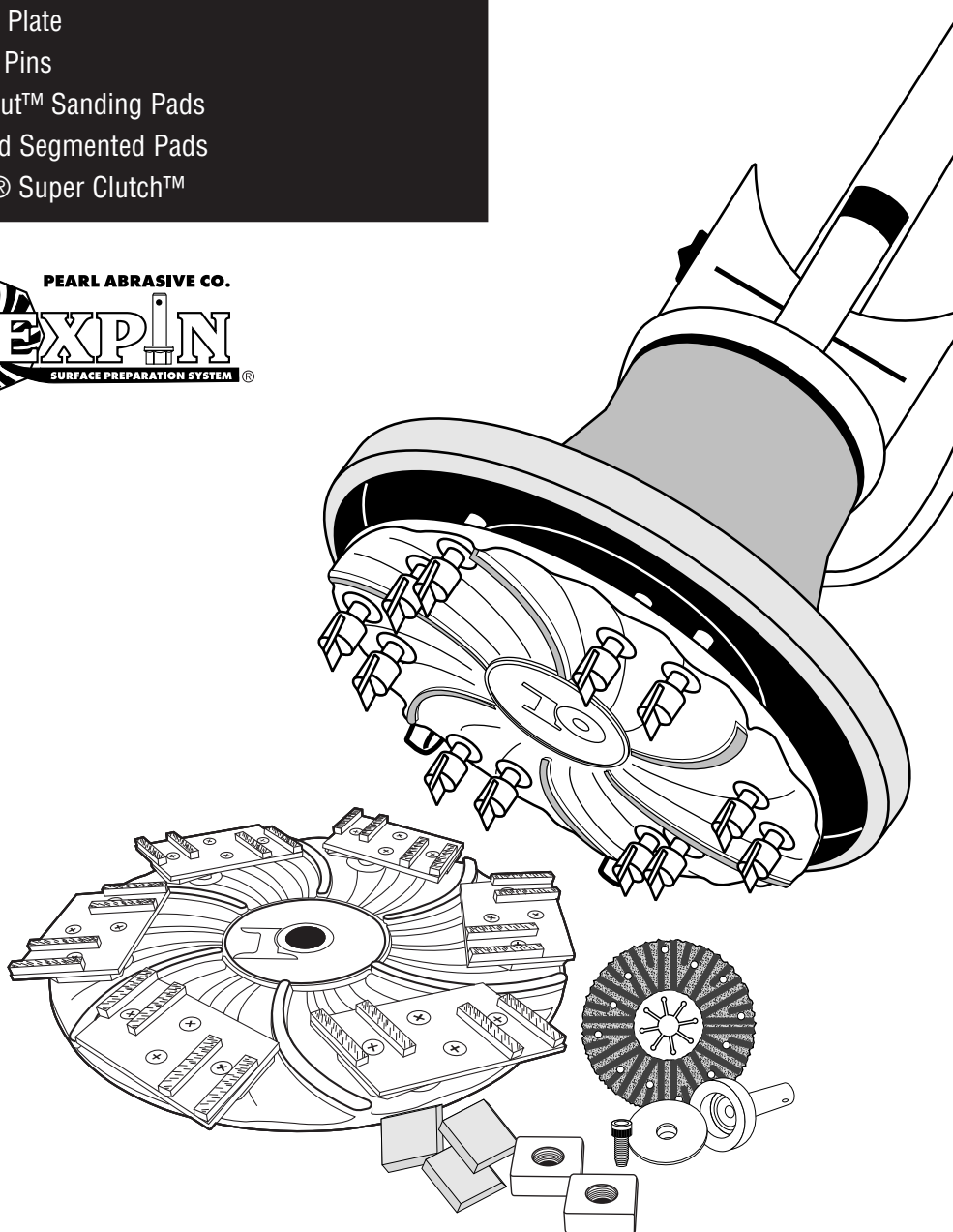



# PEARL®

## HEXPIN® MANUAL

- Hexpin® Plate
- Carbide Pins
- Turbo-Cut™ Sanding Pads
- Diamond Segmented Pads
- Hexpin® Super Clutch™



## PROFESSIONAL CONCRETE SURFACE PREPARATION TOOLS

 **WARNING:** This product can potentially expose you to chemicals that are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

REV.1

PEARL ABRASIVE CO. - HEXPIN® SURFACE PREPARATION SYSTEM



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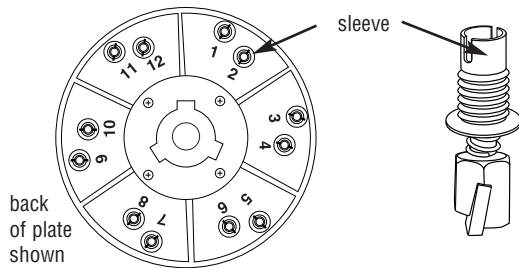
# INTRODUCTION



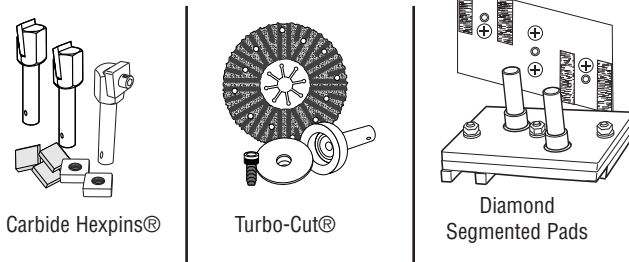
The Pearl Hexpin® system is the answer to your concrete floor preparation needs. The standard Hexplate™ configuration easily mounts onto most 17" floor buffers (Pearl Abrasive recommends using a buffer with a 1-1/2 HP motor). **Hexpin® attachments** are used on concrete surfaces for a variety of applications that require scraping or light grinding/sanding.

## FEATURES OF EACH HEXPLATE™

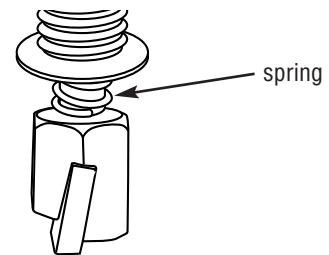
- 12 numbered Hexpin® positions. Each of the pin locators, called "**sleeves**", have been numbered to allow the operator to easily monitor wear, as well as configure the plate in a variety of ways.



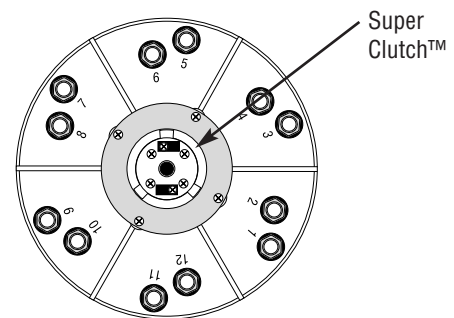
- Each Hexplate™ can use any of **3 different Hexpin® attachments**. This enables the user to match the correct Hexpin® attachment with the job application.



- Each Hexpin® is spring-mounted. This patented feature allows the Hexplate™ to float easily over uneven surfaces and allows the Hexpin® to remain in constant contact with the work surface. Light grinding/sanding and scraping efficiency is greatly enhanced because each pin is able to move independently.



- Each Hexplate™ has been designed with Pearl's patented wave design – this helps control dust.
- Each Hexplate™ comes equipped with the **Super Clutch™** that disengages the Hexpin® Plate when an obstruction is hit (such as a bolt). The **Super Clutch™** protects the operator from injury and the buffer from damage. It is also self-resetting: simply turn the buffer off and restart.



# SAFETY



**CAREFULLY READ AND FOLLOW ALL INSTRUCTIONS PROVIDED BY THE BUFFER MANUFACTURER.**

As with any piece of equipment, common sense must be used when operating a buffer equipped with the Hexpin® system. Pearl suggests that the following procedures be followed:

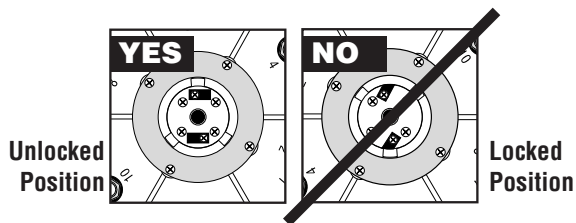
1. Carefully read and follow all instructions provided by the buffer manufacturer.



2. Comply with all ANSI safety standards regarding personal protection and the operation of electrical machinery.



3. Always tilt the buffer back and make sure that the Hexplate™ is securely locked in place.
4. **Make sure that the torque lock tabs on the Super Clutch™ are in the unlocked position (see diagram). If the tabs are in the locked position, the Super Clutch™ will not operate (and the Hexplate™ will not disengage when it hits an obstruction).**



5. Keep the electrical cord away from the working area to avoid entangling the cord in the Hexpin® head.



6. Periodically check to see that all hardware is securely tightened before use.



7. While the spring action provided by Pearl's spring-mounted Hexpin® will enable the Hexplate™ to work over uneven surfaces, common sense should be used and the operator should not attempt to use the machine over wide expansion joints.
8. **Before using the Hexpin® system, carefully check the floor for any obstructions, such as bolts or protrusions. Remove these items before beginning work.**
9. Never start the Carbide Hexplate™ on sticky mastic or thinset, as this might cause the machine to lockup. Manually clean a space approximately the size of the Hexplate™ and start the machine in this area. Then, using small cutting motions, carefully work the machine into the area to be cleaned.
10. All floor preparation work should be done by a trained professional.

# APPLICATIONS







**THE PEARL HEXPIN® SYSTEM IS FOR USE ON CONCRETE SURFACES ONLY. IT IS NOT INTENDED FOR USE ON WOOD FLOORS.**

**IT IS IMPORTANT TO CHOOSE THE APPROPRIATE HEXPIN® ATTACHMENT FOR YOUR PARTICULAR APPLICATION.**

Hexpin® applications can be broken down into 2 basic groups:

**1. Scraping** – including the removal of thinsets, mastics, cutback, and other coatings and adhesives.

**2. Light Grinding/Sanding** – including paint and residue removal, lippage removal, concrete restoration and cleanup.

	SURFACE	CONDITION	JOB				
				HEX1CHIP	TURBO-CUT™	HEX4CHIP	DIAMOND PADS
<b>CONCRETE</b>	Cured	Sanding		☼			☼
		Grinding				☼	
	Green	Sanding					
		Grinding					
	Uneven	Grinding				☼	
<b>PAINT</b>	Stripe Line	2-STEP Removal	☼	☼	☼		
		Cleanup		☼		☼	
	Floor Paint	2-STEP Removal	☼	☼	☼		
		Cleanup		☼		☼	
	Old Paint	2-STEP Removal	☼	☼	☼		
		Cleanup		☼		☼	
<b>ADHESIVES and COATING</b>	Thinset	2-STEP Removal	☼				
		Cleanup	☼	☼		☼	
	Carpet Mastic	2-STEP Removal	☼		☼		
		Cleanup		☼		☼	
	Rubber Carpet Backing Residue	2-STEP Removal	☼		☼		
		Cleanup		☼		☼	
	Thin Epoxy /Epoxy	2-STEP Removal		☼	☼	☼	
		Cleanup		☼		☼	
	Urethane	2-STEP Removal	☼	☼	☼		
		Cleanup		☼		☼	
Fiberglass	Removal	☼					
VCT Adhesive	Removal	☼	☼				
<b>GENERAL PURPOSE</b>	Ice	Removal	☼				
	Dirt and Grease	Removal	☼				
<b>WOOD</b>	Any Wood	N/A	N/A	N/A	N/A	N/A	

**IMPORTANT:  
FOR USE ONLY ON  
CONCRETE SURFACES**

*\*Individual job requirements may vary.*

*This chart only represents a general overview of Pearl's Hexpin® System.*

**2-STEP**

*Requires 2-STEP process to remove remaining residue.*

# HOW-TO's



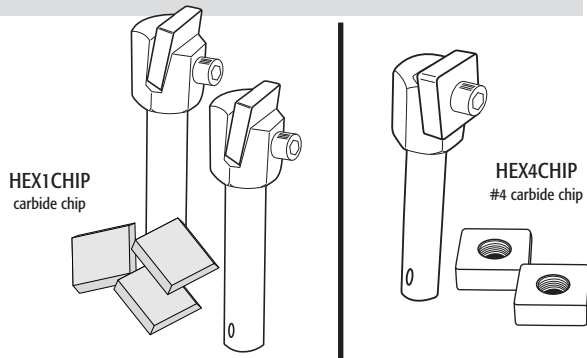
**PLEASE READ THE MANUAL AND INSTRUCTIONS PROVIDED BY THE BUFFER MANUFACTURER BEFORE STARTING ANY JOB.**

The Pearl Hexpin® system has been designed with versatility in mind. We have specially engineered the Hexpin® system to meet a variety of jobsite requirements. It is important to choose the correct **Hexpin® attachment** for the job application.

**NOTE: CERTAIN SURFACES MAY REQUIRE A 2-STEP PROCESS USING SEVERAL DIFFERENT HEXPIN® ATTACHMENTS.**

## THE HEXPIN® ATTACHMENTS

### A. CARBIDE HEXPINS®



#### Applications:

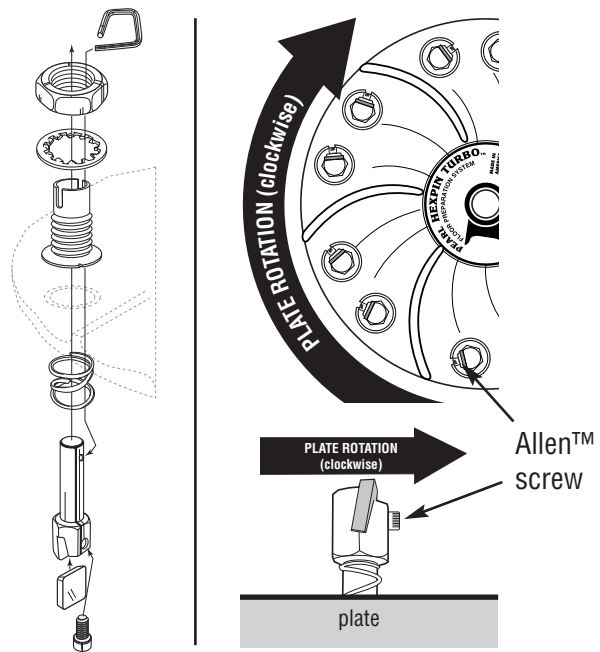
The primary use of the carbide pin attachments is for the scraping, peeling, and removing of coatings and adhesives:

- *Thinset (cementacious mortar) under ceramic tiles*
- *Mastics & glues beneath vinyl tiles*
- *Mastic and rubber or foam-backed carpet residue*
- *Cutback*
- *Dirt buildup*
- *Ice*
- *Some paints*

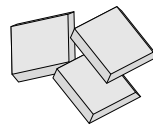
### REQUIRES 12 PINS PER PLATE.

#### How to reinsert carbide pins:

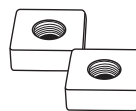
1. The carbide pins should be facing clockwise (Allen™ screw facing clockwise).
2. The spring should be placed on the carbide pin before inserting into Hexpin® sleeve.
3. On backside of Hexpin® plate align the hole in carbide pin with the grove on sleeve making sure that the carbide pin is facing clockwise.
4. Insert EZ lock pin from inside out (center hub).



#### Two different chip inserts are available:



**HEX1CHIP** (Carbide Chip)  
*Standard carbide chip used in the above-listed applications.*



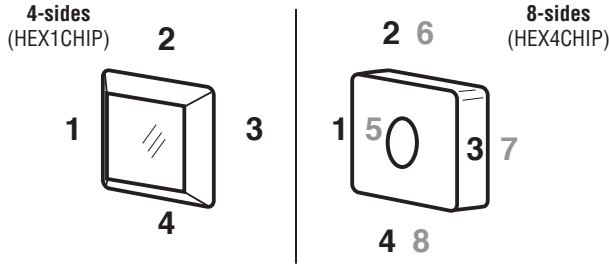
**HEX4CHIP** (#4 Carbide Chip)  
*Very aggressive carbide chip recommended for use in tough applications. HEX4CHIP rides rougher but is suitable for experienced users. **Requires different holder.** (see pg. 12)*



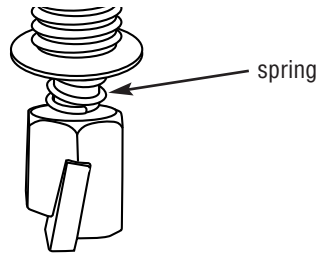


### Usage Tips:

- Each Carbide Hexpin® is equipped with a specially engineered Carbide Hexchip™ that is resistant to chipping and wear. The HEX1CHIP is a 4-sided Carbide Hexchip™ that utilizes all four sides; the aggressive HEX4CHIP is an 8-sided Carbide Hexchip™ that uses all eight sides.



- Because the Hexplate™ is equipped with our patented spring-mounted system it is able to safely float over expansion joints. However, common sense must be used operating the Carbide Hexplate™. **The operator should carefully check the floor for any obstructions, including bolts or protrusions.**

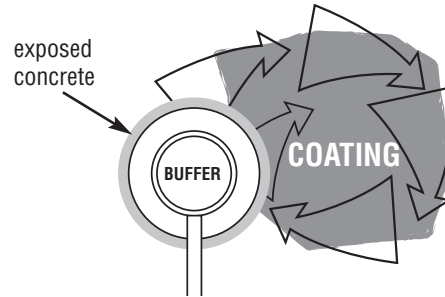


- As a general rule, any coating that can be scraped off the surface with a knife can also be removed with the Carbide Hexplate™ but much more quickly!
- Due to heat buildup resulting from friction, the Carbide Hexpin® may not be able to remove sticky coatings in a single step. For example, when removing mastic it is often beneficial to first use the Carbide Hexpin® attachment to remove the initial layer of mastic and then use the Turbo-Cut™ (see pg. 8) or Diamond Segmented Pad (see pg. 9) attachment to clean the concrete surface.



### Helpful Hints:

1. **Scraping functions can be accomplished much more easily and safely by following a simple procedure:** Manually clean a spot approximately as large as the plate itself, exposing the concrete. Then start the buffer on the clean spot, moving it into the coating from left to right. Continue the scraping with small circular motions. Doing this will greatly reduce the amount of force needed to start the scraping motion.



2. **ADDING WEIGHT:** Under certain circumstances, adding weight on the buffer canopy or base to increase direct pressure may be helpful in increasing Carbide Hexpin® performance. Pearl does not recommend adding weight on a buffer with less than 1-1/2 HP. **However, additional weight should be used only if necessary.**

**IMPORTANT:** When using additional weight, the floating effects of the spring-mounted system are diminished. Care should therefore be taken not to grind over large expansion joints or cracks when using additional weight.

3. A small amount of sand may be used in conjunction with the carbide pins. The sand will help “ball-up” the mastic and keep the cutting edge of the carbide chips exposed.
4. Some mastics retain their stickiness after the vinyl tile has been removed. Since carbide chips do not work well on mastic that is sticky or tacky, it is advisable to remove the tile and allow the mastic to harden and air dry overnight.
5. Water-based mastic may also be removed more easily if the entire area is generously

sprinkled with water and allowed to soak overnight. The result will be a soft emulsion that can be removed easily with the carbide chips. Residue will build on the chip and holder (see pg. 10 MAINTENANCE TIP).



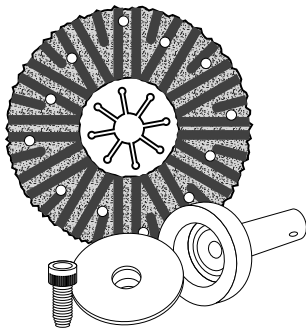
### Applications:

This attachment is ideal for sanding concrete, removing a variety of coatings and preparing surfaces for new coatings or paint. In particular, the Turbo-Cut™ Hexpin® attachment is the tool of choice for removing epoxy paint.

- Unlike traditional sandpaper, the silicon carbide grains in the Turbo-Cut™ Hexpin® attachment resist “loading up.” This enables them to be used for a much longer period of time, as well as making them very well suited for removing a wide variety of paints.
- The Turbo-Cut™ Hexpin® attachments is often used as the first step when cleaning concrete before using the Diamond Segmented Pads Hexpin® attachment (see pg. 9) .
- The Turbo-Cut™ Hexpin® attachment is also used to clean a concrete surface after the Carbide Hexpins® (see pg. 6) have removed most of the coating.
- Finally, the Turbo-Cut™ Hexpin® attachment is excellent for prepping concrete before applying paint or coatings. The Turbo-Cut™ acts in the same manner as sandpaper on wood or metal – exposing new concrete aggregate to which coatings and paint adhere better.

## B. TURBO-CUT™ HEXPIN®

pt #. HEX1FTC

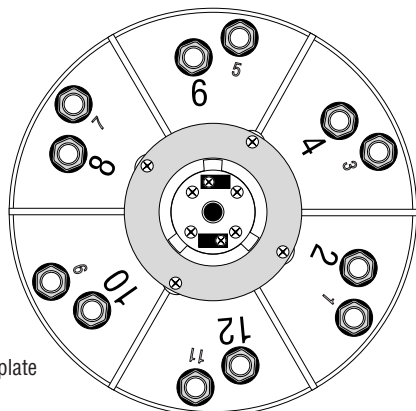


**FOR DRY USE ONLY!**

The Turbo-Cut™ Hexpin® utilizes a rugged, 16 grit disc made of silicon carbide.

**REQUIRES 6 SANDING DISCS PER PLATE.**

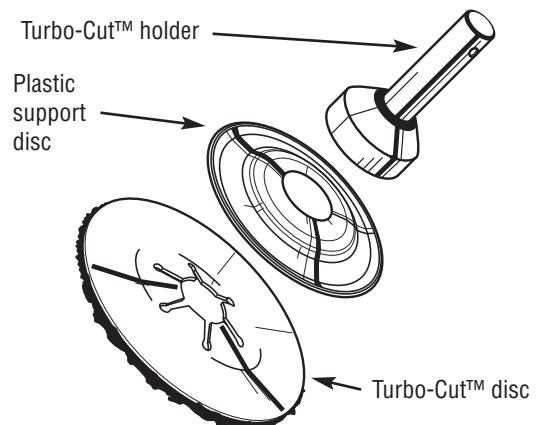
Place the Turbo-Cut™ Hexpin® attachments in the even-numbered holes (those located closest to the center of the plate – refer to the diagram).



back of plate shown

### Maintenance Tip:

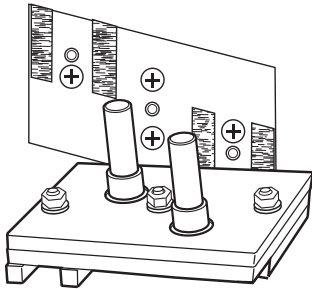
Each Turbo-Cut Hexpin® is equipped with a plastic support disc that prevents the fiber from cracking under the weight of the buffer. Care must be taken to ensure that it is always used.





## C. DIAMOND SEGMENTED HEXPIN® PADS

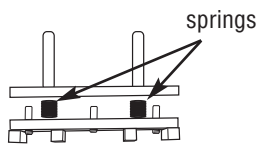
pt #. **HEX4SEG**



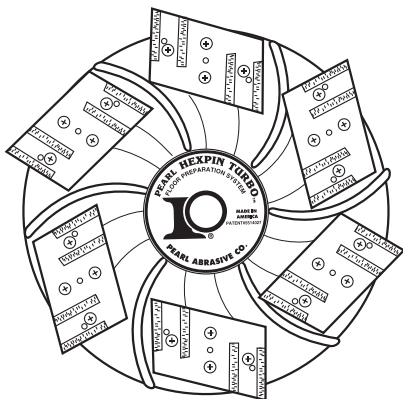
Pearl has added an even more aggressive Hexpin® diamond segmented pad attachment with a larger overall sanding surface area. This extends the life and improves the all-around sanding speed. The pads can be used wet or dry on concrete surfaces for sanding and coating removal.

### Advantages:

- Lightly grinds/sands concrete close to walls
- Easy pad changes
- Spring-loaded to follow concrete surfaces
- Fast and aggressive sanding
- Wide diamond segments last longer than the Turbo-Cut™ attachments when used on large areas.



**REQUIRES 6 PADS PER PLATE.**



### Applications:

- Use with the standard Hexpin® plates.
- Remove trowel marks easily.
- Smooth rough finishes.
- Provide texture to slippery surfaces.
- Prepare concrete surfaces for coatings.
- Remove sealers and bond breaker coatings.



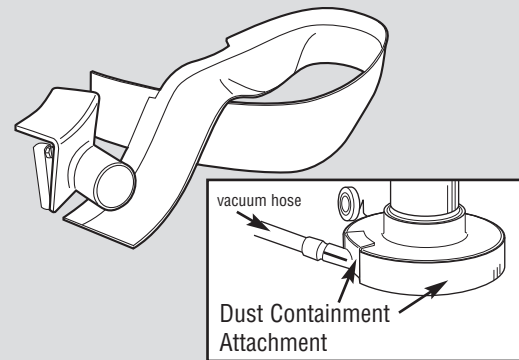
### Usage Tips:

- If clear seal or paint is so thick that pads glide over the surface, first prep the entire surface with the Turbo-Cut Hexpin® attachment (see pg. 8) to expose the concrete. Otherwise, the pads will be ineffective on the surface.

**Also Available from Pearl**

### DUST CONTAINMENT ATTACHMENT

pt #. **BUFVAC1**



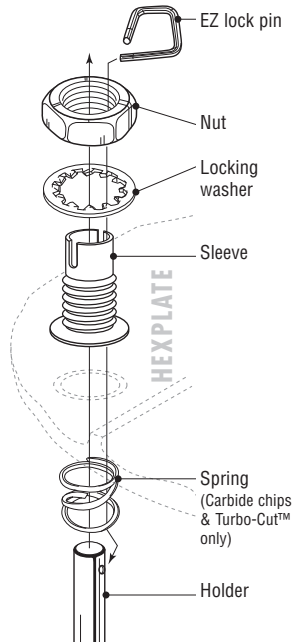
The Pearl Dust Containment system has been designed to adjust to any 17" floor buffer. Installs in just minutes and with no special tools. When used with a standard wet/dry shop vac, the Pearl Dust Containment system transforms an ordinary floor buffer into a powerful dust-free tool.

# MAINTENANCE

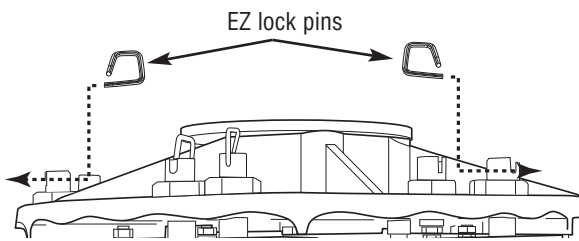
The following are simple maintenance procedures which, if followed, will insure peak performance and extend the life of your Hexpin® equipment.

- Important:** Each individual Hexpin® fits into a sleeve and is held in place with an EZ Lock pin. Each sleeve is held in place with a nut and locking washer.

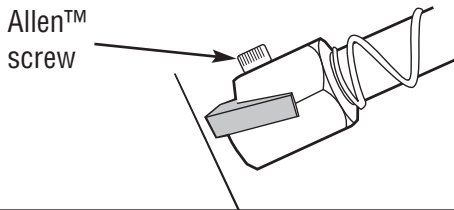
 The nuts must be kept tight. Failure to keep the nuts tight will result in premature sleeve elongation and failure. It is recommended that the nut be checked and tightened before and after each use.



- Install the EZ Lock pins from the inside (hub side).



- Replace EZ Lock pins when they get loose.
- Replace the spring on a Hexpin® when there is noticeable play between the spring and pin.
- Each carbide chip is held in place by an Allen™ head socket capscrew, which also must be checked and tightened periodically. It is recommended that the Allen™ head socket capscrews be checked and tightened before and after each use.



- Also, check the carbide chip holders to ensure that they are not bent.
- Carbide chips should be turned to the next sharp side when one side of the chip shows:

- Rounding
- Chipping
- Dullness



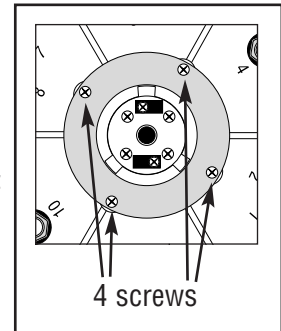
- Carbide chips should be replaced under the following conditions:

- All four sides show:
  - Rounding
  - Dullness
- One side shows:
  - Cracking

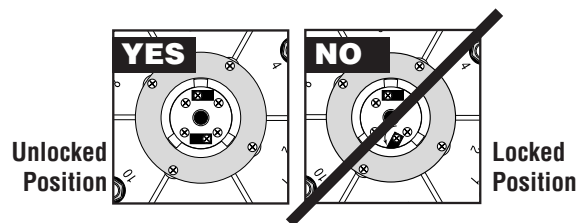


- Check the carbide chips after each use to see if they are covered with glue or coating. If they are, clean them with a wire brush to expose the carbide edge.

- On the reverse side of the plate is a clutch plate, held in place by four 1/4"-20 countersunk screws, which need to be kept tight in order to prevent movement and abrasion. It is recommended that the countersunk screws be checked and tightened before and after each use.

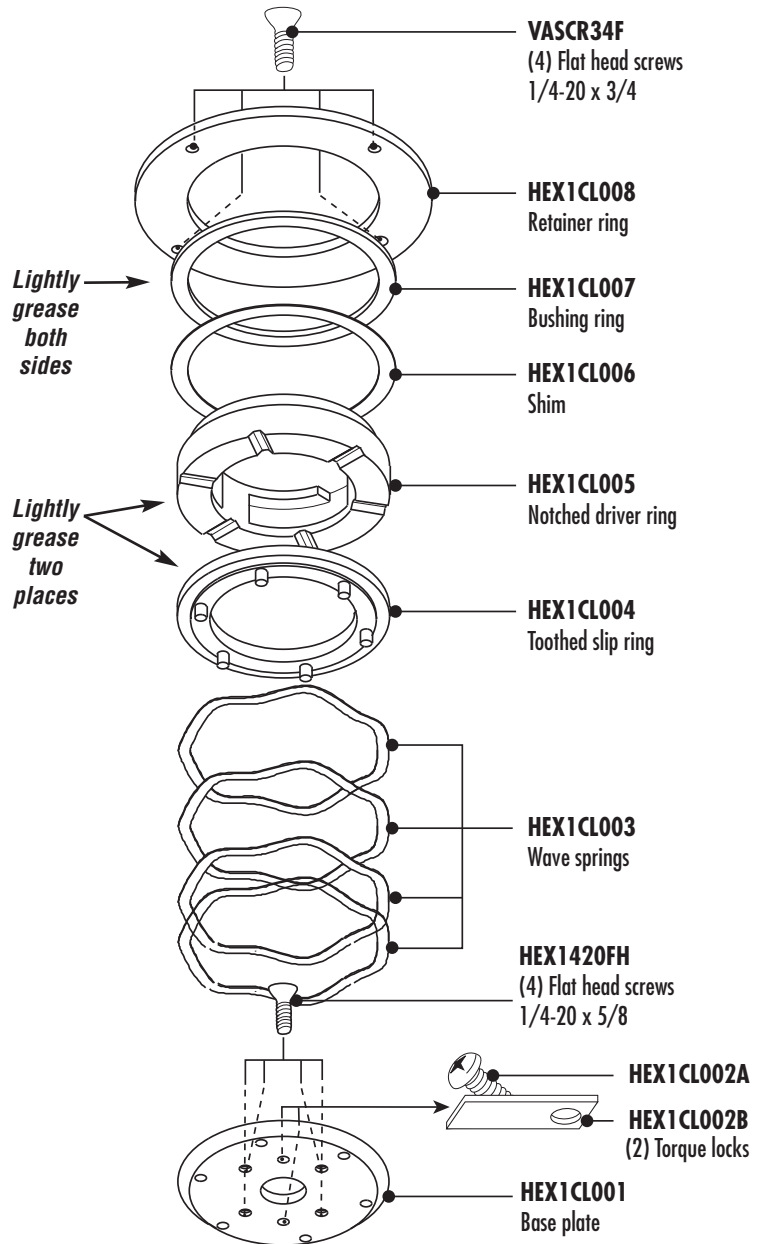
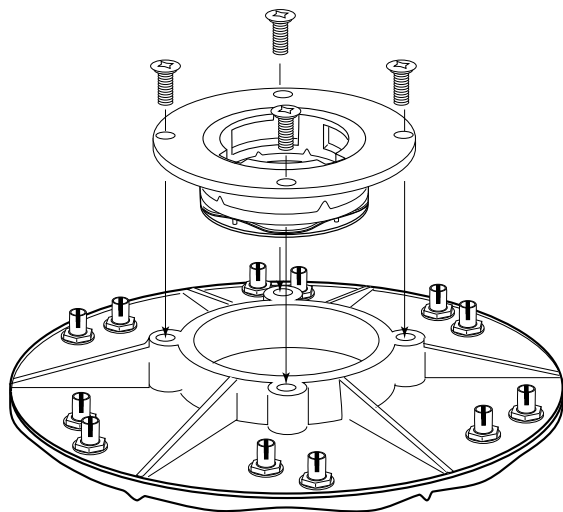


- Make sure that the torque lock tabs on the Super Clutch™ are in the unlocked position (see diagram below). If the tabs are in the locked position, the Super Clutch™ will not operate (and the Hexplate™ will not disengage when it hits an obstruction).



**HEXPIN™ SUPER CLUTCH™ MAINTENANCE  
EVERY 4 MONTHS.**

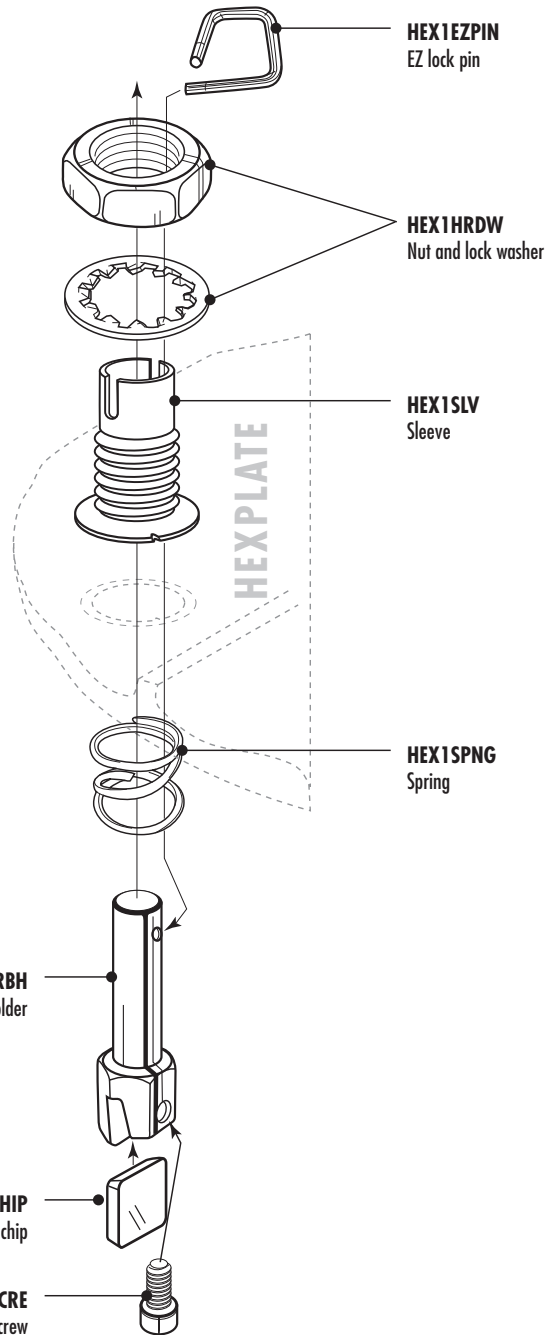
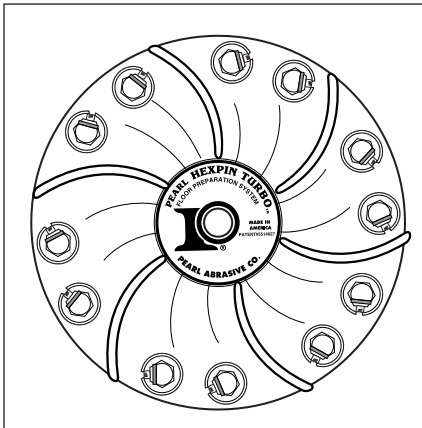
1. Remove Super Clutch™ by removing 4 screws from Retaining Ring.
2. Lift Clutch parts out including 3-wave springs.
3. Clean parts.
4. Lightly grease mating surfaces of Notched Driver Ring and Toothed Slip Ring.
5. Lightly grease both sides of Bushing Ring.
6. Re-assemble according to Super Clutch™ exploded view shown.
7. Use blue lock tile on 4 screws that hold Retainer Ring.



# PARTS

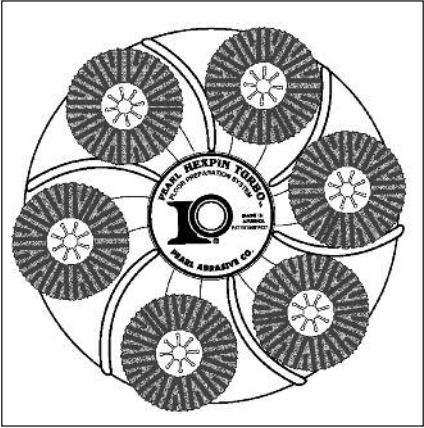
## A. HEX1CHIP CARBIDE HEXPIN®

- 12 per plate

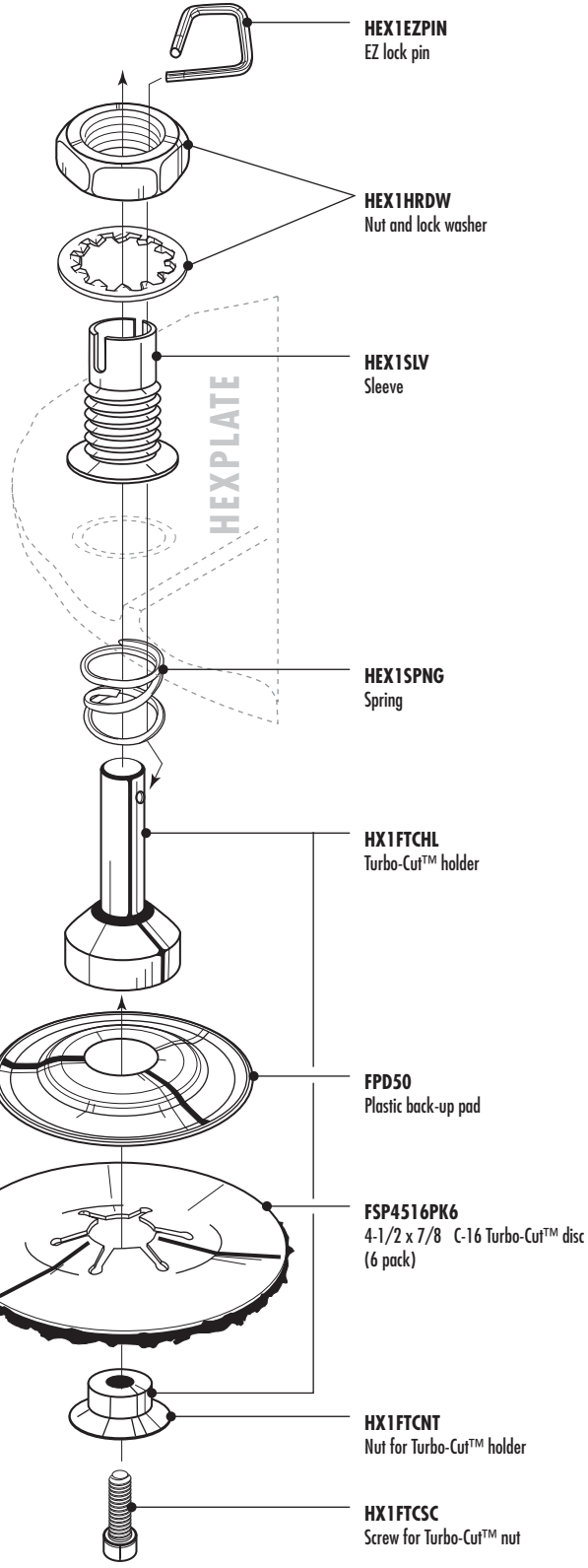


**B. TURBO-CUT™ HEXPIN®**

- 6 per plate



**HEX1FTC**  
Turbo-Cut™  
Hexpin® Disc



**HEX1EZPIN**  
EZ lock pin

**HEX1HRDW**  
Nut and lock washer

**HEX1SLV**  
Sleeve

**HEXPLATE**

**HEX1SPNG**  
Spring

**HX1FTCHL**  
Turbo-Cut™ holder

**FPDS0**  
Plastic back-up pad

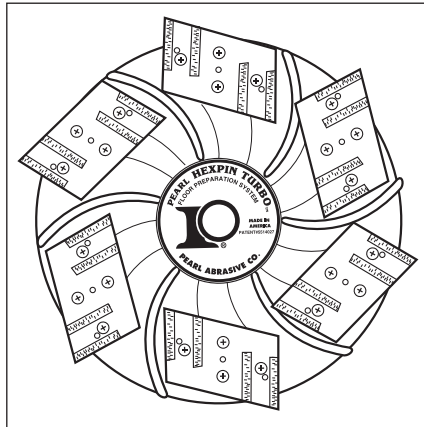
**FSP4516PK6**  
4-1/2 x 7/8 C-16 Turbo-Cut™ disc  
(6 pack)

**HX1FTCNT**  
Nut for Turbo-Cut™ holder

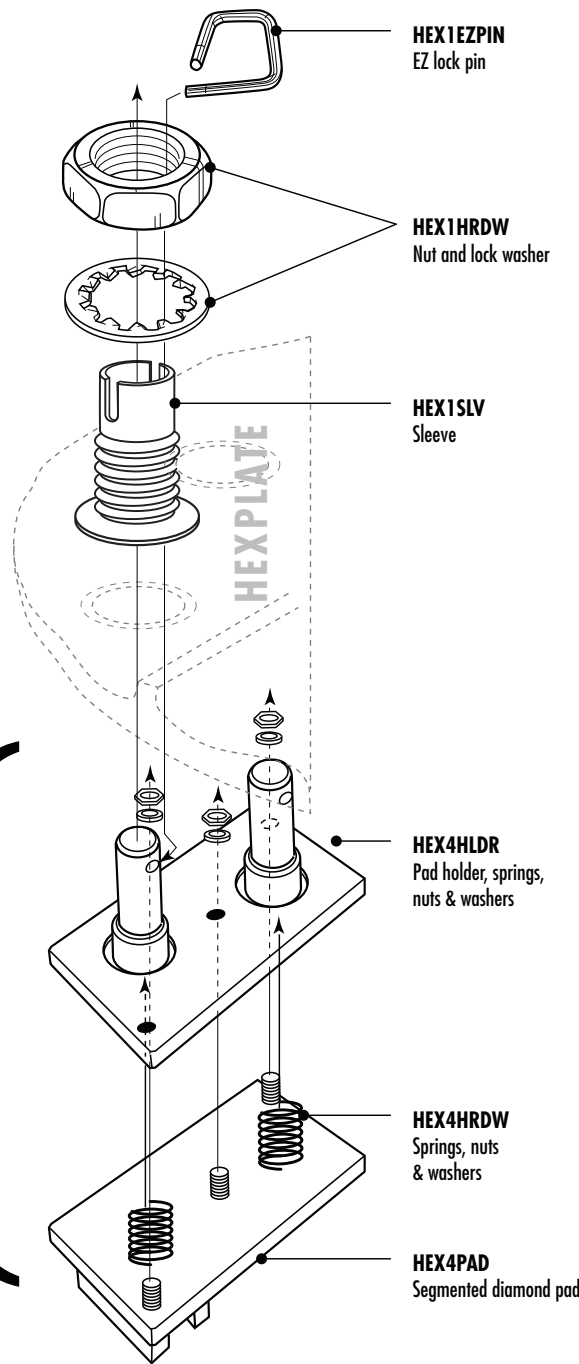
**HX1FTCSC**  
Screw for Turbo-Cut™ nut

# C. DIAMOND SEGMENTED HEXPIN® PADS

- 6 per plate



**HEX4SEG**  
Complete diamond pin  
with diamond pad  
(special order)



**HEX1EZIPIN**  
EZ lock pin

**HEX1HRDW**  
Nut and lock washer

**HEX1SLV**  
Sleeve

**HEX4HLDR**  
Pad holder, springs,  
nuts & washers

**HEX4HRDW**  
Springs, nuts  
& washers

**HEX4PAD**  
Segmented diamond pad

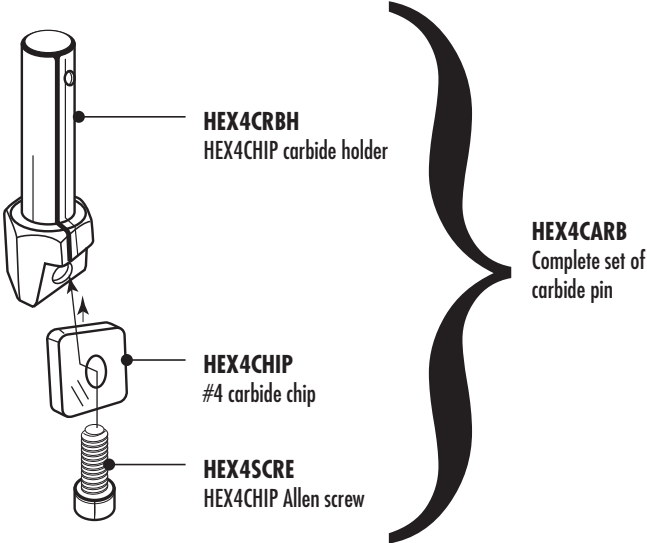
HEXPLATE



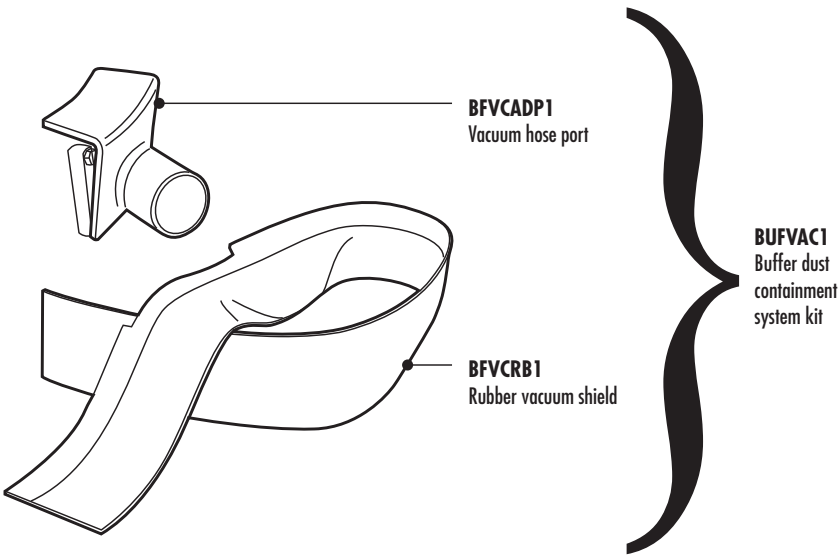
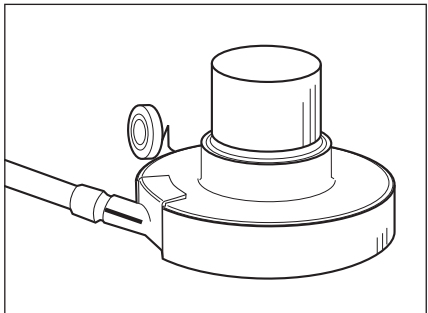
**D. HEX4CHIP CARBIDE HEXPIN®**

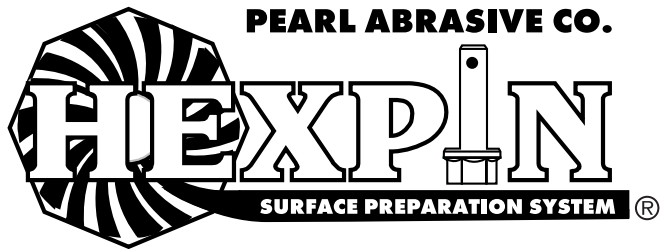
- #4 carbide chip

- 12 per plate



**E. DUST CONTAINMENT SYSTEM**





# **PEARL**®

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