SERVICE BULLETIN
SB2462

ADDRESSEES	:	Owners and operators ABC Customer Care and Parts Source
VEHICLE MODEL	:	CX45/CX35 vehicles with electric cooling fan drive
MANUAL CHAPTER	:	02.22 Engine intake system 02.34 Engine cooling system
BULLETIN TYPE	:	**Service information**
DATE	:	September 16th, 2024
SUBJECT	:	**Maintenance instructions regarding engine cooling system/engine intake system**
CONDITIONS	:	This service bulletin does not entitle to any reimbursement.

This service bulletin gives you an overview of the maintenance instructions regarding the engine cooling system/engine intake system on vehicles with an electric cooling fan drive.

SAFETY SYSTEM PREVENTING COOLING FANS FROM RUNNING WITH ACCESS DOOR OPEN

CAUTION!

Despite the presence of a safety system, it is still your responsibility to observe the necessary precautions to avoid personal injury should the safety system fail.

The electric cooling fans are mounted at the inside of the access doors of the radiator and charge-air cooler compartment. To prevent personal injury due to running fans, a safety system with proximity switches is installed to prevent the cooling fans from running when the access door is open or not properly closed.

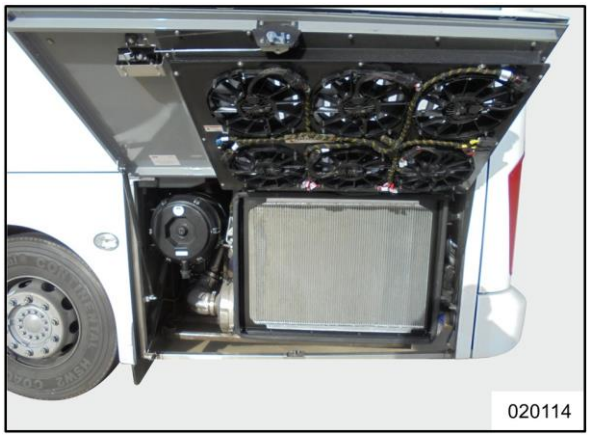

Figure 1: Radiator compartment (CX45)

Figure 2: Charge-air cooler compartment (at RHS of vehicle) (CX45)

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ENGINE RUNNING WITH ACCESS DOORS OPEN

To prevent possible overheating of the engine it is important to follow the guideline below:

CAUTION!

Do not run the engine for more than 5 minutes when one or both access doors (containing the electric cooling fans) are open or not properly closed.

MAIN POWER CABLE CONNECTIONS OF ELECTRIC COOLING FAN DRIVE

Figure 3: Radiator fan drive, main power cable connections at radiator side

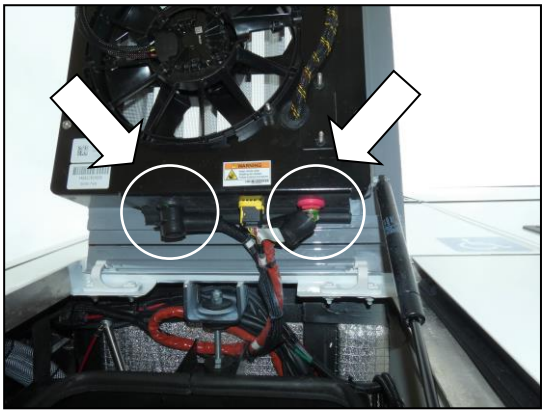

Figure 4: Charge-air cooler fan drive, main power cable connections at charge-air cooler side

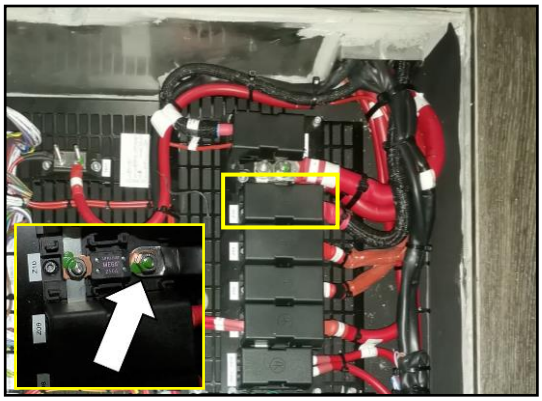

Figure 5: Radiator fan drive, main power cable connection at fuse side (fuse Z10 in junction box EKA)

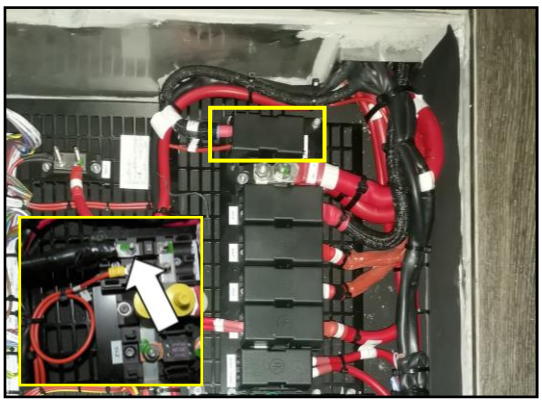

Figure 6: Charge-air cooler fan drive, main power cable connection at fuse side (fuse Z04 in junction box EKA)

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OVERVIEW OF MAINTENANCE INSTRUCTIONS

Action	Interval
Engine cooling: check coolant level	Daily
Engine intake: check air intake ducts for security, damage and leakage (visually)	
Engine cooling and engine intake: clean exterior of radiator and charge-air cooler	Every 25 000 miles
Engine cooling: check coolant hoses for signs of deterioration (change, if necessary)	Every 25 000 miles
Engine cooling: change coolant filter	Every 150 000 miles
Engine cooling: change filler and pressure relief caps of coolant tank	Every 175 000 miles
Engine cooling: change coolant of engine cooling and heating circuit	Every 400 000 miles (at least every 4 years)
Engine cooling: check anti-freeze concentration of coolant	Yearly (beginning of cold season)
Engine cooling and engine intake, electric fan drive: inspect the main positive and negative power cables for wear or frayed insulation. Ensure that the protection grommets are in place and in good condition.	Yearly
Engine cooling and engine intake, electric fan drive: check the main power cable connections for tightness (figures 3, 4, 5, 6). • **Radiator main power cables** Tightening torque at fan drive side: 20 ± 2 Nm (14 ± 1 ft.lbf) Tightening torque at fuse side: 20 Nm (14 ft.lbf) • **Charge-air cooler main power cables** Tightening torque at fan drive side: 20 ± 2 Nm (14 ± 1 ft.lbf) Tightening torque at fuse side: 4;5 Nm (3 ft.lbf)	Yearly
Engine cooling and engine intake, electric fan drive: inspect the condition of the inner and outer nylon bushings on the main power cable pass-through studs (figures 3, 4, 5, 6).	Yearly
Engine cooling and engine intake, electric fan drive: inspect main harness and connections to the system controller and all fans	Yearly
Engine cooling and engine intake, electric fan drive: inspect fuses and fuse holders	Yearly
Engine cooling and engine intake, electric fan drive: inspect supporting structure for any damage or loose mounting hardware	Yearly

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TO CLEAN EXTERIOR OF RADIATOR AND CHARGE-AIR COOLER

NOTE: The multiplex system controller has been programmed with a function which now and then will reverse the rotating direction of the cooling fans to remove as much dust as possible from the heat exchangers. The reverse running frequency depends on the operating conditions of the vehicle.

Check at regular intervals the cleanliness of the passages between the fins of the heat exchangers. Dirt obstructing the air passage reduces cooling capacity. This soon causes power loss of the engine and, in case of heavy contamination, also overheating (potentially resulting in severe engine damage).

A. NATURE OF DIRT

Nature of dirt	Cleaning agent
Dry dust or sand	Compressed air (approximately 8 bar pressure)
Tenacious dirt	Water + cleaning agent

B. CLEANING AGENT

NOTE: Hard water can reduce to half the effectiveness of cleaning agents.

NOTE: After washing, rinse thoroughly with soft water. Soap residues may attack lacquer and aluminium.

Allowed	Not allowed
Neutral cleaning agents that are also appropriate for aluminium, in a concentration of 1 to 5%. pH value of a 1% solution: between 6,5 and 8.	• "Cold cleaners" based on hydrocarbons (cleaning grade spirits, white spirit, paraffin) and other solvents containing cleaning agents added to water. • Acidic or strongly alkaline agents.

NOTE: Van Hool recommend the use of Bonderite C-MC 12 (former name P3-Grato 12) by Henkel. Mix a quantity of cleaner with a similar volume of water. Follow the instructions on the packaging.

WARNING!

To avoid health problems, read the safety instructions and instructions for use supplied by the manufacturer of the cleaning agent.

C. PREPARATIONS

- Make sure that the parking brake is applied and turn off the engine.
- Switch off all systems and turn off the battery isolation switch on the dashboard.
- Open the mechanical battery isolation switch.
- **Read the entire procedure before starting the operations.**

WARNING!

Observe safe shop practices at all times.

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D. PROCEDURE:

WARNING!

Wear a dust mask, when cleaning with compressed air.

Step	Action
1	Clean the mesh screen located over the body opening through which cooling air is drawn. The mesh screen retains the larger dirt particles drawn by the cooling fans. Depending on dirt nature, clean the mesh screen with a vacuum cleaner, compressed-air or a jet of water hose or a steam cleaner.
2	Using an air gun: blow away all leaves, paper and other debris.
3	 **CAUTION!** **High-pressure washing of the heat exchangers is not allowed!** **From inside to outside:** clean the heat exchangers with compressed-air or a jet of water depending on dirt nature and degree. High-pressure washing is not allowed!!

HELP DESK

If there are any questions, please call ABC Customer Care & Parts Source toll-free for guidance on 1-877-427-7278. Listen for the prompts for warranty and select that option.

DISCLAIMER:

The procedures contained herein are not exclusive. VDL 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.

INFORMATION HANDLING:

Important additions and modifications regarding technical information not yet included in the manual will be communicated through Service Bulletins.

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 VDL Van Hool. If you do not have a password yet, request it by using the above link.