



# MICHIGAN PNEUMATIC TOOL

Industrial Air Tools



VDEX™  
MEETS  
OSHA REQUIREMENTS

## VACUUM DUST EXTRACTION

ATTACHMENTS FOR SILICA DUST MANAGEMENT

1-800-521-8104 • [www.michiganpneumatic.com](http://www.michiganpneumatic.com)

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## Overview

VDEX™ is the abbreviation for **V**acuum **D**ust **EX**traction system = **VDEX™**. We were challenged with the task to design a system that is familiar for the operators of the tools as well as the distributors. We utilized our experience, common sense and listened to the voice of distributors and users of our tools.

Requests were:

- Less sophisticated parts
- Simple and sturdy parts
- Easy to install
- Self-explanatory
- Interchangeability between brands
- Common parts that can be acquired nationally
- Durable
- One power source

With this list of challenges we have created the VDEX™ system.

**Notice:** VDEX™ Attachments are patent pending.

## Safety



Wear Eye Protection



Wear Hearing Protection



Wear Respiratory Protection



Read Manuals Before Operating Product

# Safety

## General Product Safety Information

- Failure to observe the following warnings as well as failure to avoid potentially hazardous situations could result in death or serious injury.
- Read and understand this and all other supplied manuals before installing, operating, repairing, maintaining, changing accessories or working near this product.
- Only qualified and trained operators should install, adjust or use the VDEX™ System.
- It is your responsibility to make this safety information available to others who will operate this product.
- Warnings given in this and all other supplied manuals are for identifying hazards that are foreseeable in the general use of this tool. However, specific applications may create other hazards that must be identified and reduced before using the tool.
- Always install, operate, inspect and maintain this product in accordance with all applicable standards and regulations (local, state, country, federal, etc.) Operate and maintain this tool as recommended in this manual

to prevent an unnecessary increase in noise, vibration, dust and fume hazards.

## WARNING

### Product Safety Information – When Placing the Tool in Service

- Before beginning a job, the operator or their employer must assess all potential risks of using this product. These risks must be eliminated or appropriate controls must be implemented to reduce the risk to a safe level.
- Always use clean, dry air at 90 psig (6.2 bar/620 kPa) maximum air pressure at the inlet. Exceeding the maximum rated pressure shown on the tool may result in hazardous situations including rupture.
- Install an anti-whip device across any hose coupling without internal shut-off to prevent hose whipping if a hose fails or coupling disconnects.
- Whenever universal twist couplings (claw couplings) are used, lock pins should be installed to prevent connection failure. Whipping hoses can cause severe injury. Do not use damaged, frayed or deteriorated air hoses and fittings. Check

# Safety

that all fittings are tight before applying air pressure.

## WARNING

### Product Safety Information – General Hazards While Tool In Use

- Always use Personal Protective Equipment appropriate to the tool used and material worked. This may include dust masks or other breathing apparatus, safety glasses, ear plugs, gloves, apron, safety shoes, hard hat and other equipment.
- Air under pressure can cause severe injury. Never direct air or vacuum at yourself or anyone else.
- Always turn off the air supply. Bleed the air pressure and disconnect the air supply hose when not in use before performing any maintenance on this tool or any accessory.
- Keep clear of whipping air hoses. Shut off the compressed air before approaching a whipping hose.
- Do not use power tools when tired or under the influence of medication, drugs or alcohol.

- Never use a damaged or malfunctioning tool or accessory.

- Do not modify the tool, safety devices or accessories. Modifications can reduce the effectiveness of safety measures, increase the risks to the operator, and void the warranty.

- Do not use this tool for purposes other than recommended.

### Workplace Hazards

- Slips, trips and falls are major causes of workplace injury. Keep work area clean, uncluttered, ventilated, and illuminated.
- Be aware of slippery surfaces caused by the use of the tool and also of trip hazards caused by the air line.
- For overhead work, safety helmets must be worn. The increased risks to the operator and others must be assessed and reduced to a safe level.
- Keep others at a safe distance from your work area or ensure they use appropriate Personal Protective Equipment.

# Safety

## Projectile Hazards

- Always wear eye protection when operating or performing maintenance on this tool. The grade of protection required should be assessed for each use and may include impact-resistant glasses with side shields, goggles, or a full face shield over those glasses.

## Noise Hazards

- Always wear hearing protection when operating this tool.
- Exposure to high noise levels can cause permanent, disabling hearing loss and other problems such as tinnitus (ringing, buzzing, whistling or humming in the ears). Therefore, risk assessment and the implementation of appropriate controls for these hazards are essential.

## Operating Hazards

- Do not lubricate tool with flammable or volatile liquids such as kerosene, diesel or jet fuel. Use only recommended lubricants.
- Do not carry or drag the tool by the hose.

## Dust and Fume Hazards

- To reduce your exposure to chemicals; work in a well ventilated area and work with approved safety equipment such as dust masks that are specially designed to filter out microscopic particles.

### WARNING

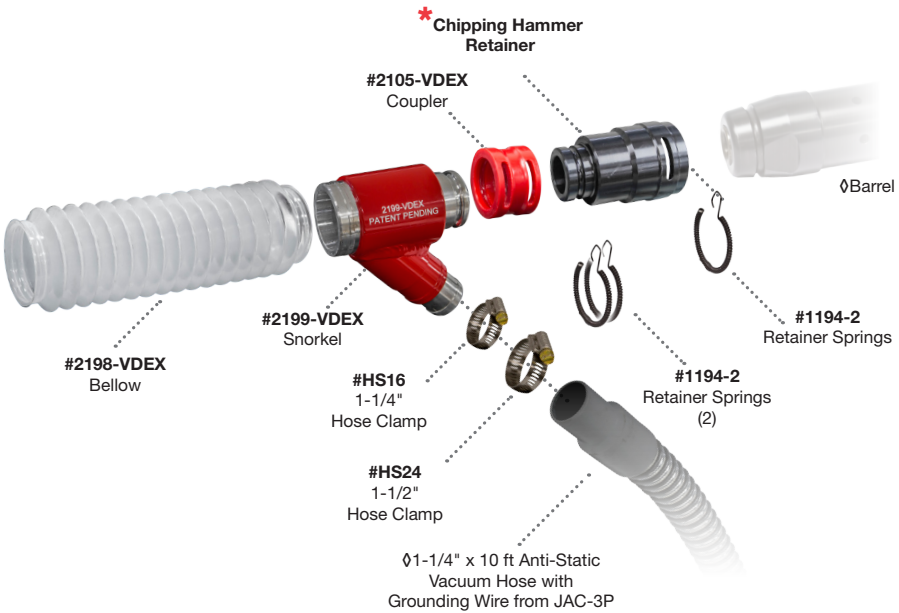
## Product Safety Information – When Maintaining the Tool

- Keep the tool operating safely through regular preventative maintenance including regular checks of speed and vibration.
  - When maintaining the tool, avoid exposure or breathing of hazardous dust and other substances deposited on the tool during use.
  - Use only proper cleaning solvents to clean parts. Use only cleaning solvents which meet current safety and health standards. Use cleaning solvents in a well ventilated area.
  - Do not remove any labels.
  - Replace any damaged label.
- NOTICE:** Refer to Product Information Manual for Model-Specific Safety Information.

# Chipping Hammer Component Identification



**CH-VDEX™ Kit**  
(Chisel Not Included)



**\* Available Chipping Hammer Retainers:**



**#1190-CPT-VDEX**  
**NOTE:** Retainers  
#1190-SUL-VDEX,  
#1190-FTC-VDEX  
Interchangeable with  
#1190-CPT-VDEX



**#1190-IR-VDEX**



**#1190-APT-VDEX**



**#1190-MINI-VDEX**



**#RH-VDEX-9B**  
**#RH-VDEX-MRD9**  
**#RH-VDEX-THD1100**  
for Roto-Hammers



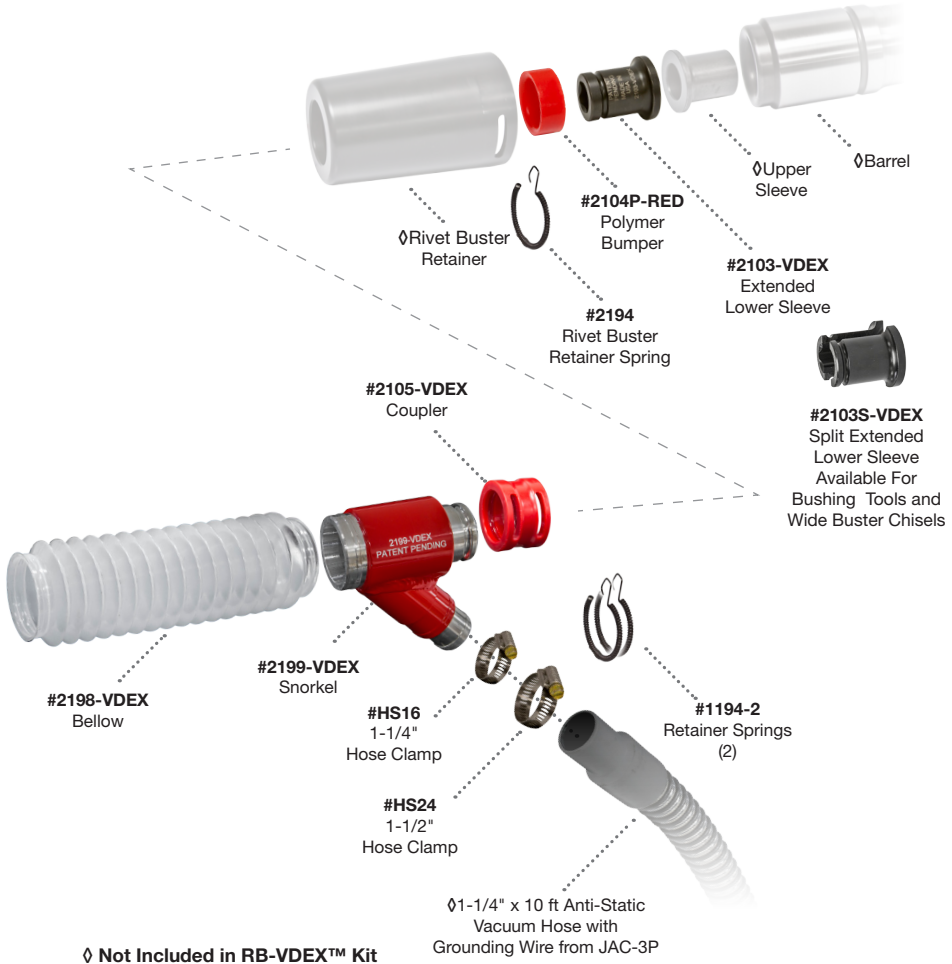
**#HHW1-300-VDEX**

∅ Not Included in CH-VDEX™ Kit

# Rivet Buster Component Identification



**RB-VDEX™ Kit**  
(Chisel Not Included)



◊ Not Included in RB-VDEX™ Kit

# Accessories

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**#VDEX-WHIP**  
3-Way Whip Hose



**#VV-0021**  
Bellows to Bellows  
Extension Coupler

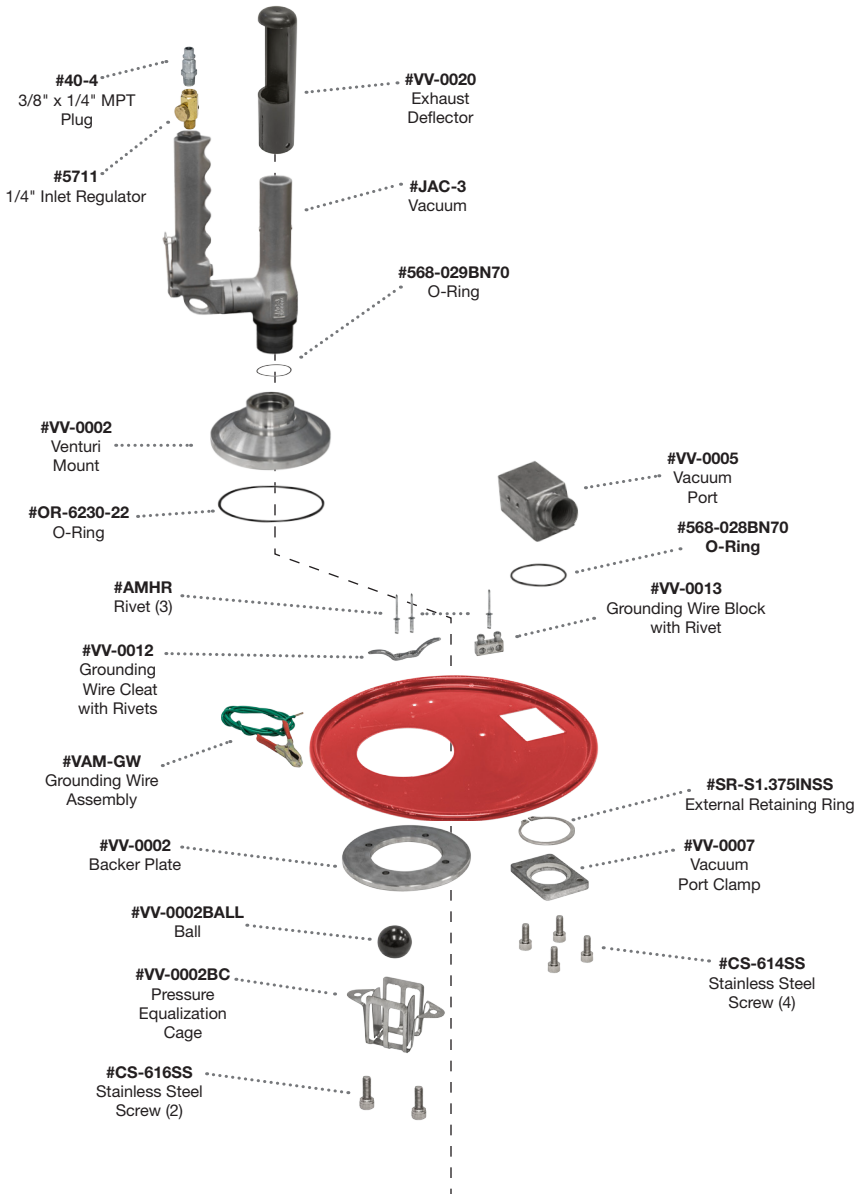


# JAC-3P Venturi Vacuum Complete



**JAC-3P**  
Venturi Vacuum  
Complete with Pail & 1-1/4" x 10 ft  
Anti-Static Vacuum Hose with  
Grounding Wire

# JAC-3P Component Identification



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# JAC-3P Component Identification

Continued From  
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# Installation

The VDEX™ system is simple to install. If you have used a Chipping Hammer or Rivet Buster in the past, you are familiar with the installation and removal of the retainer springs. We have used these very same springs for installing the VDEX™ system.

## For Chipping Hammers

1. Make sure air is disconnected from the tool before performing any installation or maintenance on pneumatic tools.

2. Determine the brand, make and model of chipping hammer that you are converting to the VDEX™ system.

- a. We currently offer 4 versions of VDEX™ Retainers
  - i. 1190-CPT-VDEX
  - ii. 1190-IR-VDEX
  - iii. 1190-APT-VDEX
  - iv. 1190-MINI-VDEX (for mini chipping hammer)
  - v. HHW1-300-VDEX (for IR threaded barrels)

**NOTE:** Retainers #1190-SUL-VDEX, #1190-FTC-VDEX interchangeable with #1190-CPT-VDEX.

**NOTE:** Some VDEX™ models may work with other brands not listed here.

3. Examine the current Retainer and compare the part number on the Retainer to the list of 1190-VDEX series Retainers noted above. Select the proper Retainer.

4. Once you have identified, ordered and received the correct Retainer, remove the standard Retainer Spring (#1194-2) and install the proper VDEX™ Retainer on the nose of your Chipping Hammer. Make sure that it is not too loose and that the Retainer fits properly.

5. After you have installed your VDEX™ Retainer and the desired chisel ormoil point, begin the installation process of the VDEX™ Snorkel (#2199-VDEX).

**NOTE:** The Snorkel, (#2199-VDEX) is held on to the front of the VDEX™ Retainer using the Coupler (#2105-VDEX).

6. Push the VDEX™ Coupler (#2105-VDEX) over the nose of the Retainer.

7. Install the Retainer Spring (#1194-2) to hold the Coupler (#2105-VDEX) on the nose of the Retainer.

8. Then insert the Snorkel (#2199-VDEX) into the other open end of the Coupler (#2105-VDEX).

# Installation

9. Join the Snorkel (**#2199-VDEX**) and the Coupler (**#2105-VDEX**) using another Retainer Spring (**#1194-2**).

10. Then install the Bellow (**#2198-VDEX**) over the nose of the Snorkel (**#2199-VDEX**). The Bellow (**#2198-VDEX**) should fit tight to the Snorkel (**#2199-VDEX**). The friction fit and the small rib will hold the Bellow (**#2198-VDEX**) on to the nose of the Snorkel (**#2199-VDEX**).

11. Your **CH-VDEX™** Chipping Hammer attachment is now successfully installed. You may need to use a longer chisel or shorten the Bellow (**#2198-VDEX**) based on the length of either component and depending on the application or use of your Chipping Hammer.

**NOTE:** VDEX™ systems have been designed with two diameters on the Snorkel for use with 1-1/4" or 1-1/2" vacuum hoses. Allowing the operator to use either Pneumatic or Electric Vacuums with the CH-VDEX™ or RB-VDEX™ attachments.

## For Rivet Busters

1. Make sure air is disconnected from the tool before performing any installation or maintenance on pneumatic tools.

2. Determine the brand, make and model number of the Rivet Buster that you are converting to the VDEX™ System.

a. Fortunately, all modern and relevant Rivet Busters utilize the same Lower Sleeve.

b. We have designed a special sleeve that converts all modern and relevant Rivet Busters. (**#2103-VDEX**).

3. No special Chisel Retainers are needed for the use and installation of the RB-VDEX™ system.

4. Remove the Rivet Buster Retainer Spring (**#2194**).

5. Slide the Retainer off of the nose of the Rivet Buster.

6. Turn the Retainer upside down and remove the Lower Sleeve (**#2103**).

**NOTE:** The Rubber or Poly Bumper will likely remain on the existing Lower Sleeve. We have included a new Poly Bumper (**#2104P-RED**) with every RB-VDEX™ system.

7. Install the new Poly Bumper (**#2104P-RED**) on the Lower Sleeve (**#2103-VDEX**). You will notice the NEW Lower Sleeve (**#2103-VDEX**) is longer and features a groove on the exterior. This is designed to protrude

# Installation

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from the nose of the Rivet Buster Retainer and allow the Coupler to be installed on the external groove.

**8.** Drop the NEW (#2103-VDEX) Lower Sleeve with (#2104P-RED) Poly Bumper into the Rivet Buster Retainer.

**9.** Make sure that the Lower Sleeve (#2103-VDEX) is sticking out of the Rivet Buster Retainer.

**10.** Install a new chisel ormoil point into the Upper Sleeve (#2101) and slide the Retainer with the Lower Sleeve (#2103-VDEX) installed, over the top of the chisel. Optionally, you could also drop the chisel ormoil point into and through the square hole in the Lower Sleeve (#2103-VDEX) and then slide the entire assembly on to the nose of the tool. Make sure the Upper Sleeve (#2101) is in place.

**11.** Re-install the Retainer Spring (#2194) that holds the Retainer on to the barrel of the Rivet Buster.

**12.** Slide Coupler, (#2105-VDEX) over the extended Lower Sleeve (#2103-VDEX), now sticking out of the front of the Rivet Buster.

**13.** Use the Retainer Spring (#1194-2) to hold the Coupler (#2105-VDEX) on to the

new extended Lower Sleeve (#2103-VDEX).

**14.** Insert the Snorkel, (#2199-VDEX) into the open end of the Coupler (#2105-VDEX).

**15.** Use another Retainer Spring (#1194-2) to hold the Snorkel (#2199-VDEX) onto the Coupler (#2105-VDEX).

**16.** Then install the Bellow (#2198-VDEX) over the nose of the Snorkel (#2199-VDEX). The Bellow (#2198-VDEX) should fit tight to the Snorkel (#2199-VDEX). The friction fit and the small rib will hold the Bellow (#2198-VDEX) on to the nose of the Snorkel (#2199-VDEX).

**17. NOTE:** VDEX™ systems have been designed with two diameters on the Snorkel for use with 1-1/4" or 1-1/2" Vacuum Hoses. Allowing the operator to use either Pneumatic or Electric Vacuums with the CH-VDEX™ or RB-VDEX™ Attachments.

# Installation

## For JAC-3P Vacuum and Pail System

### Installation of the JAC-3P Vacuum with Pail to a CH-VDEX™ Chipping Hammer attachment or a RB-VDEX™ Rivet Buster attachment.

1. Remove the NPK JAC-3 from the box.
2. Install the JAC-3 into the Vacuum Adapter on top of the Pail. There is an o-ring in the top of the Vacuum Adapter that will offer some initial resistance. Make sure the JAC-3 Vacuum is fully seated. Make sure to install the Exhaust Deflector (**#VV-0020**) on the top of the Vacuum.  
**IMPORTANT:** If you do not have this on top, the Vacuum could expel dust or particles towards the operator.
3. Remove the Locking Ring that secures the Lid to the bottom section of the Pail.
4. Make sure the Velocity Ring (**#VV-0026**) is in the bottom of the Pail when you fill it with water. Do not fill water over the top of the Velocity Ring (**#VV-0026**). Fill the Pail with 4.5 to 5 inches of water.  
**NOTE:** If overfilled, water will be expelled from the top of the JAC-3 vacuum when started.

5. Reinstall the Locking Ring that secures the Lid on to the bottom section of the Pail. Make sure the secondary Safety Lock is also latched.

6. For units sold prior to October 25<sup>th</sup> 2017, Install the Vacuum Hose with Copper Grounding Wire (**#VV-0010-10-ASM**) on to the Vacuum Port (**#VV-0005**) on the top of the Pail. Use the 1-1/4" Worm Gear Clamp (**#HS16**) to secure the Hose (**#VV-0010-10-ASM**) to the Vacuum Port (**#VV-0005**).

For units sold after October 25<sup>th</sup> 2017, Your vacuum hose has one black cuff (**#VV-0011**) and one white connecting cuff (**#VV-0011**). The black end connects to the Vacuum Port (**#VV-0005**) on the top of the Pail, and the White end connects to the Snorkel (**#2199-VDEX**).

7. Install the Copper Wire on the Grounding Block (**#VV-0013**) using the only open screw hole.

8. Attach the other end of the Vacuum Hose (**#VV-0010-10-ASM**) on to the open port on the VDEX™ Snorkel (**#2199-VDEX**). Use the 1-1/4" Worm Gear Clamp (**#HS16**) to secure the Hose (**#VV-0010-10-ASM**) to the Snorkel (**#2199-VDEX**).

9. Use the VDEX 3-Way Whip Hose (**#VDEX-WHIP**) to connect the end

# Installation & Operating Tips

with the coupler to the JAC-3P, then connect the air tool with one of the available CP Fittings. Lastly, connect your air supply to the JAC-3P using the VDEX 3-Way Whip Hose (**#VDEX-WHIP**). Depress the lever and flip up the lever lock to start the vacuum.

**10.** Then begin using the air tool and collect the dust and small debris.

**NOTE:** The JAC-3P comes equipped with additional External Grounding Wire with Clamp (**#VAM-GW**). Additional Grounding maybe desired or required in some applications.

**NOTE:** Overhead work will fill the JAC-3P Pail faster than horizontal work.

## Operating Tips

- We recommend that you check the Pail every 2 hours of operation to examine the amount of dust and debris you are collecting as well as the remaining water level.
- If water comes out of the Exhaust Deflector you have too much water in the Pail.
- If dust and debris begins to come out the Exhaust Deflector, you do not have enough water in the Pail or you have overfilled the

Pail with dust and debris.

- There are no moving parts in the JAC-3 vacuum. No maintenance necessary. Simply clean it from time to time by spraying it down with soap and water. If the air supply is dirty then you will clog the venturi ports in the JAC-3 Vacuum and could cause a reduction in performance.
- Do not use the JAC-3P to vacuum up water. There is no float mechanism in the Pail to automatically shut the Vacuum off when water reaches the suction port on the front of the venturi.
- Never apply the JAC-3 Vacuum directly to your skin or clothes.
- Always wear eye protection when operating the JAC-3 Pail, accompanying pneumatic tools, or any pneumatic tools.
- There is a brass in-line Regulator (**#5711**) on the air inlet of the JAC-3 Vacuum. This will increase and decrease the performance of the JAC-3 Vacuum. Depending on the type of concrete or media that you are breaking, you may need more or less suction depending on the level of dust created. This Regulator (**#5711**) is



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supplied for operator preference. Performance ratings of the JAC-3 Vacuum are performed when the Regulator (**#5711**) is fully open.

- Never work on, remove or install the CH-VDEX safety Retainers or RB-VDEX Sleeve, VDEX Attachments while the JAC-3P Vacuum is operating. Disconnect all air before working on VDEX Attachments or JAC-3P Vacuum systems.

# Limited Warranty

**MPT** guarantees to the original purchaser this tool to be free of defects in material and workmanship for a period of one hundred eighty (180) days after shipment. This guarantee is limited to the repair or replacement of any part(s), upon our examination, which prove to have been defective. This guarantee does not cover damage caused by normal wear or misuse due to lack of lubrication, excessive air pressure, water or other contaminants from the air line, cosmetic damage or damage due to negligence, misuse, abuse, failure to follow operating instructions or accidental spills, damage due to environmental causes such as floods, airborne fallout, chemicals, salt, hail, windstorms, or lightning,

damage due to accidents, fire, theft, or vandalism, damage due to improper connection or modification of equipment, product(s) which have been opened or tampered with for any reason or which have been damaged due to alteration, or repair by other than an authorized **MPT** service center.

Except as expressly set forth in this warranty, **MPT** makes no other warranties, expressed or implied, including any implied warranties of merchantability and fitness for a particular purpose. **MPT** expressly disclaims all warranties not stated in this limited warranty. Any implied warranties that may be imposed by law are limited to the terms of this expressed limited warranty.

## For Your Records:

Dealer Contact Name \_\_\_\_\_

Dealer Contact Phone \_\_\_\_\_

Date of Purchase \_\_\_\_\_

Serial Number \_\_\_\_\_

# Notes

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# MICHIGAN PNEUMATIC TOOL

## Industrial Air Tools

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