

DC Storm LPG

Part No 44542-C

Original instructions



WARNING!

Read the instruction manual before using the machine.

EN: Dustcontrol reserves the right to change specifications without notice and is under no obligation to alter previously delivered products. Dustcontrol is not responsible for errors or omissions in this catalogue.

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Sold by:

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Safety Considerations

Read all instructions before attempting to operate this machine and save these instructions.

Warning! When using propane machines, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following:

1. Important!

No hot particles nor ignition sources are allowed to be sucked into the unit. The machine should not be used for explosives, unstable or pyrophoric particles.

— **WARNING!** Operators shall be adequately instructed on the use of these machines.

— **WARNING!** When the motor is delivered it's empty on oil due to transport. Fill the motor with motor oil otherwise there is risk to damage the motor

— **WARNING!** This machine is for dry use only.

— **CAUTION!** The engine emits carbon monoxide; use only the machine in a well-ventilated area.

— **CAUTION!** Both side of the catalyst (exhaust outlet) there will be hot surface

— **CAUTION!** This machine shall be stored indoors only.

— **WARNING!** PROPANE:
Natural propane gas is colorless and odorless. To make it easier to detect, suppliers add chemical compounds to make it easier to detect. A smell of rotten eggs or skunk signifies the presence of propane gas. Propane is highly flammable when mixed with air. Keep all sources of direct or indirect ignition, such as cigarettes, lighters, grinding sparks, welding arcs or gas fired heaters away from the unit. Use only antistatic hoses to prevent the buildup of static electricity. Propane vapor is heavier than air and will be more concentrated at floor level.

- If propane gas is detected, turn the unit off.
- If it is safe to do so, close the Service Valve on the propane cylinder.
- Leave the area immediately and proceed outside.
- Do not turn any lights on or off on your way.
- Have the area checked by a certified technician with the correct detection device.
- Have the unit checked before re-use.

— **WARNING!** The engine is equipped with a three way catalytic muffler which reduces, but does not eliminate, the amount of Carbon Monoxide (CO) in the engine emission. To avoid the risk of asphyxiation, operate the unit only outdoors or in a space with adequate ventilation. Symptoms of carbon monoxide asphyxiation include; headache, drowsiness, disorientation, and nausea. CO is heavier than air and will accumulate at floor level. Should the operator develop any of the symptoms, shut the unit off, do not sit or lie on the floor. Move immediately out of the area, preferably outside and seek medical attention. The unit should be checked by a qualified technician prior to further use.

— **WARNING!** NEVER tamper with the emission data analyzer or O2 sensor. These are for your protection and will monitor and alarm when the engine fuel mixture is not within specification.

2. Work area environment
Don't expose the machine for rain. Don't use it in damp or wet locations or in presence of flammable liquids or gases.
3. Overload
Never let the machine operate fully throttled. Always follow the regulations pertinent to the material you are working with ie asbestos. Don't use the machine for purposes that it isn't intended for.
4. Body injuries
Never let the suction come in contact with parts of the body. The strong suction effect can hurt the blood-vessels in the skin. Do not repair the electric components yourself. The machine should be serviced by qualified personnel only. Faults may cause injury. See also below under warnings.
5. This STORM LPG unit is designed to run on liquid propane vapor. As such, the propane tank is for vapor draw. Do not use a substitute tank, use only the OEM tank.
NOTE: Introducing propane liquid into a system designed for vapor may damage the regulator and thereby damage the machine. Do not substitute tanks that are intended for other applications.
6. Propane Tanks:
 - Must be DOT certified and UL/CE listed.
 - Must never be filled more than 80% of capacity. It is unlawful and extremely dangerous to overfill cylinders.
 - Must always be stored outdoors when not in use.
 - Must only be filled by an authorized and qualified technician.
 - Must be periodically inspected.
 - Must be purged prior to the initial filling.
 - Must be stored and transported in an upright position.

Safety Considerations

7. Important measure
With cleaning and maintenance on the machine, the power cable should be disconnected from the supply.
8. Maintain the machine with care
Keep the machine clean and check that the hose is undamaged and that all gaskets are tight. Follow instructions. Keep handles dry and free from oil and grease.
9. Checking for damage
Before further use of the machine it should be carefully checked that the machine is undamaged. If there are any damaged parts these should be repaired by a Dustcontrol authorized service center.
10. Warning
Use only accessories and replaceable parts which are available in the Dustcontrol catalogue.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- This machine is intended for commercial use only, for example in hotels, schools, hospitals, factories, shops, offices and rental businesses.

Technical Data

HxWxL [mm]	1800x790x1600	70x31x63 inches
Weight	375 kg	826 lbs
Engine power (vanguard)	21 HP	21 HP
Power output	15 kW	15 kW
Flow open inlet	820 m ³ /h	483 cfm
Max vacuum	30 kPa	120 inches of water lift
Fine filter polyester, area	5 m ²	53,8 ft ²
Degree of separation (EN 60335-2-69, Class M)	99,995 %	99,995 %
Filter area, microfilter	3.7 m ²	39,8 ft ²
Degree of separation, microfilter EN 1822-1	HEPA H13	HEPA H13
Soundlevel	79 dB(A)	79 dB(A)

Description

The STORM LPG is a propane engine powered vacuum extractor and as such contains; a propane powered engine, Three Way Catalytic Muffler, propane fuel tank, vacuum producer and filtration system with three stages of separation for use for source extraction, cleaning and material transportation applications. In different types of industries.

This machine is intended for commercial use only, for example in hotels, schools, hospitals, factories, shop, offices and rental businesses.

– **CAUTION!** The machine should only be used in a well-ventilated area.

The extraction system functions with negative pressure (vacuum) that draws the air through suction casings/ nozzles, hose system, separator and filter system. Coarse separation of dust occurs in the unit's cyclone which is a highly efficient separator for larger particulate. The fine dust is separated and contained by the unit's filter system. Separated material is collected for disposal in the plastic sack or container at the base of the cyclone.

Filter cleaning with reverse pulse gives long filter life and constant capacity.

Operation

Before starting the machine:

1. Make sure that there is oil in the engine. We recommend 5W-30 Advanced Full Synthetic Motor Oil.
2. Check the fuel level. Replace with full tank if no fuel is indicated. If changing the tank perform a leak test of the system.
3. Check that the high pressure propane hose is correctly connected and hand tight on the tank service valve.
4. Check the battery indication. If the level is 50 % or less, the engine may be difficult to start. Charging may be required.
5. Ensure that the accessory USB and Work Lamp switches are in the OFF (DOWN) position to prevent power drain by the accessories.
6. The engine throttle level should be in the DOWN (LOW IDLE) position.
7. The gate valve on the cyclone inlet should be open.

This unit uses an automatic centrifugal mechanical clutch that engages and disengages automatically depending upon engine speed. At LO IDLE, the clutch may drag slightly and produce some slow rotation of the vacuum producer. The clutch is designed to engage at an engine speed above idle.

No operator input is required for clutch engagement and disengagement, it is automatic.

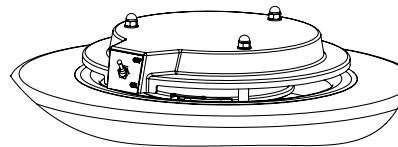
Starting the Unit

1. Open the service valve on the tank permitting the flow of fuel to the engine.
2. Turn the Key Switch from OFF, through ON and hold in the START position.
3. When the engine catches, release the key.
4. Allow the engine to warm up for 20 – 30 seconds.
5. Move the engine throttle lever to the Operate (HI IDLE) position.

The filter should be cleaned 1-2 times per day with continuous running or if the machine is equipped with a filter monitor, when this is in the red area.

For filter cleaning:

1. Start the machine.
2. Close the shutter valve on the machine's inlet.
3. Activate the cleaning switch ON and later OFF, 4-7 pulses.
4. Open the shutter valve.
5. If the filter condition meter reads green work can continue. If in the red, pulse clean again. If after several repetitions, the filter condition still shows red the fine filter must be changed. If it remains on red, despite changing the filter, the vacuum relief valve needs to be checked.



When the gauge turns red - close shutter and open the valve - 4-7 pulses.

The plastic sack should be changed only after the filter has been cleaned. The sack should be changed when the dust level is about 5 cm under the foot valve. The plastic sack should be sealed after removal from the machine. Use only original plastic sacks.

Stopping the Unit

A filter cleaning procedure is recommended before shutting the unit down. Refer to the section on filter cleaning.

This unit uses propane vapor as fuel and the shut-down procedure is slightly different from an engine that uses a liquid fuel. It is important to follow this sequence as good safety practice.

1. Move the engine throttle lever to the START/STOP (LO IDLE) position and allow the engine to reduce speed to the idle condition.
2. Close the service valve on the propane tank.
3. Allow the engine to run out of fuel and stop.
4. Turn the Key Switch to the OFF position.
5. If you are leaving the area, remove the ignition key and take it with you

Service

The fine filter should be changed at least once per year. Use only original spare parts. If the machine is used with a microfilter/HEPA filter, this should be changed every 300 running hours. Use breathing protection when changing the filter. Care must be taken during the filter change not to expose unprotected persons to harmful dust. Used filters should be sealed in a plastic sack and disposed of properly.

The DC Storm LPG should be performance tested at least once per year because it may be used with hazardous materials. Worn parts must be replaced.

Never compromise the function of the DC Storm LPG, use only original spare parts.

The turbopump has a very long maintenance free service life. After approximately 500 running hours, the radial seal between the motor and pump housing should be greased. Bearings and seals in the motor and turbopump should be checked and lubricated. Parts worn beyond serviceable tolerances should be replaced with genuine spare parts.

Service

Maintenance Point and Interval Table

NOTE: The first service point is at 5 hours and is considered the break in period for the unit.

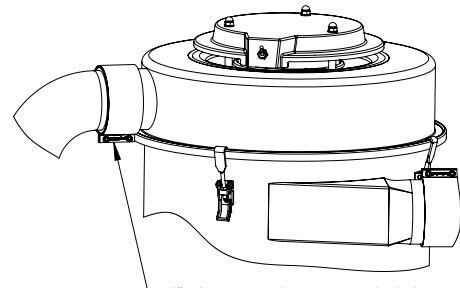
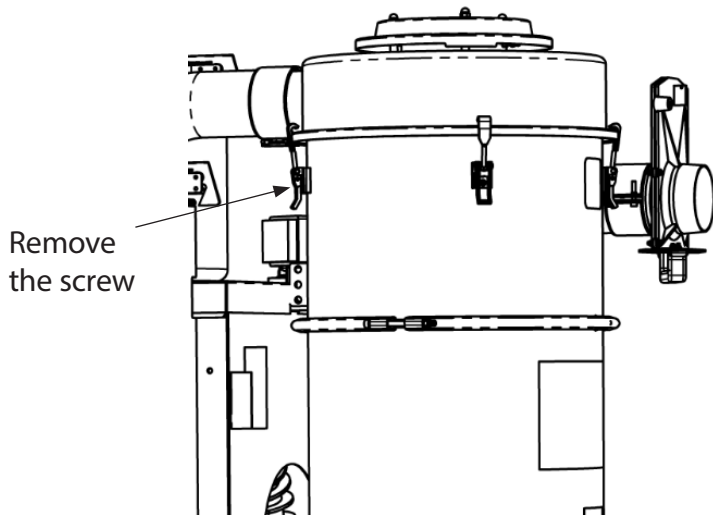
OP - Operator

ST - Trained service Technician

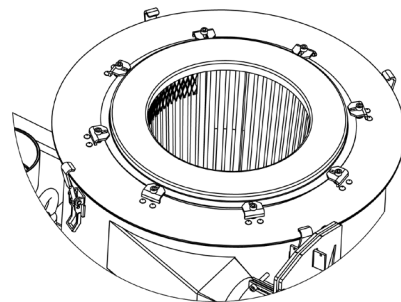
Maintenance Points	Interval									
	DAILY	At 5 HRS	Every 50 HRS	Every 100 HRS	Every 200 HRS	Every 300 HRS	Every 500 HRS	Every 750 HRS	As Req.	NOT E
Operator										
1. Clean Unit	OP									
2. Check Fasteners	OP									
3. Check/Add Engine Oil	OP									
4. Check for Oil Leakage	OP									
5. Inspect Fuel Hoses and Fittings	OP									
6. Clean Engine Intake Filter	OP/ST									
Engine										
7. Replace Engine Intake Air Filter			OP/ST							
8. Change Engine Oil		ST		ST						
9. Change Engine Oil Filter				ST						
10. Check External Engine Oil Lines				ST						
11. Check Battery Connections		ST								
12. Check, clean and re-gap spark plugs					ST					
13. Replace Spark Plugs								ST		
14. Engine Valve Adjustment								ST		
15. Oxygen Sensor Cleaning							ST			
Transmission										
16. Drive Belt Check		ST	ST							
17. Drive Belt Replacement									ST	
18. Clutch Service							ST			
Vacuum Producer										
19. Bearing Lubrication							ST			
20. VRV Check							ST			
Filter Unit										
21. Filter Replacement									OP/ST	
22. Check Discharge Arrangement	OP									
Chassis										
23. Tighten Chassis Fasteners	OP			ST						
24. Check Caster Brakes				ST						
25. Check Tire Inflation	OP									

Service

Change filters:

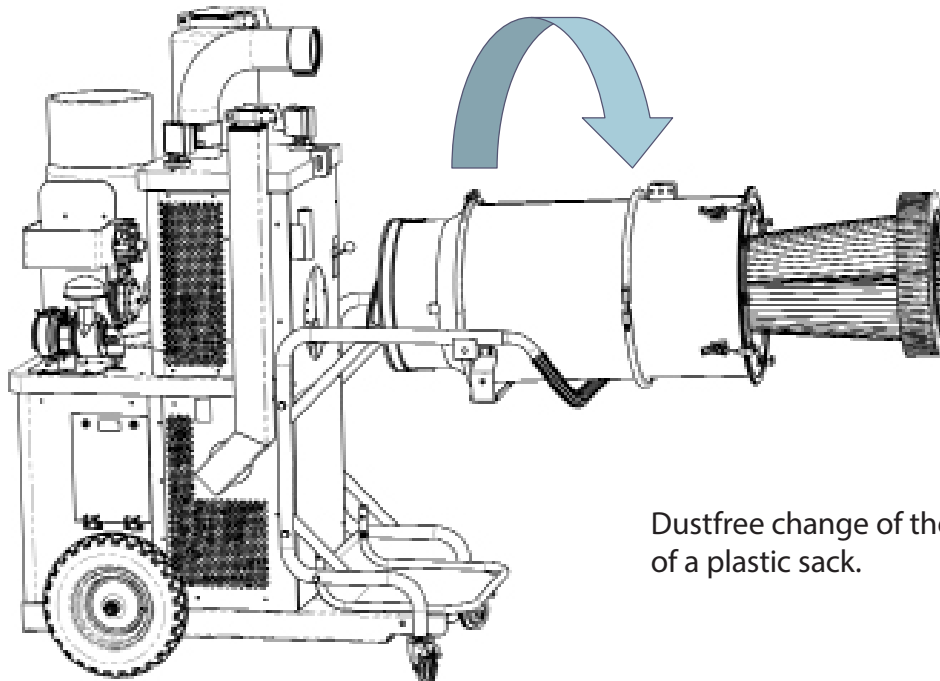


Unfasten the screws and remove the top.



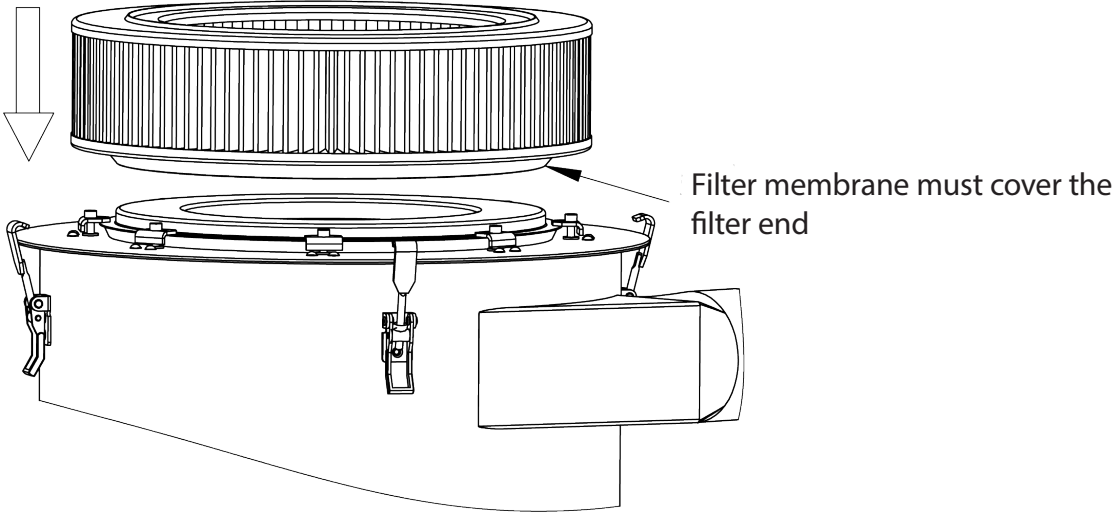
Open and turn.

Turn the cyclone.



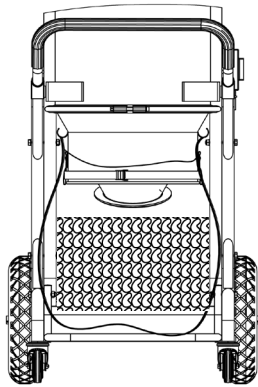
Dustfree change of the filter with help of a plastic sack.

Service



Service

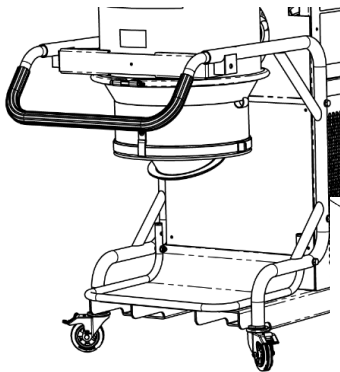
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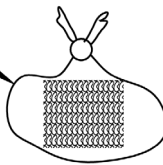
Switch ON

Intellibag;
dustfree change of bag step by step

2



Switch ON
- take out the bag



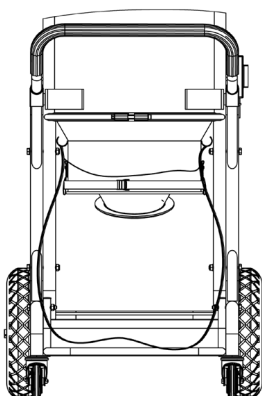
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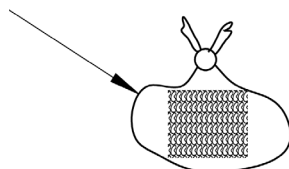
Switch ON
- put the new sack on



4



Switch ON
- pulse the filter and run the dust collector



Accessories

Description	Part No		
Longopac Maxi	44077	Battery charger	44510 (US)
Plastic sack, 60 l	46145	(SCHUKO)	44510-1
Fine filter	44081	Extension cable for	44509
HEPA filter	42807	battery charger (3m)	

Other accessories — see Dustcontrol catalogue.

Warranty

The warranty period for this machine is two years and covers manufacturers faults. The warranty is valid under the condition that the machine is used under normal conditions on the task for which it was designed and is maintained properly.

Normal wear is not covered by this warranty. Service performed by other than Dustcontrol or it's authorized agent voids automatically the warranty. No other warranty expressed or implied is applicable.

Trouble Shooting

Problem	Possible Cause	Solution
Engine will not turn over when Key Switch is rotated to "START" position.	Dead Battery.	Check battery monitor. Charge battery/replace battery.
	Main Fuse blown.	Check fuse/replace fuse.
	Engine problem.	Call for service.
When Key is rotated to "START", solenoid just clicks	Battery is low.	Check battery monitor. Charge battery/replace battery
Engine turns over when Key rotated to "START" but will not catch.	Propane Cylinder is empty.	Check cylinder/fill cylinder.
	Propane cylinder service valve is not open.	Open service valve.
	Fuel System Lockout not releasing.	"Prime" the fuel vacuum switch. Check wiring connections to fuel solenoid. Reconnect if they are apart.
	Fuel system is not connected properly.	The RH ACME thread hose fitting that connects to the tank has an integral safety check valve. Remove the fitting from the tank and re-install it accordingly.
	Battery is low.	Check battery monitor, charge if required.
	Oil Level is low.	Check and add oil if required.
	Emission Data Analyzer has shut the unit down.	Wait 1 minute and try to start again. Call for service.
	Electrical fault in the engine	Call for service.
Engine hard to start, requires excessive cranking and runs rough.	Fuel system is not connected properly.	The RH ACME thread hose fitting that connects to the tank has an integral safety check valve. Remove the fitting from the tank and re-install it accordingly.
	Battery is low.	Check battery monitor, charge if required.
	Idle requires adjustment	Call for service.
	Fuel mixture is lean	Call for service.
	Engine problem, spark plug, compression, valves...	Call for service.
Engine starts and idles but stalls when throttle opened.	Starving for fuel. Sufficient fuel delivery on low speed but leans out and stalls when throttle opened.	Check tank service valve is open fully. High pressure hose is kinked. Air/Fuel mixture requires adjustment. Call for service
Engine running fine then just stops.	Propane cylinder empty.	Check fuel level and replace with a full tank.
	Engine oil low, Oil pressure switch has shut the unit off.	Check oil and add as required.
	Emission data analyzer has shut the engine off. It is running too rich.	Engine Intake Air filter requires attention.
	Engine electrical problem.	Call for service.
	Main fuse blown.	Replace fuse, 30 A ATO
Engine begins to backfire or run poorly.	Engine mechanical problem.	Call for service.
	Engine electrical problem.	Call for service.
Engine starts and runs fine at high idle but no suction.	Hose not connected.	Connect hose.
	Discharge arrangement is leaking.	Check and rectify.
	Cyclone inlet gate valve closed.	Open gate valve.
	Connected hose is blocked.	Remove hose at cyclone and check vacuum.
	Blower not rotating.	Visual check of rotating blower.
	Drive belts damaged, blower not turning.	Shut unit down, remove key and inspect transmission belts through the inspection panel.
Engine runs at high idle and blower appears to be operating normally but poor suction.	Hose damaged/hose blocked.	Check hose and clear/replace
	Hose too long or restrictive.	Contact service for options.
	Attached machine takeoff blocked.	Check and clear.
	Leakage in hose or unit.	Find and fix.
	Main filter loaded.	Check filter monitor. Engage pulse system and clear filter.
	Cyclone full of collected material.	Shut down unit and clear cyclone.
Unit exhausts dust	Filters incorrectly installed or breached.	Shut down unit, tag out and call for service. The unit must be decontaminated if this condition is encountered.

EC-declaration of conformity

We declare that DC LPG is in conformity with following directives and standards;
2006/42/EC, 2014/35/EU. EPA Certification JPPYS.6272CM-007.

Serial Number and manufacturing year are indicated in a rating plate on the machine.

Dustcontrol AB

The image shows two handwritten signatures in blue ink. The first signature on the left is 'Anna-Lena Berg' and the second signature on the right is 'Peter Söderling'. Both signatures are written in a cursive, flowing style.

Anna-Lena Berg/Peter Söderling
CEO/Technical Manager

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