Aerosmith Fastening Trailer Pinning Guide

PowerPIN™ 3388HP

Aerosmith's Breaking All the RULES!

Think You Know Everything About Pin Fastening?
Think Pins Are Hard To Remove? **Not Anymore!**
Aerosmith's Newest PowerPin 3388HP breaks all the rules.
It's Easy to Install... and Easy to Remove. That's right REMOVE!
Trailer Floors, RV Floors, have a panel that needs replacing?
Aerosmith Has Your Solution.
Our 3388HP installs quickly and **Removes** easily with an impact driver.

Why 3388HP PowerPin?

- **Save Time & Money**
  7-10 Times Faster
  than traditional fastening
- **Versatile**
  Use 3388HP for floors, walls
  and a wide range of steels
- **Durable**
  ASTM tested for sheer and tensile performance
- **Easy Maintenance**
  IT'S REMOVABLE!
  Maintenance is as close
  as your nearest impact driver

aerosmith®

Defining the Standard
For Steel & Concrete
Fastening

Your Local Authorized Aerosmith Distributor
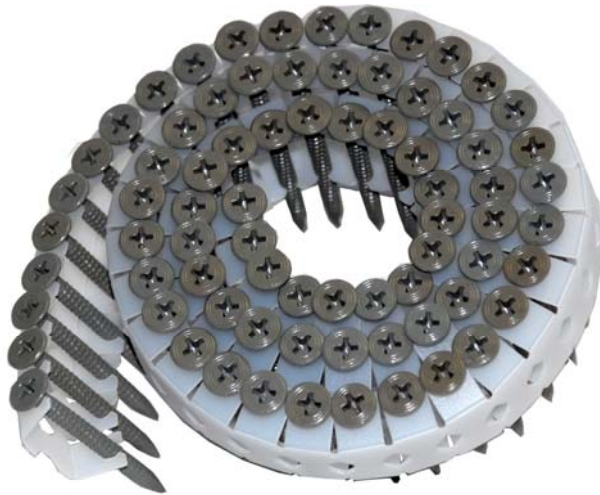
3388HP

HN120

Specifications

Part Number	3388HP
Description	.137 x 1-1/2"
Head Size	.325 nominal #2 Phillips head
Knurl	Double Knurl
Recommended Tool	HN120 with HN10297LH nose
Recommended Compressor	AKHL1230E

Pullout Test

Results Are In Ultimate, Average Pounds

285	20 gauge steel
393	18 gauge steel
574	16 gauge steel
659	14 gauge steel
923	12 gauge steel

Corrosion Data ASTM B117 Salt Spray

1560 hours	Driven
3240 Hours	UnDriven

Aerosmith 3388HP Fastener has Climacoat Long Life Polymer Coating

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Aerosmith® Fastening Systems
5621 Dividend Road, Indianapolis, IN 46241
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AEROSMITH FASTENING SYSTEMS

TECHNICAL BULLETIN #112
August 2012

Aerosmith Brand Removable Pin
Withdrawal Comparisons
(Average Ultimate Pounds)

Cold Formed Steel (gauge: inches/mls)	Aerosmith Brand Removable Series Pins 3388 & 3258	#8 & #10 Screws Per SSMA*
18g; 50ksi (.0451"/43mils)	393	#8 - 282 #10 - 327
16g; 50ksi (.0566"/54mils)	574	#8 - 354 #10 - 411
14g; 50ksi (.0713"/68mils)	919	#8 - 354 #10 - 477
12g; 50ksi (.1017"/97mils)	920	#8 - 354 #10 - 477

Source
*Steel Stud Manufacturers Association (SSMA) source: Product Technical Information;
"Complies with 2009 IBC"; Copyright 2011; page 57 "Fasteners" www.ssma.com.

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The Basics:
How-To & Removal

Instructions
Removing Aerosmith
2257, 3258, 3388 Phillips Headed Pins

Items Needed	
	#1 Phillips Bit for 2257 (Sidewalls) #2 Phillips Bit for 3258 (Sidewalls) #2 Phillips Bit for 3388 (Floors)
	Corded or Cordless Impact Driver *do not use a standard "drywall type" screw gun*
	Pry-Bar

Easy Steps to Remove Pins and Board:

1. Use an impact driver, with appropriately sized bit, to twist and break head from the shank of the pin. **Forced Entry Pins WILL NOT back out like a screw. The impact tool will simply break the head or cause the shank to spin loose.** The pins are designed to break off (floors) or spin loose (sidewalls).

2. **ALL** the pins in a given sheet/piece of material need attention before it can be removed. It doesn't take long to break the pin's bond loose, no more than a couple of seconds.

3. **For Floor boards**: After Step 1 use a pry bar applying upward pressure to the wood panel prying away from the steel. The wood will come up easily. If the board doesn't come up easily, then find the spot where it sticks and use the impact driver on the pins. It hasn't been broken loose.

   See our sidewall pin removal video on YouTube at this link:

4. **For Sidewall boards**: After Step 1 use a pry bar if necessary, however once you having broken the pins loose, the board will typically simply fall off the sidewall.
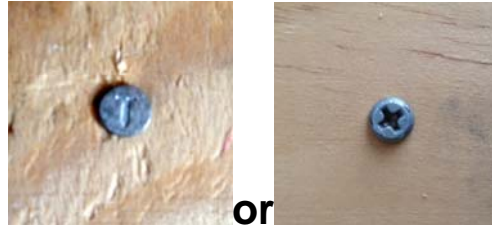
   See our sidewall pin removal video on YouTube at this link:

   http://www.youtube.com/aerosmithfastening1

5. Once the boards have been removed, use a claw hammer or pry bar to remove loose pins.

If you have any questions contact Aerosmith at **1-800-528-8183**

If the pin used in your sidewall looks like this:

or

Removal of the sidewall panel is easily accomplished but you need to drive the pin through the panel with an air punch tool.

Aerosmith recommends the JIT Air Punch pictures below:

This tool breaks the cold weld and drives the pin through the panel.

1) Position the nose of the air punch over the pin head and pull the trigger.
2) Repeat the same action for all the pins in the panel.
3) Once all the pins have been punched, then the panel can be removed with very little effort.
4) The pins will remain in the steel and can be removed with a claw hammer or pry bar.

See our removal process video on YouTube at this link:

   http://www.youtube.com/aerosmithfastening1

If you have any questions contact Aerosmith at **1-800-528-8183**

Aerosmith Trailer Pinning 101

Floors:

1) Plan your shots: NO double layers

                                        NO Welds or D-ring Supports

                                        NO Main Rail

                                        Mark the cross members: Chalk line?

2) Use your body weight to press the materials down to the steel in order to assure a tight connection.

3) Position the tool straight up and down in order to maximize holding power by producing a round hole in the steel.

4) At the seams, ALWAYS fasten the closed side of the cross member first and then the second side. With most frames, fastening from the front of the trailer to the back will accomplish this task. At the seams, stagger the fasteners so the pins don't damage the plywood. A wider flange or double member would greatly eliminate poor seam connections and build speed.

5) If a pin won't drive into a particular spot, move several inches away and try a different location. Don't keep trying in the same spot.

6) Pinning brings speed to fastening but don't sacrifice quality for 10x faster when 8x faster and doing it correctly ultimately will increase your production.

Causes of High or Broke off Pins:

Double layers of steel, Not pressing materials down, Hot Spots, Out pacing the compressor and surge tanks, Improper Compressor setting, D-Ring plates, lack of lubrication in the tool

Sidewalls:

1) Plan your shots: Carefully hold and turn the tops of the Z-purlin to make sure they are even and flat.
2) Don't overdrive the pins: This weakens the sidewall materials.
3) Push the materials against the steel frames tightly to assure a tight connection.
4) At the seams, fasten the edge closest to the bend in the Z-purlin first and then fasten the open side to maximize the holding power and minimizing the deflection.
5) Clearly mark the purlin locations. Most plants use a straight edge to plan their shots. Pins increase productivity but also increase opportunity for poor quality if a process is not followed.

Aerosmith Daily Tool Basics

1) *Safety:* Always wear eye protection confirming to ANSI Z87.1 standards with side protection.

2) *Inspect:* Visually inspect screws, the safety contact, and trigger *BEFORE* connecting to the air system. The Safety Contact and

Trigger should move freely with screws tight. If the tool does not meet these criteria, please do not use the tool and contact your pin providers for service. Failure to conduct these inspections could result in tool failure or bodily harm.

3) *Lubricate:* Place 6 to 10 drops of 10 weight non-detergent oil into the hose coupler, as shown in photo, before connecting to the tool. This action will lubricate the tool. Do this at least twice a day. A light film of oil should appear at the exhaust if the tool is properly lubricated.

4) *Loading:* To properly load the tool, depress the latch on the canister to open and then depress the latch on the gate door.

Completely remove the tape from the coil of pins. Failure to remove the tape will cause the tool to skip and not properly feed the fasteners. Now that the tape has been removed from the coil, place the coil into the canister with the points of the pin facing away from you. Remove the loose end of the coil and align the fastener heads in order to line up with the top of guide. This is illustrated in the photo below.
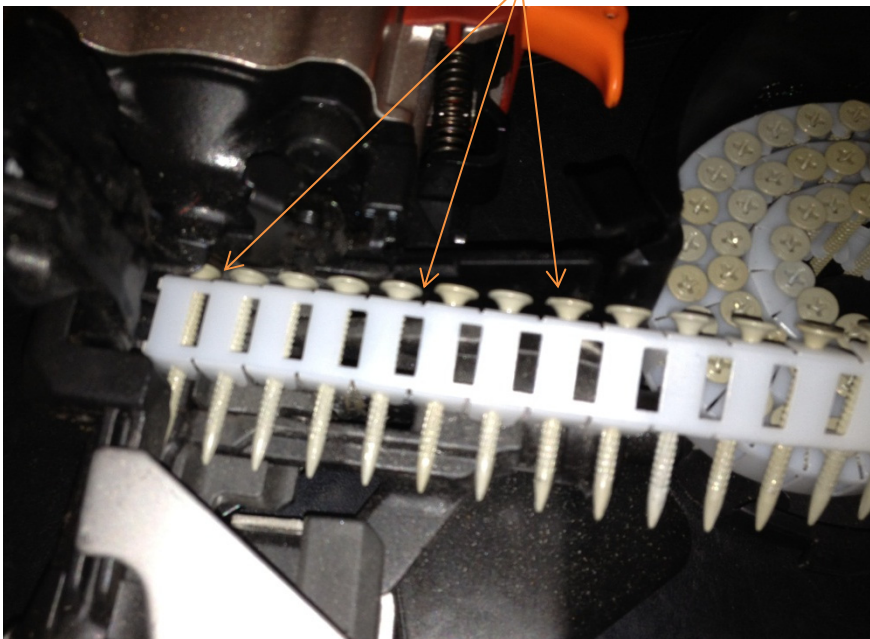
5) ***Driving Pins:*** Align the tool straight over the material that you would like to fasten. You want the tool to be as close to 90° degrees to your work surface as possible. This will assure proper pin engagement to the steel. Using your body weight to push the materials against the steel, press the tool onto the work surface. This action will depress the safety contact. Once the safety contact has been depressed, pulling the trigger will cause the tool to activate and fire a pin. This style of safety system is referred to as "restrictive fire" triggering. The HN120 and the HN25C, both have restrictive fire triggers. The safety contact and the trigger, ***BOTH***, must be fully released to reset or the tool will not function properly. If the tool does nothing or skips a pin, these steps have most likely not been followed. Remember, ***BOTH*** the safety contact and the trigger must be released in order for the tool to properly reset.

6) ***End of the shift:*** Remember to oil the tool, clean off the debris, and disconnect the tool from its hose. Disconnecting the tool from its hose will allow the tool's back pressure to clean its internal filter, which will extend the life of the tool.

<u>Keys to Remember</u>

Safety: Glasses

Inspect: Check it before you wreck it or yourself

Lubricate: Twice a day at least

Loading: Remove Tape and Align

Driving: 90°, body weight, safety then trigger, reset both

High Pressure Compressor Basics

AKHL1050E or AKHL1230E

1) **Turning On or Off**: Locate the red toggle switch on the unit. For the AKHL1050E, the switch on top side of the unit. For the AKHL1230E, the switch is located between the two tanks.

AKHL1050

AKHL1230E

2) **Draining:** The compressors and surge tanks must be drained a couple times per day to eliminate water from the system and to maintain maximum operating efficiency. Most plants will drain them at lunch and the end of the day. They then leave the valves open in order to again purge the system first thing in the morning when they start back up. The drains can be found:

AKHL1050E

AKHL1230E

Warning: DO NOT Put any body part in path of Drain!

3) **Air Pressures:** The compressors high pressure output is controlled by an orange knob on the top side of the compressor. Typically, you are running two separate systems: one for floors and one for sidewalls.

Sidewalls: The HN25C tools are operating between 275-280 PSI. The photo illustrates the proper gage setting.

Floors: The HN120 tools are operating at 340 PSI. The photo illustrates the proper gage setting.
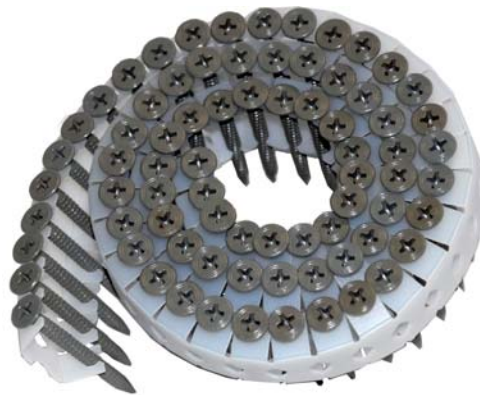
4) **Fittings:** The fittings on the high pressure tools and compressors are unique to the system. They only work with each other. The couplers are push to lock, meaning that you simply push the plug into the coupler to connect. To remove, simply pull back on the outer sleeve of the coupler.

The Pins

PowerPIN™

3388HP
Large Head Breakaway

Specifications

|	
Material	1060 Carbon Steel
Finish	.0002 Climacoat® Longlife Polymer
Corrosion Resistance	3,240 hours undriven (10% Red Rust)
Head Diameter	.325
Shank Diameter	.137
Length	1-1/2"
Knurl	Double Knurl
Point Style	Ballistic
Collation	Plastic Sheet Collated
Quantity per Carton	1.5M

Aerosmith Quality Control Process

Aerosmith internally verifies each lot of pins to meet the following requirements:
- Lot Trace
- Pin Dimensions
- Bend Test
- Collation Specifications
- Test fire each lot

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PowerPiN™

2257HPX
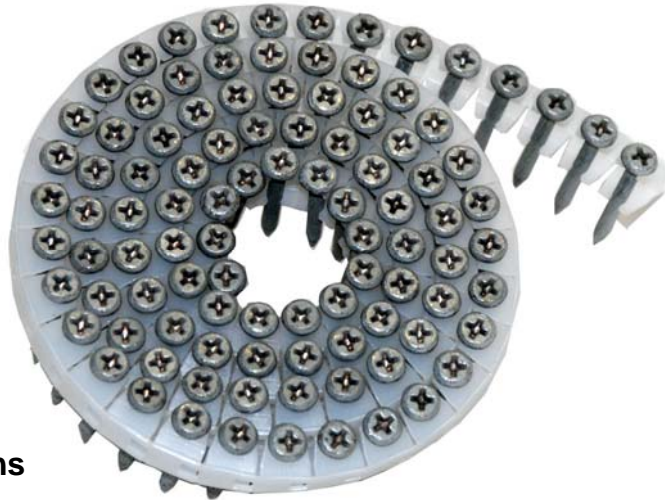
Specifications

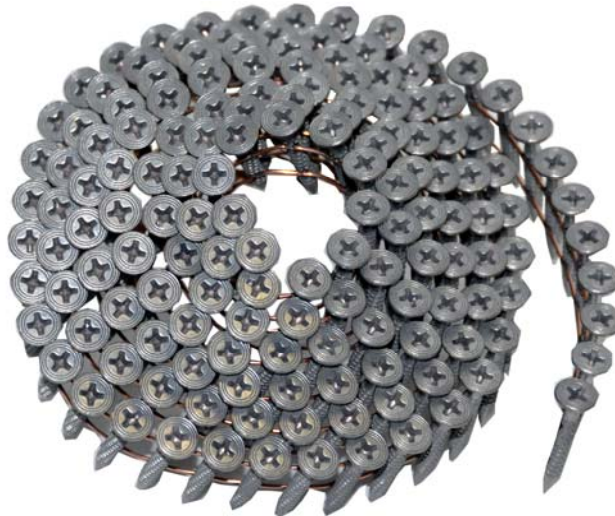|	
Material	1045 Carbon Steel
Finish	.0002 zinc
Head Diameter	.250 with #1 Phillips head
Shank Diameter	.100
Length	1"
Knurl	Helical
Point Style	Ballistic
Collation	Plastic Sheet
Quantity per Carton	2M

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3258A

Specification

Material	1045 Carbon Steel
Finish	.0002 Zinc
Head Diameter	.325 nominal with #2 Phillips head
Shank Diameter	.137
Length	1"
Knurl	Double Knurl
Point Style	Ballistic
Collation	Wire Collated
Quantity per Carton	2M

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The Audit

Floor/Wall Pinning Audit Worksheet

Unit Serial Number: _____

Auditor: _____

Date: _____

Inspection Points	Pass	Fail
1) High Pins	☐	☐
2) Broken Pins	☐	☐
3) Loose Plywood	☐	☐
4) Uniformity of Pattern	☐	☐
5) Staggered Pins at Seam	☐	☐
6) Too Many Pins	☐	☐

Corrective Action Required

Notes: _____

_____

_____

Any Questions?
Contact us at
1-800-528-8183
or
www.AerosmithFastening.com