

# DL2000 DUST COLLECTOR

# **SERVICE MANUAL**

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**Read this manual before servicing machine**

*403082 Rev G*

This manual provides all the information needed to use and service your dust collector. Good operation and durability depend on proper maintenance and careful use.

Before leaving the factory, this particular model has undergone stringent tests to ensure utmost reliability. Always check however to make sure the dust collector has not been damaged during transport in such a way as to affect operation and safety.

This manual should be considered an integral part of the dust collector and must be kept together with the unit until this is scrapped. In case of loss of or damage to the manual, ask **National Flooring Equipment (NFE)** for a new copy.

Some details shown in the illustrations in this manual may be different from those of your dust collector. Some component parts may have been removed for greater clarity.

For easier reference, this manual is split into sections, identifiable by specific graphic symbols.

This manual must be kept in a place accessible to all the personnel charged with operating and servicing the dust collector.

In case of any doubts, immediately contact **NFE Customer Service**.

**The manual must be kept with the dust collector at all times.**

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1.1 Identification of main parts



- 1) Motor head
- 2) Push handle
- 3) Flap for filter shaking system
- 4) Filtering chamber
- 5) Removable Longopac® container
- 6) Fixed wheels
- 7) Casters
- 8) Longopac® bag
- 9) Inlet
- 10) Container release lever

**1.2 Accessories provided**



**402467 – Filter, Primary  
(ONLY REPLACEMENT FILTER)**

1.3 Technical details

Product Specifications					
Vacuum Pressure	Air Movement	Noise Emission	Filter Efficiency	Filter Area	Inlet
88.6" H <sub>2</sub> O (2,250 mm H <sub>2</sub> O)	206 CFM (350 m <sup>3</sup> /h)	75 dBA	99.995 @ .18 microns	32.3 ft <sup>2</sup> (30,000 cm <sup>2</sup> )	2" (50 mm)

Product Specifications			
Width	Height	Length	Weight
22" (56 cm)	51.2" (130 cm)	20.9" (53 cm)	125.7 lbs (57 kg)

Machine Variants			
Region	Serial Number	Input Power	Power
Domestic	10XXXX	120V / 60 Hz	2.7 hp (2 kW)
	23XXXX	120V / 60 Hz	2.7 hp (2 kW)
International	11XXXX	230V / 50 Hz	2.7 hp (2 kW)
	20XXXX	110V / 50 Hz	2.7 hp (2 kW)
	28XXXX	100V / 50/60 Hz	2.0 hp (1.5 kW)

## 1.4 Warranty

National Flooring Equipment Inc. (referred to as "The Company") warrants that each new unit manufactured by The Company to be free from defects in materials and workmanship in normal use and service for a period of twelve (12) months from date of shipment from The Company to the end user. If shipment to end user is from a Distributor, The Company may honor warranty for up to 15 months from initial shipment from the Company if the end user can provide documentation of receipt date. Accessories or equipment furnished and installed on the product by the Company but manufactured by others, including but not limited to: engines, motors, electrical components, transmissions etc., shall carry the accessory manufacturers own warranty. Battery warranties are prorated over the warranty period. Customer is responsible for the inspection of equipment or parts upon delivery. **Freight damages are excluded from this warranty.**

The Company, at its determination of defect, will repair or replace any product or part deemed to be defective in material or workmanship within specified warranty time period. All product determinations and / or repairs will take place at The Company repair facility or at a certified warranty location designated by The Company. The Company will coordinate and be responsible for all freight expenses associated with valid warranty claims. Freight and shipping expenses associated with abuse or misuse will be back charged to the Distributor/Customer. The Company reserves the right to modify, alter or improve any part / parts without incurring any obligation to replace any part / parts previously sold without such modified, altered or improved part / parts. In no event shall the seller or manufacturer of the product be liable for special, incidental, or consequential damages, including loss of profits, whether or not caused by or resulting from the negligence of seller and / or the manufacturer of the product unless specifically provided herein. **This warranty shall not apply to any products or portions there of which have been subjected to abuse, misuse, improper installation or operation, lack of recommended maintenance, electrical failure or abnormal conditions, and to products which have been tampered with, altered, modified, repaired, reworked by anyone not approved or authorized by the Company or used in any manner inconsistent with the provisions of the above or any instructions or specifications provided with or for the product.** Any and all unauthorized onsite warranty work conducted by unauthorized personnel or any outside person(s), is not covered by The Company unless the work has been pre-authorized by a predetermined manufacturer representative. This warranty excludes wearable parts and/or consumables.

Defective or failed material or equipment shall be held at the purchaser's premises until authorization has been granted by The Company to return or dispose of defective products. Products returned to The Company for inspection must be returned with a manufacturer authorized Return Material Authorization (RMA), and must be packaged to The Company's specifications to avoid damage during shipment. Any unauthorized return of equipment will be declined at the dock by The Company. Any non-approved items returned with approved returned items are subject to rejection and will not be credited. Credit will be issued for material found to be defective upon The Company's inspection based on prices at time of purchase.

To obtain a Material Safety Data Sheet and/or a copy of the CE Declaration of Conformity please contact National. This product is CE compliant.

**TO OBTAIN SERVICE CONTACT NATIONAL FLOORING EQUIPMENT, INC. TOLL FREE AT 800-245-0267 FOR A REPAIR AUTHORIZATION NUMBER. COD FREIGHT RETURNS WILL NOT BE ACCEPTED. FREIGHT COLLECT SHIPMENTS WILL NOT BE ACCEPTED. WARRANTY REPAIRS MUST BE ACCOMPANIED BY DATE OF PURCHASE RECEIPT AND A RETURN/REPAIR AUTHORIZATION NUMBER.**

**RETURN/REPAIR AUTHORIZATION NUMBER:** \_\_\_\_\_  
**MACHINE SERIAL NUMBER:** \_\_\_\_\_

## **2.1 Safety details**

The person in charge of safety shall be responsible for informing workers about the risks associated with dust collector operation.

The obligation also exists of training workers so they are able to protect themselves and others.

Failure to observe basic safety regulations and warnings could cause accidents during dust collector operation, maintenance and repair. Accidents can often be avoided by recognizing potentially dangerous situations before these occur. Operators should be aware of potential hazards and be trained and skilled enough. They should also have the tools necessary to perform these duties properly.

**NFE** shall under no circumstances be deemed liable for accidents or damage caused by use of the dust collector by personnel not properly trained or who use it in an improper manner, as well as by even partial failure to comply with the safety regulations and intervention procedures indicated in this manual.

The safety warnings and warning notices are indicated in this manual and on the product.

Unless these hazard messages are heeded, the operator could become involved in accidents with serious consequences for him/herself and for other people.

The safety messages are highlighted by the following symbols:

**Attention!**

***Unless these messages are heeded, operator injuries could occur.***

**Warning!**

***Unless these messages are heeded, dust collector damage could occur.***

**NFE** cannot foresee all possible circumstances capable of representing a potential hazard. The warnings in this manual and on the products should not therefore be deemed exhaustive. In the event of tools, procedures, work or machining methods being used that are not explicitly recommended by **NFE**, make sure no hazards exist for operators and others.

**Only ever use original NFE spare parts.**

**NFE declines all liability in the event of non-original spare parts being used.**

## 2.2 Safety warnings

**Attention!**

**The following indications are, by themselves, not enough to fully protect against all the hazards that could arise during dust collector operation. These will have to be integrated with common sense and the experience of the operator, both of which are crucial factors for preventing accidents. Each section of this manual lists further specific safety warnings for the various operations.**

**Maintenance jobs must always be performed with the power plug detached from the power source.**

The employer must inform and train the user according to the provisions of applicable laws.

Before using the machine, prepare and train yourself by reading this manual carefully. Use of the machine by untrained and unauthorised persons is forbidden.

Using the machine to collect toxic substances is forbidden unless this has been equipped with special filters required for the specific type of dusts. Such filters must be explicitly requested by you.

If the machine is used to collect toxic-harmful substances, the Longopac® container must be emptied and the filters cleaned using adequate individual protection devices, selected according to the type of substances to be collected.

Do not collect flammable materials or substances which could cause explosions (fuels, solvents, etc.). To collect such materials, the machine must be built with Anti-explosion Motor and Electric System and this must be requested by you explicitly.

Do not collect corrosive substances unless the machine is equipped with containers suitable for this purpose.

Use of the machine without the supplied filters is not recommended.

If the filters are correctly fitted, the machine will not eject any objects.

Never rest miscellaneous materials on the horizontal protection guard.

The machine casing containing moving parts must not be removed by the user.

When using the machine, mind other people, especially children.

Use the machine cautiously on slopes and ramps.

Do not change direction on gradients.

Make sure the parked machine remains stable by operating the braked wheel.

During cleaning operations, maintenance jobs or when changing parts, the starter switch must be off and the machine must be disconnected from the power mains by removing the cable from the socket.

Only skilled persons should carry out repairs.

During use, mind the power supply cables and avoid crushing or pulling these.

Periodically check the mains power cable to ensure this is not damaged.

In the event of the cable being damaged, the machine must not be used.

In the event of the cable, plugs or couplings being replaced, make sure these are protected against water spray and check mechanical strength.

Never pull the machine by means of the power cable.

Motor brushes must be replaced according to maintenance schedule. Always use original spare parts.

The user is responsible for disposing of collected substances in accordance with applicable laws.

After 10 years of use, we recommend sending the machine for a complete overhaul to **NFE**.

In the event of Customers fitting a tool to the machine not supplied by **NFE**, make sure the safety conditions are complied with and in any event, **NFE** is unable to accept liability for any problems arising from use of such tool.

The dust collector must not be operated in a corrosive or explosive environment.

Always make sure the dust collector is free of all foreign materials such as debris, oil, equipment and other objects that could affect operation and cause injury to persons.

Avoid using flammable or toxic solvents such as petrol, benzene, ether and alcohol for cleaning.

Avoid prolonged contact with solvents and inhaling their vapours. Avoid use close to open flames or sources of heat.

Never use the dust collector without the filter.

Do not collect lit cigarette ends. The filter could be damaged.

Do not collect petrol or flammable liquids in general.

Make sure all the guards and protection devices are in place and that all the safety devices are in place and working properly.

Do not wear loose or hanging clothing such as ties, scarves or torn garments that could become trapped and be sucked up by the cleaner.

Do not open the collect Longopac® container with the machine running.

The manual should always be kept handy for reference so the operating cycle can be checked every time there are doubts.

In the event of this manual being lost or damaged, ask **NFE** for a new copy.

Structural damage and improper alterations or repairs could change the protection capacity of the dust collector and therefore void the warranty.

Any alterations to the appliance must only be made by **NFE** engineers.

During maintenance jobs, affix a notice to the appliance indicating "**MACHINE BEING SERVICED, DO NOT START**".

Climbing on the cleaner is forbidden.

Never touch electric wires, switches, buttons, etc. with wet hands.

Before connecting to the power mains, make sure the power voltage and frequency are those shown on the machine plate.

Make power connections to a mains supply with efficient earth system ground.

In the event of an extension cord being used, make sure this is in perfect condition, and that the cross section of the cable is suitable for the dust collector power input.

When restoring original working conditions, the appointed personnel should make sure that at the end of the operating procedure, proper dust collector operation safety conditions are restored, especially the safety devices and the protective guards.

Only adult persons should use the dust collector.

During collecting operations, always brake the dust collector using the special revolving wheel lock.

### 2.3 Safety plates and symbols

Plates are affixed to the dust collector showing safety symbols and/or messages.

**Attention!**

**Make sure all the safety messages are legible.**

**Clean these with a cloth, soap and water. Do not use solvents, diesel fuel or petrol.**

**Replace the damaged plates with new ones supplied by National Flooring Equipment.**

**If a plate is affixed to a replaced part, make sure a new plate is affixed to the new part.**

**Attention!**

**Read the operator's and maintenance manual carefully before using the cleaner or doing any maintenance jobs.**

**IMPORTANT**

**DO NOT BREATHE IN FLAMMABLE AND/OR  
EXPLOSIVE LIQUIDS OR POWDERS**

**Warning!**

**Risk of crushing upper limbs while fitting and locking the material Longopac® container on the dust collector.**

**Never place hands between the material Longopac® container and dust collector while locking.**

**Do not place hands on sides of Longopac® container near the guide pins while locking.**

**Perform the Longopac® container locking operation by means of the levers located on the side, USING BOTH HANDS!**

## 2.4 Outstanding risks

Careful analysis of risks performed by the manufacturer and stored in the technical file has made it possible to eliminate most of the risks associated with dust collector operation.

The manufacturer advises carefully following the instructions, procedures and advice contained in this manual as well as applicable safety regulations, including the use of the envisaged protection devices, both those integrated in the dust collector and individual.

Outstanding risks associated with the dust collector could be:

***Electrical maintenance risks caused by the need to work under power.***

Only trained personnel should work on the machine with the power supply connected and this must have double earth insulation.

***Risk of improper use in the presence of explosive and flammable substances.***

The dust collector must not be used in environments containing substances in the form of liquids that could vaporize at room temperature and flammable dusts and gas.

***Risks of operation in humid environments.***

Keep to the limits shown in this manual at section 1.6 Allowed environmental conditions.

***Risk of erroneous interpretation of the safety pictograms.***

Having identified the various outstanding risks, the manufacturer has affixed to the dust collector a number of hazard labels in compliance with regulations relating to the graphic symbols to be used. The user must immediately replace any safety plates that become illegible due to wear or damage.

***Attention!***

***Removing the safety plates on the dust collector is strictly forbidden. The manufacturer declines all liability in relation to dust collector safety in the event of failure to comply with the above indications.***

### **3.1 Informative notes**

This section describes the control and special maintenance operations crucial for keeping the dust collector in perfect working condition. All other maintenance and major repairs must be expressly authorized by the manufacturer. In such cases, always contact **NFE** or an authorized dealer.

### **3.2 General safety warnings**

Maintenance jobs must always be performed by skilled technicians, trained to carry out their specific jobs. In the case of this machine, these are:

- Mechanical maintenance
- Electrical maintenance

The Safety Manager has the precise duty of determining the professional capacities and skills of such persons.

Before doing any maintenance job, the safety manager must:

- Make sure there are no unauthorized persons in the work area.
- Make sure the necessary tools are on hand and that these are in good condition.
- Make sure that lighting is adequate and, if necessary, provide 24-V portable lamps.
- Make sure the maintenance engineer is equipped with all approved individual protection devices needed for the specific operation (gloves, eyewear, shoes, etc.).
- Make sure the maintenance engineer has carefully read the instructions contained in this manual and knows how the dust collector works.

Before carrying out a maintenance job, the maintenance engineer must:

- Disconnect the plug from the power socket.

Work done on motors or other electrical component parts must only be performed by a specifically trained electrician, authorized by the Safety Manager.

Always use tools that are in perfect condition and specifically made for the operation to be done. The use of unsuitable tools or tools not in good condition could cause serious damage.

### 3.3 Maintenance operations

**Attention!**

**All the described operations must be done with the plug disconnected from the power socket. Before starting any maintenance or cleaning job, always wear adequate protective clothing, eyewear and/or gloves according to the type of job to be done.**

For smooth dust collector operation, the following periodic maintenance is necessary:

- Check to see whether the filter is worn or has become too permeable.
- Make sure the sealing gaskets of the motor head base, of the filter-holder ring and of the Longopac® container are working efficiently.
- The electrical parts (plugs, switches, cables, etc.) must not be faulty.
- The screws and nuts must always be tight.
- Make sure the Longopac® container is not overfull. This should be emptied when the collected material has reached 3/4 of maximum capacity.
- Check the integrity of the flexible collect hose and accessories to be used.
- If the flexible hose is perforated, the power of the dust collector will be reduced and dust and liquids will leak into the environment.

**Attention!**

**It is recommended that this machine is serviced by NFE or its authorized dealers.**

### 3.4 Replacing the filters

To replace the filters, proceed as follows:

- Turn off the dust collector by pressing the motor **STOP** buttons.
- Disconnect the dust collector plug from the power socket.

**Important!**  
**Wear individual protection devices.**

- Release the two retainers that hold the motor head in place. Lift the motor head and rest this on a flat surface being careful not to damage the power cable.



- Loosen the screw.



- Remove the filter.

**Important!**

**All the material trapped by the filter and the filter itself must be disposed of through authorized channels in the country where the dust collector is used.**

### 3.5 Cleaning the filters

- Remove filter from machine by following the steps in “Replacing the Filters”.  
**Note:** HEPA filters are NOT washable.
- Gently tap filter to dislodge loose contaminants. Use a garbage bag or other suitable container to catch the material, keeping in mind the type of material that was picked up during operation.
- Rinse filter with warm, running water from the inside out.
- Let filter soak for 10-20 minutes in warm water with a mild dishwashing soap.
- Gently wash filter by rolling it through the water. A soft brush can also be used to clean the pleats, but be careful to not tear the filter.
- Rinse filter with clean, running, warm water and let air dry.  
**Note:** The filter must be completely dry before using again. Do NOT use compressed air to dry the filter.
- When filter is completely dry, re-install it on the machine.

Keep in mind that filters do have a life span and washing won't get them back to like-new performance; however, it will be better than using dirty filters. Inspect filters regularly for any damage to the filter media. If the media is damaged, replace the filter.

### 3.6 Troubleshooting

<i>Fault found</i>	<i>Possible cause</i>	<i>Recommended remedy</i>
<i>The dust collector fails to start</i>	No power	Check the power mains supply Check the integrity of the plug and power cable
	Thermal magnetic switch tripped	Reset the thermal magnetic switch
<i>Dust is leaking out</i>	Perforated collect pipe	Replace the pipe
	Filter unsuitable for type of job	Fit a suitable filter for the type of material to be collected
<i>The dust collector does not work as it should</i>	Pipe perforated or blocked	Check the pipe and, if necessary, replace it
	Bag full	Empty bag
	Filter blocked	Clean the filter and if necessary change it.
	Seals worn	Check the seals and, if necessary, replace them
	Air leak	Check for any air leaks out of closing fasteners, tightening screws, Longopac® container or filter chamber
<i>Motor very noisy</i>	<i>Contact NFE customer service</i>	

**Warning!**  
For any other problems, contact the NFE customer service.

**3.7 Recommended spare parts**

<b>Code</b>	<b>Description</b>
<b>402467</b>	Filter, Primary
<b>402488</b>	Gasket, Filter Chamber, 1.2 m
<b>402493</b>	Gasket, Container, 1.2 m
<b>402468</b>	Filter, Peated Teflon
<b>402471</b>	Filter, HEPA
<b>402473</b>	Longopac, 4 Pack
<b>402475</b>	Motor, 120V
<b>402476</b>	Brushes, Motor, 120 Volt
<b>402482</b>	Gasket, Longopac
<b>402484</b>	Switch, On/Off
<b>402487</b>	Gasket, Inlet
<b>402494</b>	Damper, Inlet Slide
<b>402497</b>	Motor Head, 120 Volt
<b>402502</b>	Cord, Adapter, 120V, 20 amp to 15 amp

**402503** Cord, Adapter, 120V, 20 amp, 33'

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**402517** Connector, Hose, 50mm

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**402518** Hose, Antistatic, 50mm, 7.5m

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**402519** Adapter, Hose, 50mm

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**402520** Reducer, Hose, 50mm to 38mm

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**402521** Hose, Antistatic, 38mm, 7.5m

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**402522** Adapter, Hose, 38mm

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**402523** Wand, Floor, 38mm, Aluminum

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**402524** Brush, Floor, 38mm, Steel

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**403719** Plug, NEMA 5-15 Style, Folding Ground, Japan (Serial Number 28XXXX only)

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**403869** Motor, 100 Volt (Serial Number 28XXXX only)

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**403870** Plug, Male, IEC 60309, 110-130V, 16A, 3W, Yellow (Serial Number 20XXXX only)

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**405048** Assembly, Cord, CEE 7/7, 30ft (Serial Number 11XXXX only)

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**405049** Motor, 230 Volt (Serial Number 11XXXX only)

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