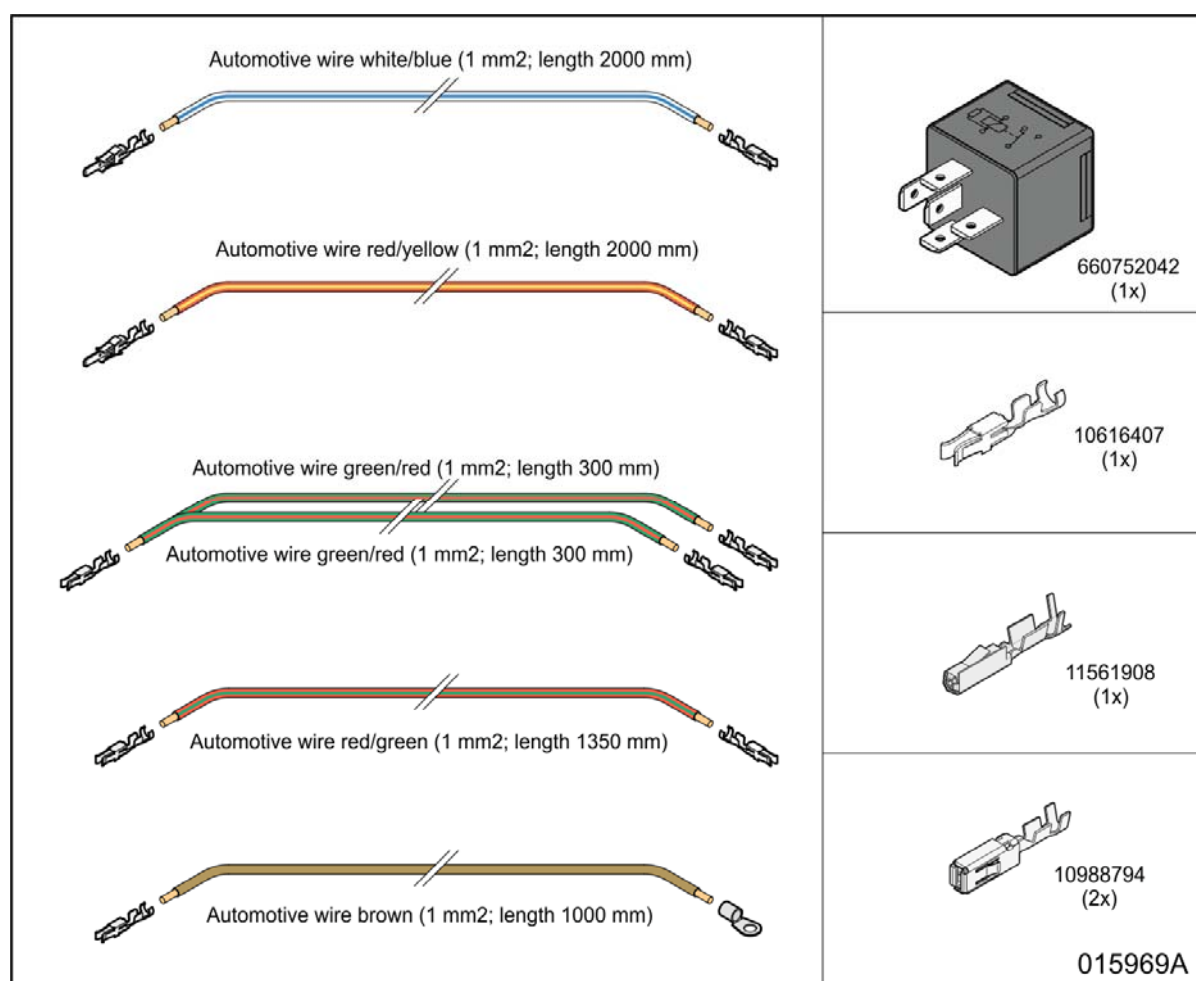


Figure 2

VH reference	Description	Quantity*
660752042	Relay	1
10616407	Connector terminal, female	1
11561908	Connector terminal, female	1
10988794	Connector terminal, female	2
11699955	Pre-assembled white/blue (W-B) automotive wire with connector terminal 11135282 crimped at one end and connector terminal 10962683 at the other end	1
	Pre-assembled red/yellow (R-GE) automotive wire with connector terminal 11135282 crimped at one end and connector terminal 10962683 at the other end	1
	Pre-assembled green/red (GN-R) automotive wire with connector terminal 11261034 crimped at the end of the double wires and connector terminal 10962683 at the two other ends	1
	Pre-assembled red-green (R-GN) automotive wire with connector terminal 10962683 crimped at one end and connector terminal 10674890 at the other end	1
	Pre-assembled brown wire (BR) automotive wire with connector terminal 10962683 crimped at one end and ring terminal 11060882 at the other end.	1

* Sufficient for one vehicle

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PREPARATIONS:

- Park the vehicle on a level floor. Apply the parking brake. Switch off the engine Switch off all systems and turn off the battery master switch on the dashboard.
- Put a "DO NOT START" warning message on the instrument panel before starting the checks or repairs.
- Put chocks in front of and behind the drive axle wheels.
- Read the entire procedure before starting to work.



WARNING!

Observe safe shop practices at all times.

PROCEDURE:

Refer also to the wiring diagrams which have been attached to this work procedure.

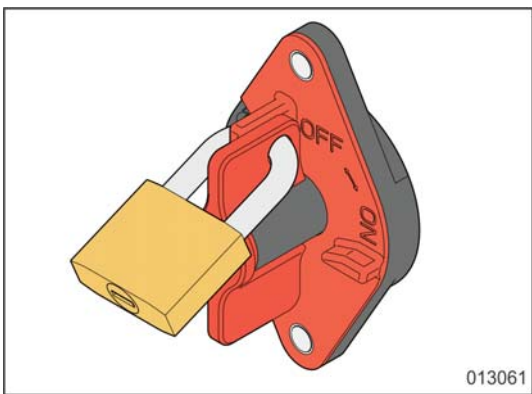
Step	Action
1	In the battery compartment: turn the mechanical battery isolation switch to the "OFF" position.  013061
2	Modify the electric wiring at master switch S068/S080 and instrument panel as explained in "STEP 2 IN DETAIL".
3	Modify junction box EKV as explained in "STEP 3 IN DETAIL".
4	Re-install the instrument panel and dash panels in reverse order of removal.
5	Download the current program into the multiplex-system computer module as described in the maintenance manual. The current multiplex program is available through the customer portal under the "software" section.
6	Register the works by means of the registration button located behind work procedure WP1144 on the Van Hool customer portal. Write the text "WP1144 executed" in the "Remark" field. Labour allowance will only be awarded after registration of the works.

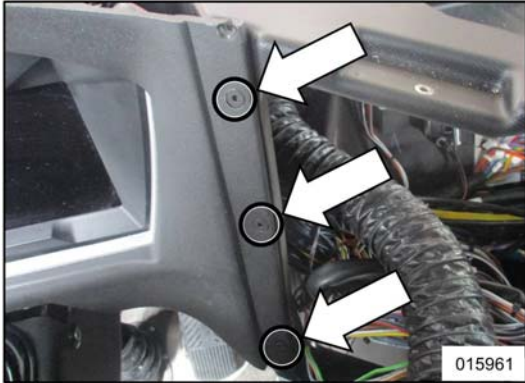
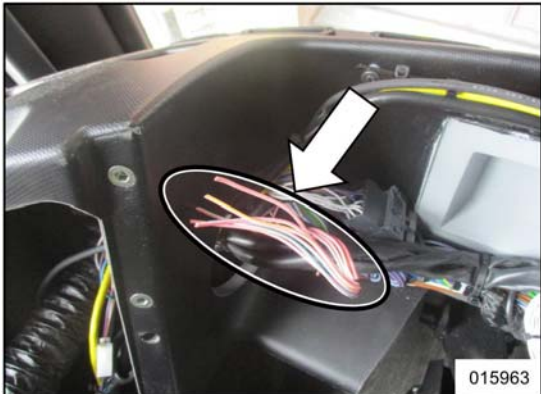
Figure 3: Mechanical battery isolation switch, locked with padlock

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STEP 2 IN DETAIL: To modify electric wiring at master switch S068/S080 and instrument panel

Step	Action
2.1	Remove the dashboard cover panel.  015958 Figure 4
2.2	Undo and remove the Torx screws securing the RH dash panel indicated in the figure. Tilt the panel forwards so gain access to the RH fastening screws of the instrument panel.  015959 Figure 5
2.3	Undo and remove the Torx screws securing the LH dash panel indicated in figure. Tilt the panel forwards so gain access to the rear of master switch S068/S080 and to the LH fastening screws of the instrument panel.  015960 Figure 6

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2.4	Remove the six fastening screws (3 at the left side, three at the right side) of the instrument panel.  015961 Figure 7: RH fastening screws of instrument panel
2.5	Tilt the instrument panel forwards to gain access to the electrical connectors at the back.  015962 Figure 8
2.6	• Locate behind the instrument panel the bundle with pink colored spare wires. Take the pink/blue (Ro-B) and pink/yellow (Ro-Ge) spare wires apart. • Locate in junction box EKV the other end of the pink/blue (Ro-B) and pink/yellow (Ro-GE) spare wires. Due to the presence of multiple identical colored spare wires in EKV, a multimeter must be used to find the proper end.  015963 Figure 9
2.7	At the back of master switch S068/S080: disconnect the connector socket. By using terminal removal tool VH10541368, remove connector terminal of contact number 6. Cut off the cable terminal and isolate the wire end with a heat shrink tubing because this wire will not be reconnected.

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2.8

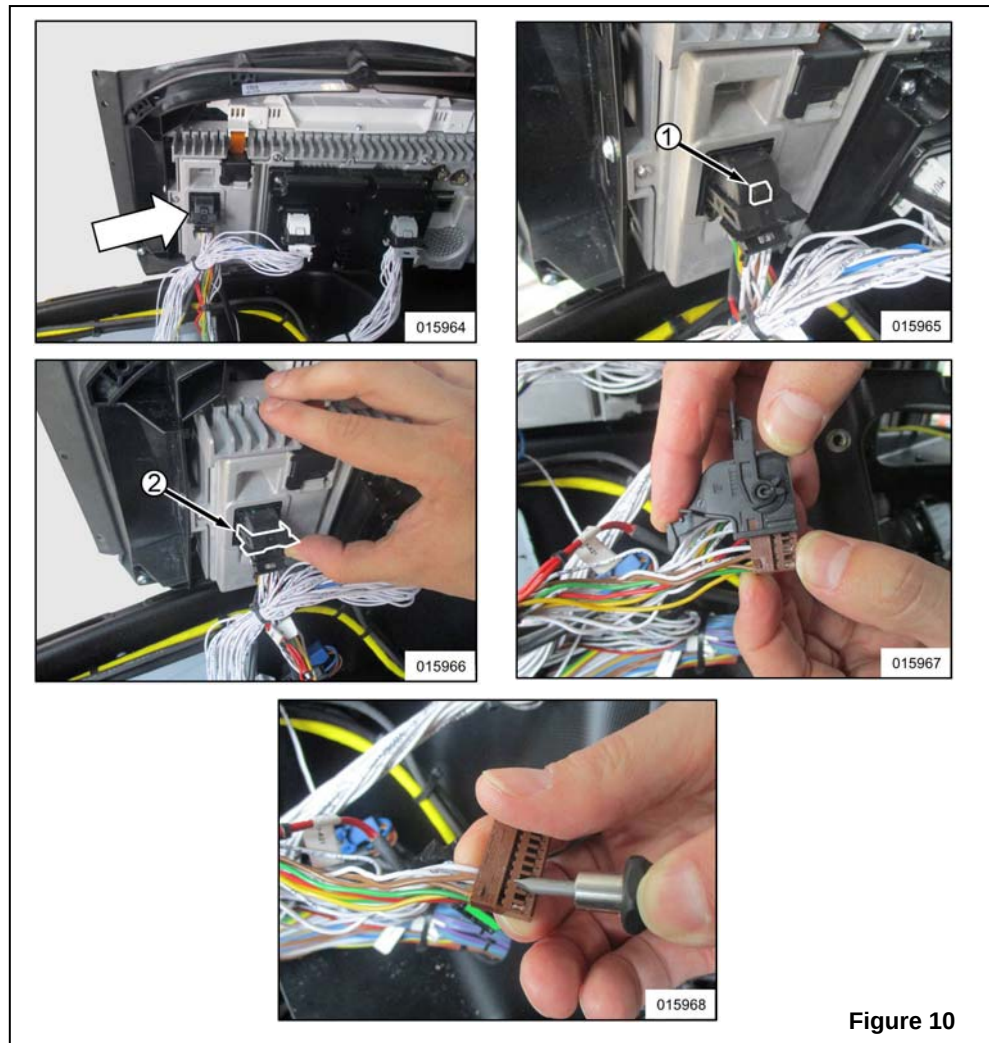
NOTE: The indicated pink/yellow (Ro-GE) spare wire routes between the dashboard and junction box EKV.

Route the pink/yellow (Ro-GE) wire from the spare wire bundle to the connector socket of S068/S080. Strip back the wire and crimp female connector terminal 10616407 from the kit to this wire. Introduce the connector terminal into contact number 6 of switch S068/S080 connector socket.

2.9

Change instrument panel wiring as follows:

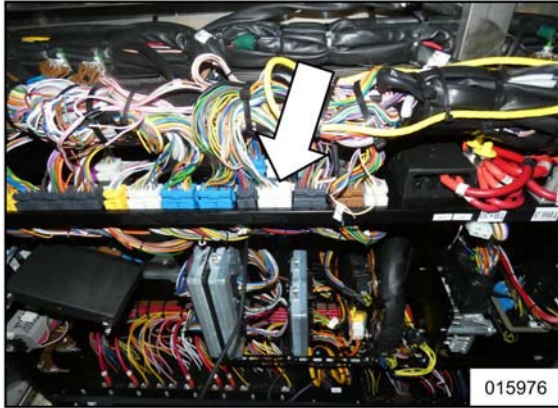
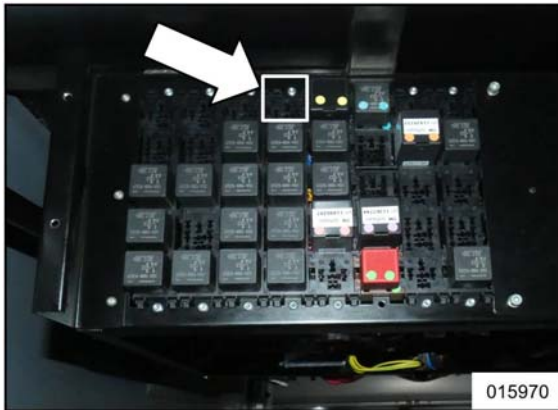
- a. Locate the black connector.
- b. Unlock the connector by pushing the tab (1) and turning the locking lever (2) of the housing upwards.
- c. Remove the connector.
- d. Slide the connector with the colored wires out of the housing.
- e. Remove the connector terminal of contact number 36 by using a small flat screwdriver
- f. Cut off the connector terminal and isolate the wire end with a heat shrink tubing because this wire will not be reconnected.



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2.10	<i>NOTE: The indicated pink-blue (Ro-B) spare wire routes between the dashboard and junction box EKV.</i> Route the pink/blue (Ro-B) wire from the spare wire bundle to the LHS of the instrument panel. Strip back the wire and crimp female connector terminal 11561908 from the kit to this wire. Introduce the connector terminal into contact number 36 of the connector socket.
2.11	Re-connect the connector socket to the instrument panel.

STEP 3 IN DETAIL: To modify junction box EKV

Step	Action
3.1	Locate the white 18-pin connector 113 and disconnect.  Figure 11
3.2	Install relay 660752042 from the kit on the free location near relay RL511.2. Label the relay as RL511.3.  Figure 12: Free location near RL511.2

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3.3	Route the pink/blue (Ro-B) wire to connector 113. Strip back the wire and crimp female connector terminal 10988794 from the kit to this wire. Introduce the connector terminal into contact number 2 of the socket of connector 113.
3.4	Route the pink/yellow (Ro-GE) wire to connector 113. Strip back the wire and crimp female connector terminal 10988794 from the kit to this wire. Introduce the connector terminal into contact number 1 of the socket of connector 113.
3.5	At the plug of connector 113: - Remove the secondary locking device. - Take the red/yellow (R-GE) wire from the kit. - Introduce the male cable terminal of the red/yellow wire into contact number 1 of the connector plug. - Route the other end of the red/yellow wire to the new relay RL511.3 and introduce the connector terminal into contact "3" of the relay socket.
3.6	At the plug of connector 113: - Take the white/blue (W-B) wire from the kit. - Introduce the male cable terminal of the white/blue wire into contact number 2 of connector plug. - Route the other end of the white/blue wire to the new relay RL511.3 and introduce the connector terminal into contact "4" of the relay socket.
3.7	Reconnect connector 113.
3.8	At relay RL511.3: - Remove relay RL511.3 from its socket. - Take the green/red (GN-R) wire from the kit. - Introduce the single female connector terminal of the green/red wire into contact "5" of the relay socket. - Introduce a double female connector terminal of the green/red wire into contact "1" of the relay socket. - Route the remaining connector terminal of the green/red wire to diode block DB1. Figure 13: Location of diode block DB1. - Take the brown (BR) wire from the kit. - Introduce the female connector terminal of the brown wire into contact "2" of the socket of relay RL511.3. Connect the ring terminal of the brown wire to a ground stud in EKV. - Re-install relay RL511.3.

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3.9	At diode block DB1: - Remove diode block DB1 from its socket. - Introduce the connector terminal of the green/red into contact 5 of the diode block socket. - Take the red/green (R-GN) wire from the kit. - Introduce the female connector terminal into contact “4” of the diode block socket. - Route the other end of the red/green wire to connector socket E of multiplex node 3. - Re-install diode block DB1.
3.10	At connector E of multiplex node 3: - Unlock connector E and pull the connector socket out of the multiplex node. - Click the connector socket sides open. - Introduce the cable terminal of the red/green electric wire into contact number 6 of the connector socket E. - Reassemble the connector socket and reinstall it into the node.
3.11	Re-install the instrument panel and dash panels holding the switches in reverse order of removal. Secure hand-tight in place using the screws covered during removal.

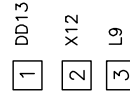
DISCLAIMER:

The procedures contained herein are not exclusive. Van Hool cannot possibly know, evaluate, or advise the transportation industry of all conceivable ways in which a procedure may be undertaken or of the possible consequences of each such procedure. Other procedures may be as good, or better, depending upon the particular circumstances involved.

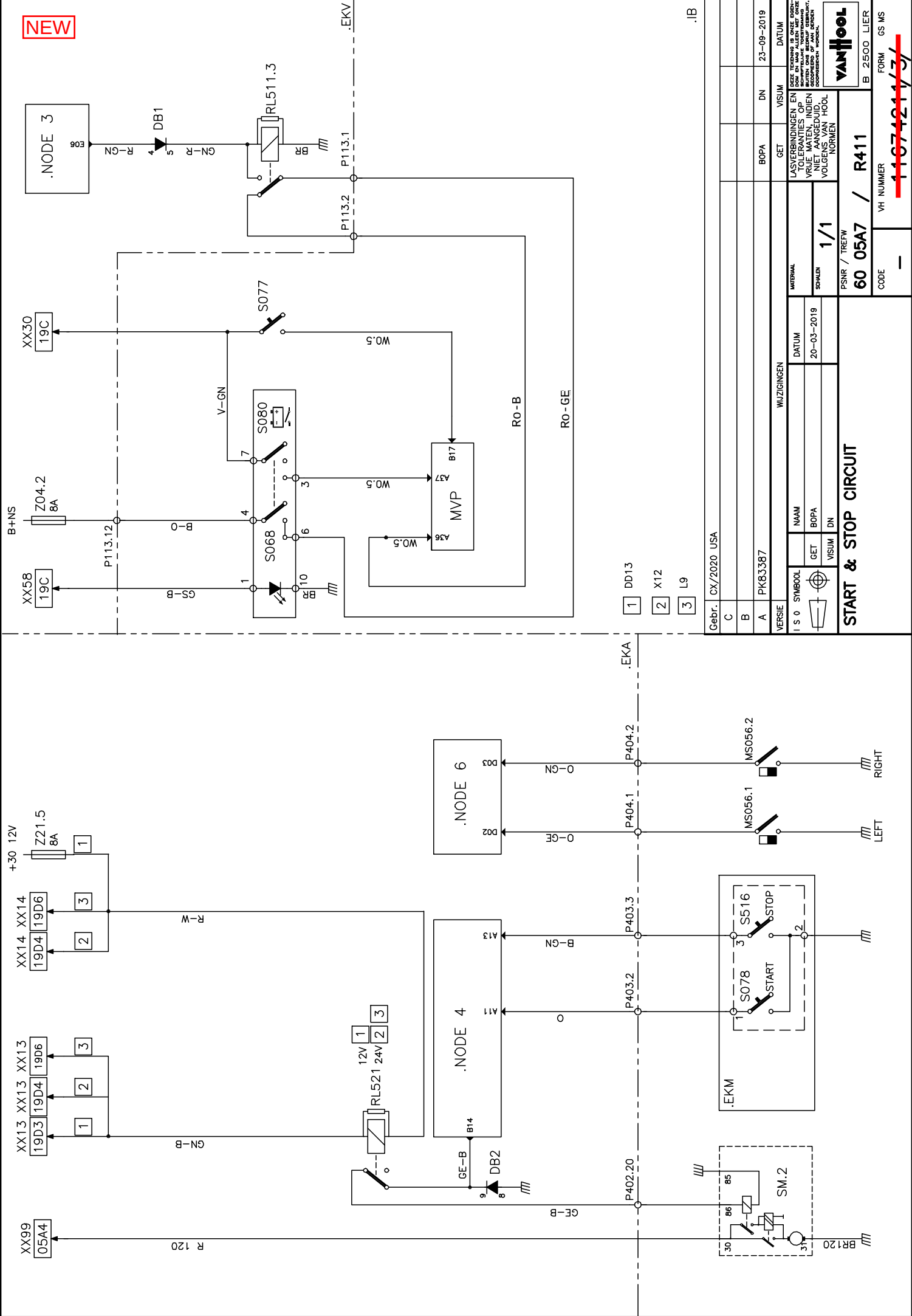
Each carrier who uses the procedures herein must first satisfy itself thoroughly that neither the safety of its employees or agents, nor the safety or usefulness of any products, will be jeopardized by any procedure selected.

VAN HOOL CUSTOMER PORTAL:

Consult the customer portal regularly for the latest service documentation. In addition to the maintenance manual, you will also find the operating manual and the spare parts catalogue of your vehicle on the customer portal. The customer portal is accessible through www.vanhool.be, and only with a code (password) from Van Hool. If you do not have a password yet, request it by using the link on the Van Hool website.



Gebr.	CX/2020 USA
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NEW

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- 2 X12
- 3 L9

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C							
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A	PK83387						
VERSIE		WUJZINGEN					
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