



SERVICE BULLETIN No.1193

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COACH MODEL	: T2100 and C2000 Series
BULLETIN TYPE	: Product Improvement
SECTION	: Section 10 - HVAC
DATE	: September 4, 2006
SUBJECT	: Evaporator blower speed controller
TERMS & CONDITIONS	: No claims will be accepted with reference to this Bulletin.

APPLICATION:

All T and C model coaches.

DESCRIPTION:

Ref.: Carrier/Sütrak Technical Bulletin #GB 06-001 bis (see attachment).

- Carrier/Sütrak have revised the speed controller of the evaporator blowers used in the AC186 (T2100) and AC187 (C2045) systems (see Figures 1 and 2).

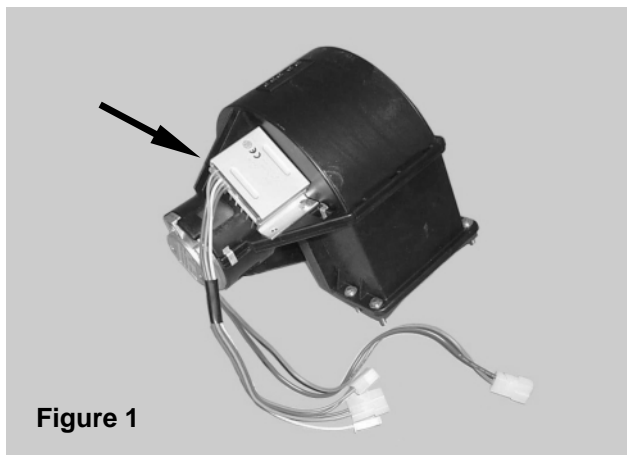


Figure 1

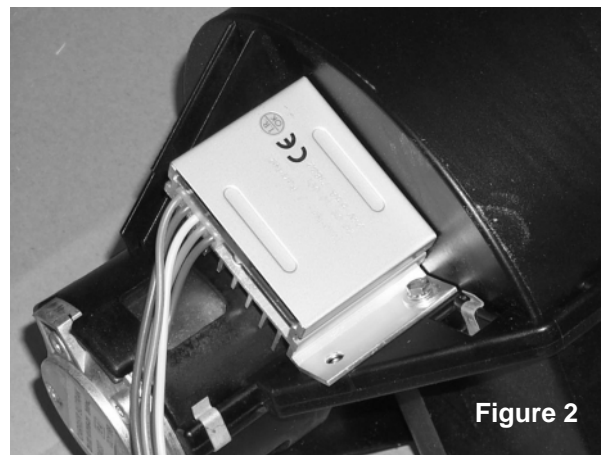


Figure 2

Description continued on next page.

Service personnel: please read, initial and circulate.

Service Manager	Parts Manager	Warranty Administrator	Workshop Foreman	Service Technician

Continued from page 1.

- The connector attaching the speed controller wiring to the printed circuit board has been deleted. The wires are now soldered directly onto the printed circuit board, protected by shrink tubing, resin-cast and secured by a cable tie.
- New speed controllers have been cut into production as from following units:

Model	Engine	VIN
T2140	Cummins	40160 →
	Detroit Diesel	40622 →
T2145	Cummins	44331 →
	Detroit Diesel	44662 →
	Caterpillar	44833 →
C2045	Cummins	46078 →
	Detroit Diesel	46723 →
	Caterpillar	47294 →

- The procedure in this Bulletin describes the steps required to replace the old speed controller by the new one in case of failure.

PARTS AND PRODUCTS:

Old parts

VH reference	Description	Qty.*
VH 632803235	Speed controller #26.09.10.001, evaporator blower	1

*Quantities per blower

New parts

VH reference	Description	Qty.*
VH 10996158	Speed controller, #26.09.10.006-00, evaporator blower	1

*Quantities per blower

- Old and new parts are interchangeable, but only the new will be offered for service replacement.
- Parts may be purchased from your nearest ABC Customer Care & Parts Source service center.
- Parts and products disposition: discard according to applicable environmental regulations.

PROCEDURE:

If you do not have the expertise to perform present procedure, do not hesitate to go to your nearest ABC Customer Care & Parts Source dealership.

1. General:

- This job should be executed by an experienced automotive electrician
- For more information refer to
 - the Electrical Wiring Diagram Booklet that comes with the coach
 - the Maintenance Manual
 - the Operator's Guide Book

2. Special tools, equipment or services:

- No special tools, equipment or services are required.

3. Preparations:

- Park the coach on a level surface with the front wheels straight. Apply the parking brake and shut down the engine.
- Switch off all systems and turn off the battery master switch.
- Put a "DO NOT OPERATE" tag on the instrument panel.
- Read the entire procedure before beginning to work.

CAUTION: Observe safe shop practices at all times.

4. To replace the evaporator blower speed controller (T2100):

The blowers are located on both sides of the heater/evaporator assembly in the parcel racks. Each blower has its own speed controller bolted to it (see Figure 2).

- 1) To open the panel giving access to the affected blower(s), undo and remove the panel mounting screws (see Figure 3). Slide the panel aside to release it from its retaining bracket. The blowers are now visible (see Figure 4).

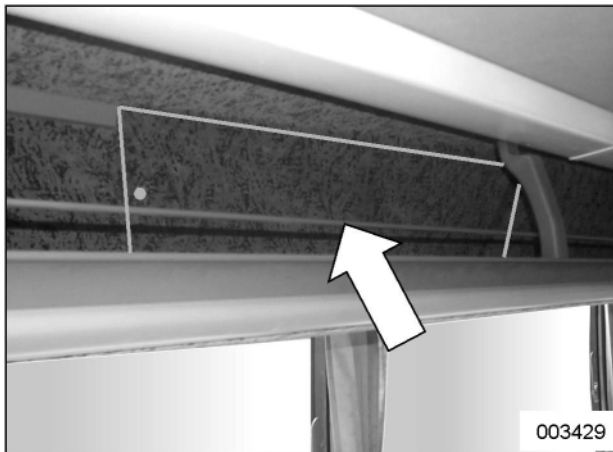


Figure 3: T2100 evaporator blower access door (left-hand)



Figure 4: T2100 evaporator blower bank (left-hand)

NOTE: Most of the blowers are readily accessible to replace the speed controller. If the controller is inaccessible, first remove the blower from the air duct by undoing the mounting bolts.

NOTE: Blowers are directional (left-hand and right-hand). Improper installation will impair efficiency.

- 2) Take note of the blower and speed controller wiring hook-up.
Undo the speed controller connectors.
- 3) Take note of the speed controller installation.
Undo and remove the fastener(s) securing the speed controller to the blower housing.
Recover the hardware.

NOTE: Parts may be obtained free of charge. In order to be eligible for a free assembly, the old part must be returned. Applicable to coaches under warranty only.

- 4) Install the new controller on the blower housing.
Tightening torque for the controller mounting hardware is 22 in.lbf (24 Nm).
- 5) Hook-up the controller and blower wiring to the coach wiring.
- 6) If applicable, reinstall the blower in its former location.
Tightening torque for the blower mounting hardware is 22 in.lbf (24 Nm).
- 7) Continue speed controller replacement on other blowers as required.
- 8) Close and secure the blower access panel(s).

5. **To replace the evaporator blower speed controller (C2045):**

The blowers are located behind the heater/evaporator assembly in the parcel racks. Each blower has its own speed controller bolted to it (see Figure 2).

- 1) Using a flat blade screwdriver, unlatch the door giving access to the affected blower(s) (see Figure 5). This may take a few counter-clockwise turns of the screwdriver.
Lower the door. The blowers are now visible (see Figure 6).

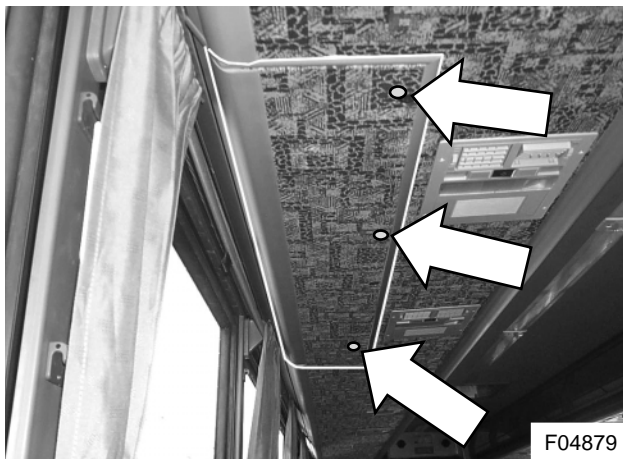


Figure 5: C2045 evaporator blower access door (left-hand parcel rack)



Figure 6: C2045 evaporator blower bank (left-hand parcel rack)

NOTE: On commuter coaches the controller is inaccessible without first removing the blower and shroud assembly from the blower bank in the air duct. Remove the affected blower and shroud assembly by undoing and removing the six M6 mounting bolts.

- 2) Take note of the blower and speed controller wiring hook-up.
Undo the speed controller connectors.
- 3) Take note of the speed controller installation.
Undo and remove the fastener(s) securing the speed controller to the blower housing.
Recover the hardware.

***NOTE:** Parts may be obtained free of charge. In order to be eligible for a free assembly, the old part must be returned. Applicable to coaches under warranty only.*

- 4) Install the new controller on the blower housing.
Tightening torque for the controller mounting hardware is 22 in.lbf (24 Nm).
- 5) Hook-up the controller and blower wiring to the coach wiring.
- 6) Reinstall the blower and shroud assembly in its former location.
Tightening torque for the M6 mounting bolts is 80 in.lbf (9 Nm).
- 7) Continue speed controller replacement as required.
- 8) Close and secure the blower access door.

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.

SERVICE INFORMATION:

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

ATTACHMENTS:

Carrier/Sütrak Technical Bulletin #GB 06-001 bis "Speed controller".

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Technical BULLETIN



Date: 1st March 2006
Distribution:
Subject : SPEED CONTROLLER

No.: GB 06-001 bis
Category: Product Information
Department: Customer Quality

Part number

26,09,10,001 speed controller

*Picture 1 – On the right the old speed controller - part # 26,09,10,001
On the left the new one - part # 26,09,10,006-00*



Description of product improvement

In isolated cases, due to an intermittent contact between the wiring connector pin and the speed controller socket, the speed controller wire terminal has shown signs of malfunctioning. This condition can produce improper speed controller operation.

In order to address the issue, the speed controller design has been improved. The connector of the harness cables on the PCB (printed circuit board) has been deleted. The wires are now soldered directly to the PCB; additionally they will be glued and fixed with a hose and a cable tie (see pictures).

New part number

The new part number is 26,09,10,006-00. The new part number is replacing the old one effective immediately for both production and spare parts. The old cable set available as a spare part (part number 63,52,02,002) will not be usable any more after the modification.

New parts availability and installation

During the warranty period of the vehicle, replacement parts for old speed controllers showing the above mentioned failure may be obtained Free of Charge on a one for one exchange basis.

Old and new parts are directly interchangeable, but only the new will be offered as service replacements.

Picture 2&3 – detail of the new speed controller - part # 26,09,10,006-00



Picture 4 – new speed controller - part # 26,09,10,006-00

