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| ADDRESSEES | : ABC Customer Care and Parts Source Owners and operators of coaches listed under "Application" |
| VEHICLE MODEL | : CX45 |
| SYSTEM/SUBSYSTEM | : 10.66 Body and accessories – Interior lighting equipment |
| BULLETIN TYPE | : Product Improvement |
| DATE | : December 01st, 2015 |
| SUBJECT | : Stepwell lighting |
| TERMS & CONDITIONS | : Normal claiming conditions apply for failures which occur during the standard warranty period. |

APPLICATION:

As from following unit, Van Hool has made a production change in order to increase reliability of the stepwell lighting.

| Model | VIN |
|-------|-------|
| CX45 | 48244 |

DESCRIPTION:

1. If on units before 48244 one of the lighting strips fails, Van Hool recommends changing all five step nose lighting strips to improve the service life of the system.
2. Customers who want to upgrade their coaches to the latest specification may purchase the parts and install them as described in this Service Bulletin.

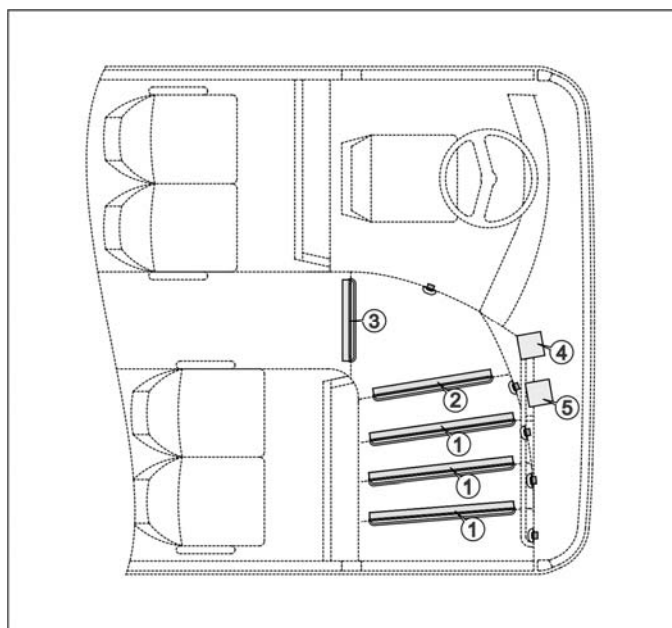


Figure 1: New installation (with controllers in junction box)

1. Step nose lighting strip, 29 inch long
2. Step nose lighting strip, 24 inch long
3. Step nose lighting strip, 16.5 inch long
4. Controller RGB
5. Controller POWERLED

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MATERIAL (for one coach):

| VH reference | Description | Number in figure 1 | Qty. |
|----------------|--|--------------------|------|
| 11375269 | Step nose lighting strip, 740 mm (29 inch) long | 1 | 3 |
| 11375270 | Step nose lighting strip, 610 mm (24 inch) long | 2 | 1 |
| 11375271 | Step nose lighting strip, 420mm (16.5 inch) long | 3 | 1 |
| 10988784 | Connector, receptacle housing, 6-pin, blue | - | 2 |
| 10988783 | Connector, receptacle housing, 12-pin, green | - | 1 |
| 11134561 | Connector, receptacle housing, 21-pin, brown | - | 1 |
| 10988794 | Cable terminal, female (0,5-1 mm ²) | - | 30 |
| 11382452 | Controller, RGB (6-pin/21-pin sockets) | 4 | 1 |
| 11382450 | Controller, POWERLED (6-pin/12-pin sockets) | 5 | 1 |
| 11357365 | Cleaner | | 1 |
| 11357370-03500 | Adhesive tape | - | 1 |

- Material may be purchased through regular channels.
- Parts/Waste disposal: discard old material according to applicable environmental regulations.

JOB REQUIREMENTS:**1. Technician's expertise and job supporting information:**

- This job has to be carried out by an experienced automotive electrician.

2. Special tools, equipment or services:

- This job requires the use of an appropriate terminal crimping tool and soldering equipment.

PROCEDURE:**1. Preparations:**

- Park the coach safely, apply the parking brake, stop the engine, switch off all systems and turn off the battery master switch.
- Install a "DO NOT OPERATE" warning message on the instrument panel.
- Read the entire procedure before beginning to work.

**WARNING!**

Observe safe shop practices at all times.

2. To remove old step nose lighting strips:

- 1) In the step well, remove the trim panel to have access to the EKF junction box.
- 2) Locate at the bottom of the EKF junction box compartment the two white 2-pin connectors in the harness to the step nose lighting strips.

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- 3) Cut the nylon cable tie securing the connectors.
- 4) Cut-off the wires just near the connectors.
- 5) Remove the step nose lighting strips fixing screws and carefully pull loose the with adhesive tape mounted strips.
- 6) Cut-off the wires of the extension cables near the soldering joints under the step nose lighting strip.

3. To install new step nose lighting strips:

- 1) Thoroughly clean the step nose using 11357365 cleaner.
- 2) Solder the wires of the new lighting strip to the extension cable as indicated in the upper left corner of figure 3. Provide a durable and watertight connection.
- 3) Install the new step nose lighting strip with adhesive tape and install the attaching screws.
- 4) Connect the wires of the extension cables to the connectors as indicated in figure 3. Connect the connectors to the POWERLED and RGB controllers. Secure the controllers to the bottom of the EKF junction box compartment with two screws (refer to Figure 2).

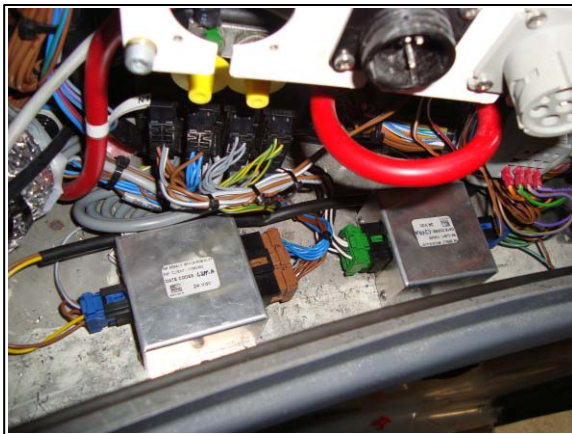


Figure 2: Location of controllers in EKF junction box

- 5) Verify the good working of the lighting system.
- 6) Replace the dashboard trim panel.

Procedure complete.

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.

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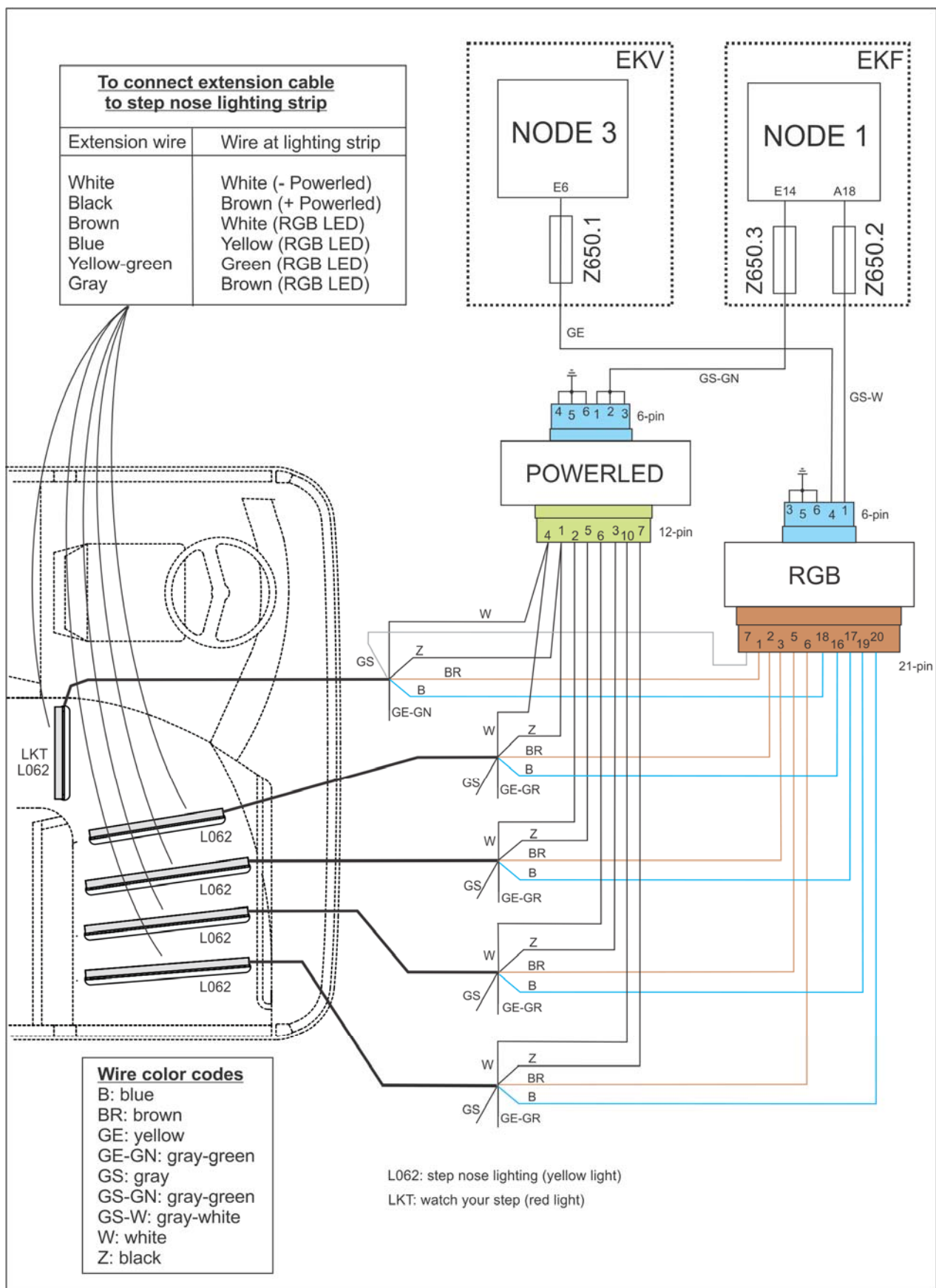


Figure 3: Wiring diagram of new installation

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INFORMATION HANDLING:

Important supplements to and modifications of the technical information not yet included in the Van Hool manuals are communicated by means of Service Bulletins.

File the Service Bulletins at the back of your manual, in numerical order.

To make sure that you will be reminded of the Bulletins that have appeared in the meantime while paging the manual, mark the pages concerned by hand with the Service Bulletin number.

VAN HOOL CUSTOMER PORTAL:

Consult the Van Hool customer portal for the latest service documentation. Beside 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, under menu point "Service" 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.