



**BVA**<sup>®</sup>  
HYDRAULICS

# Hydraulic Portable Nut Splitter

**Model: HNS105, HNS200, HNS308**

SFA Companies 10939 N. Pomona Ave. Kansas City, MO 64153  
Tel: 888-332-6419 \* Fax: 816-448-2142  
E-mail: sales@bvahydraulics.com Website: www.bvahydraulics.com



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

## **⚠️ WARNING**

- Study, understand, and follow all instructions provided with/on this product before use.
- Failure to heed the instructions may result in personal injury and/or property damage.

**⚠️ WARNING: Cancer and Reproductive Harm.**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**Read this manual and follow all the Safety Rules and Operating Instructions before using this product.**

HNS105-M0\_102018

## **SAFETY and GENERAL INFORMATION**

**Save these instructions.** For your safety, read, understand, and follow the information provided with and on this nut splitter before using. The owner and operator of this equipment shall have an understanding of this nut splitter and safe operating procedures before attempting to use. The owner and operator shall be aware that use and repair of this product may require special skills and knowledge. Instructions and safety information shall be conveyed in the operator's native language before use of this nut splitter is authorized. If any doubt exists as to the safe and proper use of this nut splitter, remove from service immediately.

**Inspect before each use.** Do not use if broken, bent, cracked or damaged parts are noted. Any nut splitter that appears damaged in any way, or operates abnormally shall be removed from service immediately. It is recommended that an annual inspection be done by qualified personnel. Labels and Operator's Manuals are available from manufacturer.



Always perform a visual inspection of any tool and its accessories before use. Never attempt to use excessively worn, broken, or dull tools.



Keep all objects, other than the nut being split, out of the way of the tool, or tool damage and injury may occur.



When splitting metal objects there is a chance that debris may be ejected. Eye protection and safety gloves are encouraged at all times while in operation. Do not split nuts into any pieces smaller than half the nuts original size.



Do not allow the hydraulic hoses to kink, twist, curl, or bend so tightly that the flow of hydraulic oil is blocked or slowed in any way. Never exceed 10,000 psi of hydraulic pressure while operating the nut splitter.



Never attempt to grasp a pressurized hose that is leaking.

## **PRODUCT DESCRIPTION**

**Adaptability:** BVA Nut Splitter is available with special nut adapters to allow you to split huck nuts, round nuts, and 12 point hex nuts.

**Versatility:** BVA Nut Splitter comes in various sizes and models including straight head models, angle head models, and double cutting angle head models. Each model can split multiple nut sizes.

**Flexibility:** BVA Nut Splitter is designed to fit into tight spaces and because of our multiple model selection; we can find the right tool for your specific application.

**Precision:** BVA Nut Splitter cutting chisels, can be positioned so that only the nut is cut leaving the stud and threads unharmed.

**Speed:** BVA Nut Splitter can be unpacked from its toolbox, assembled, and ready to use in less than five minutes; and it only takes mere seconds to split a nut.

**Safety:** BVA Nut Splitter's do not use any sort of hammering, impact, or flame to split nuts, and as such, there are no specialty permits required for operation on the job.

## POWER REQUIREMENTS

The BVA Nut Splitter is hydraulically driven. All models require a hydraulic pump that delivers 10,000 PSI pressure. Exceeding 10,000 PSI pressure will void any and all warranties. Any type of hydraulic pump may be used to operate the BVA Nut Splitter; including air, electric, foot driven, or hand pumps. Pumps can be purchased separately from BVA and include all the necessary hoses and fittings. See the list below for appropriate pump and Nut Splitter combinations.

### BVA HNS Series Specification

Model	Capacity (Tons)	Nut Size Capacity	Stud Dimension	Weight (lbs)
HNS105	25	0625"-1.4375"	0.4375"-0.875"	20.0
HNS200	25	1.1875" - 2.375"	0.4375" - 0.875"	21.0
HNS308	100	2.625" - 3.5"	1.75" - 2.25"	95.0

If a BVA hydraulic pump is not used, refer to the chart listed below for the appropriate power requirements

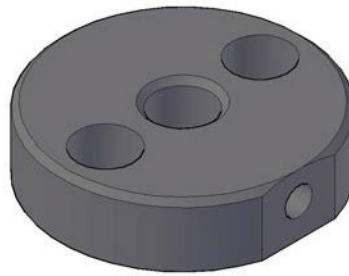
Model	Valve Type	Hose Rating	Usable Minimum Oil Capacity
HNS105	2-Way	10,000 PSI	10 Cu. In.
HNS200	2-Way	10,000 PSI	10 Cu. In.
HNS308	2-Way	10,000 PSI	82 Cu. In.

## ASSEMBLY

Within the BVA Nut Splitter there are three "Model" types; the Straight Head Models, Angle Head Models, and Angle Head Double Cutting Models. All three models share similar features of assembly, but between the three models there are two different methods of holding the cutting chisels. See illustration below.



Type 1



Type 2

The assembly instructions are separated based on the chisel holder types. Section 1 assembly shall cover all assemblies involving the "Type 1" chisel holder and section 2 shall cover all assemblies involving the "Type 2" chisel holder.

## Section 1- Assembly Instructions for "Type 1" Chisel Holders.

1. Unscrew the chisel holder from the cylinder.
2. Place the knobbed end of the cutting chisel into the center hold of the chisel holder.
3. Insert the set screw into the threaded side hole of the chisel holder. Do not over tighten the set screw, it is provided to hold the cutting chisel inside the chisel holder only. The cutting chisel should be loose enough to spin with minimal friction inside the chisel holder, but not fall out.
4. Place the appropriate space for the nut you are cutting inside the cylinder. The spacer shall be placed inside the cylinder in such a way that engraved side can be read. Only one spacer is required to split a nut. Never split a nut with more than one spacer installed at a time, doing so will damage the stud threads.
5. Screw the chisel holder and chisel assembly (from step 3) into the cylinder until it is seated firmly and bottomed out in the cylinder.
6. Connect the cylinder and pump together via 10,000 PSI hydraulic hose.
7. Pressure up the cylinder until the internal piston has been fully extended from the cylinder. Hold the pressure so that the piston stays in this extended position.
8. Place the BVA Nut Splitter housing on the threaded end of the cylinder and screw the housing onto the cylinder. Screw the housing all the way onto the cylinder until it is seated firmly and bottomed out on the cylinder, unscrew the housing one full turn.
9. Insert the set screw into the threaded side hole of the housing and tighten to secure it into place.
10. Release the held pressure on the cylinder to allow the piston to retract back into the cylinder.
11. Your BVA Nut Splitter is now fully assembled and ready for use.

## Section 2- Assembly Instructions for "Type 2" Chisel Holders.

1. Unbolt the chisel holder from the cylinder.
2. Place the knobbed end of the cutting chisel into the center hold of the chisel holder.
3. Insert the set screw into the threaded side hole of the chisel holder. Do not over tighten the set screw, it is provided to hold the cutting chisel inside the chisel holder only. The cutting chisel should be loose enough to spin with minimal friction inside the chisel holder, but not fall out.
4. Place the appropriate space for the nut you are cutting inside the cylinder. The spacer shall be placed inside the cylinder in such a way that engraved side can be read. Only one spacer is required to split a nut. Never split a nut with more than one spacer installed at a time, doing so will damage the stud threads.
5. Align the two bolt holes of the chisel holder and spacer assembly (from step 3) to the two threaded holes on the top of the piston on the cylinder, and screw in the two bolts removed from step 1. Tighten the two bolts until they are seated firmly in the cylinder. Some of the BVA Nut Splitter models are packaged with two sets of bolts; this is to accomodate thicker spacers. If during assembly it is discovered that the two bolts are too short, use the the longer second set to firmly bolt the chisel holder assembly and spacer into the cylinder.
6. Connect the cylinder and pump together via a 10,000 PSI hydraulic hose.
7. Pressure up the cylinder until the internal piston stays in this extended position.
8. Place the BVA Nut Splitter housing on the threaded end of the cylinder and screw the housing onto the cylinder all the way until it is seated firmly and bottomed out on the cylinder. Once the housing has been firmly seated and bottomed out, unscrew the housing one full turn.
9. Insert the set screw into the threaded side hole of the housing and tighten it to secure it into place.
10. Release the held pressure on the cylinder to allow the piston to retract back into the cylinder.
11. Your BVA Nut Splitter is now fully assembled and ready for use.

Please see illustration on next page to see BVA Nut Splitter fully assembled.

## Assembled BVA Nut Splitter



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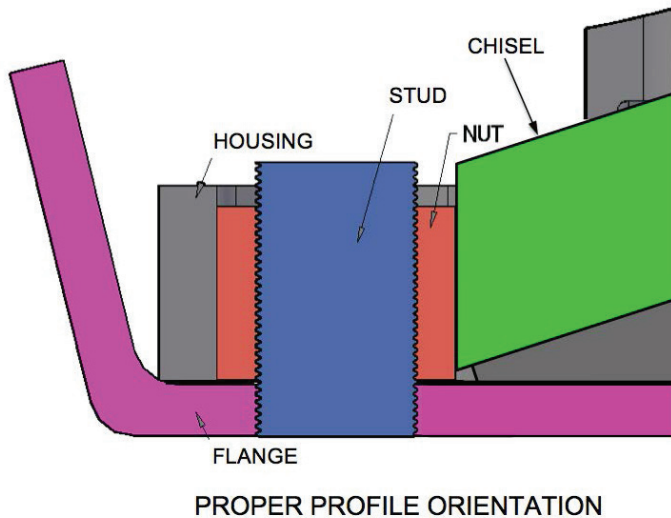
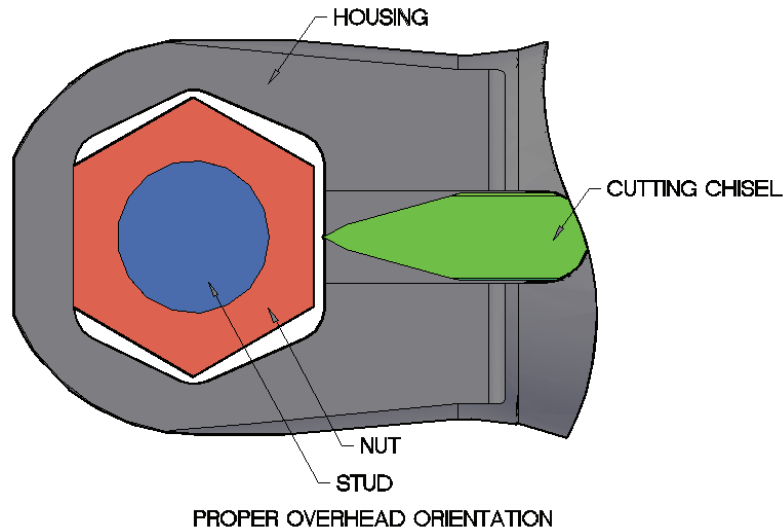


## OPERATION

\*Before operation read and follow all warnings, safety tips and assembly instructions.

1. Lubricate the cutting edge of the chisel with an anti-seize lubricant before each split is attempted.

2. Place the BVA Nut Splitter over the nut to be split. Orientate the BVA Nut Splitter in the exact position as illustrated below. The BVA Nut Splitter should be parallel to the surface of the flange, and the cutting chisel should be centered on the flat side of the nut being split. Refer to the illustration below for proper alignment.



3. Pressurize the cylinder to extend the chisel slowly until the cutting edge makes contact with the flat nut face. Verify that the cutting edge is centered on the flat of the nut before continuing.

4. Continue to pressurize the cylinder slowly to begin splitting the nut. You will hear a loud pop; this noise indicates that the nut has been successfully split. Once you hear the loud pop, stop pressurizing the cylinder.
5. If the nut was frozen in place, it should now be freed enough to rotate the nut 180 degrees to split the opposite flat on the nut for complete removal. If the nut cannot be rotated, reorient the BVA Nut Splitter itself instead and repeat steps 1 through 4.
6. Having two opposite flats faces of the nut successfully split, the nut should now be in two pieces and can easily be removed from the stud.

A successfully split nut should look like the illustration below.



## Maintenance

The BVA Nut Splitter is designed to be a low maintenance tool. Following the steps below will help ensure a long useful shelf life of the tool for years to come.

- \* Always lubricate the cutting edge of the chisel with an anti-seize lubricant before each split it attempted. Grease and molly based lubricant is recommended and can be purchased seperately.
- \* Do not let the cutting chisel get dull. The cutting chisel can be re-sharpened by hand with a whestone or on a bench grinder using a slow rpm and a fine ground wheel. Keeping the cutting chisel well lubricated and cool during sharpening will allow you to sharpen the cutting edge quickly and safely.
- \* After each use thoroughly clean the tool and its accessories before storage.
- \* Replace all thread protectors and dust covers on the tool when not in use or during storage. This will help keep any debris from entering the hydraulic system and keep the oil clean and ready for use.
- \* For storage, always keep your BVA Nut Splitter in its supplied tool box. The supplied tool boxes have been manufactured to keep the tool and its accessories safe from any accidental damage and will increase the longevity of the tool.

## TROUBLE SHOOTING

PROBLEM P	POSSIBLE CAUSE	POSSIBLE SOLUTION
Cylinder does not hold pressure	<ol style="list-style-type: none"> <li>1. Cylinder seal is leaking.</li> <li>2. Leaking fitting connection</li> <li>3. Pump malfunction</li> </ol>	<ol style="list-style-type: none"> <li>1. Change cylinder</li> <li>2. Tighten fitting connections</li> <li>3. Change pump</li> </ol>
Cylinder does not advance or only advances partially	<ol style="list-style-type: none"> <li>1. Pump release valve is open</li> <li>2. Not enough fluid in pump</li> <li>3. Air in hose lines</li> <li>4. Couplers not tight</li> <li>5. Pump reservoir too small</li> </ol>	<ol style="list-style-type: none"> <li>1. Close valve</li> <li>2. Add fluid to pump</li> <li>3. Bleed air from hose lines</li> <li>4. Tighten couplers</li> <li>5. Change pump to one with larger reservoir</li> </ol>
Cylinder advances slowly	<ol style="list-style-type: none"> <li>1. Leaking fitting connection</li> <li>2. Clogged fitting or hose</li> <li>3. Loose coupler</li> <li>4. Pump flow rate too slow</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten fitting connections</li> <li>2. Change out fittings or hoses</li> <li>3. Tighten couplers</li> <li>4. Change pump to one with faster flow rate</li> </ol>
Cylinder does not retract, retracts slowly or retracts partially	<ol style="list-style-type: none"> <li>1. Pump release valve closed</li> <li>2. Coupler not fully closed</li> <li>3. Clogged fitting or hose</li> <li>4. Damaged retraction spring</li> <li>5. Pump reservoir overfilled</li> </ol>	<ol style="list-style-type: none"> <li>1. Open valve</li> <li>2. Close coupler</li> <li>3. Change out fittings or hoses</li> <li>4. Replace spring</li> <li>5. Drain out excess fluid</li> </ol>
Cutting chisel does not penetrate the nut	<ol style="list-style-type: none"> <li>1. Inadequate pump pressure</li> <li>2. Incorrect spacer used</li> <li>3. Cutting chisel edge dull</li> <li>4. Housing not fully threaded onto cylinder</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase pump pressure to 10,000 psi, MAX.</li> <li>2. Change spacers</li> <li>3. Sharpen or replace cutting chisel</li> <li>4. Thread housing fully on cylinder as per assembly instructions</li> </ol>
Cutting chisel splits the nut and damages the stud threads	<ol style="list-style-type: none"> <li>1. Incorrect spacer used</li> <li>2. Housing threaded more than necessary</li> </ol>	<ol style="list-style-type: none"> <li>1. Change spacer</li> <li>2. Thread housing fully on cylinder as per assembly instructions</li> </ol>

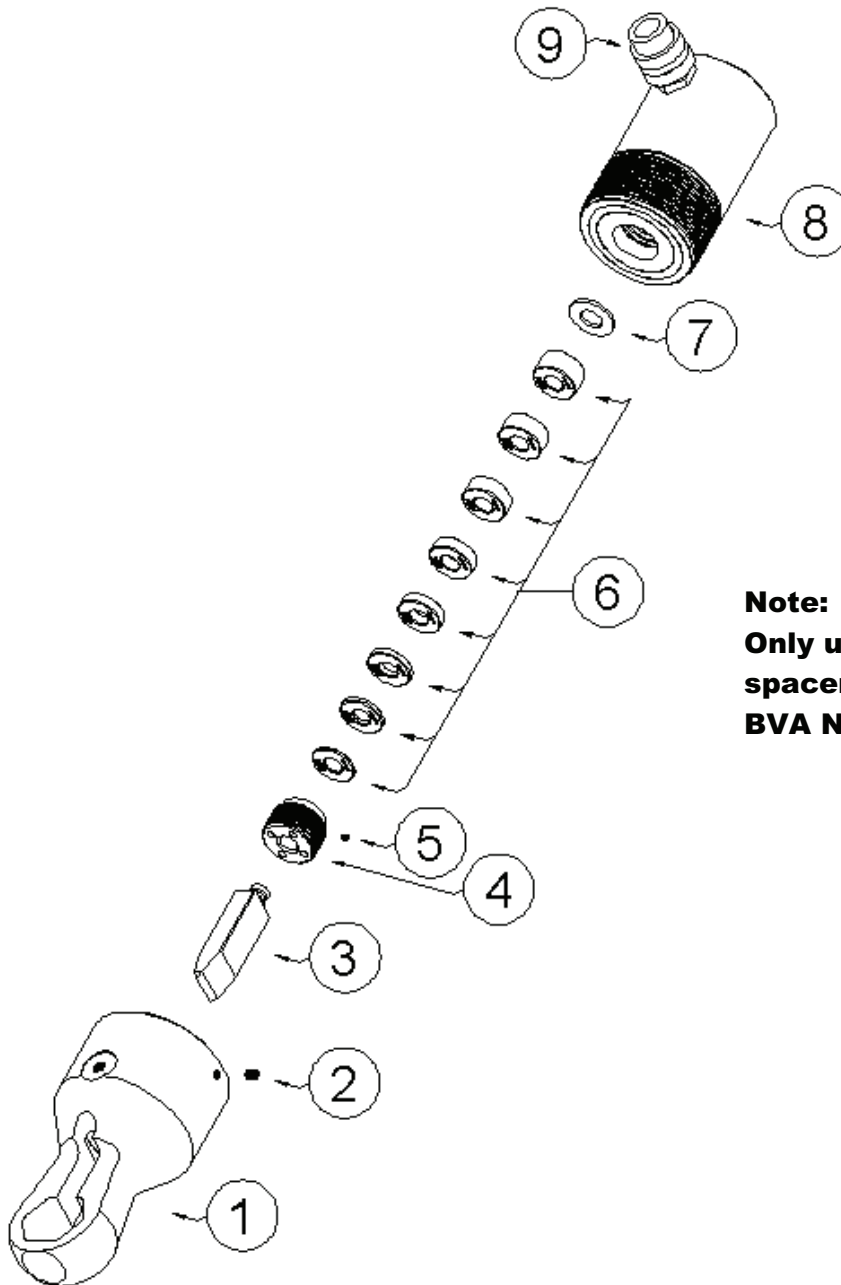


**BVA**<sup>®</sup>  
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# Hydraulic Portable Nut Splitter Parts List

Model: "Type 1" Style

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E-mail: sales@bvahydraulics.com Website: www.bvahydraulics.com



**Note:**  
Only use one  
spacer per  
BVA Nut Splitter

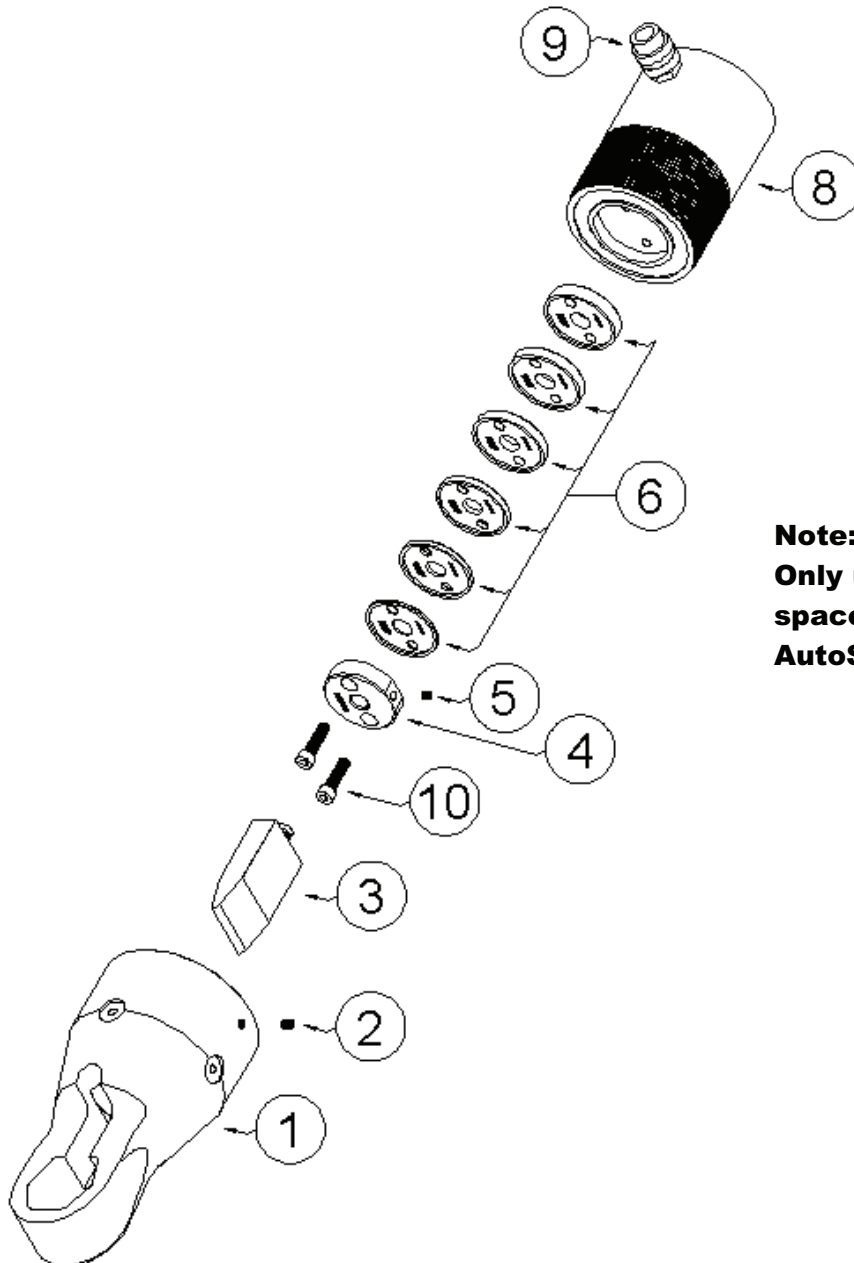


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# Hydraulic Portable Nut Splitter Parts List

## Model: "Type 2" Style

SFA Companies 10939 N. Pomona Ave. Kansas City, MO 64153  
Tel: 888-332-6419 \* Fax: 816-448-2142  
E-mail: sales@bvahydraulics.com Website: www.bvahydraulics.com



**Note:**  
Only use one  
spacer per  
AutoSPLITTER



**BVA**  
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# Hydraulic Portable Nut Splitter Parts List

## Model: "Type 1 & 2" Style

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 Tel: 888-332-6419 \* Fax: 816-448-2142  
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Item No.	Description	HNS105	HNS200	HNS308	Qty
1	Housing	CB7112	C87114	D87079	1
2	Housing Set Screw	SSN04-20X05	SSN04-20X05	SSN6-16X12	1
3	Cutting Chisel	HNS-25	HNS-25	B87090-2	1
4	Chisel Holder	B86215	B2K979	B87089	1
5	Chisel Holder Set Screw	SSN6-32X04	SSN6-32X04	SSN04-20X05	1
6	Spacer Set ( 8 Pcs)	A99077	A2K996	N/A	1
	Spacer Set ( 6 Pcs)	N/A	N/A	A91001	1
7	Adjustment Spacer	A2K682	A2K988	N/A	1
8	Hydraulic Cylinder	H2501	H2501	H10002A	1
9	Female Coupler	CH38F	CH38F	CH38F	1
9A	Dust Cover	CDC38	CDC38	CDC38	1
10	Chisel Holder Bolt Set A	N/A	N/A	SHCS06-16X12	2
	Chisel Holder Bolt Set B	N/A	N/A	SHCS06-16X20	2
11	Chisel Holder Allen Key (not shown)	WSS1	WSS1	WSS2	1
12	Chisel Holder Bolt Set Allen Key (not shown)	N/A	N/A	WSS5	1
13	Housing Allen Key (not shown)	WSS2	WSS2	WSS3	1
14	Toolbox with Foam Insert (not shown)	25TB / 25TBI	25TB / 25TBI	100TB28 / 100TBI28	1
-	Repair Kit for Hydraulic Cylinder	H25-3-9902-108	H25-3-9902-108	H99-3-9901-106	1



# Single Acting Cylinders Service Parts

## MODELS: H2501

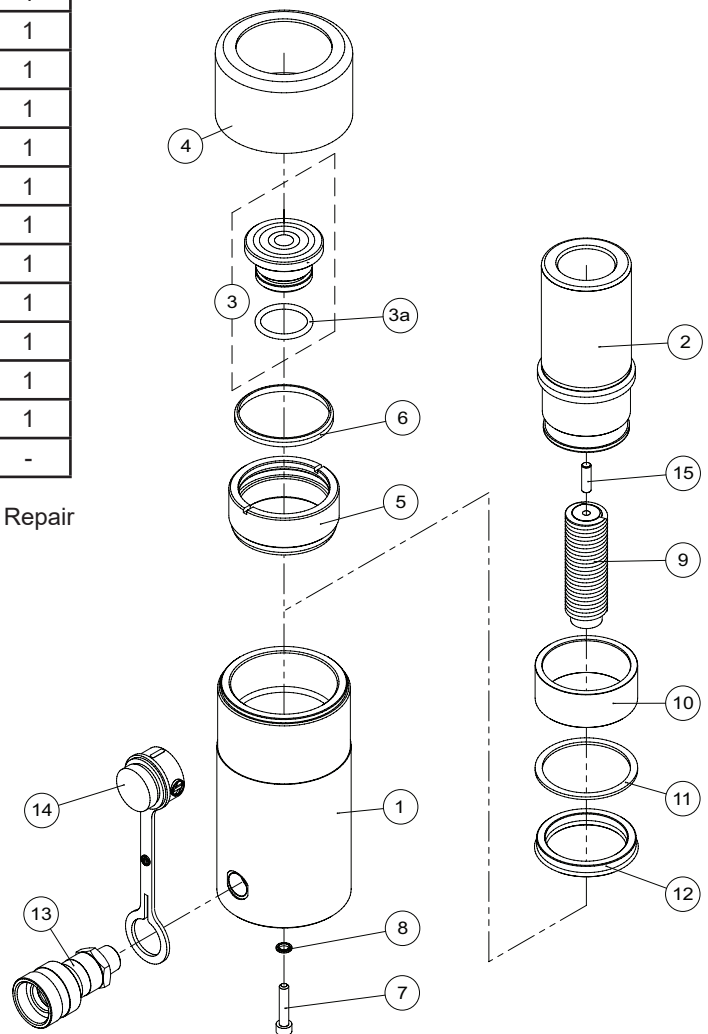
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Not all components of the cylinder are replacement items, but are illustrated as a convenient reference of location and position in the assembly sequence.

Item	Part Number	Description	Qty
1	N/A	Cylinder	1
2	N/A	Ram	1
3	SD25	Saddle Assy	1
3a	*	O-ring	1
4	H25-6-2305-103	Protective Cap	1
5	H25-5-1804-100	Upper Bearing	1
6	*	Dust Seal	1
7	*	Bolt	1
8	*	Special Washer	1
9	H25-4-0201-109 (H2501)	Return Spring Assy	1
10	H25-5-1204-102	Bearing	1
11	*	Back-up Ring	1
12	*	U-cup	1
13	CH38F	Female Coupler	1
14	CDC38	Dust Cover	1
15	644-1-0060-200	Bolt	1
(*)	H25-3-9902-108 (H2501)	Repair Kit	-

(\*) - indicates items included in, and available only as part of Repair Kit

N/A - part is not available as replacement



To ensure safe and reliable performance, replace worn or damaged parts with BVA Hydraulics Authorized Replacement Parts only.



# Single Acting Cylinder Service Parts

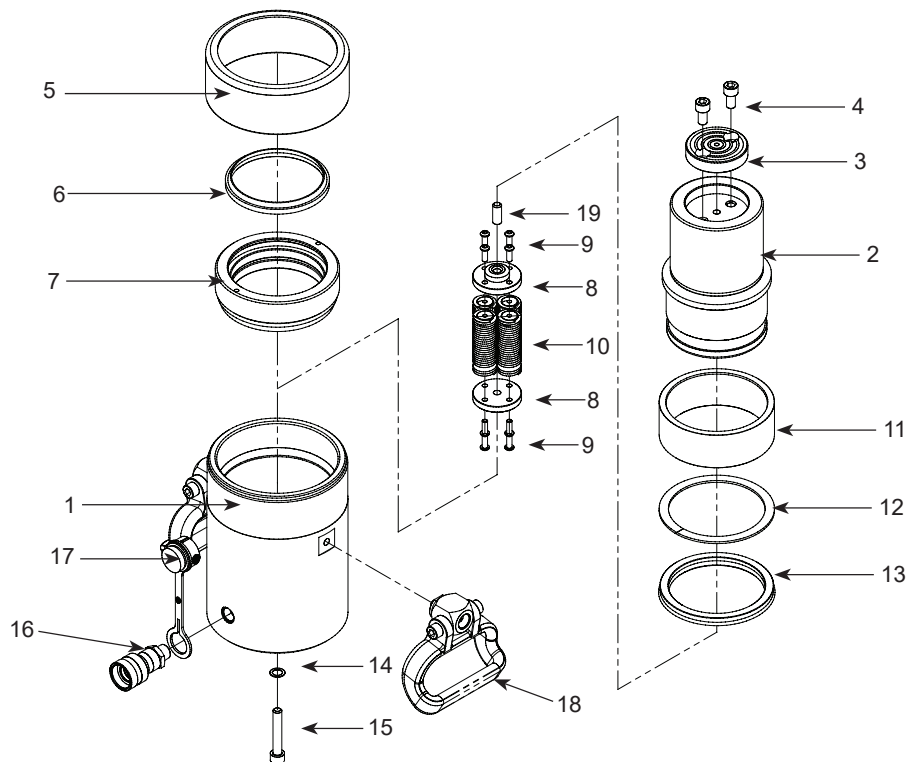
**MODEL: H10002A**

SFA Companies 10939 N. Pomona Ave. Kansas City, MO 64153  
 Tel: 888-332-6419 \* Fax: 816-448-2142  
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**Note:** Not all components of the pump are replacement items, but are illustrated as a convenient reference of location and position in the assembly sequence.

Item	Part Number	Description	Qty.
1	N/A	Cylinder Housing	1
2	N/A	Ram Plunger	1
3	H55-6-1103-100	Saddle	1
4	649-1-0010-109	Bolt	2
5	H99-6-2305-208	Protecting Cap	1
6	*	Dust Seal	1
7	H99-5-1804-205	Upper Bearing	1
8	H99-6-2100-109	Spring Base	2
9	614-1-0060-206	Bolt	8
10	H26-3-2875-103	Return Spring Assy.	4

Item	Part Number	Description	Qty.
11	H99-5-1204-100	Bearing	1
12	*	Back-up Ring	1
13	*	U-cup	1
14	*	Washer	1
15	649-1-0100-302	Bolt	1
16	CH38F	Female Coupler (3/8"-18NPTF)	1
17	CDC38	Dust Cover	1
18	H55-3-1806-106	Handle Assy.	2
19	644-1-0100-105	Bolt	1
(*)	H99-3-9901-106	Repair Kit	-



## LIMITED LIFETIME WARRANTY

BVA Hydraulics®, represented in the United States by SFA Companies ["SFA"] warrants this product to be free from defects in material and workmanship for the life of the product as long as the original purchaser owns the product. The warranty is non-transferable and is subject to the terms, exclusions, and limitations described below:

- Damaged components, including but not limited to bent rams, dented or crushed cylinder walls, broken welds or couplers as well as worn out seals, o-rings and springs are the result of misuse and not covered by warranty and BVA Hydraulics will not provide any warranty credit for such damaged components.
- This warranty does not cover ordinary wear and tear, overloading, alterations (including repairs or attempted repairs not performed by BVA Hydraulics or one of its authorized personnel), improper fluid use, or use of the product in any manner for which the product was not intended or the use of which is not in accordance with the instructions or warnings provided with the product.
- In the unlikely event that a BVA Hydraulics product fails due to material defect in workmanship, you may contact SFA for disposition. In such cases, the customer's sole and exclusive remedy for any breach or alleged breach of warranty is limited to the repair or replacement of the defective product.
- Under no circumstances is BVA Hydraulics liable for any consequential or incidental damage or loss whatsoever.
- THIS WARRANTY IS LIMITED TO NEW PRODUCTS SOLD THROUGH AUTHORIZED DISTRIBUTORS AND OTHER CHANNELS DESIGNATED BY BVA HYDRAULICS. NO AGENT, EMPLOYEE OR OTHER REPRESENTATIVE OF BVA HYDRAULICS IS AUTHORIZED TO MODIFY THIS WARRANTY.
- THE FOREGOING IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FOR A FITNESS FOR A PARTICULAR PURPOSE.
- Components not manufactured by BVA Hydraulics including certain motor systems, gasoline engines, and other are not covered by this warranty and instead are covered by the manufacturer's separate manufacturer's warranty provided in the package.
- BVA Hydraulics' liability in all cases is limited to, and will not exceed the purchase price paid for the product.



NOTES:

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# NOTES:

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