



COBRA VII

USER GUIDE





COBRA VII

POWER BRUSH SYSTEM



Division of D.P.L. Enterprises Inc.

3868 East Post Road, Las Vegas, Nevada 89120, (702) 454-5515, FAX (702) 454-5225

Website: www.air-care.com; E-mail: Info@Air-Care.com

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UNPACKING AND INSTALLATION

Remove the outer box and inspect for damage. Report all damage immediately to your carrier. If special setup instructions are required, they will be taped to the outside of the equipment or in the "Operating" section of this manual, available online.

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

Check that all parts are present (See Pages 6-7)

1. COBRA-VII 4 (four) speed motor drive unit.
2. Flexible drive cable, 3/8" core by 33 feet long.
3. Flex-E-Bristle Brush, for use in 4" to 18" diameter air ducts.
4. 3 Button Wireless remote control handheld transmitter with a 12v battery installed.
5. Commercial Option (12"-36" diameter Flex-E-Bristle Brush.)

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.

- There are no user serviceable components in the COBRA VII; only trained technicians should attempt to make internal repairs on this equipment. Call Air-Care 800-322-9919 for tech Support.
- Never use the COBRA-VII in a wet environment.
- Always turn off the main power switch/Breaker on the COBRA VII panel when the brush and cable are laid down to prevent injury if the START switch is accidentally activated.
- Be sure all power cords and electrical extensions are rated to meet or exceed the original Air-Care power cord spec's, and inspect AC power plugs to be sure the ground pin is in place.
- Never connect power to Air-Care equipment unless all covers and safety shields are in place. Mechanical and electrical parts could be activated and cause injury.
- Never allow anyone but a properly trained technician to use Air-Care equipment or cleaning products.
- All Air-Care equipment is designed for US standard 115 volt, 60 Hz AC. Most Air-Care equipment can be special ordered to meet other worldwide standards for a reasonable price and delivery schedule. Always check the specifications on the Equipment before connecting electrical power to Air-Care equipment.
- Keep the cable clear of breakable objects as it can flip and twist during higher torque applications.
- Turn off main power switch when removing or replacing the Flex-E-Bristle Brush. If you have questions about the safe use of any Air-Care product, call 702-454-5515.

OPERATING THE COBRA

Setup and Testing

1. Place the Cobra VI drive unit on the floor or other stable surface near the ducts to be cleaned.
2. Connect a power cord to the pigtail on of the rear of Power unit and to a standard 115 volt grounded AC outlet (Img. 1).
3. Attach the flexible shaft to the motor unit by first aligning the square end of the shaft with the square hole in the drive unit, then screwing the black disconnect nut onto the 2" diameter, threaded end of the coupler. This nut should be snug, but NOT excessively tight (Img. 2).
4. Hold the outer cable housing near the Flex-E-Bristle Brush. Hold the brush where it will not hit you or other objects when it begins to rotate. It should only be started AFTER it is inside an air duct.
5. Turn on the power breaker/switch (Img. 3).
6. Using caution, select the "Panel" on the brush control switch (Img. 4).
7. The Brush can be started by using the BRUSH FORWARD or BRUSH REVERSE setting on the 2nd switch from the left. With the brush speed still set to 3 or 4, the brush should begin to turn slowly. (Img 5)

NOTE: If the brush does not turn, it may be necessary to uncoil the cable or increase the speed dial setting slightly.

8. Set the Switch back to the OFF or Center position to be sure the Brush Stops.
9. Press the "BRUSH REVERSE" setting on the bottom of the switch to verify that the brush rotates in the opposite direction.
10. Hold the brush cable approximately 12" from the brush end and keep it away from any breakable objects if you want to test the speed control while the brush is not inside an air duct.
 - a. Increase the "Brush Speed" Dial Setting to observe the brush speed increase
 - b. With Caution, press the "Brush Forward" button to change the direction of the brush.

11. Turn the Speed control dial back to "0" to verify the brush completely stops.
12. Return the Brush Forward switch to OFF, Center position.
13. To test the remote, Locate the White Remote control and use the Far Left Panel Switch to select "Remote". Be sure that the Brush is either being held by the cable or laying in an area where it will not damage anything when it starts running.
14. Increase the Brush Speed dial to 3 or 4.
15. Press the Upper arrow on the remote and the brush should start to turn.
16. Press the Center button on the remote and the brush should stop.
17. Press the Bottom arrow on the remote and the

- Brush should begin to turn in the opposite direction.
18. It is possible to increase or decrease the speed of the brush with the Brush Speed dial.
19. While the brush is running, the direction of rotation can be changed by pressing the UP arrow on the remote.
20. Turn the Speed control Dial to "0" to stop the brush and press the Center button on the remote to turn off the brush motor.
- 21 The brush MUST BE STOPPED BEFORE INSERTING INTO AND OUT OF AN AIR DUCT.
22. Do not crimp the cable when storing or transporting. This may bend the strands in the cable causing premature fatigue and failure.



Image 1



Image 2



Image 3



Image 4



Image 5



1. Bring the TurboJet into close proximity to the planned connection ducts.



2. Pre-vacuum and plug these openings.



3. Attach the Turbojet or other negative air machine to the system.



4. If the Return has a Filter, Remove the filter, place it in a Plastic bag and reinstall the filter into the return to block air flow through the air system during cleaning. Do not forget to remove this bag when the job is complete.



5. CAUTION: DO NOT INSERT OR REMOVE THE BRUSH FROM THE DUCT WHILE THE BRUSH IS TURNING



6. Begin at the duct opening farthest from the furnace/air conditioner.

7. With the Brush **STOPPED**, insert the brush and cable assembly one or two feet into the duct to be cleaned. **THE MACHINE END OF THE CABLE MUST BE STRAIGHT FOR AT LEAST 4 to 5 FEET TO REDUCE THE FRICTION and HEATING OF THE CABLE HOUSING.** A tight bend in the cable will cause friction that will damage the cable housing and cable resulting in costly repairs or replacement of the cable.

8. Start the brush by turning on the main power, press the START switch on the Remote and it will start in the lowest speed. The brush will begin to rotate within a few seconds. NOTE: The brush will begin to turn slowly in the Lowest Speed setting. Most duct cleaning will be done between 30 and 80 on the dial.

DUCT CLEANING PROCEDURES

9. Push the Flex-E-Bristle Brush into the duct with a smooth gentle force. The brush will expand and compress to clean any size duct from 4" to 18" high and any width.

CAUTION: To clean duct board ducts, or older flex duct systems, the COBRA VII Brush system should be used at a lower speeds (30 or 40) with caution as its aggressive cleaning action may damage these delicate ducts. Internally insulated ducts, brittle flex ducts and fraying duct board ducts should NOT be cleaned with a power brush.

10. When the end of the duct is reached, the cable can be pulled slowly back toward the opening. If the duct is rectangular in shape, Press the "Change Rotation" on the Remote. The rotation of the brush in this direction will allow it to "Walk" to the opposite side of the duct from what was cleaned going into the duct and assure that both sides of the rectangular duct are cleaned.

11. Stop the brush 1 or 2 feet from the duct entrance then remove the brush. This duct opening can now be plugged with the foam plug, and the next duct opening cleaned in the same manner. Repeat this on each duct opening until all have been cleaned.

12. The duct system is now ready to be decontaminated by fogging in a duct sealant like Soot Set and an EPA registered sanitizer such as Envirocon.



Cobra 7 Remote Operation

Pressing the Up or Down arrow once will start the brush.

Press the Upper arrow on the remote and the brush should start to turn.

Press the Center button on the remote and the brush should stop.

Press the Bottom arrow on the remote and the Brush should begin to turn in the opposite direction.

TROUBLESHOOTING GUIDE

PRIOR TO TROUBLESHOOTING, CHECK THE FOLLOWING.

1. Be sure power cord is plugged in, AND the Breaker/switch is in the "ON" with the Light Lit. If there is no light, try another outlet.
2. When testing the motor use the remote switch to turn the motor on for the first test.
3. For testing leave the Speed at the Lowest Setting of 30.
4. It is SAFER to run the COBRA VII with the cable end DISCONNECTED. You will be told when to attach it.

PROBLEM	CHECK	IF	ACTION
Motor does not run.	1. Did you follow the first 4 steps at the top of this page?	Yes	Be sure the Brush and Cable have been disconnected and Go to #2
		No	Follow the 5 instructions above then go to #2
Motor does not run	2. Does the RED LED on the remote flash when the buttons are pushed?	Yes	The Remote may have a weak battery, Replace the 12v battery and repeat the test. If it still does not light, Go to #4.
		No	The Remote may have a dead battery, Replace the 12 volt battery
Motor does not run	3. Turn the Motor "ON" with the Remote START button then Press "Change Rotation". Does the motor run in BOTH directions?	Yes	The motor is good, but the remote is failing, Call Air Care.
		No	Go to #4
Motor does not run	4. Use the Panel START switch and Change Direction Switch, and count to 4 to give it time to respond. Did Motor Run?	Yes	The Remote appears to be failing, Call Air Care. 702-454-5515
		No	Contact Air-Care for advanced Diagnostics. 702-454-5515
Brush Speed does not change	5. Press the PANEL "START" switch. Does the Motor start to run at any speed?	Yes	Go to #7
		No	If the "Speed Indicator" lights on the Panel change? Contact Air-Care Tech Support.
Motor Runs until Cable and Brush Installed	6. Is the Cable coiled tightly or is this brand new cable?	Yes	When being used, the cable must be coiled loosely, about 24" diameter or larger coils. A new cable must "break in" a few hours.
		No	Go to #7
Motor Runs until Cable and Brush Installed	7. Is the Large 36" brush attached?	Yes	The 36" brush should only be run at speeds of Lowest and Med Slow (30 and 50)
		No	Contact Air-Care Tech Support
Final Test Run	8. Did the COBRA VI run properly in all modes?	Yes	Problem solved. A power surge may have tripped the breaker.
		No	Look for the new symptom in the left column or call Air-Care Tech Support. 702-454- 5515

COBRA COMPONENTS



- A Intake Fan w/Filter
- B Remote Control Storage Pocket
- C Exhaust Fan
- D Brush Mode Switch
- E Manual Brush Switch
- F Brush Speed Dial
- G Power Switch



Attaching brush cable to connector



Attaching brush to cable

STANDARD ACCESSORIES



OPTIONAL ACCESSORIES



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PARTS LIST

Ref #	Description	Included	Part #
1	COBRA VII, Complete with Standard Accessories 120/220	--	FG0228
2	COBRA VII, Motor & Control Box with Remote for 120 V and 220V	YES	SACOB0062
3	Brush and Cable, COBRA VII Std 3/8" Core x 33 Cable. WITHOUT brush, order 18" Flex-E-Bristle Brush (Ref#7)	YES	SACOB0015
4	Internal Parts for Motor and control panel	YES	Call
7	18" Flex-E-Bristle Brush, Standard Black Bristles for 4" to 18" Ducts	YES	SACOB0011
8	Brush Hub. The Hub for the Cobra VII brush can be fitted with other length and diameter bristles for special applications.	Optional	SACOB0005
9	18" Replacement Bristles, Standard Bristles, 18" x .021 diameter (5 changes)	Optional	BA0006
10	Handle, Coil'n'Carry	YES	FG0102
11	Power Cord, 3 ft Pigtail	YES	EC0186
13	Cable Housing 5/8" OD for 3/8" Core	Optional	COM0571
15	Cable Repair Kit, for Standard 3/8" Cable, Brush End	Optional	SACOB0020
17	Cable Repair Kit, for Standard 3/8" Cable, Machine End	Optional	SACOB0018
19	Allen Wrench, for Brush to Cable Set Screw, 1/8" --	Optional	BC0005
20	Disconnect Nut (For all Cobra Cables)	Optional	ACC0151
24	COBRA VI Instructions, This Document (Online at the Air-Care Website). P/N MM0206	YES	SAO0009
25	Control Panel Assembly with all parts	YES	SACOB0058
26	Motor, 1/2 HP 90 VDC, 1750 RPM	YES	M0005
27	Universal Remote, Cobra	YES	SAXM0018

SPECIFICATIONS

Power Requirements:	120/220 VAC, 50/60 Hz 7.0 Amps
Size:	14.4" W x 19.5" D x 14" H
Weight:	28-lbs. motor case, 7-lbs. cable and brush
Motor:	90-Volt high torque DC motor
Controller:	90-Volt DC controller with speed and load correction
Cable Sizes:	Standard 3/8" core, 5/8" O.D. nylon housing, 33 feet long. Optional: 50-foot cable available
Brushes:	Standard: 4"-18" self adjusting Flexible Brush, Detachable Optional: 14"-36" self adjusting Flex-E-Bristle Brush
Power Cord:	Pigtail with grounded plug

Specifications subject to change without notice.

If you have any questions, call Air-Care at 800-322-9919

LIMITED WARRANTY

Cobra VII Power Brush System

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:

Motor	1 Year
Circuit Board & Remote	1 Year
Cable 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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