

Air-Care™
INDOOR AIR QUALITY SPECIALISTS
TRUCKMASTER

**Duct Cleaner for use with Truck Mount
Carpet Vacuums**

OPERATING INSTRUCTIONS MANUAL

CE3049

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M3049
TruckMaster Manual
Updated 08/24/11

Air-Care is a Division of D.P.L. Enterprises, Inc.
3868 E. Post Road, Las Vegas, NV 89120 (702) 454-5515, Fax (702) 454-5225
Website: www.air-care.com, E-mail: Info@Air-Care.com

Inspect all of the packing material for small parts before discarding packaging material. Report all damage to Air-Care immediately. Any attempt at repairing suspected damages may void warranty.

Check that all parts are present

Air Care TruckMaster Duct Cleaner

- Main Control Case
- 16 Gauge Grounded Power Cord
- Vacuum Hose, 1 ½" x 35 feet with 12" Flex-E-Bristle Brush, 1500 Watt Motor and Power Cord
- Handheld Remote Control Transmitter -
- Instruction (This Document)

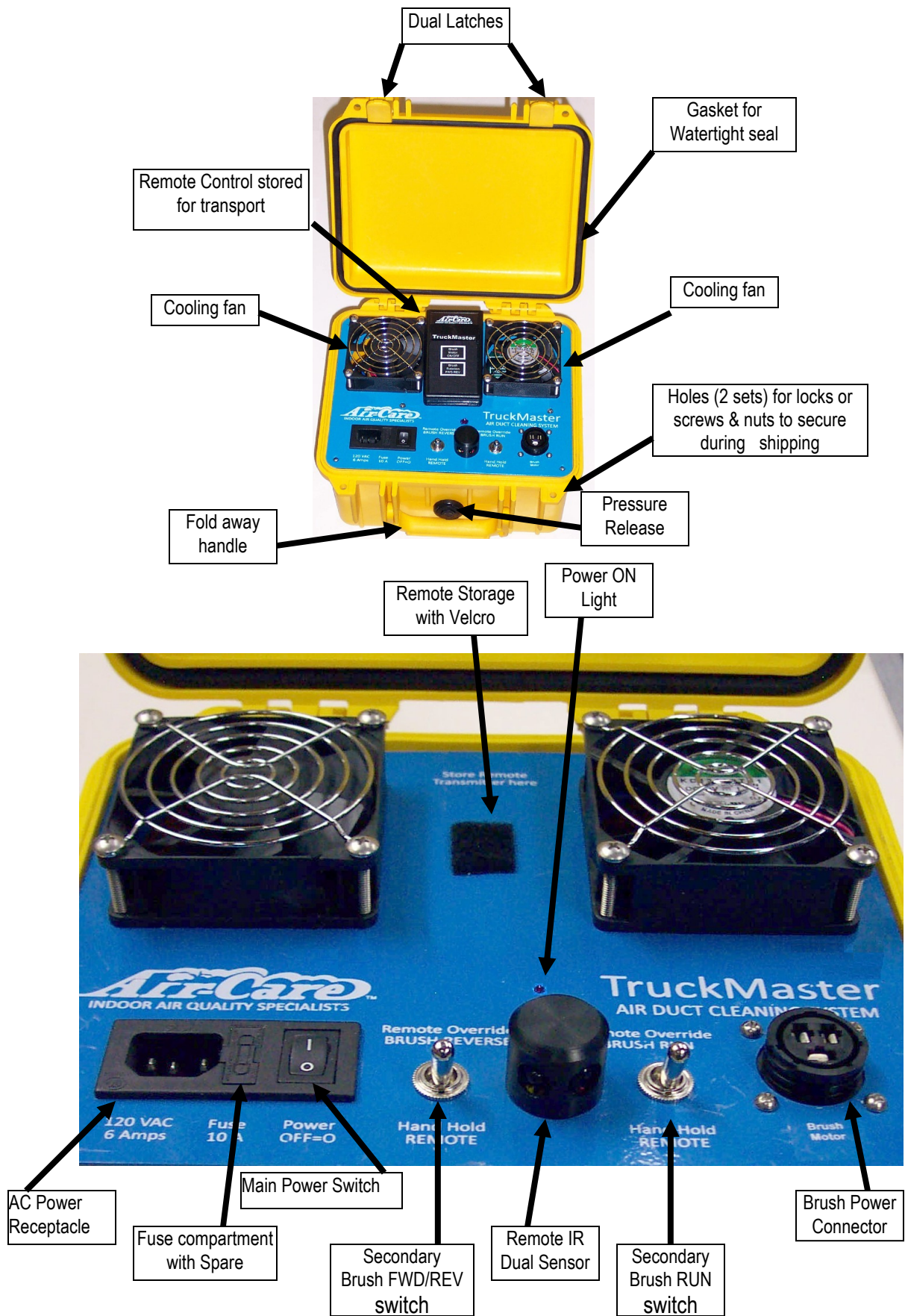
Safety Precautions

Always use safe and common sense precautions when working with Air-Care equipment. Do not block walkways with equipment, and remove delicate and breakable articles from the immediate work area. The following are precautions that should be reviewed by all persons who will be involved in the cleaning activity.

- Other than replacing the brush motor on the end of the vacuum hose, there are no user serviceable components in Air-Care TruckMaster. Only trained technicians should attempt to make internal repairs on this equipment.
- Always unplug both power cords before removing the covers or working on the wiring.
- Inspect AC power plugs to be sure the ground pins are in place.
- Never connect power to Air-Care equipment unless all covers and safety shields are in place. Mechanical and electrical parts could activate and cause injury.
- Never allow anyone but a properly trained technician to use the equipment or cleaning products.
- All Air-Care equipment is designed for US standard 115 volt, 60 Hz AC. The Air Care TruckMaster is optionally available in 220/240 Volt, 50/60 Hz Power. Always check the specifications on the equipment before connecting electrical power to Air-Care Equipment.

If you have questions about the safe use of any Air-Care product, call 702-454-5515

Equipment specifications and part numbers are subject to change without notice.



Infrared Window

Clip for
Pocket or Belt

9 Volt Battery
Compartment

Red LED
Indicator

Brush Motor RUN
and STOP Button

Brush Motor
Forward and
Reverse Button

Velcro to secure
Remote in Case

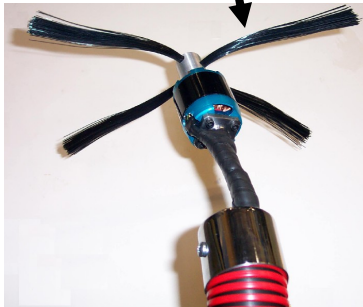
Battery Compartment
Cover



12" Flex-E-Bristle Brush for
4"-12" Ducts is Standard on
1.5" hose

Truck Mount Solution
Hose connection

CE1816A Connection to TruckMaster
Vacuum Hose



Truck Mount Vacuum
Hose Connection



1500 Watt Brushless
Outrunner Motor

Bristles are
replaceable

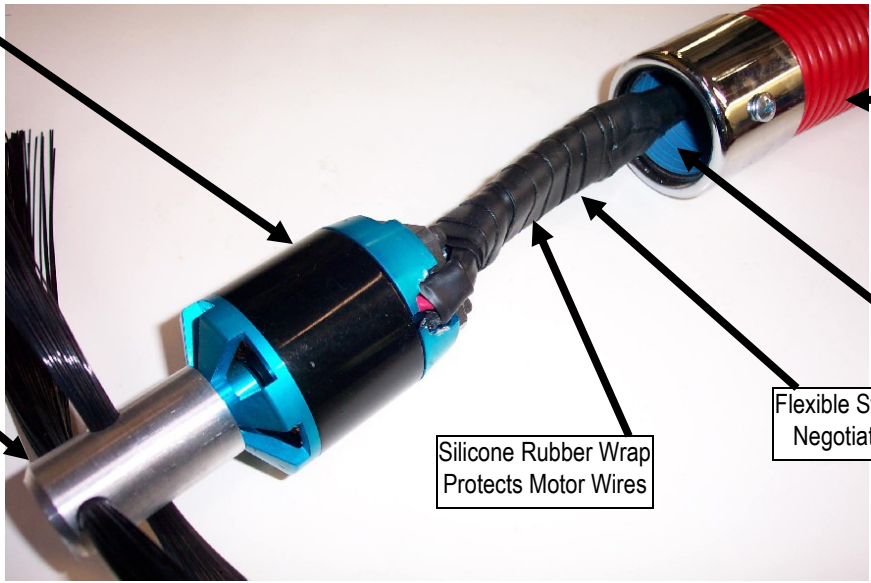
1.5" Crushproof Hose
is Standard, 2" hose
optional with 18"
Bristle Brush

Chrome Hose
End

Maximum Opening
in Vacuum Hose

Flexible Steel Motor Mount to
Negotiate Sharp Corners

Silicone Rubber Wrap
Protects Motor Wires



Duct Cleaning with the Air Care TruckMaster

The Air Care TruckMaster has a unique dual function. The motorized brush on the end of the vacuum hose assembly agitates the dust and debris in the air duct, while the Truck Mount Vacuum functions as the debris collector. This method of cleaning only requires that the supply and return grills be removed and the air system is turned off. Caution, some air systems may automatically cycle in the OFF position on the Thermostat, so it is best to also shut off the main power breaker to the furnace while cleaning.

Before applying power, be sure that all 3 Switches on the Control Box are in the OFF (0) position. After connecting the Air Care TruckMaster power cord to the Power Inlet, wait 20 seconds before attempting to turn on the Brush. Connect the 1 1/2" X 35' hose assembly (or the optional 2" X 35' hose assembly) to your Vacuum Source Hose. The electrical cord from the hose will plug in to the TruckMaster control box. Unless your truck vacuum has provision for "Dry Dust", you should install the "Dust Damper" between the Truck vacuum hose and the TruckMaster Hose and attach the solution hose to the trucks solution hose. This wets the dust so it will not damage the vacuum blower wheel.

The Remote uses an Infrared Light beam similar to a Television Remote. The operator must be in sight of the DuctMaster Control Panel where the Remote Receiver is located for it to operate. The operator can be across the room or up on a ladder and the remote will function as long as there are no obstructions between the operator and the sensor on the TruckMaster Panel. The remote will NOT work between rooms.

When using the Remote, BOTH Switches on the control box for the brush MUST BE OFF (0)! These switches can be used to manually START/STOP or control FWD/REV directions of the brush if the Handheld Remote Transmitter is lost or has a dead battery. When these switches are ON (1), it deactivates the Remote.

Once the technician inserts the brush into the duct, use the Remote's ON/OFF Button to start the brush and gently work the vacuum hose and brush into the duct. STOP the brush before removing it from the duct

When the technician cannot push the vacuum hose in any farther, press the FWD/REV button on remote to "reverse" the brush rotation to allow it to go deeper into the ducts. Repeat this process for each supply and return duct. Pull the hose out of the duct with the motor running, but stop it before removing the brush from the duct.

Where you have long ducts, such as main trunk lines without access doors, you must make "cut-ins", to access the entire length of the duct.

After cleaning each duct, each opening should then be decontaminated by fogging them with our EPA registered Sporidicin sanitizer, Soot Set sealer and Liquid Odor Kill deodorizer.



**Using Air Care
TruckMaster to
clean Ceiling ducts**

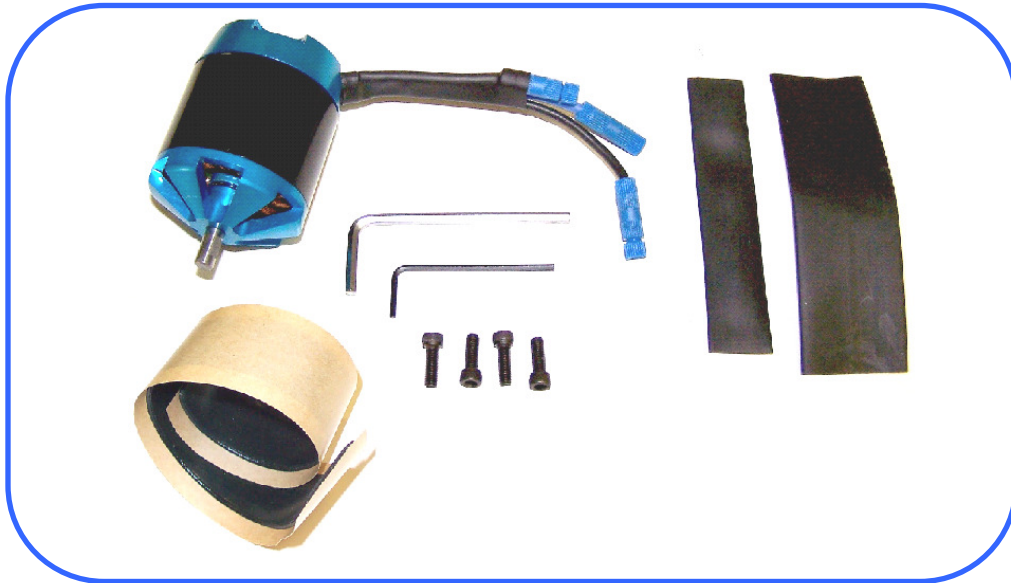


**Using Air Care
TruckMaster to
clean floor ducts**

DuctMaster Brush Motor Replacement Instructions

The DuctMaster brush motor is a very reliable brushless DC motor. There are, however, situations that may require it to be cleaned or replaced.

There is a Replacement Kit motor for field replacement if needed. p/n AC3070AKIT



P/N CE3070AKIT

1. Be sure that it is the motor itself rather than the wiring or the power source that has failed before you proceed. Contact Air-Care for technical support at 800-322-9919
 - a. Be sure the power cord is plugged in. Test it by turning power switch to “0” for 30 seconds, then turn on the power switch (1) and the Red Power Light should light indicating AC power. Then the 2 fans should run. If they run, the power supply for the Brush Motor is good
 - b. Verify that the brush motor power connector is fully inserted and locked in place in the panel.
 - c. Test the power to the motor with the brush panel switch – the ON/OFF switch must be OFF when the power switch is turned on (1). You must wait 30 seconds before turning on the brush switch. (Do not use the remote for this test). If it still does not run you may replace the motor. Though unlikely, there may be other causes of the motor not running properly.

If you have any questions on how to test these conditions, call the Air-Care technical support line 800-322-9919.

M3070AKIT
Updated: 05/20/09

2. Once it has been determined that the brush motor is the most likely problem, it is time to turn off the power, unplug the power cord from the TruckMaster and **follow the removal instructions below.**

a. Locate the replacement motor kit that will have the needed 9/64" Allen wrench. The 1/8" Allen wrench for the brush hub requires a 1/8" Allen wrench which was packaged with the brush.



b. Remove the brush, using a 1/8" Allen wrench to loosen the set screw, then pull the brush off the motor shaft and set it aside.



c. Remove the 2 Phillips screws on one side of the vacuum hose chrome cuff and gently pull the wires out of the hose a few inches.



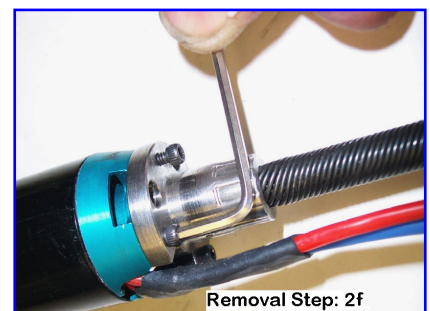
d. Gently pull the motor mount and wires out of the end of the vacuum hose. It may be necessary to lay the hose out straight by going to the machine end of the hose and push the power cord 12" in so there will be enough slack to pull the cord out the other end of the vacuum hose.



e. **NOTE:** It is a good idea to tape the wires in the hose to the end of the hose so it does not get pulled into the hose and out of reach while you are working on the motor.



f. With a box cutter or other blade, cut the black heat shrink tubing off the flexible portion of the motor mount –CAUTION: DO NOT CUT THE 3 MOTOR WIRES LOCATED ON ONE SIDE OF THE MOTOR MOUNT. Remove this tubing and discard it. Use the Allen wrenches in the kit (9/64") to loosen and remove the 4 black motor mounting screws that hold it to the mount.



- g. There are 3 motor wires that are connected with 3 blue twist butt splices on current DuctMaster motors and the wires are cut to 3 different lengths so they do not overlap. Some earlier versions may have crimp connectors or gold push on connectors with all 3 wires the same length. As Long as the REPLACEMENT MOTOR has these blue twist-on butt splices, the power cord in the hoses (1.5" or 2") must have the 3 wires cut to 3 different lengths to match the new Motor connectors.

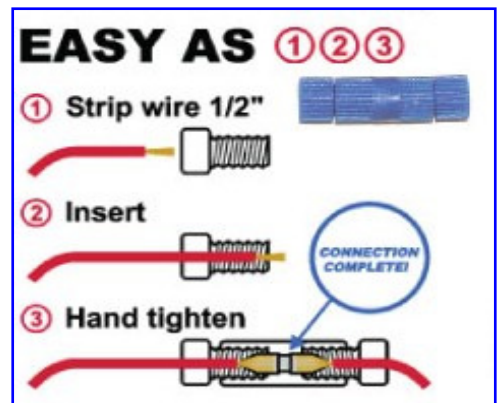
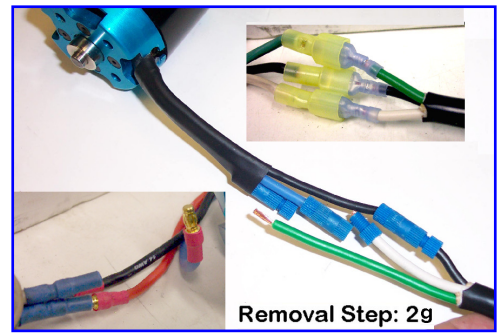
Disconnect the wires at the vacuum hose side of the splices. The twist off type can be loosened on hose side, the crimped connectors can be cut off on the hose side and the gold connectors can be simply pulled apart.

Set the motor aside to be repaired or returned to Air-Care.

3. Reinstall motor.

Follow the re-install new motor instructions below:

- a. Install the motor adapter to the motor with the 4 Allen screws removed For the older round motor mount, align the notch in the motor mount with the side of the motor that has the 3 wires coming out.
- b. Install the 4 Allen head screws through the motor mount and into the motor housing. Install all 4 loosely at first then tighten them in stages: first snug, then tight. Be sure all 4 are tight.
- c. Connect the 3 Motor wires to the Motor Power Cord with the Twist on Butt Splices.



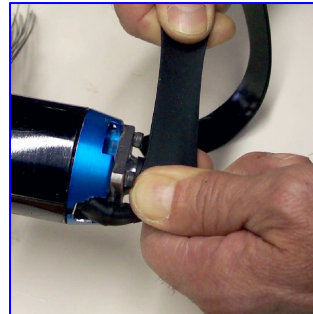
- d. Hold the wires along one side of the motor mount and slide the heat shrink tubing over the shaft and the wires. Adjust the position of the shrink tubing so that it will hold the wires in place at side of the Square mount so the 2 holes in the motor mount are not covered. It may be necessary to trim the tubing to the proper length. The $\frac{3}{4}$ " shrink tubing must cover the crimped section of the Motor Adapter.

Use a hair dryer or heat gun to heat the tubing so it will shrink tight onto the motor mount and the wires. Install the motor mount end into the vacuum hose as it was removed and tighten the 2 screws. Re-Install the Brush to the Motor shaft. The Motor replacement is complete and can be tested now.

- e. Finally, use the "Stretch and Stick" silicone rubber tape to wrap the wires and back end of the motor mount. This tape is NOT sticky, but it when stretched it will adhere to itself. It is VERY IMPORTANT to pull and stretch this tape as you are applying it or it will not stick. Overlap the layers approximately $\frac{1}{2}$ " and continue to stretch and wrap from the Motor end to the Hose end. You can trim off any excess. The Tape will stick initially pretty well and the hose can be used within 5 minutes, but Maximum adhesion requires overnight to setup.



For technical questions, call Air-Care 800-322-9919



Motor Maintenance Tips:

1. Clean the exterior of the motor periodically to be sure the cooling openings in the motor housing and the aluminum heat shield are open for air circulation. The motor has powerful magnets mounted inside the outer case. These magnets can attract and hold ferrous metal particles which may find their way into the motor and cause it to bind. These can sometimes be removed with compressed air from the outside, but it may be necessary to open up the motor to remove them
2. Inspect the screws on the motor for tightness and tighten as necessary:
 - (4) Screws on the motor mount
 - (1) Set screw on the aluminum heat shield
 - (2) Set screws for the motor shaft in the blue housing
 - (3) Screws at the vacuum hose inlet.
3. Inspect the 3 push together connectors for the motor at the vacuum hose inlet.

Specifications

Specification	Description
Size	11" W x 10" D x 7" H
Weight	<ul style="list-style-type: none"> 7.5 Pounds
Power requirements:	<ul style="list-style-type: none"> 115 Volt AC, 60Hz, 5 AMPS (Optional: 220/240 Volt, 50/60 Hz, 3 AMPS)
Power Cord	16 gauge, 3 wired grounded to Computer type Receptacle
Hose Attachments	<ul style="list-style-type: none"> Hose, 1 1/2" X 35' TruckMaster Brush and Motor Assembly. Includes: 12" DuctMaster Brush, .032" BLK Bristles Power Brush RPM is 2,000 max. with 1500watt Motor and Power Connector Dust Damper for use with Truckmount carpet machines connects between Truck Vacuum hose and TruckMaster vacuum hose.
Operating Environment	25 to 125 Deg F (-4 to 50Deg C)
Case	Durable Poly case with dual latches and waterproof lid
Operating Controls, TruckMaster	<ul style="list-style-type: none"> ON/OFF main power with Red LED power indicator Wireless Handheld IR Remote Control with 2 Activating Buttons to Start/Stop and change direction of brush rotation. Secondary Brush On/Off and Brush Fwd/Rev switches on panel

Parts List

Description	Part Number	Notes
TruckMaster Duct Cleaning system	CE3049	Power & Control Box, 1.5" x35 ft Hose, 12" brush 1500 watt Motor, Dust Damper, AC cord and Bag
TruckMaster Power and Control Box	AC3104	Power Cord NOT included
Remote Transmitter, hand held, 2 button, Belt/Pocket clip	AC1339	9 Volt Battery Included
Battery for remote (9 Volt)	1153	Standard 9 Volt Battery
Brush, Motor, Vacuum hose Assembly 1.5"	CE2958C	Includes 12" Brush
Brush, Motor, Vacuum hose Assembly 2.0"	CE2960B	Includes 18" brush
Replacement Brush Motor Kit, 1500 Watt w/ Instructions	AC3070AKIT	
Replacement Flex-E-Bristle Brush with Hub, 12"	AC1321C	.021" Diameter Nylon, Black, Level
Replacement Flex-E-Bristle Brush with Hub 18"	AC1322B	.032" Diameter Nylon, Black, Level
Bristles, 1 hank, 12"	AC1293	Enough for 5 replacements
Bristles, 1 hank, 18"	AC1295	Enough for 5 replacements
Power Cord, 15 ft, 18 ga x 3 wire grounded	1741	Standard Computer type end
Bag, Equipment for Hose Assembly and Power Control unit.	CE3052A	
Dust Damper, 2.0"	CE1816A	
Fuse, 10 Amp, 5mm x 20mm	1951	TruckMaster has 1 SPARE fuse in holder

Air Care TruckMaster Troubleshooting Guide

Symptom	Possible Causes	Suggested Action
Remote does not operate Brush	<ol style="list-style-type: none"> 1. Be sure Handheld Remote is pointed at the Remote Receiver sensor in the center of the control panel. 2. Check that the Red indicator on the Handheld remote flashes (Once) when any button is pressed 	<ul style="list-style-type: none"> • Locate the DuctMaster so the remote has an unobstructed view of the center of the panel. • If the red LED does not flash, replace the battery.
Brush & hose cannot be inserted far enough into duct.	<ol style="list-style-type: none"> 1. Duct is too small for hose (Less than 2" wide opening). 2. Duct makes two 90° turns in less than 12 inches. 	<ul style="list-style-type: none"> ▪ Be sure you are using the 1 ½" X 35' Hose, Brush and Motor Assembly • Try to access the duct from another opening.
Brush Motor does not turn.	<ol style="list-style-type: none"> 1. The Brush Switch on the Panel was "ON" when the power cord was plugged in 2. Electronic Torque control shut down brush motor power. 3. There was a power loss in the building or a power surge. 4. Motor Connectors have come loose. 5. Motor has collected metal particles inside due to its magnetic pull. 	<ul style="list-style-type: none"> • Be sure the Brush Switch on the Panel is OFF. • Turn OFF power switch for 30 seconds, and then turn on – wait 20 seconds before attempting to run motor. • Be sure the Brush Switch on the Panel is OFF. Try using remote again. • Be sure Brush Power Cable is fully inserted into the Panel Connector • Clean out debris from the motor without damaging the internal wires. A soft brush or air gun may work.
There are holes in the red vacuum hose.	<ol style="list-style-type: none"> 1. The "crush proof" hose is very durable, but if it is pulled excessively hard, it can separate at the grooves. 	<ul style="list-style-type: none"> • Call Air Care for an RMA for a quote to have the vacuum hose repaired or replaced.
		<ul style="list-style-type: none"> • Call Air-Care 800-322-9919 or 702-454-5515 info@air-care.com

Glossary & Acronyms

1. ACGIH—American Conference of Government Industrial Hygienists
2. ASHRAE—American Society of Heating, Refrigerating, and Air Conditioning Engineers
3. Air Handler/ AHU—The Furnace or air conditioner that heats, cools and moves the air.
4. Antimicrobial—Agent that kills Bacteria, Molds and viruses. See “Sanitizer
5. Arrestance – An ASHRAE standard procedure to measure air filter efficiency (52.1)
6. Bioaerosols— Molds and bacteria that are found floating in the air.
7. Biological Contaminants— Bacterial, Mold/Fungus, viruses and their waste, byproducts and decomposition materials that can be inhaled and cause many types of health effects.
8. Building Related Illness—Diagnosable illness whose symptoms can be identified and whose cause can be directly attributed to airborne building pollutants (e.g., Legionnaire’s disease, and hypersensitivity Pneumonitis).
9. CFM—Cubic Feet per Minute, a measure of how much air is flowing in an air system.
10. CO—Carbon Monoxide, an odorless, toxic gas produced during combustion.
11. CO₂—Carbon Dioxide an odorless, non-toxic gas produced during combustion and exhaled by people.
12. Ceiling Plenum – The area above a suspended ceiling that may be used as a return path to the Air Handler.
13. Conditioned Air – The air that has been filtered, heated or cooled by the air handler.
14. Dampers – Flaps or valves in the air duct that control the amount of airflow in the duct.
15. Diffusers & Grilles & Registers – The covers at the end of supply and return ducts that control the amount and direction of the air-conditioned air entering or leaving a room.
16. Electrostatic Filter – A High Efficiency (95% Arrestance) Air filter that generate static electricity from the air movement through the air handler and captures dust from the air while the clean air move freely through it.
17. EPA—Environmental Protection Agency
18. Duct – A metal, plastic or fiberglass tube that transports air to and from the Air Handler. They can be round, square or rectangular.
19. Duct Board – Compressed fiberglass material used to make air ducts, particularly in the southern U.S.
20. Fiberglass Filter – A disposable, very low efficiency filter (approx. 10% arrestance).
21. Flex duct – Plastic fabric duct with a spiral wire support. It is used extensively in the Western U.S.
22. HEPA—High Efficiency Particulate Air
23. HVAC—Heating, ventilation and air-conditioning
24. IAQ—Indoor Air Quality
25. MSDS—Material Safety Data Sheet
26. Make-up Air – Fresh “outside” air that is brought into a Commercial building.
27. NADCA-National Air Duct Cleaners Association
28. NAFA – National Air Filter Association
29. NIOSH—National Institute for Occupational Safety and Health
30. Negative building pressure – A condition that allows air to flow into a building when a door is opened.
31. NSC -- Nevada Safety Counsel
32. NSF International – An independent testing laboratory for Air filters
33. OSHA—Occupational Safety and Health Administration
34. Positive building Pressure – A condition when air will come out of a building when a door is opened.
35. Re-entrainment – The flow of dust and debris removed from an air system back into the same building
36. Return/Return Duct
37. Sanitizer – A material designed to kill mold, bacteria, and viruses.
38. Sick Building Syndrome – A group of symptoms such as headache and watery eyes that disappear after the sufferer leaves the building for a few hours.
39. Supply/ Supply Duct—The opening and related ductwork that delivers conditioned air to a room.
40. VAV—Variable air volume system – A system that varies the amount of flow of air to regulate temperature.
41. VOC’s—See “Volatile Organic Compounds”
42. Volatile Organic Compounds (VOC’s)—Chemicals that release gasses into the air such as solvents.



LIMITED WARRANTY

TRUCKMASTER

Air-Care warrants this product to be free from defects in materials and workmanship to the original purchaser for a period of Two (2) years from the date of purchase. Components listed below are excluded from this Two year period and are covered for periods described below:

Circuit Board & Remote	1 Year
Speed Controller	1 Year
Hose & Motor Assembly	90 Days
Brush Assembly	No Warranty

Warranty covers both parts and labor (labor is to be performed at Air-Care's facility located at 3868 E. Post Road; Las Vegas, Nevada).

Warranty is extended to the original purchaser and is **not** transferrable.

This warranty does not extend to any damage to a product caused by or attributable to freight damage, abuse, misuse, improper or abnormal usage. Warranty is also void if the product has been modified or altered in any way.

The purchaser is responsible for the cost of shipping the equipment to Air-Care's facility for evaluation. If found to be defective and covered by the terms of this warranty, Air-Care will pay FedEx ground shipping charges on the repaired or replaced item back to the purchaser's location. Any additional expedited service charges for quicker shipping shall be born by the purchaser. If the product or component is not found to be a warranty issue, the purchaser will be responsible for return shipping charges.

Air-Care is not responsible or liable for indirect, special, or consequential damages arising out of or in connection with the use of performance of the product; damages with respect to any economic loss, loss of property, loss of revenues or profits, loss of use, or other incidental or consequential damages of whatsoever nature.

The warranty extended hereunder is in lieu of any and all other warranties, and any implied warranties of any type.

This warranty gives you specific rights. These rights and others vary from state to state.

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