



# CLASSIC (WV) ROTARY SWIVEL NOZZLES USER MANUAL



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This manual must be used in accordance with all applicable national laws. The manual shall be regarded as a part of the machine and shall be kept for reference until the final dismantling of the machine, as defined by applicable national law(s). Updated manuals can be downloaded at:  
<https://www.stoneagetools.com/manuals>

## SPECIFICATIONS

Tool Family:	Warthog® Classic (WV)			
Tool Model:	WV-046-LK-A	WV-046-LK-B	WV-046-LK-C	WV-046-LK-D
Pipe Size:	2-4 in. (51-102 mm)			
Pressure Range:	3-4 kpsi (207-276 bar)			
Flow Range:	7-8 gpm (26-30 L/min)	4-4.5 gpm (15-17 L/min)	4-4.5 gpm (15-17 L/min)	3-3.5 gpm (11-13 L/min)
Inlet Connection:	1/4" NPT / BSPP			
Jet Type:	Drilled			
Front Jet Size:	.024	.020	.018	.018
Back Jet Size:	2 @ .052	2 @ .039	2 @ .032	2 @ .028
Outside Diameter:	1.5 in. (38 mm)			
Overall Length:	2 in. (51 mm)			
Weight:	.4 lb (.20 kg)			
Max Water Temperature:	160 °F (70 °C)			

### DESCRIPTION AND INTENDED USE

The Warthog® Classic (WV) uses StoneAge's flow-through technology and features a revolutionary high-speed rotating design with no high pressure seals or bearings to service making it low maintenance. It cleans lines as small as 2" (51 mm) with long sweeping elbows.

The tool has a 1/4" NPT pipe thread inlet and can pass through long radius elbows in lines 2" (51 mm) and larger if a 1/4" NPT hose fitting is used.

### KEY FEATURES:

- Rotational speed controlled by pressure/flow
- Excellent for navigating elbows
- Clears grease, fat, ice and fine roots

**EC DECLARATION OF CONFORMITY**

**Manufacturer:** StoneAge Incorporated  
466 South Skylane Drive Durango, CO 81303 USA

**Authorized Representative:** StoneAge Netherlands BV  
Reedijk 7Q  
3274 KE Heinenoord Netherlands  
Sander de Korte, Customer Service Manager

**Declare that:** Warthog® Classic (WV-XXX)  
are rotary swivel tools designed for cleaning pipes with  
bends.

**Are compliant with the following Directives and Standards:**

Directive 2006/42/EC (Machinery Directive)

EN ISO 12100:2010 (E) Safety of machinery – General principles for design – Risk assessment and risk reduction

The Technical Files for the Warthog® Classic (WV-XXX) are maintained at:

StoneAge Incorporated, 466 South Skylane Drive, Durango, CO 81303, USA and were compiled by the Engineering Manager. The Technical File is available through the Authorized Representative. This Declaration of Conformity is issued under the exclusive responsibility of StoneAge Incorporated.



StoneAge Incorporated, Durango, CO, USA  
Liz Mancuso, Director of Engineering

02/15/23

Date



## UK DECLARATION OF CONFORMITY

**Manufacturer:** StoneAge Incorporated  
466 South Skylane Drive Durango, CO 81303 USA

**Authorized Representative:** StoneAge UK  
Unit 3  
Crucible Business Park  
Woodbury Lane  
Norton  
Worcester  
Worcestershire, WR5 2DQ  
United Kingdom  
Steve Ellis, Managing Director StoneAge UK

**Declare that:** Warthog® Classic (WV-XXX)  
are rotary swivel tools designed for cleaning pipes with  
bends.

### Are compliant with the following Statutory Requirements and Designated Standards:

S.I. 2008 No. 1597 (E) Safety of machinery – General principles for design – Risk assessment and risk reduction  
EN ISO 12100:2010 (E) Safety of machinery – General principles for design – Risk assessment and risk  
reduction

The Technical Files for the Warthog® Classic (WV-XXX) are maintained at:

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StoneAge Incorporated, Durango, CO, USA  
Liz Mancuso, Director of Engineering

02/15/23  
Date



**UK  
CA**

# WARNING AND SAFETY INSTRUCTIONS

## ⚠ WARNING

Because of the short length of the Warthog® Classic (WV), the tool can turn around in pipes and come back at the operator at a high rate of speed. A rigid “stinger” should be used between the hose and the tool. The rigid length of the tool including hose end must be 1-1/2 times the inside diameter of the pipe being cleaned (see below).

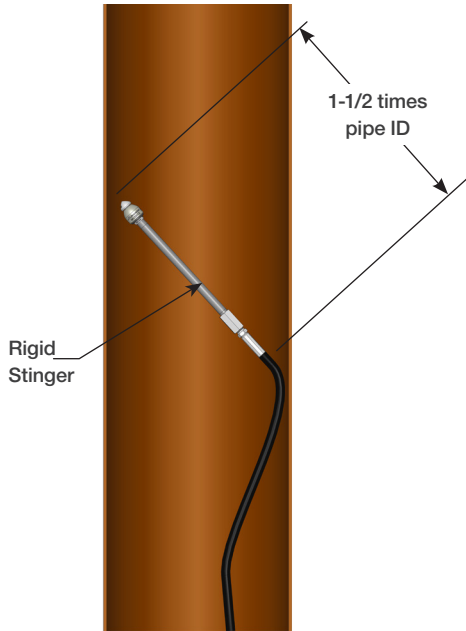
Make sure there is an operator controlled dump in the system, operated by the person closest to the cleaning job. It is recommended that the hose be marked a few feet from the end with a piece of tape so the operator knows when to stop when retracting the tool.

## ⚠ DANGER

Operations with this equipment can be potentially hazardous. Caution must be exercised prior to and during machine and water jet tool use. Please read and follow all of these instructions, in addition to the guidelines in the WJTA Recommended Practices handbook, available online at [www.wjta.org](http://www.wjta.org). Deviating from safety instructions and recommended practices can lead to severe injury and/or death.



**IMPROPER USE:**  
Classic (WV) will turn around in large diameter pipe  
**VERY DANGEROUS!**



**PROPER USE:**  
Classic (WV) with rigid “stinger” to prevent turnaround, still able to pass through elbows.

# WARNING AND SAFETY INSTRUCTIONS

## OPERATOR TRAINING

Managers, Supervisors, and Operators **MUST** be trained in Health and Safety Awareness of High-pressure Water Jetting and hold a copy the Water Jetting Association (WJA) Code of Practice, or equivalent (see [www.waterjetting.org.uk](http://www.waterjetting.org.uk)).

Operators **MUST** be trained to identify and understand all applicable standards for the equipment supplied. Operators should be trained in manual handling techniques to prevent bodily injury.

StoneAge has designed and manufactured this equipment considering all hazards associated with its operation. StoneAge assessed these risks and incorporated safety features in the design. StoneAge **WILL NOT** accept responsibility for the results of misuse.

**IT IS THE RESPONSIBILITY OF THE INSTALLER/ OPERATOR** to conduct a job specific risk assessment prior to use. Job specific risk assessment **MUST** be repeated for each different set up, material, and location.

The risk assessment **MUST** conform to the Health and Safety at Work Act 1974 and other relevant Health and Safety legislation.

Operators **MUST** read, understand, and follow the Operational and Training Requirements (Section 6.0) of WJTA-IMCA's, Industry Best Practices For The Use Of High-pressure Waterjetting Equipment, or equivalent.

Operators **MUST** read, understand and follow the Warnings, Safety Information, Assembly, Installation, Connection, Operation, Transport, Handling, Storage, and Maintenance Instructions detailed in this manual.

The risk assessment **MUST** consider potential material or substance hazards including:

- Aerosols
- Biological and microbiological (viral or bacterial) agents
- Combustible materials
- Dusts
- Explosion
- Fibers
- Flammable substances
- Fluids
- Fumes
- Gases
- Mists
- Oxidizing Agents

# WARNING AND SAFETY INSTRUCTIONS

## PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

Use of Personal Protective Equipment (PPE) is dependent on the working pressure of water and the cleaning application. Managers, Supervisors, and Operators **MUST** carry out a job specific risk assessment to define the exact requirements for PPE. See Personal Protective Equipment (Section 5) of WJTA-IMCA's, Industry Best Practices For The Use Of High-pressure Waterjetting Equipment for additional information.

**Hygiene** - Operators are advised to wash thoroughly after all waterjetting operations to remove any waterblast residue which may contain traces of harmful substances.

**First aid provision** - users **MUST** be provided with suitable first aid facilities at the operation site.

PPE may include:

- **Eye protection:** Full face visor
- **Foot protection:** Kevlar® brand or steel toe capped, waterproof, non-slip safety boots
- **Hand protection:** Waterproof gloves
- **Ear protection:** Ear protection for a minimum of 85 dBA
- **Head protection:** Hard hat that accepts a full face visor and ear protection
- **Body protection:** Multi-layer waterproof clothing approved for waterjetting
- **Hose protection:** Hose shroud
- **Respiratory protection:** May be required; refer to job specific risk assessment





# WARNING AND SAFETY INSTRUCTIONS

## **⚠ WARNING**

Operations with this equipment can be potentially hazardous. Caution **MUST** be exercised prior to and during equipment and water jet tool use. Please read and follow all of these instructions, in addition to the guidelines in the WJTA-IMCA's Industry Best Practices handbook, available online at [www.wjta.org](http://www.wjta.org). Deviating from safety instructions and recommended practices can lead to severe injury and/or death.

- Do not exceed the maximum operating pressure specified for any component in a system.
- The immediate work area **MUST** be marked off to keep out untrained persons.
- Inspect the equipment for visible signs of deterioration, damage, and improper assembly. Do not operate if damaged, until repaired.
- Make sure all threaded connections are tight and free of leaks.
- Users of the Warthog® Classic (WV) **MUST** be trained and/or experienced in the use and application of high-pressure technology and cleaning, as well as all associated safety measures, according to the WJTA Recommended Practices for the use of High-pressure Waterjetting Equipment.
- Install mechanical stops, stingers and back out preventers as appropriate when doing any tube, pipe or vessel cleaning.
- Always de-energize the system before servicing or replacing any parts. Failure to do so can result in severe injury and/or death.

Refer to WJTA-IMCA's Industry Best Practices For The Use Of High-pressure Waterjetting Equipment and/or The Water Jetting Association's, WJA Code of Practice for additional safety information.

- Complete a job specific risk assessment and act on the resulting actions.
- Adhere to all site specific safety procedures.
- Ensure the waterblasting zone is properly barricaded and that warning signs are posted.
- Ensure the workplace is free of unnecessary objects (e.g. loose parts, hoses, tools).
- Ensure all Operators are using the correct Personal Protective Equipment (PPE).
- Check that the air hoses are properly connected and tight.
- Check all hoses and accessories for damage prior to use. Do not use damaged items. Only high quality hoses intended for waterblast applications should be used as high-pressure hoses.
- Check all high-pressure threaded connections for tightness.
- Operate the high-pressure water at full pressure and use the Pneumatic Foot Pedal Dump Control to verify that the dump valve is working properly.
- Ensure that Operators never connect, disconnect, or tighten hoses, adapters, or accessories with the high-pressure water pump unit running.
- Ensure no personnel are in the hydroblasting zone.

## PRE-RUN SAFETY CHECK

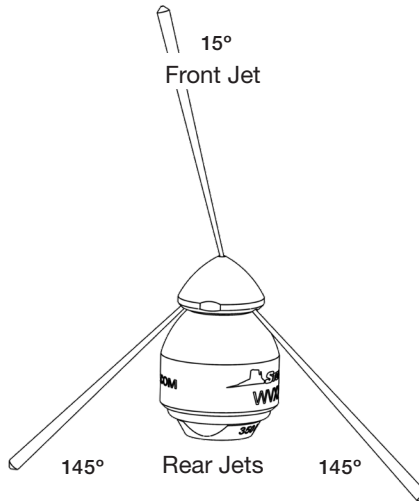
## WARTHOG® CLASSIC (WV)

PIPE SIZE: 2"-4" LINES (51-102 MM)

INLET: 1/4" NPT OR BSPP

FLOW RANGE: 3-8 GPM (11-30 LPM)

The (WV) can easily navigate elbows and clear grease, fat, ice and fine roots. A low maintenance nozzle for 2-4" (51-102 mm) pipes, the (WV) has no seals or bearings to service. When the drilled jets wear out, low cost head replacements are available to keep this tool running at peak performance.



### UNIVERSAL

- Jetting is preconfigured for an equal balance of pulling, flushing, cleaning, and cutting
- Head can be replaced when worn to keep the tool operating at peak performance
- Head features a unique locking mechanism for added safety

### WV UNIVERSAL

3 Ports:

Front: 1 @ 15°

Rear: 4 @ 145°

DESCALING



PULLING/  
FLUSHING



## NOTICE

*Before connecting the tool to the end of the hose, flush the jetter hose to remove debris. The most important item in maintaining the WV is keeping debris from entering the tool, which will prevent it from rotating.*

### OPERATION:

- Attach the tool to the end of the hose. Note that there is a large O-Ring (WV 008) around the inlet. This O-Ring helps prevent the tool from getting caught on the rear edge when pulling the tool back out of the line.



**TECH TIP:** NPT threads -StoneAge recommends the use of Teflon tape and yellow Threadmate™ on NPT thread connections.

- It is recommended that the hose be marked a few feet from the end with a piece of tape so the operator knows when to stop on the way back out.
- Position the tool within the pipe to be cleaned.
- Close the dump and slowly bring the pump up to pressure the first time to make sure jets are not plugged and the jet thrust is correct. The WV should begin to slowly rotate.
- Once the pump is up to pressure, feed the WV at a reasonable rate to allow the jets time to clean the pipe. Once operating pressure is reached, feed the tool into the pipe to begin the cleaning job.
- Depending on the amount of debris in the pipe, it may be necessary to occasionally pull the WV back toward the pipe entrance to prevent large buildups behind the tool. Allow the jets time to do their work by feeding the hose out at a controlled rate.
- When finished cleaning, shut down and secure pump before removing WV from line. If the WV will be removed from the line and stored for more than several days, blow out water with compressed air to prolong the life of the internal components.

Parker Threadmate™ is a registered trademark of the Parker Hannifin Corporation.

**HEAD WILL NOT ROTATE:** First, make sure the head Warthog® Classic (WV) is still tightened into the shaft (BA 501-LK). A safety feature built into the shaft stops the tool from rotating if the head comes loose. If the head isn't loose, try the following procedure.

Spray a light oil such as WD-40 into the tool and rotate head by hand until it turns freely again.

Make sure that the jets in the head are not plugged. If the tool still does not rotate after trying this several times, it may need to be disassembled and cleaned on the inside. To do this requires a socket wrench (found in StoneAge Tool Kit WV 612) inserted into the rear of the shaft to remove the head from the shaft.

Begin by removing the O-ring (WV 008) and the Retaining Ring (WV 010). Pull the Inlet Nut (WV 002-P4, BSPP4) out of the Body (WV 003). Using a spanner wrench (WV 181) and the head removal tool (BA 182), unscrew the Shaft (BA 501-LK) from the Head (WV 046-LK). Make sure the head removal tool slides under the head in the orientation shown. This process is shown in the figure below.

Make sure the two small holes in the side of the shaft are cleaned out; debris plugging these holes is the most likely cause of the tool not rotating. If the outside of the shaft is badly worn, it needs to be replaced.

### NOT GETTING THE DESIRED OPERATING PRESSURE:

- The type of WV may not be the correct tool for the job. Verify jetting at [jetting.stoneagetools.com](http://jetting.stoneagetools.com)
- For more information contact your factory authorized StoneAge® Inc. distributor or go to [www.sewernozzles.com](http://www.sewernozzles.com) for help.

## TOOL SERVICE

Warthog® Classic (WV) product training and proper tools are required to service this tool. If you are uncomfortable performing the service, bring the WV to your authorized dealer.

The use of a bench vice is highly recommended. Take care throughout the entire procedure to keep the internals clean and free from grit, lint, and contamination. Failure to do so could result in premature failure after service.

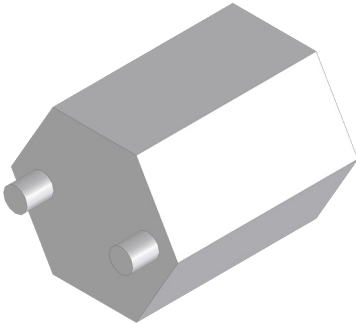
### LIST OF TOOLS:

- Bench Vice (recommended)
- Small flat screwdriver
  
- WV 612-LK Tool Kit
  - BA 182 Head Removal Tool
  - WV 181 Spanner Wrench

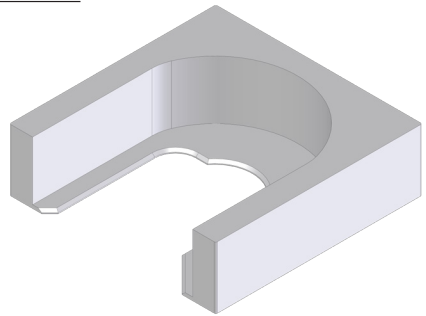
### LIST OF MATERIALS:

- Loctite® #262 Red (StoneAge p/n BA 185)
- WD-40® Multi-Use Product

### WV 612-LK Tool Kit



WV 181 Spanner Wrench



BA 182 Head Removal Tool

***FAILURE TO USE THE  
BA 182 HEAD REMOVAL  
TOOL WILL DAMAGE THE  
SHAFT AND VOID THE  
TOOL WARRANTY.***

“WD-40®” is a registered trademark. “Multi-use product” is the product category, “WD-40 Multi-Use Product” is sometimes shortened to WD-40®

Loctite® #262 Red is a registered trademark of the Henkel Corporation.

## DISASSEMBLY

1. Remove the O-Ring at the rear end of the WV.

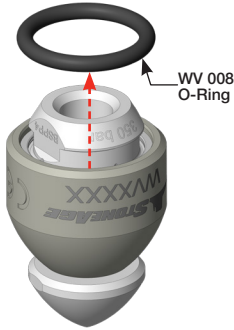


Figure 1: For Step 1

2. Remove the Retaining Ring by inserting a small screw driver under the end of ring and rotating it around until the ring comes away from the body.

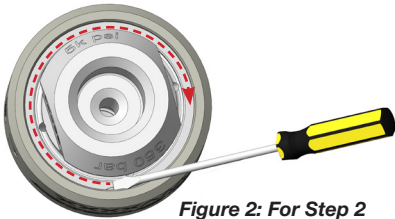


Figure 2: For Step 2



Figure 3: For Step 2

3. Flip the WV Assembly and the Inlet Nut will drop out.



Figure 4: For Step 3

4. Orient the Head Removal Tool so that the flats on the head align with the sides of the tool. See Figure 5

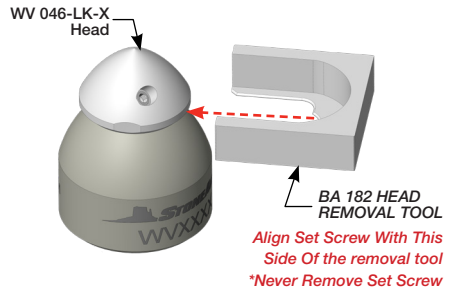


Figure 5: For Step 4

5. Slide the tool between the head and the body as shown in Figure 6.

**FAILURE TO USE THE BA 182 HEAD REMOVAL TOOL WILL DAMAGE THE SHAFT AND VOID THE TOOL WARRANTY.**

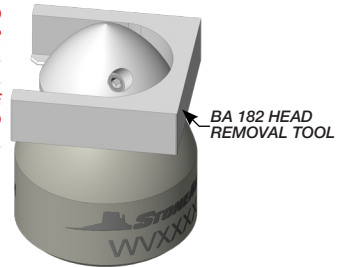


Figure 6: For Step 5



**TECH TIPS:** The BA 182 Head Removal Tool and WV 181 Wrench Spanner Tool are included in the WV 612-LK Kit.

6. Flip the WV Assembly upside down and clamp the BA 182 Head Tool in a vise.

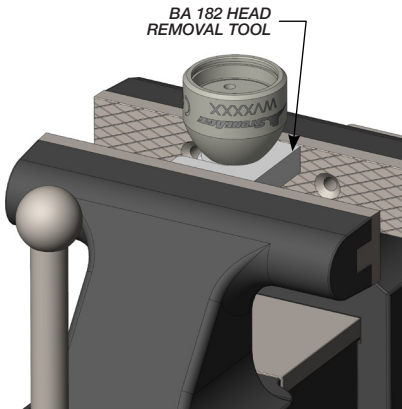


Figure 7: For Step 6

8. Grasp the Wrench Spanner Tool with an Adjustable End Wrench and rotate Counterclockwise to release the Shaft from the Head.

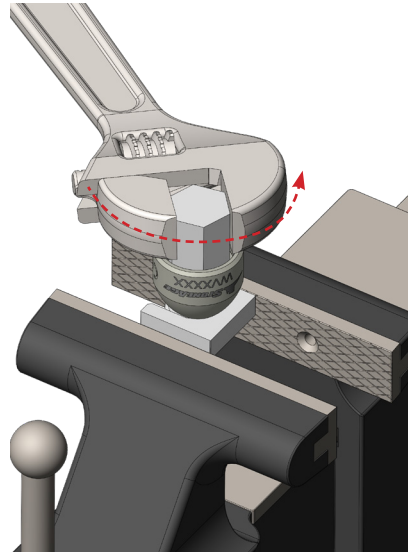


Figure 9: For Step 8

9. Remove the Shaft and Head from the Body.

7. Insert the Spanner Wrench Tool into the two holes in the shaft.

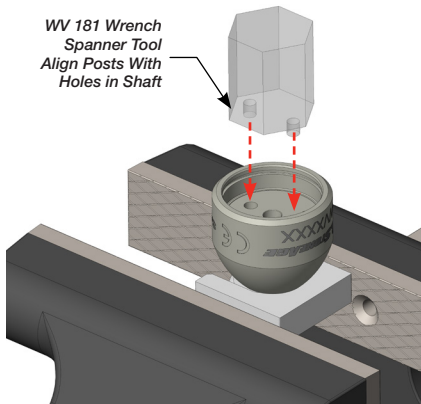


Figure 8: For Step 7

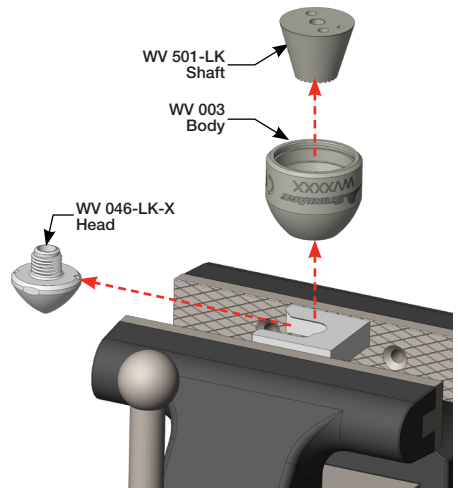


Figure 10: For Step 9

**TECH TIPS:** The BA 182 Head Removal Tool and WV 181 Wrench Spanner Tool are included in the WV 612-LK Kit.

## ASSEMBLY

1. Insert the Shaft into the Body.
2. Apply 2-4 drops of Loctite® #262 Red (StoneAge p/n BA 185) to the threads of the Head and light screw into the Shaft through the Body.

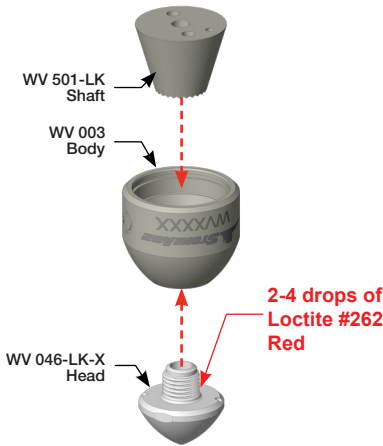


Figure 11: For Steps 1-2

## NOTICE

Whenever reassembling tool, apply 2-4 drops of Loctite #262 Red (StoneAge p/n BA 185) around the circumference of the threads on the Head prior to screwing it into the Shaft. Care must be taken not to allow excess Threadlocker into the internal shaft bore below the female threads or onto the tapered external surface of the shaft. Torque to 100 in-lbs using socket wrench (available from StoneAge as p/n WV 181). Also replace Retaining Ring (WV 010) with a new one during each reassembly.

If you do not have the required tools or you are not confident in performing these procedures please send the tools back to StoneAge for maintenance and repairs.

3. Clamp the BA 182 Head Removal Tool into a vise with the flat side facing up. See Figure 12.
4. Slide the WV Assembly into the Head Removal Tool. See Figure 12.

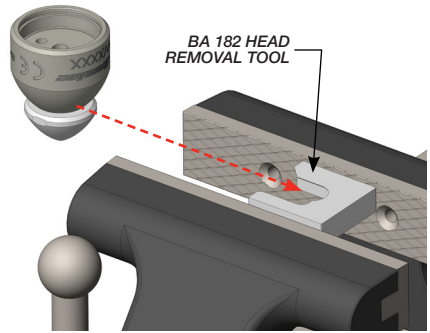


Figure 12: For Steps 3 & 4

5. Insert the Spanner Wrench Tool into the two holes in the shaft.

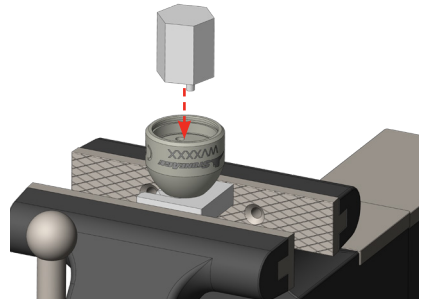
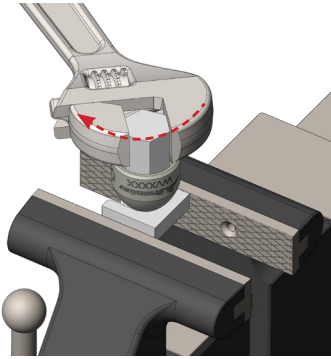


Figure 13: For Step 5



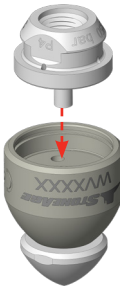
6. Grasp the Wrench Spanner Tool with an Adjustable End Wrench and rotate Clockwise to tighten the Shaft to the Head.

**TORQUE TO 100 IN-LBS.**



**Figure 14: For Step 6**

7. Remove the WV Assembly from the vise and flip it to install the Inlet Nut.



**Figure 15: For Step 7**

8. Open the Retaining Ring with a small screwdriver.



**Figure 16: For Step 8**

9. Insert the Retaining Ring around the Inlet Nut and into the Body. Press it down until it clicks in.



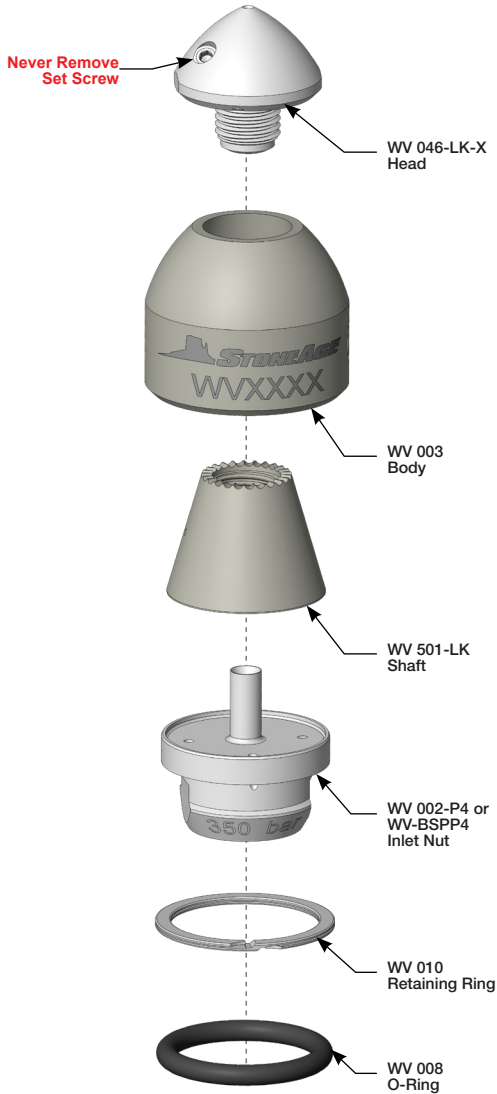
**Figure 17: For Step 9**

10. Press the O-Ring around the Inlet Nut and into the Body.



**Figure 18: For Step 10**

# PART NUMBERS AND KITS



## KIT CONTENTS

WV 610-LK-RT1 OVERHAUL KIT	WV 612-LK TOOL KIT
1 WV 008 O-Ring 1.137 OD 70A Nitrile 1 WV 010 Stainless Steel 1.125 Spiral Retaining Ring	1 BA 182 Head Removal Tool for Locking Head 1 BA 185 Red Loctite 262 .5ml 1 WV 010 Stainless Steel 1.125 Spiral Retaining Ring 1 WV 181 Socket Wrench Tool for Locking Head 1 PL 594 Warthog Classic (WV) User Manual

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# TERMS AND CONDITIONS AND WARRANTY INFORMATION

**1. Acceptance of Terms and Conditions.** Receipt of these Terms and Conditions of Sale ("Terms and Conditions") shall operate as the acceptance by StoneAge, Inc. ("Seller") of the order submitted by the purchaser ("Buyer"). Such acceptance is made expressly conditional on assent by Buyer to these Terms and Conditions. Such assent shall be deemed to have been given unless written notice of objection to any of these Terms and Conditions (including inconsistencies between Buyer's purchase order and this acceptance) is given by Buyer to Seller promptly on receipt hereof.

Seller desires to provide Buyer with prompt and efficient service. However, to individually negotiate the terms of each sales contract would substantially impair Seller's ability to provide such service. Accordingly, the product(s) furnished by Seller are sold only according to the terms and conditions stated herein and with the terms and conditions stated in any effective StoneAge Dealer Agreement or StoneAge Reseller Agreement, if applicable. Notwithstanding any terms and conditions on Buyer's order, Seller's performance of any contract is expressly made conditional on Buyer's agreement to these Terms and Conditions unless otherwise specifically agreed to in writing by Seller. In the absence of such agreement, commencement of performance, shipment and/or delivery shall be for Buyer's convenience only and shall not be deemed or construed to be an acceptance of Buyer's terms and conditions.

**2. Payment/Prices.** Unless other arrangements have been made in writing between Seller and Buyer, payment for the product(s) shall be made upon receipt of invoice. The prices shown on the face hereof are those currently in effect. Prices invoiced shall be per pricelist in effect at the time of shipment. Prices are subject to increase for inclusion of any and all taxes which are applicable and which arise from the sale, delivery or use of the product(s), and the collection of which Seller is or may be responsible to provide to any governmental authority, unless acceptable exemption certificates are provided by Buyer in accordance with applicable law. Buyer shall pay all charges for transportation and delivery and all excise, order, occupation, use or similar taxes, duties, levies, charges or surcharges applicable to the product(s) being purchased, whether now in effect or hereafter imposed by any governmental authority, foreign or domestic.

**3. Warranty.** SELLER MAKES NO WARRANTIES OR REPRESENTATIONS AS TO THE PERFORMANCE OF ANY PRODUCT EXCEPT AS SET FORTH IN THE STONEAGE LIMITED WARRANTY PROVIDED WITH THE PRODUCT.

**4. Delivery.** Seller is not obligated to make delivery by a specified date, but will always use its best efforts to make delivery within the time requested. The proposed shipment date is an estimate. Seller will notify Buyer promptly of any material delay and will specify the revised delivery date as soon as practicable. UNDER NO CIRCUMSTANCES SHALL SELLER HAVE ANY LIABILITY WHATSOEVER FOR LOSS OF USE OR FOR ANY DIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM DELAY REGARDLESS OF THE REASON(S).

All product(s) will be shipped F.O.B. point of origin, unless specifically agreed otherwise, and Buyer shall pay all shipping costs and insurance costs from that point. Seller, in its sole discretion, will determine and arrange the means and manner of transportation of the product(s). Buyer shall bear all risk of loss commencing with the shipment or distribution of the product(s) from Seller's warehouse. Order shortages or errors must be reported within fifteen (15) business days from receipt of shipment to secure adjustment. No product(s) may be returned without securing written approval from Seller.

**5. Modification.** These Terms and Conditions are intended by Seller and Buyer to constitute a final, complete and exclusive expression of agreement relating to the subject matter hereof and cannot be supplemented or amended without Seller's prior written approval.

**6. Omission.** Seller's waiver of any breach or Seller's failure to enforce any of these Terms and Conditions at any time, shall not in any way affect, limit or waive Seller's right thereafter to enforce and compel strict compliance with every term and condition hereof.

**7. Severability.** If any provision of these Terms and Conditions is held to be invalid or unenforceable, such invalidity or unenforceability shall not affect the validity or enforceability of the other portions hereof.

**8. Disputes.** Seller and Buyer shall attempt in good faith to promptly resolve any dispute arising under these Terms and Conditions by negotiations between representatives who have authority to settle the controversy. If unsuccessful, Seller and Buyer shall further attempt in good faith to settle the dispute by nonbinding third-party mediation, with fees and expenses of such mediation apportioned equally to each side. Any dispute not so resolved by negotiation or mediation may then be submitted to a court of competent jurisdiction in accordance with the terms hereof. These procedures are the exclusive procedures for the resolution of all such disputes between the Seller and Buyer.

# TERMS AND CONDITIONS AND WARRANTY INFORMATION

**9. Governing Law.** All sales, agreements for sale, offers to sell, proposals, acknowledgments and contracts of sale, including, but not limited to, purchase orders accepted by Seller, shall be considered a contract under the laws of the State of Colorado and the rights and duties of all persons, and the construction and effect of all provisions hereof shall be governed by and construed according to the laws of such state.

**10. Jurisdiction and Venue.** Seller and Buyer agree that the state or federal courts located within the City and County of Denver, Colorado shall have sole and exclusive jurisdiction over any litigation concerning any dispute arising under these Terms and Conditions not otherwise resolved pursuant to Section 9 as well as any alleged defects of any Products or damages sustained as a result of such alleged defects. Seller and Buyer further agree that should any litigation be commenced in connection with such a dispute, it shall only be commenced in such courts. Seller and Buyer agree to the exclusive jurisdiction of such courts and neither will raise any objection to the jurisdiction and venue of such courts, including as a result of inconvenience.

**11. Attorney's Fees.** If any litigation is commenced between Seller and Buyer, or their personal representatives, concerning any provision hereof, the party prevailing in the litigation shall be entitled, in addition to such other relief that is granted, to a reasonable sum as and for their attorneys' fees and costs in such litigation or mediation.

## STONEAGE TRADEMARK LIST

View the list of StoneAge's trademarks and service marks and learn how the trademarks should be used. Use of StoneAge trademarks may be prohibited, unless expressly authorized.

<http://www.StoneAgetools.com/trademark-list/>

## STONEAGE PATENT DATA

View the list of StoneAge's current U.S. patent numbers and descriptions.

PAT <http://www.sapatents.com>

## STONEAGE TERMS AND WARRANTY

View StoneAge's Terms and Warranty Conditions online.

<http://www.stoneagetools.com/terms>

<http://www.stoneagetools.com/warranty>

# TERMS AND CONDITIONS AND WARRANTY INFORMATION

## WARRANTY:

Warranties set forth herein extend only to End-Users, meaning customers acquiring, or that have previously acquired, a product manufactured by StoneAge ("Product") for their own use and not for resale, either directly from StoneAge Inc. ("StoneAge") or from a StoneAge Authorized Dealer or Reseller ("Dealer"). No warranty of any kind or nature is made by StoneAge beyond those expressly stated herein.

**1. LIMITED WARRANTY PERIOD.** Subject to the limitations and conditions hereinafter set forth, StoneAge warrants its Product to be free from defects in workmanship and material for a period of one (1) year from the date of purchase by the End-User, provided that the end of the limited warranty period shall not be later than eighteen (18) months from the date of shipment of the Product to the Dealer or the End-User by StoneAge ("Limited Warranty Period"). All replacement parts which are furnished under this Limited Warranty and properly installed shall be warranted to the same extent as the original Product under this Limited Warranty if, and only if, the original parts were found to be defective within the original Limited Warranty Period covering the original Product. Replacement parts are warranted for the remainder of the original Limited Warranty Period. This Limited Warranty does not cover any component part of any Product not manufactured by StoneAge. Any such component part is subject exclusively to the component manufacturer's warranty terms and conditions.

**2. LIMITED WARRANTY COVERAGE.** StoneAge's sole obligation under this Limited Warranty shall be, at StoneAge's option and upon StoneAge's inspection, to repair, replace or issue a credit for any Product which is determined by StoneAge to be defective in material or workmanship. StoneAge reserves the right to examine the alleged defective Product to determine whether this Limited Warranty is applicable, and final determination of limited warranty coverage lies solely with StoneAge. No statement or recommendation made by a StoneAge representative, Dealer or agent to End-User shall constitute a warranty by StoneAge or a waiver or modification to any of the provisions hereof or create any liability for StoneAge.

**3. WARRANTY SERVICE PROVIDERS.** Service and repair of the Product is to be performed only by StoneAge authorized service representatives, including Dealers who are authorized repair centers, with StoneAge approved parts. Information about StoneAge authorized service representatives can be obtained through the StoneAge website at [www.stoneagetools.com/service](http://www.stoneagetools.com/service). Unauthorized service, repair or modification of the Product or use of parts not approved by StoneAge will void this Limited Warranty. StoneAge reserves the right to change or improve the material and design of the Product at any time without notice to End-User, and StoneAge is not obligated to make the same improvements during warranty service to any Product previously manufactured.

**4. WARRANTY EXCLUSIONS.** This Limited Warranty does not cover, and StoneAge shall not be responsible for the following, or damage caused by the following: (1) any Product that has been altered or modified in any way not approved by StoneAge in advance in writing; (2) any Product that has been operated under more severe conditions or beyond the rated capacity specified for that Product; (3) depreciation or damage caused by normal wear and tear, failure to follow operation or installation instructions, misuse, negligence or lack of proper protection during storage; (4) exposure to fire, moisture, water intrusion, electrical stress, insects, explosions, extraordinary weather and/or environmental conditions including, but not limited to lightning, natural disasters, storms, windstorms, hail, earthquakes, acts of God or any other force majeure event; (5) damage to any Product caused by any attempt to repair, replace, or service the Product by persons other than StoneAge authorized service representatives; (6) costs of normal maintenance parts and services; (7) damage sustained during unloading, shipment or transit of the Product; or (8) failure to perform the recommended periodic maintenance procedures listed in the Operator's Manual accompanying the Product.

**5. REQUIRED WARRANTY PROCEDURES.** To be eligible for warranty service, the End-User must: (1) report the Product defect to the entity where the Product was purchased (i.e. StoneAge or the Dealer) within the Limited Warranty Period specified in this Limited Warranty; (2) submit the original invoice to establish ownership and date of purchase; and (3) make the Product available to a StoneAge authorized service representative for inspection to determine eligibility for coverage under this Limited Warranty. This Limited Warranty shall not extend to any person or entity who fails to provide proof of original purchase from StoneAge or a Dealer. No Product may be returned for credit or adjustment without prior written permission from StoneAge.

**6. DISCLAIMER OF IMPLIED WARRANTIES AND OTHER REMEDIES.** EXCEPT AS EXPRESSLY STATED HEREIN (AND TO THE FULLEST EXTENT ALLOWED UNDER APPLICABLE LAW), STONEAGE HEREBY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY AND ALL WARRANTIES, REPRESENTATIONS OR PROMISES AS TO THE QUALITY, PERFORMANCE OR FREEDOM FROM DEFECT OF THE PRODUCT COVERED BY THIS LIMITED WARRANTY. STONEAGE FURTHER DISCLAIMS ALL IMPLIED INDEMNITIES.

## TERMS AND CONDITIONS AND WARRANTY INFORMATION

**7. LIMITATION OF LIABILITY.** End-User specifically acknowledges that the Product may be operated at high speeds and/or pressures, and that as such it may be inherently dangerous if not used correctly. End-User shall familiarize itself with all operation materials provided by StoneAge and shall at all times use and require its agents, employees and contractors to use all necessary and appropriate safety devices, guards and proper safe operating procedures. In no event shall StoneAge be responsible for any injuries to persons or property caused directly or indirectly by the operation of the Product if End-User or any agent, employee, or contractor of End-User: (1) fails to use all necessary and appropriate safety devices, guards and proper safe operating procedures; (2) fails to maintain in good working order such safety devices and guards; (3) alters or modifies the Product in any way not approved by StoneAge in advance in writing; (4) allows the Product to be operated under more severe conditions or beyond the rated capacity specified for the Product; or (5) otherwise negligently operates the Product. End-User shall indemnify and hold StoneAge harmless from any and all liability or obligation incurred by or against StoneAge, including costs and attorneys' fees, to or by any person so injured.

TO THE FULL EXTENT ALLOWED BY APPLICABLE LAW, STONEAGE SHALL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES (INCLUDING WITHOUT LIMITATION, LOSS OF PROFITS, LOSS OF GOODWILL, DIMINUTION OF VALUE, WORK STOPPAGE, INTERRUPTION OF BUSINESS, RENTAL OF SUBSTITUTE PRODUCT, OR OTHER COMMERCIAL LOSS EVEN TO THE EXTENT SUCH DAMAGES WOULD CONSTITUTE DIRECT DAMAGES), WITH RESPECT TO THE COVERED STONEAGE PRODUCT, OR OTHERWISE IN CONNECTION WITH THIS LIMITED WARRANTY, REGARDLESS OF WHETHER STONEAGE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

IT IS UNDERSTOOD THAT STONEAGE'S LIABILITY, WHETHER IN CONTRACT, IN TORT, UNDER ANY WARRANTY, IN NEGLIGENCE, OR OTHERWISE SHALL NOT EXCEED THE AMOUNT OF THE PURCHASE PRICE PAID BY THE END-USER FOR THE PRODUCT. STONEAGE'S MAXIMUM LIABILITY SHALL NOT EXCEED, AND END-USER'S REMEDY IS LIMITED TO EITHER (1) REPAIR OR REPLACEMENT OF THE DEFECTIVE WORKMANSHIP OR MATERIAL OR, AT STONEAGE'S OPTION, (2) REFUND OF THE PURCHASE PRICE, OR (3) ISSUANCE OF A CREDIT FOR THE PURCHASE PRICE, AND SUCH REMEDIES SHALL BE END-USER'S ENTIRE AND EXCLUSIVE REMEDY.

YOU, THE END-USER, UNDERSTAND AND EXPRESSLY AGREE THAT THE FOREGOING LIMITATIONS ON LIABILITY ARE PART OF THE CONSIDERATION IN THE PRICE OF THE STONEAGE PRODUCT YOU PURCHASED.

Some jurisdictions do not allow the limitation or exclusion of liability for certain damages, so the above limitations and exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction. If any provisions of this Limited Warranty is held to be invalid or unenforceable, such invalidity or unenforceability shall not affect the validity or enforceability of the other portions hereof.



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