



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

NT 72/2 Eco TC / 65/2 Eco TC

1.667-151 / 1.667-141





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Vacuum cleaners NT 72/6 Eco TC / NT 65/2 Eco TC are high-powered wet and dry vacuum cleaners for professional use.

NT 72/2 Eco TC:

- Container in stainless steel
- 72 litre container volume for dry vacuuming
- 56 litre container volume for wet vacuuming
- 2 suction motors

NT 65/2 Eco TC:

- Container in plastic
- 65 litre container volume for dry vacuuming
- 50 litre container volume for wet vacuuming
- 2 suction motors

Filter and suction system

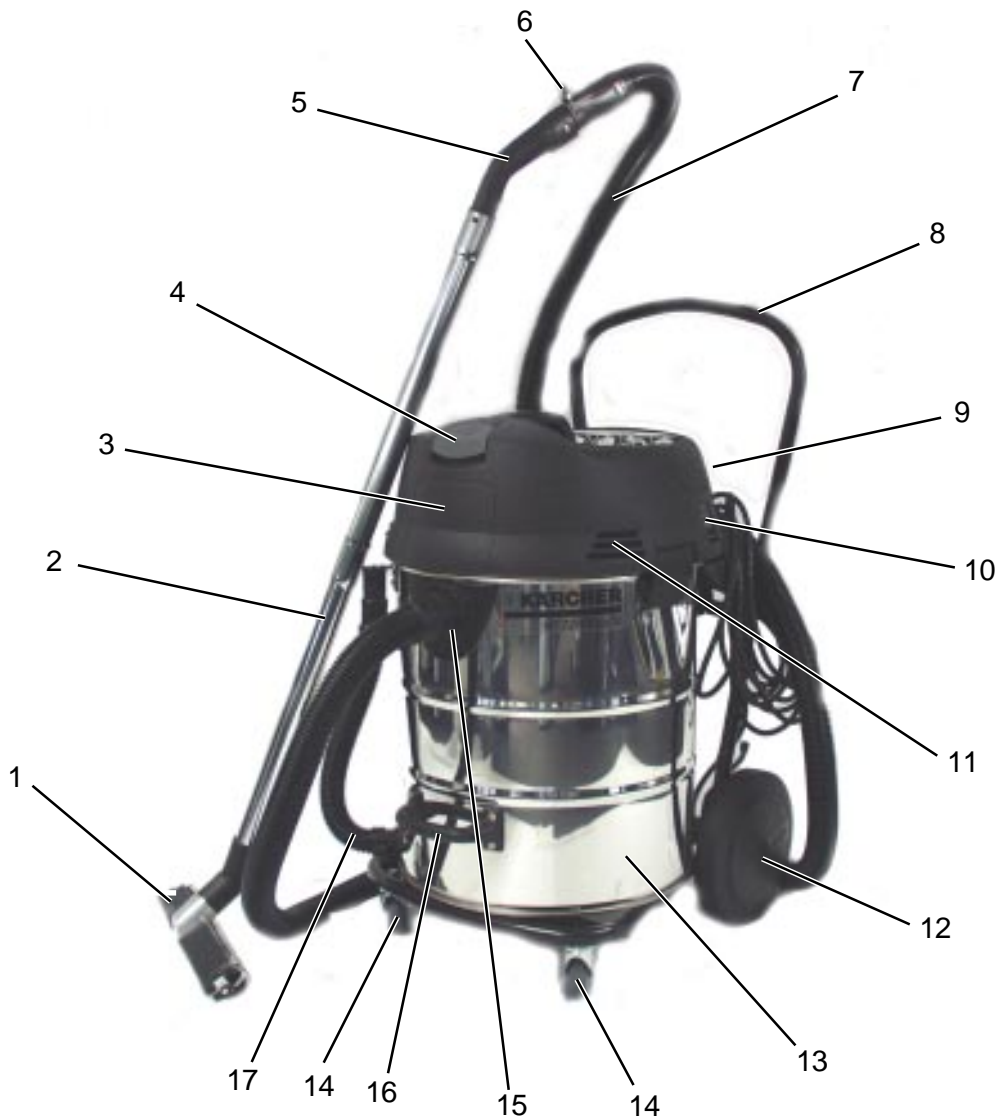
- Suction head with filter lid for easy removal of the flat pleated filter.
- Flat pleated filter (dust class M).
- Additional paper filter bag with sealable vacuum intake for dust-free removal.
- Suction hose connection with bayonet system.
- Oil-resistant drainage hose.
- Power filter clean function (PFC). When the lever in the handle is actuated, a pulsating air current is generated which cleans the flat pleated filter.
- Additional slide flap on the suction head for switching on and off the Power Filter Clean function.
- Level monitoring function when wet vacuuming by means of 2 electrodes. When the maximum filling level is reached, the suction motors are switched off.
- The NT 72/2 Eco TC is earthed in the device as far as the suction hose connection. An electrically conductive suction hose is optionally available.



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

View from the front of the NT 72/2 Eco TC



- | | |
|---|--------------------------------------|
| 1 Floor tool | 9 Slide, PFC ON/OFF |
| 2 Suction pipe | 10 Air discharge, suction air |
| 3 Suction head | 11 Air inlet, motor cooling air |
| 4 Unit switch | 12 Wheel, x2 |
| 5 Handle | 13 Dirt container |
| 6 Lever; activates the filter cleaning function (PFC) | 14 Swivel casters, x2, 1x with brake |
| 7 Suction hose | 15 Suction hose connection |
| 8 Push handle | 16 Container emptying handle |
| | 17 Waste water drainage hose |



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

View from the front of the NT 65/2 Eco TC



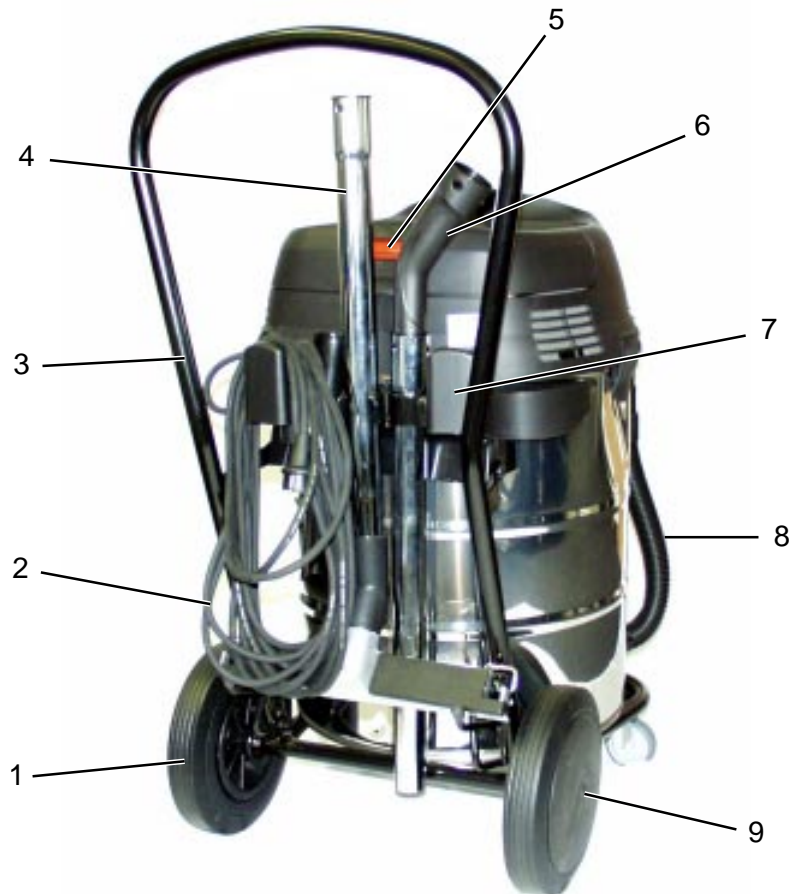
- | | |
|---|--------------------------------------|
| 1 Floor tool | 9 Slide, PFC ON/OFF |
| 2 Suction pipe | 10 Air discharge, suction air |
| 3 Suction head | 11 Air inlet, motor cooling air |
| 4 Unit switch | 12 Waste water drainage hose |
| 5 Handle | 13 Wheel, x2 |
| 6 Lever; activates the filter cleaning function (PFC) | 14 Container, plastic |
| 7 Suction hose | 15 Swivel casters, x2, 1x with brake |
| 8 Push handle | 16 Suction hose connection |
| | 17 Container emptying handle |



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

View from the back of the NT 72/2 Eco TC



- 1 Left-hand wheel
- 2 Mains cable
- 3 Push handle
- 4 Suction pipe
- 5 Slide PFC ON/OFF
- 6 Handle
- 7 Accessory and cable holder
- 8 Waste water drainage hose
- 9 Right-hand wheel



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

View from the back of the NT 65/2 Eco TC



- 1 Left-hand wheel
- 2 Waste water drainage hose
- 3 Mains cable
- 4 Push handle
- 5 Suction pipe
- 6 Slide PFC ON/OFF
- 7 Handle
- 8 Accessory and cable holder
- 9 Right-hand wheel



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

Suction head



Filter lid when opened

- 1 Filter lid
- 2 Air discharge, motor cooling air
- 3 Valve for automatic filter cleaning (PFC)
- 4 Flat pleated filter
- 5 Air intake, suction motors (rubber screen seal)



Suction head, view from below

- 6 Upper housing section seal
- 7 Level control electrodes
- 8 Antistatic contact plate (only with NT 72/2 Eco TC)
- 9 Flat pleated filter



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New Unit Information

International Service Information
January 23, 2003

Tilting device



After removing the upper section of the housing, the container (2) can be tilted for emptying.

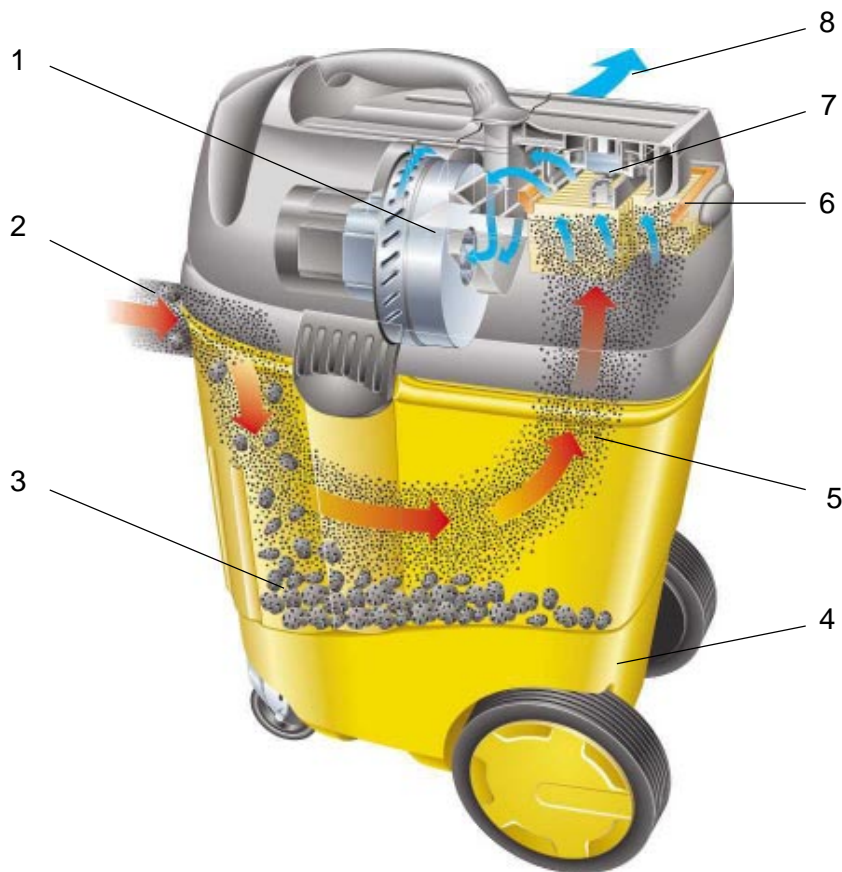
- 1 Tilting chassis
- 2 Container
- 3 Handle



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

Function: Suction system



- 1 Suction motor
- 2 Air intake, service air
- 3 Coarse dirt
- 4 Dirt container
- 5 Fine dust
- 6 Flat pleated filter
- 7 Vacuum valve
- 8 Air discharge, service air

In normal vacuuming operation, the lever at the handle is not actuated (see pos. 6, page 3 and 4).

The service air flows from the air inlet (2) through the dirt container (4) and the flat pleated filter (6) via the suction motor (1) to the air discharge (8).

The vacuum valve (7) is closed at a vacuum of less than 150 mbar on the underneath of the valve.

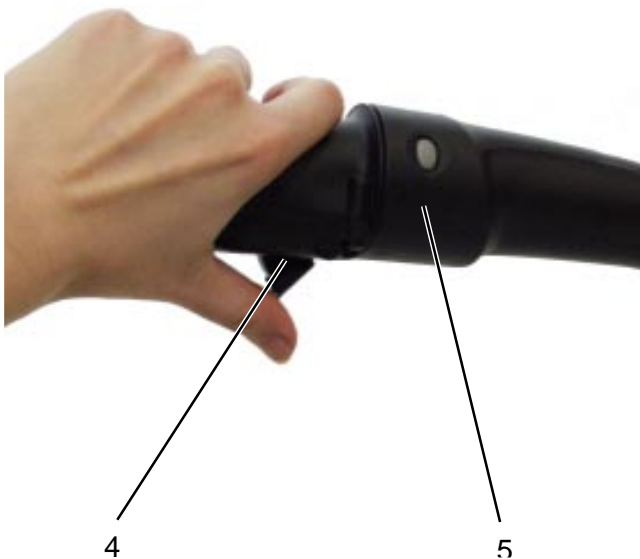


NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

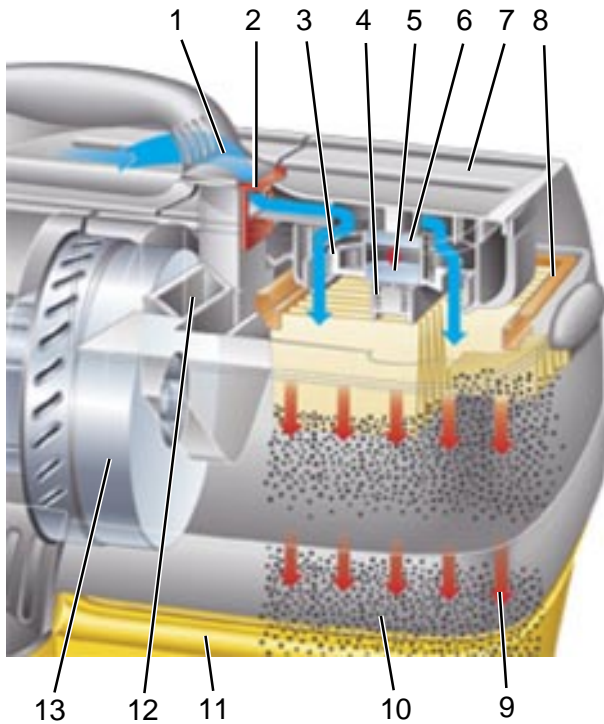
International Service Information
January 23, 2003

Function: Filter cleaning (Power-Filter-Clean PFC)

The filter cleaning function (PFC) is switched on and off using the slide (2). When it is switched on (slide down), it is possible to activate the PFC function using lever (4).



- 1 Handle for opening the filter lid
- 2 Slide
Pushed down: PFC switched ON
Pushed up: PFC switched OFF
- 3 Handle, upper housing section
- 4 Lever to activate the filter cleaning function (PFC)
- 5 Handle

**NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information****International Service Information
January 23, 2003****Function: Filter cleaning (Power-Filter-Clean, PFC)**

- 1 Air intake, service air
- 2 Slide
- 3 Valve seat
- 4 Spring
- 5 Magnet
- 6 Metal plate
- 7 Filter lid
- 8 Flat pleated filter
- 9 Pulsating air current
- 10 Fine dust
- 11 Dirt container
- 12 Air intake, suction motor
- 13 Suction motor

Activating the lever in the handle (see page 10, pos. 4) closes a flap which interrupts the air current in the suction hose.

With the flap closed and the suction motor running, the vacuum in the suction system increases. Once an adequate vacuum has been reached, the valve seat (3) opens, allowing the ambient air to flow down through the air intake (1) and the flat pleated filter (8) to the dirt container (11). Once the pressure level is balanced, the valve seat (3) is closed again immediately by the magnet (5) and the spring (4).

When the suction motor (12) is running, a vacuum is generated immediately again in the vacuum area and the valve seat opens again. This process is repeated in rapid sequence, creating an audible, pulsating air current. The downward movement of the pressure waves created in this way serves to clean the flat pleated filter (8), causing the fine dust to drop downwards.

The valve with valve seat, magnet and spring (3, 5, 4) does not offer facility for adjustment.

The automatic filter cleaning function does not work if:

- the suction system is leaking.
- the rubber screen seal at the air intake (12) is not correctly sealed.
- the flat pleated filter (8) is damaged.
- the valve (3, 4, 5, 6) is soiled or leaking
- the flap in the handle does not close correctly.

Using the red slide (2) in the air intake (1), it is possible to switch the automatic filter cleaning function on and off:

- Slide (2) up PFC OFF.
- Slide (2) down PFC ON.



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

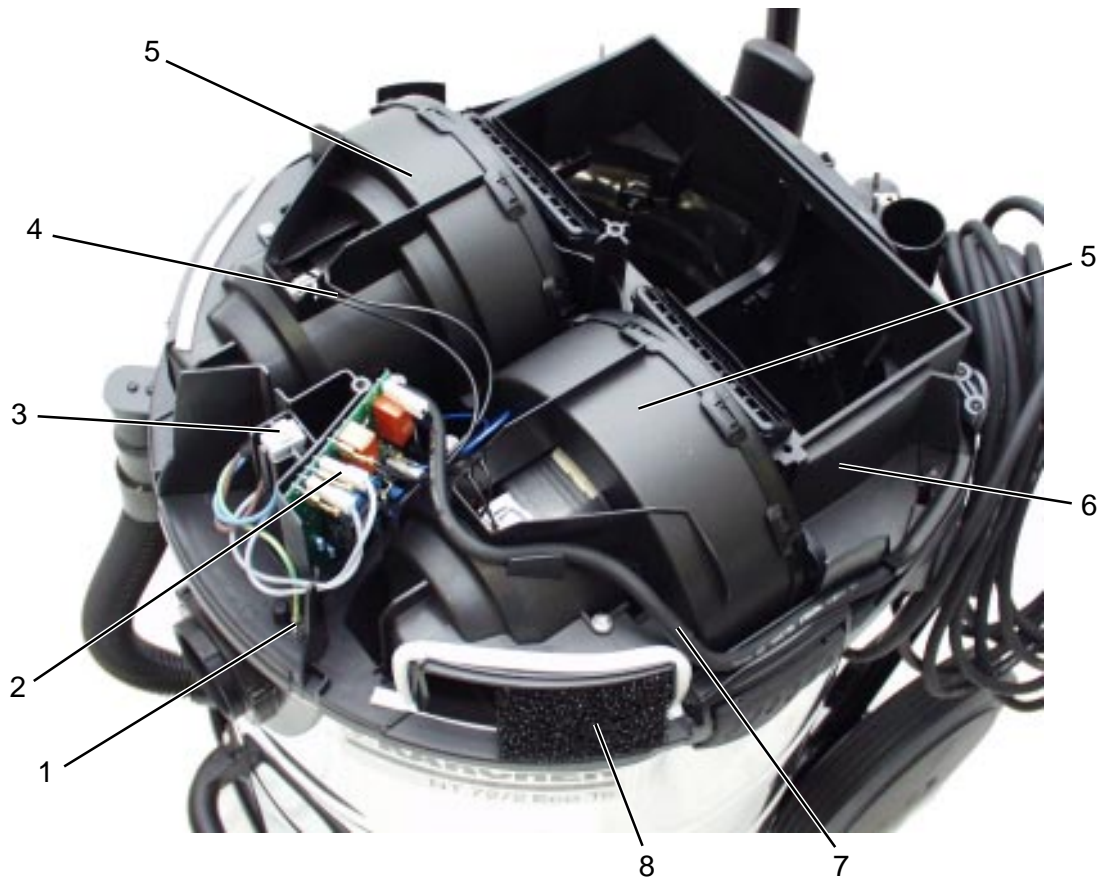
Basic settings and service procedures



- 1 Fastening screws for the lid (5x)
- 2 Flat pleated filter
- 3 Filter lid, open
- 4 Unit switch
- 5 Suction head – upper section

Suction head – removing the upper cover

- Remove the fastening screws (1) and take off the upper cover (5).

**NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information****International Service Information
January 23, 2003****Basic settings and service procedures****Suction head, upper cover removed**

- 1 Earthing terminal (only with NT 72/2 Eco TC)
- 2 PRINTED CIRCUIT BOARD, electronic control circuit
- 3 Unit switch
- 4 Connection cable, suction motor
- 5 Housing, suction motor
- 6 Suction head, base section
- 7 Mains cable
- 8 Air intake, motor – cooling air

Note:

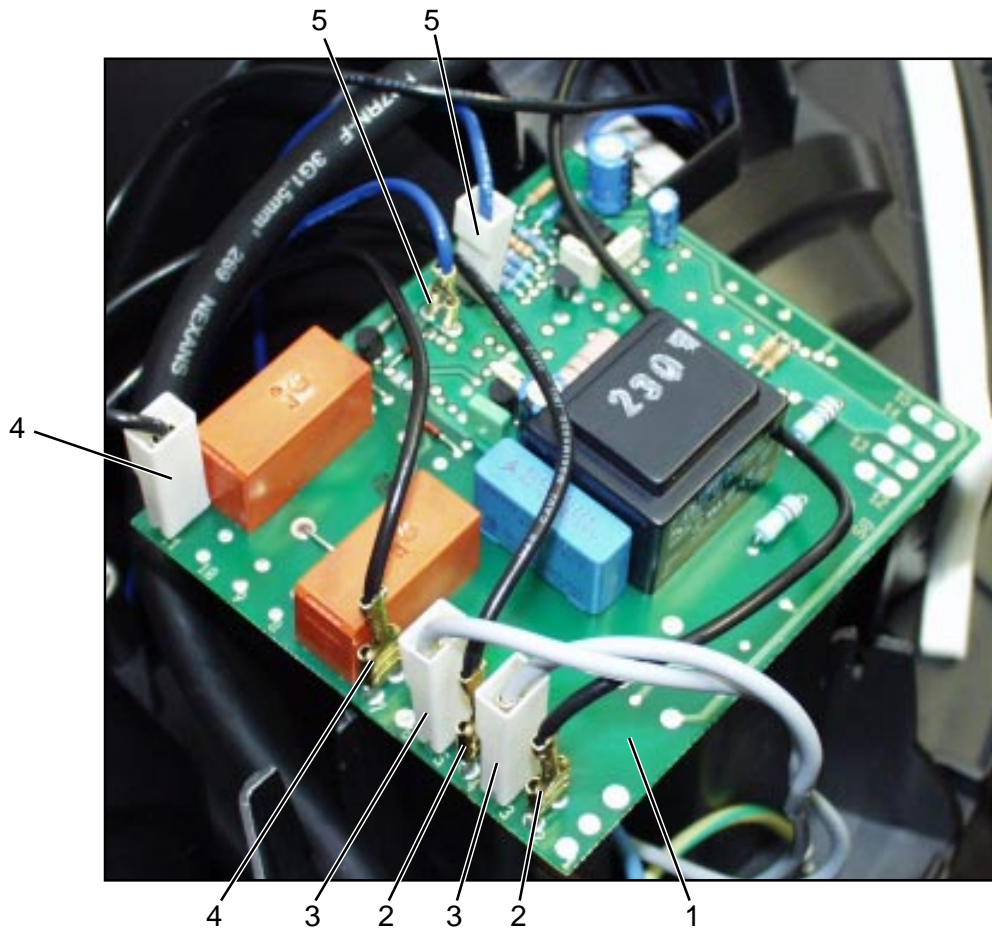
Pay attention to correct routing of the connection cable and mains cable.



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

Basic settings and service procedures



- 1 PRINTED CIRCUIT BOARD, electronic control circuit N1 (removed)
- 2 Suction motor connection M1
- 3 Unit switch connection S1
- 4 Suction motor connection M2
- 5 Electrode level control connection B1

Removing the electronic control circuit

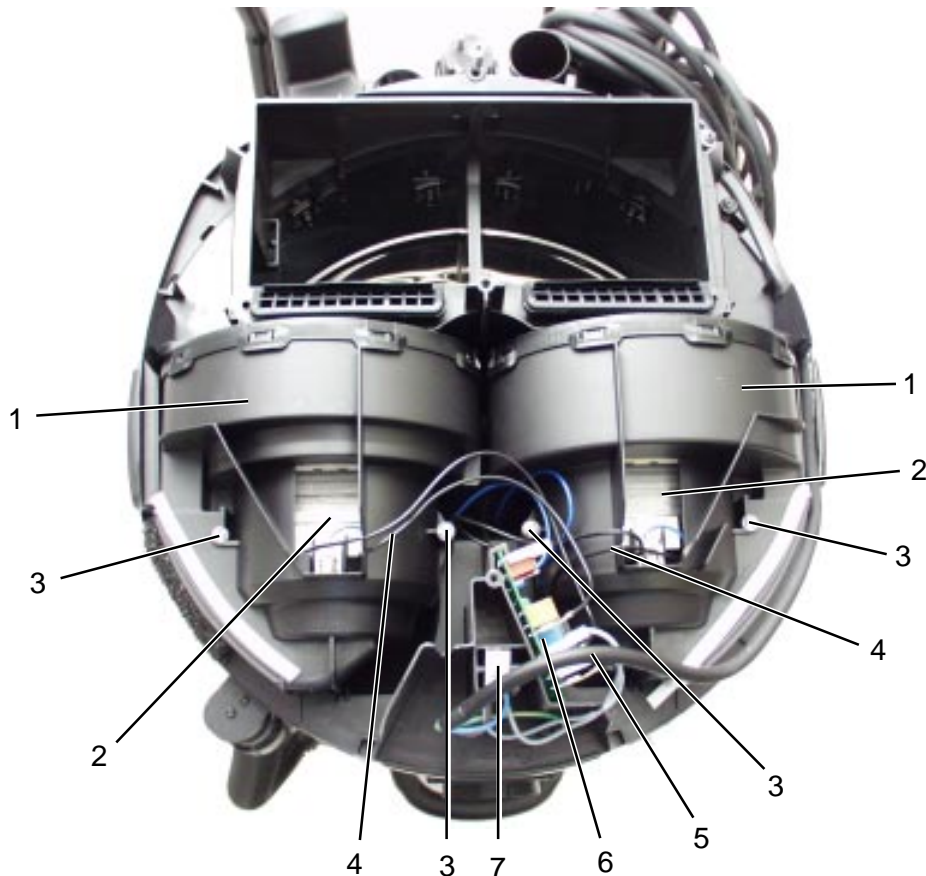
- Carefully pull the PRINTED CIRCUIT BOARD (1) upwards and detach all the connecting cables (2, 3, 4, 5).



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

Basic settings and service procedures



- 1 Suction motor housings (2x)
- 2 Suction motors (2x)
- 3 Suction motor housing mounting screws (4x)
- 4 Suction motor connection cable
- 5 Mains cable
- 6 Electronic control circuit PRINTED CIRCUIT BOARD
- 7 Unit switch

Removing the suction motors

- Detach the suction motor connection cable (4) from the PRINTED CIRCUIT BOARD.
- Loosen the housing mounting screws (3) and remove the complete housing with suction motor (1).

Note:

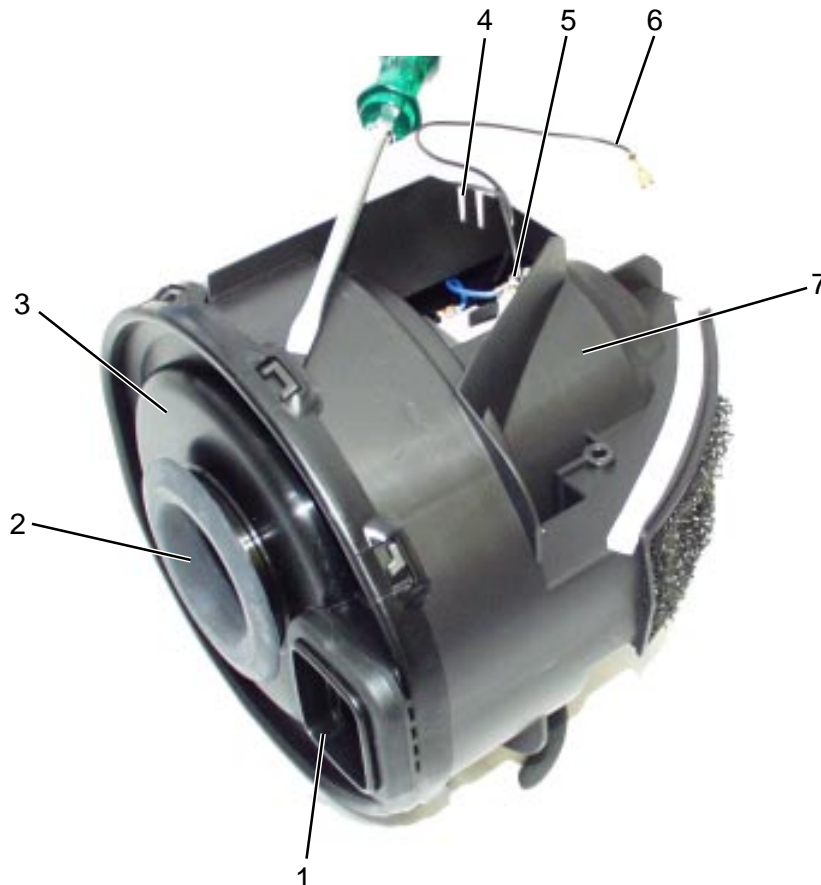
Pay attention to correct routing of the connection cable.



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

Basic settings and service procedures



- 1 Air discharge, service air
- 2 Air inlet, service air
- 3 Lid, suction motor housing
- 4 Slits for cable routing
- 5 Carbon brushes
- 6 Connection cable, suction motor (2x)
- 7 Suction motor housing

Removing the suction motors

- Carefully raise the lid (3) of the housing (7) using a flat screwdriver and remove the housing (7) from the suction motor housing.

Note:

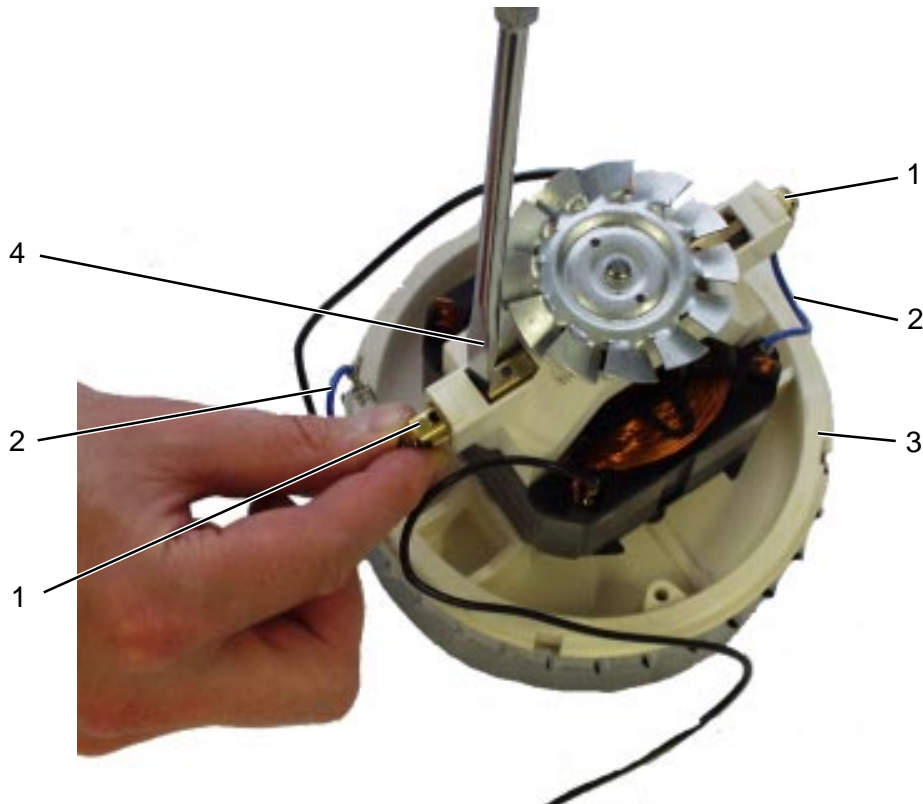
Before mounting, ensure that the cable is correctly routed. Ensure that the connection cables are not trapped or jammed.



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

Basic settings and service procedures



- 1 Carbon brush
- 2 Connection cable, carbon brush
- 3 Suction motor
- 4 Screwdriver

Replacing the carbon brushes

- Remove the suction motor (3) (see page 15, 16)
- Detach the connection cable (2), push the lock-in clip downwards using the flat screwdriver (4) and pull out the carbon brush (1).
- Push in the new carbon brush and pull the lock-in clip back upwards using pointed pliers.
- Plug the connection cable (2) back in, reinstall the suction motor (3) in the housing and mount.



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

Basic settings and service procedures



Removing the suction hose connection

- Pull out the locking device (3) on the underside using a small screwdriver, turn the suction hose connection (1) clockwise and remove.

Note:

With the vacuum cleaner NT 72/2 Eco TC, before removing always first unscrew the earthing contact (2) on the top.

- 1 Suction hose connection
- 2 Earthing contact
- 3 Locking device



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

Troubleshooting

Fault	Remedy
Suction motor not running	<ul style="list-style-type: none">- The container (when wet vacuuming) is full (electrodes have contacted), empty- Check cable, plug, fuse, socket and power supply / remedy any defects- Check / replace suction motor- Check electronic cut-out circuit, clean / replace electrodes- Check / replace PRINTED CIRCUIT BOARD
Suction motor fails to switch off when the container is full during wet vacuuming operation.vacuuming operation.	<ul style="list-style-type: none">- Clean / replace electrodes- Check / replace PRINTED CIRCUIT BOARD
Loss of suction power.	<ul style="list-style-type: none">- Filter lid not correctly closed / close correctly- Paper filter bag is full / replace- Actuate filter cleaning system several times and check function- Check suction tool, suction pipe, handle, suction hose for blockages, ckear any blockage- Check the suction system (switching device on the handle, suction hose connection, filter seat, seal at the suction head, rubber screen seal and sealing lip at the suction motor) for leaks, repair any leakage.- Check the flat pleated filter:<ul style="list-style-type: none">a) The filter is blocked: Cleanb) The filter is wet and blocked: Clean / dry / replacec) The filter is defective: replace
The device throws up dust when vacuumingwhen vacuuming.	<ul style="list-style-type: none">- Check the mounting position of the flat pleated filter / position correctly / replace
The device fails to vacuum.	<ul style="list-style-type: none">- Insert flat pleated filter- Filter lid is not correctly closed / close correctly- Check the flat pleated filter for damage / replace



NT 72/2 Eco TC / 65/2 Eco TC
New Unit Information

International Service Information
January 23, 2003

Troubleshooting

Fault	Remedy
Filter Cleaning system (PFC) fails to operate.	<ul style="list-style-type: none">- Filter lid not closed / close- Check the ON/OFF slide / push downwards (to switch on)- Check / replace the flat pleated filter- Check the suction system (switching device on the handle, suction hose connection, filter seat, seal at the suction head, rubber screen seal and sealing lip at the suction motor) for leaks, repair any leakage- Check / replace the vacuum valve

Notes for service technicians:

In order to prevent any risk to health, always observe the following instructions when performing any maintenance and repair work:

When transporting the vacuum cleaner, the suction hose connection of the device must always be sealed shut with the sealing plug.

Used flat pleated filters or paper filter bags must be disposed of in a dust-tight sealed bag in accordance with statutory regulations.

When performing maintenance work, a respiratory mask (P2 or higher rating) or disposable clothing must be worn.



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New Unit Information

International Service Information
January 23, 2003

Technical specification

unit type	unit no.	circuit diagramm	operating instruction	maintance booklet	spare parts list
NT 72/2 Eco TC (EU) 230V	1.667-151	0.088-514	5.960-515	-	5.970-060
NT 65/2 Eco TC (EU) 230V	1.667-141	0.088-514	5.960-515	-	5.970-060

The technical specification sheets and circuit diagramm are on the next edition of the spare parts CD-ROM (DISIS) and in the Intranet.

Technical specification sheet: folder „Central / Service info Int`l / Technical Specifications“

circuit diagramm: folder „Central / Service Info Int`l / Circuit Diagramm“

Further operating instructions ans spare parts list as paper documents can be oerdered with the corresponding part number from our Spare Parts Department.

Special Tools

No special tools are required.

Tightening torque

No specification.