



ecob/ade®

INSTALLATION & OPERATIONS MANUAL

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To ensure proper functionality and optimum performance, it is **STRONGLY** recommended that Hillphoenix cases and equipment be installed/serviced by qualified technicians who have experience working with commercial refrigerated display merchandisers and storage cabinets. For a list of Hillphoenix-authorized installation/service contractors, please visit our website at www.hillphoenix.com.

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LIABILITY NOTICE

For Cases with Shelf Lighting Systems

Hillphoenix does NOT design any of its shelf lighting systems or any of its display cases with shelf lighting systems for direct or indirect exposure to water or other liquids. The use of a misting system or water hose on a display case with a shelf lighting system, resulting in the direct or indirect exposure of the lighting system to water, can lead to a number of serious issues (including, without limitation, electrical failures, fire, electric shock, and mold) in turn resulting in personal injury, death, sickness, and/or serious property damage (including, without limitation, to the display itself, to the location where the display is situated [e.g., store] and to any surrounding property). DO NOT use misting systems, water hoses or other devices that spray liquids in Hillphoenix display cases with lighted shelves.

If a misting system or water hose is installed or used on a display case with a shelf lighting system, then Hillphoenix shall not be subject to any obligations or liabilities (whether arising out of breach of contract, warranty, tort [including negligence], strict liability or other theories of law) directly or indirectly resulting from, arising out of or related to such installation or use, including, without limitation, any personal injury, death or property damage resulting from an electrical failure, fire, electric shock, or mold.

P079211M, REVO

Revision History

REV.	DATE	CHANGE DESCRIPTION	AUTHOR
V1.00	11/12/19	Initial manual release	BK/(MARKETING)

GENERAL INFORMATION

Thank you for choosing Hillphoenix for your food merchandising needs. This manual contains important technical information and will assist you with the installation and operation of your new Hillphoenix Ecoblade assemblies for refrigerated display-cases. By closely following the instructions, you can expect peak performance; attractive fit and finish; and long case life.

We are always interested in your suggestions for improvements (e.g. case design, technical documents, etc.). Please feel free to contact our Marketing Services group at the number listed below. Thank you for choosing Hillphoenix, and we wish you the very best in outstanding food merchandising.

PRODUCT DESCRIPTION

This manual covers general installation and operational information for the Ecoblade Shelf-Edge Technology. Hillphoenix recommends you retain a copy for future reference.

STORE CONDITIONS

Hillphoenix cases are designed to operate in an air-conditioned store that maintains a 75°F (24°C) store temperature and 55% (max) relative humidity (ASHRAE conditions). Case operation will be adversely affected by exposure to excessively high ambient temperatures and/or humidity.

RECEIVING ECOBLADE

Inspect Ecoblade assemblies carefully. In the event of shipping damage and/or shortages, please contact the Service Parts Department at the number listed below.

ECOBLADE DAMAGE

Claims for obvious damage must be 1) noted on either the freight bill or the express receipt and 2) signed by the carrier's agent; otherwise, the carrier may refuse the claim. If damage becomes apparent after the equipment is unpacked, retain all packing materials and submit a written request to the carrier for inspection within 14 days of receipt of the equipment. Failure to follow this procedure will result in refusal by the carrier to honor any claims with a consequent loss to the consumer.

If a UPS shipment has been damaged, retain the damaged material, the carton and notify us at once. We will file a claim.

LOST/MISSING ITEMS

Ecoblade assemblies are carefully inspected to insure the highest level of quality. Any claim for lost/missing items must be made to Hillphoenix within 48 hours of receipt of the equipment. When making a claim please use the number listed below.

SERVICE & TECHNICAL SUPPORT

For service or technical questions, please contact Hillphoenix Case Division Technical Support at 800-283-1109.

MISSING ITEMS

Ecoblade assemblies are inspected before shipping to ensure the highest level of quality. Any claim for missing items must be made to Hillphoenix within 48 hours of receipt of the assemblies

ORDERING ECOBLADE PARTS

If you need to contact Hillphoenix about parts for Ecoblade, call 800-283-1109 and ask for a Service Parts Representative.

Provide the following information:

- Model number and serial number of the shelf for which the part is needed
- Length of the part (if applicable)
- Color of the part (if painted) or of polymer part
- Quantity of parts needed
- Ship-to location

If Hillphoenix Service Parts decides that a part must be returned instead of scrapped, you will be issued a Return Material Authorization number.

Hillphoenix
Display Merchandisers
1925 Ruffin Mill Road Colonial Heights, VA 23834
1-800-283-1109
Website: www.hillphoenix.com

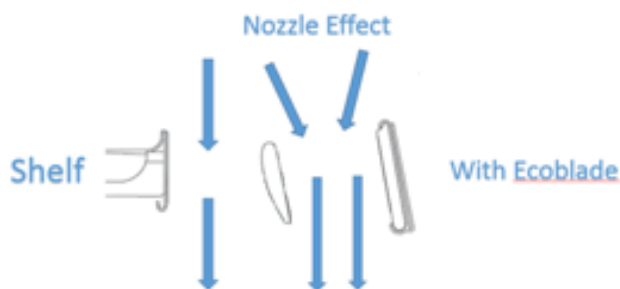
WHAT IS ECOBLADE?

Ecoblade is a shelf-edge technology that manages air turbulence between the discharge air and return air vents on an open multi-deck case for purposes of improving product temperatures and energy savings. Ecoblade is a cost-effective alternate solution to putting doors on medium-temp cases.



HOW IT WORKS

Ecoblade uses a patented twin blade configuration which has been optimized in Computational Fluid Dynamic (CFD) software programs and validation testing to capture the air turbulence in front of the shelf and direct it in a fashion as to keep the cold air near the product and within the case thus resulting in colder merchandise and warmer aisles. And since the air returning to the evaporator coil is colder, the evaporator (refrigeration) does not have to work as hard to keep the case cold, thus resulting in energy savings up to 33%. Maximized savings occurs when the Ecoblade is inline with the load limit line of the case.



WHAT ARE THE ECOBLADE OPTIONS?

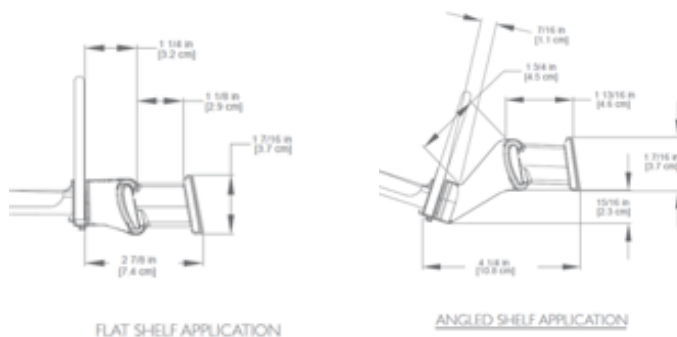
Case Models that accept Ecoblade:

Multi-Deck Case Models Available		
6 series	Origin ² (Low Front)	Origin ² (High Front)
3NDML-NRG	O5DMH-NRG	OHHM-NRG
5DMLH-NRG	O5DM-NRG	OHM-NRG
6DMLH-NRG	O5DR-NRG	OHPH-NRG
6MLH-NRG	O5M-NRG	OHP-NRG
6NDMLH-NRG	O5MH-NRG	ONHM-NRG
6DMLHR	ON5DMHX-NRG	ONHMH-NRG
	ON5DMX-NRG	ONHPH-NRG
	ON5DRX-NRG	
	ON5MHX-NRG	

LENGTH: Ecoblade is available in 2 lengths – 48" (4') or 36" (3')

COLOR: Ecoblade is available in typical interior colors, White or Black. For best aesthetic results, Ecoblade should be ordered with color matching case interior. The tag molding feature on the outer blade is co-extruded with the backing being available to match interior colors, Black or White.

SHELF CONFIGURATIONS: Ecoblade is available with flat shelves or angled shelves (must be 15-17° angled). The shelf orientation must be known prior to ordering the shelves as the angle of the ecoblade is not adjustable; there are 2 unique SKUs for flat and angled positions.



FACTORY FIT OR FIELD RETROFIT: Ecoblade is designed for either mounting to the shelves from the factory (most aesthetically pleasing design) or it is available as a stand-alone component that can be mounted to existing shelves in the field. The field install is compatible with shelves that have either standard 1 1/4 inch tag molding (TM) or standard slotted 1 1/4 inch tag molding on flat or angled shelves.

- The field install has 3 unique SKUs:
 - Flat shelf w/ STD TM

ECOBLADE™ SHELF-EDGE TECHNOLOGY INFORMATION

- Flat shelf w/ Slotted™
- Angled Shelf w/ Slotted™



Retrofit over slotted tag molding shown.

PRODUCT STOP: EcoBlade is compatible with solid Plexi product stops or wire fence style product stops. It should be noted that the product stops used in standard slotted tag molding is not compatible with EcoBlade and special product stops must be ordered.

TAG MOLDING: Tag molding is available on the outer blade for managing store shelf labels. It is designed to be inserted from the top. The height of the 1⁷/₁₆ inches.

ESL (ELECTRONIC SHELF LABELS): Contact Factory for available options

COMPLIANCE: NSF 7

Models available for Shelf-Edge Technology

Multideck Cases		
6 series	Origin ² (Low Front)	Origin ² (High Front)
3NDML-NRG	O5DMH-NRG	OHHM-NRG
5DMLH-NRG	O5DM-NRG	OHM-NRG
6DMLH-NRG	O5DR-NRG	OHPH-NRG
6MLH-NRG	O5M-NRG	OHP-NRG
6NDMLH-NRG	O5MH-NRG	ONHM-NRG
6DMLHR	ON5DMHX-NRG	ONHMH-NRG
	ON5DMX-NRG	ONHPPH-NRG
	ON5DRX-NRG	
	ON5MHX-NRG	

Energy Savings*	Flat shelves: 20-33%	Flat shelves: 20-33%	Angled Shelves: 8-15%
	Angled Shelves: 15-25%	Angled Shelves: 15-25%	

* Based on recommended shelf configurations; Actual results will vary on shelf depths and locations within the case

Ecoblade shelves install basically the same way as any other shelf. For retrofit installations, simply remove the existing shelves and replace them with the Ecoblade shelves.



Installer retrofitting an Ecoblade shelf to an existing case.

Ecoblade shelves can be installed by just one person, as with any other shelf. Some installers may find it helpful however, to have two people handle the shelves so as to keep from bending or damaging the blades. An extra person also typically makes the process go quicker especially on retrofits since the slots on the rear panels of existing cases may not always be properly aligned due to normal wear from use.



Two people usually can install Ecoblade shelves on retrofits more quickly.

On applications with shelf-mounted lighting, plug the attached lighting into the receptacle on the rear panel of the case as you would with any other shelf-mounted lighting.



Lighting receptacle on the rear panel of a case.

A **best practice** for installing retrofits is to take a picture of the merchandised existing shelves before unloading them prior to their removal. This way, when it's time to restock after the Ecoblade shelves have been installed, the merchandise can be replaced in exactly the same locations as it was before.



Taking a picture of the existing shelf merchandising before unloading the product is a best practice.

INSTALLATION AND OPERATION

ECOBLADE RETROFIT



Bottom view of Ecoblade retrofitting to an existing shelf.

Ecoblade retrofits install on existing shelves by attaching them to the edge of the shelf with the tightening screws at the bottom of each Ecoblade arm. Swivel the lower portion of the arm before completely tightening it to the shelf in order to get the proper alignment.



Cutouts in the plexi product stops provide clearance around the Ecoblade arms.

ECOBLADE PRODUCT STOPS

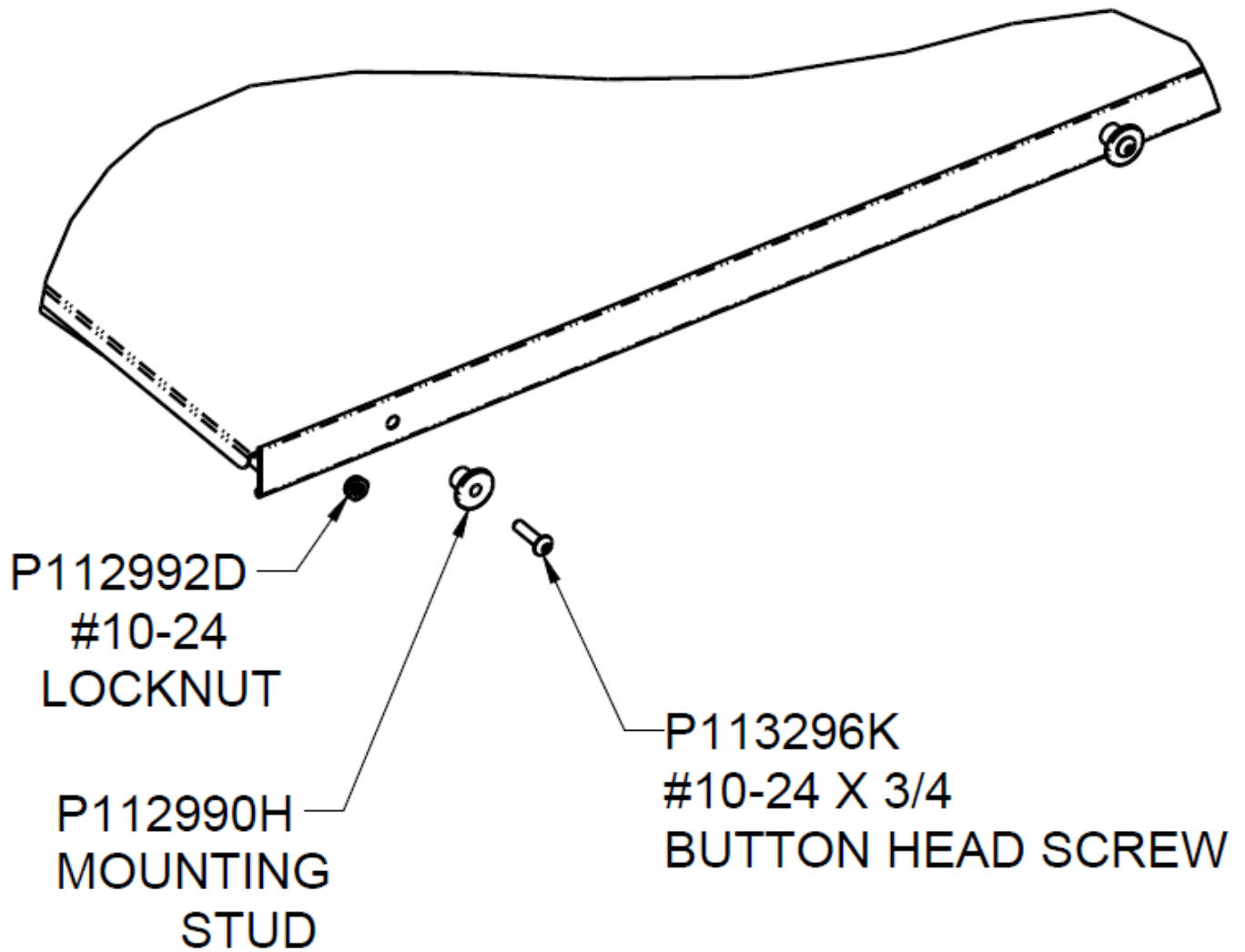


Product stops easily attach to Ecoblade.

R888395 REF,AS,SF,ECOBULD,ASSY

JAB 09/11/19

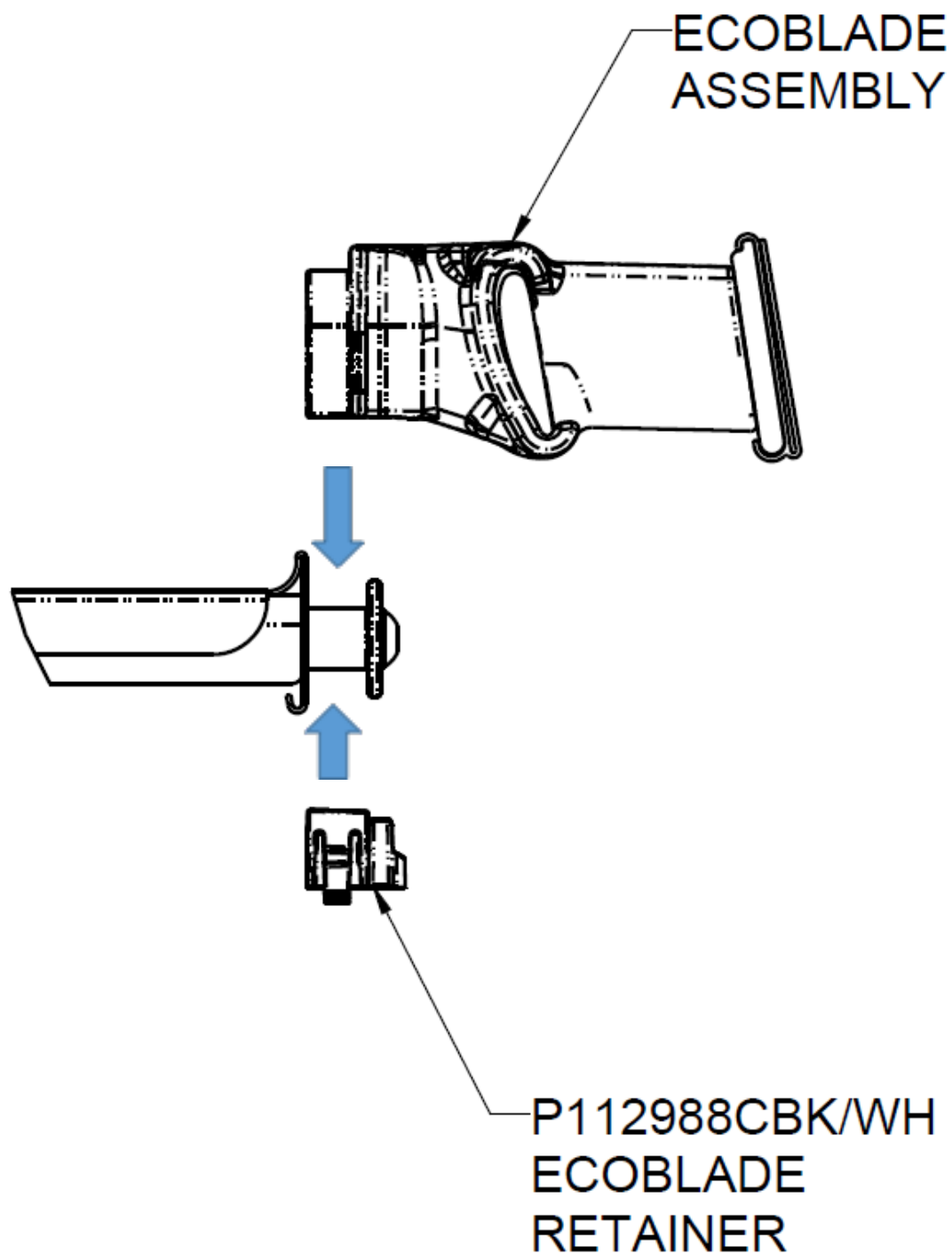
ECN 113812



ECOBLADE SERVICE & CLEANING

Ecoblade can be serviced and cleaned by easily removing the ecoblade from the shelf and cleaning in wash bin or sink with warm soapy water.

ASSEMBLY AND DISASSEMBLY TO THE SHELF



Warning Maintenance & Shelf Care

When cleaning shelves the following must be performed PRIOR to cleaning:

To avoid electrical shock, be sure all electric power to shelf lighting is turned off before cleaning. In some installations, more than one switch may have to be turned off to completely de-energize the lights.

Do not spray cleaning solution or water directly on lights or any electrical connections.

All lighting receptacles must be dried off prior to insertion and re-energizing the lighting circuit.

Please refer to the Use and Maintenance section of this installation manual.

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Tel: 1-800-283-1109

1925 Ruffin Mill Road Colonial Heights, VA 23834

Due to our commitment to continuous improvement, all specifications are subject to change without notice.

Hillphoenix is a Sustaining Member of the American Society of Quality.

Visit our website at www.hillphoenix.com



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WARRANTY

HEREINAFTER REFERRED TO AS MANUFACTURER

FOURTEEN MONTH WARRANTY. MANUFACTURER'S PRODUCT IS WARRANTED TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USE AND MAINTENANCE FOR A PERIOD OF FOURTEEN MONTHS FROM THE DATE OF ORIGINAL SHIPMENT. A NEW OR REBUILT PART TO REPLACE ANY DEFECTIVE PART WILL BE PROVIDED WITHOUT CHARGE, PROVIDED THE DEFECTIVE PART IS RETURNED TO MANUFACTURER. THE REPLACEMENT PART ASSUMES THE UNUSED PORTION OF THE WARRANTY.

This warranty does not include labor or other costs incurred for repairing, removing, installing, shipping, servicing, or handling of either defective parts or replacement parts.

The fourteen month warranty shall not apply:

1. To any unit or any part thereof which has been subject to accident, alteration, negligence, misuse or abuse, operation on improper voltage, or which has not been operated in accordance with the manufacturer's recommendation, or if the serial number of the unit has been altered, defaced, or removed.
2. When the unit, or any part thereof, is damaged by fire, flood, or other act of God.
3. Outside the continental United States.
4. To labor cost for replacement of parts, or for freight, shipping expenses, sales tax or upgrading.
5. When the operation is impaired due to improper installation.
6. When installation and startup forms are not properly complete or returned within two weeks after startup.

THIS PLAN DOES NOT COVER CONSEQUENTIAL DAMAGES. Manufacturer shall not be liable under any circumstances for any consequential damages, including loss of profit, additional labor cost, loss of refrigerant or food products, or injury to personnel or property caused by defective material or parts or for any delay in its performance hereunder due to causes beyond its control. The foregoing shall constitute the sole and exclusive remedy of any purchases and the sole and exclusive liability of Manufacturer in connection with this product.

The Warranties are Expressly in Lieu of All Other Warranties, Express or Implied and All Other Obligations or Liabilities on Our Part. The Obligation to Repair or Replace Parts or Components Judged to be Defective in Material or Workmanship States Our Entire Liability Whether Based on Tort, Contract or Warranty. We Neither Assume Nor Authorize Any Other Person to Assume for Us Any Other Liability in Connection with Our Product.

MAIL CLAIM TO:

Hillphoenix
Display Merchandisers
1925 Ruffin Mill Road
Colonial Heights, VA 23834
1-800-283-1109

Hillphoenix
Refrigeration Systems &
Electrical Distribution Products
709 Sigman Road
Conyers, GA 30013
770-285-3200