QUALITIES THAT MAKE THE DIFFERENCE

VAN HOOL

Service Bulletin No. 1073

COACH MODEL	**:** All coaches equipped with a factory-fitted lift
BULLETIN TYPE	**:** Product improvement
MANUAL & SECTION	**:** Operator's Guide Book : Section 2 - Operating instructions Spare Parts Manual : Section 7830 - Dashboard
DATE	**:** January 31st, 2001
SUBJECT	**:** Introduction of an accessory part advanced lift interlock system
TERMS & CONDITIONS	**:** Parts may be purchased from your nearest International Coach Parts Inc. dealer. Note that no claims will be accepted with reference to this Bulletin.

DESCRIPTION:

Van Hool have cut into production an advanced lift-interlock system as a standard feature on their new lift-equipped models (see applicable VIN numbers below).

The new system has been designed as a safety enhancement. It represents a further development of the vehicle's automatic basic safety system, which keeps service brakes actuated, when the lift bay door is open, thus preventing the driver from driving off with the lift doors not properly closed.

The asset of the new system is that the driver must make a positive effort to engage/disengage the lift operating system. He must first actuate a parking brake controlled switch with telltale bulb on the instrument panel. Otherwise the lift cannot be operated, or the coach cannot be moved.

We are pleased to announce that Van Hool have developed an after-market accessory kit with the same function for those Van Hool owners who may want to offer this added comfort feature to their drivers.

The interlock system is available as a kit under a single parts number. It comes complete with all necessary hardware and installation instructions and can be fitted by a trained electrician with standard hand tools. The time required for the installation is approximately 60 minutes.

As a reference, fitting and operating instructions for T2100 Series coaches have been included in this Bulletin.

Service Bulletins are issued to supplement or supersede information in the Van Hool manuals. Service Bulletin number, date and subject on the register at the end of the relevant chapter(s). File Service Bulletin separately for future reference.

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APPLICATION :

The lift interlock system is a standard option on vehicles equipped with factory-fitted lifts and with VIN numbers equal to and greater than :

Coach	Model	VIN cut-in
Touring	T2145 w/ Cummins engine	44132
	T2145 w/ Detroit Diesel engine	43997
Commuter	C2045 w/ Cummins engine	45041
	C2045 w/ Detroit Diesel engine	45533

PARTS INFORMATION :

Order kit # VH 10726306 "Advanced lift interlock system" that includes the following parts :

Part description	Qty.	Marking
Change over relay	1	R201.210
Push-button switch	1	4570-06
Telltale bulb	1	24V 3628-01
Green lens	3	n/a
Standard relay	1	24V 0 332 209 206
Automotive electric wire, 14AWG	3 ft	yellow/red
Decal	1	Lift power

FITTING INSTRUCTIONS :

1. General :

- This job requires extensive knowledge of automotive electricity and should therefore be executed by an experienced automotive electrician.
- The fitting instructions below are applicable to T2100 units only. Customers wishing to retrofit T-800 and T-900 Series coaches, may order tailor-made wiring diagrams with their conversion kit. Please state VIN, when ordering.
- The Following schematics have been included in this Bulletin:
  - wiring diagram of the original T2100 door brake circuit (VH 10663324).
  - wiring diagram of the T2100 door brake circuit with the new interlock system (VH 10700572) installed.
  - wiring diagram of a KOS lift installation (VH 10654299).
- Stewart and Stevenson (S&S) lift circuits equipped with a splitter box do not require the modification shown on wiring diagram VH 10654299.
  S&S lift circuits without splitter box should be modified as per KOS lift diagram.

- For more information refer to the Electrical Wiring Diagram Booklet that comes with the coach.

2. Cautions and basic safety rules:

- Park the coach on a level surface, apply the parking brake, shut down the engine, and install wheel chocks.
- Switch off all systems and turn off the battery master switch.
- Observe safe shop practices at all times.
- Read the entire procedure before beginning to work.

3. To install advanced lift interlock system VH 10726306 :

1. In the driver's compartment, on the switch panel to the right of the central instrument cluster, locate two free slots on the upper row of switches. Install the push-button switch in one of the slots. Install the telltale bulb next to it (see: Sxx on door wiring diagram). Label switch and bulb with the "Lift Power" decal.
   Figure 1 shows the final stage of switch and telltale bulb installation.

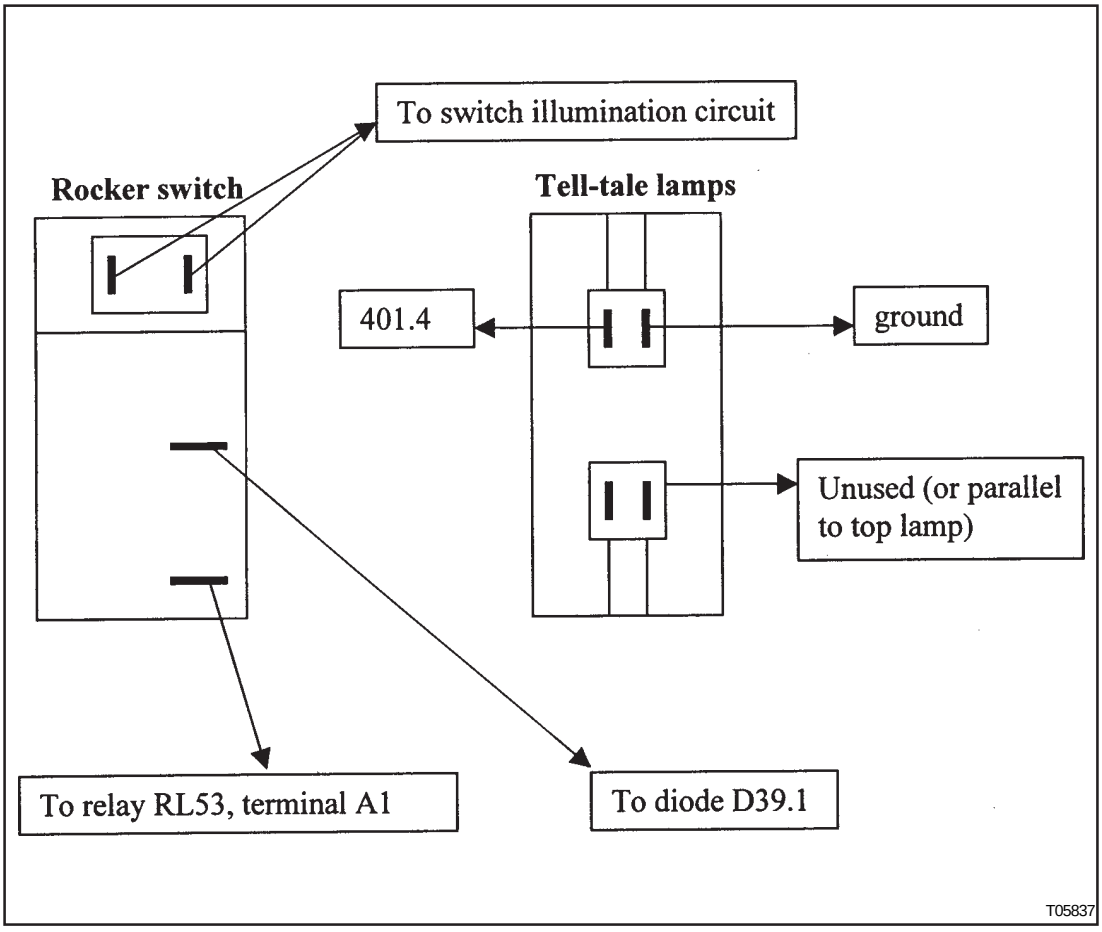

Figure 1 : Lift power-switch and telltale bulb hook up

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2. In the main junction box, install the change over relay in a free area (see RL53N on door wiring diagram).
   Figure 2 shows the final stage of the change over relay installation.

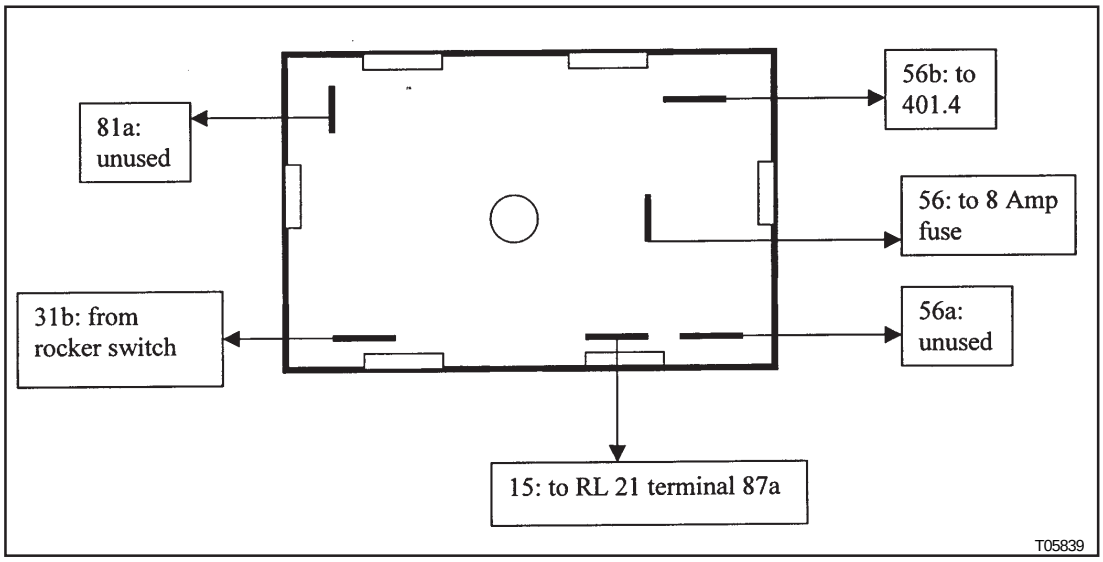


Figure 2 : Change over relay hook up

3. Install the standard relay in a free slot of the relay rack (see: RLY on lift wiring diagram).
   Figure 3 shows the final stage of the relay installation.

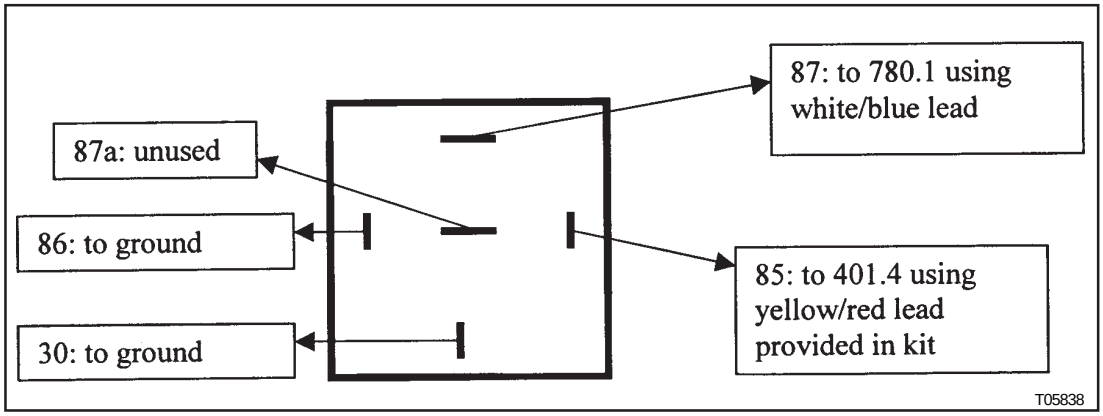


Figure 3: Relay hook up

4. On the circuit breaker rack, locate a free circuit breaker holder connected to a +30 source (e.g. next to circuit breaker Z029). Install an 8 Amp circuit breaker (see: Zxxx on door wiring diagram).

5. Locate relay RL53 on the relay rack and remove it from its relay holder. Discard relay RL53.

6. Remove the yellow-red wire (GE-R) from the relay holder of relay RL53. Connect this wire to terminal 56b of change over relay RL53N using a suitable extension wire.

7. Locate relay RL21 on the relay rack.

8. Connect vacant terminal 87a of relay RL21 to terminal 15 of change over relay RL53N using a suitable extension wire.

9. Connect the output terminal of circuit breaker Zxxx to terminal 56 of change over relay RL53N.

10. Connect terminal 31b of change over relay RL53N to the lower terminal of push button switch Sxx on the switch panel in the driver's compartment. In most cases this can be achieved through terminal 6 of connector P148 (P148.6).

11. Connect the upper terminal of push-button switch Sxx on the switch panel in the driver's compartment to the anode (+ terminal) of diode D39.1 (ground, if parking brake on), which is located in the main junction box. In most cases this can be achieved through terminal 5 of connector P148 (P148.5).

12. Connect one terminal of the telltale bulb on the switch panel in the driver's compartment to a suitable ground.

13. Connect the other terminal of the telltale bulb to terminal 56b of change over relay RL53N. In most cases this can be achieved through terminal 7 of connector P148 (P148.7).

14. In the main junction box, undo the white/blue wire connected to terminal 1 of connector P780 (P780.1).

15. Connect terminal 86 and 30 of relay RLY to a suitable ground.

16. Connect terminal 87 of relay RLY to terminal 1 of connector P780 (P780.1).

17. Connect terminal 85 of relay RLY to terminal 56b of change over relay RL53N.

18. This ends the installation procedure of the advanced lift interlock system VH 10726306

19. Check lift operation referring to the operating instructions

OPERATING INSTRUCTIONS :

1. To unlock the lift system:

1. Apply the parking brake.

2. Press the "LIFT POWER" switch on the instrument panel once. The switch is now in the "ON" position. The yellow light next to the switch will illuminate, indicating that the door brake is activated and that the lift system is unlocked.

3. The lift can be deployed.

2. <u>To lock the lift system</u> :

1. Stow the lift carefully.

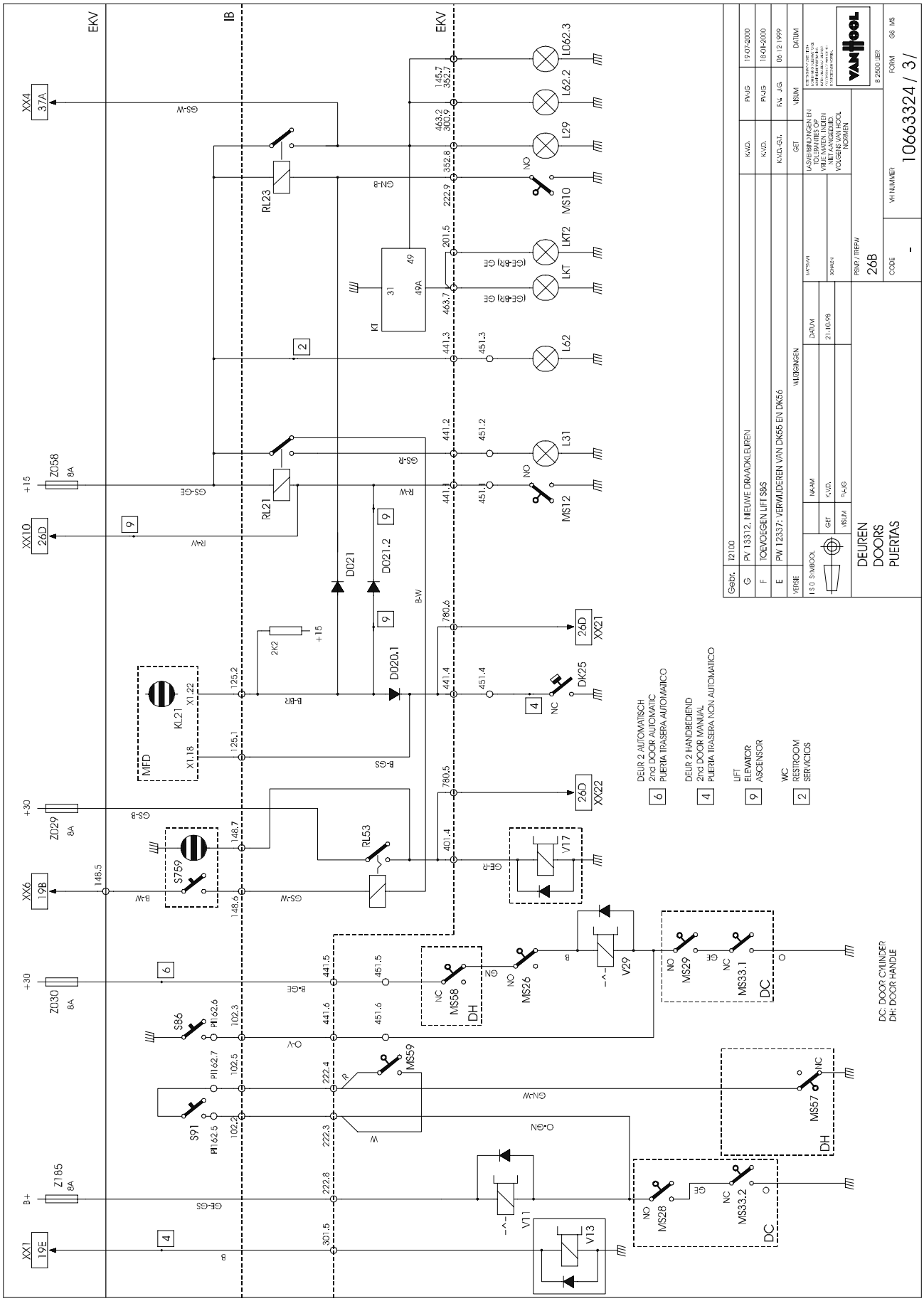
2. Close the lift doors.

3. With the parking brake still applied, press the "LIFT POWER" switch on the instrument panel once. The yellow light next to the switch will go out.

4. The door brake is now released and the lift system is locked again. The lift cannot be deployed any more.

5. This ends the operating instructions to unlock/lock the lift system.

NOTE
The "LIFT POWER" switch cannot be switched ON or OFF: *1. With the parking brake released.* *2. With the lift not properly stowed.* *3. With the lift doors open.* *The coach cannot be moved:* *1. With the "LIFT POWER" switch in the ON position.* *2. With the lift not properly stowed.* *3. With the lift doors open.*



Wiring diagram of the original T2100 brake circuit

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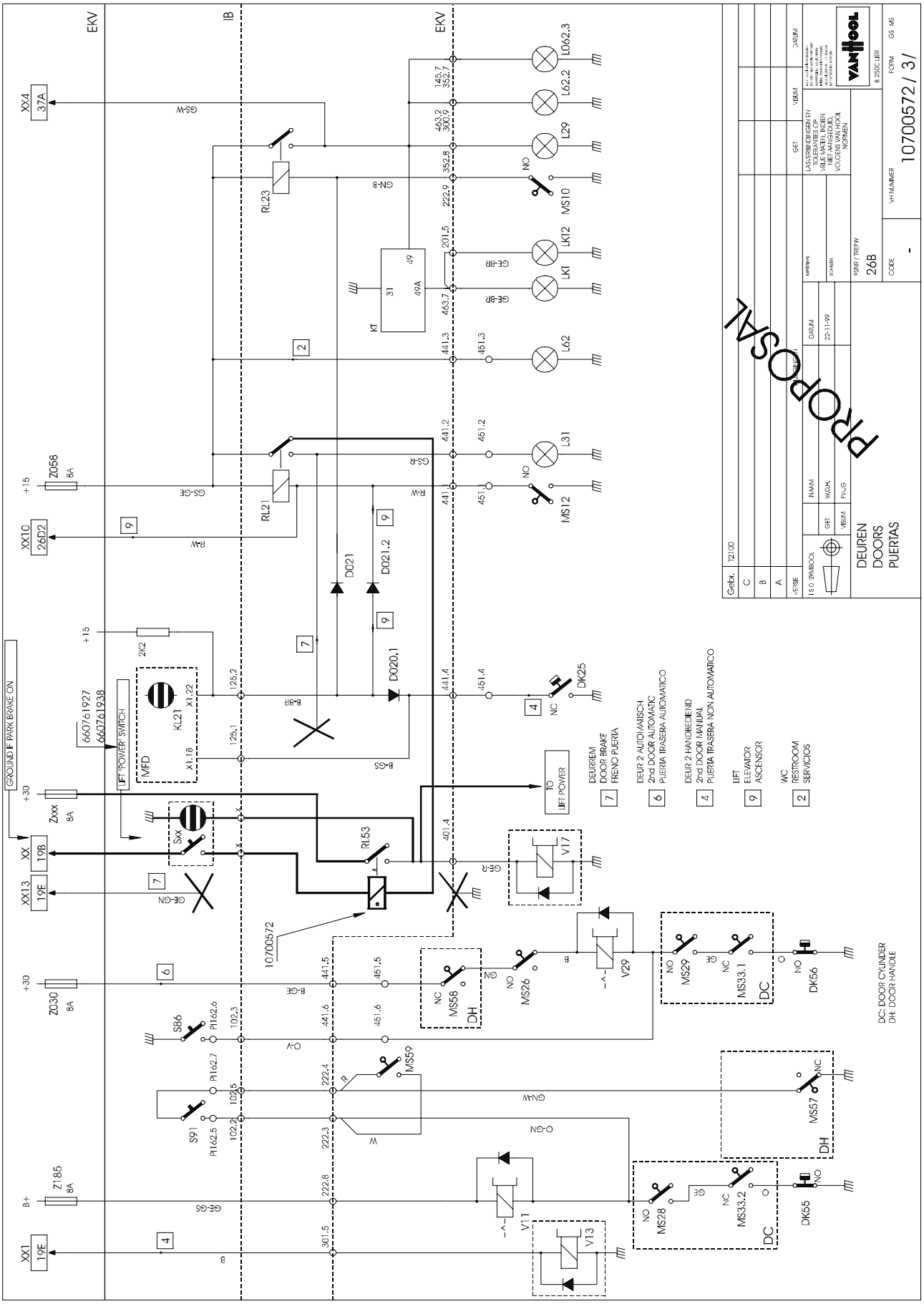
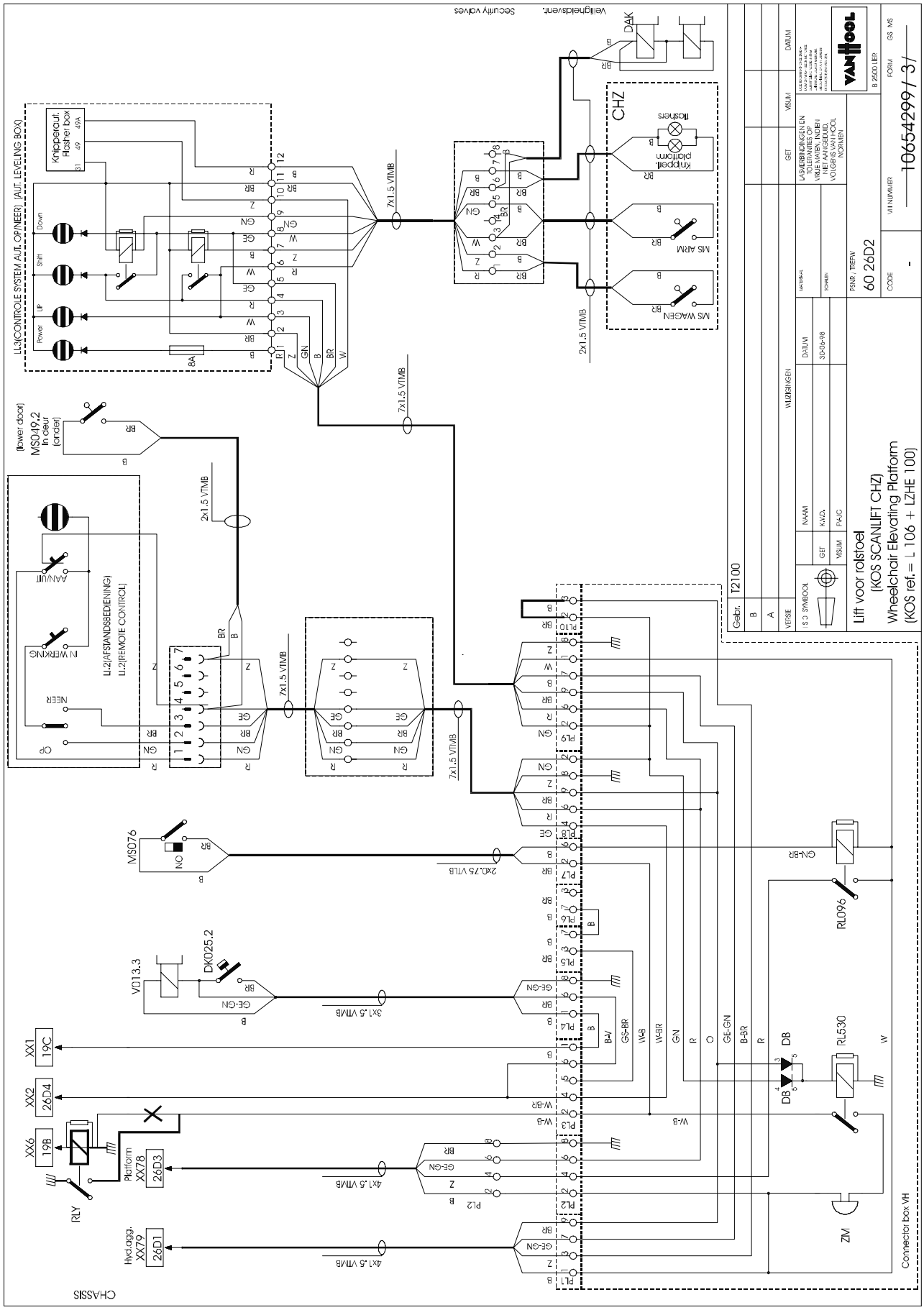


Wiring diagram of T2100 door brake circuit with advanced interlock system installed



Wiring diagram of T2100 KOS lift installation

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