

# Hy-Ram

**Hydraulic  
Impact  
Breaker**

Model  
HR470



**ALLIED**

## Parts Manual - HY-RAM Series

Keep this manual in a convenient location so that it is easily accessible for future reference. Contact your Allied Dealer or the Allied Customer Service Department for replacement manuals. Inquiries regarding the content of this manual must include effective date shown on inside cover.



PM575476

## Contact Information and Revision History



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Revision History for Document No. PM575476



Continuous improvement of our products is an Allied policy. The material in this publication, including figures, captions, descriptions, remarks and specifications, describe the product at the time of its printing, and may not reflect the product in the future. When changes become necessary, these will be noted in the table below. Specifications are based on published information at the time of publication. Allied Construction Products, LLC, reserves the right to change, edit, delete or modify the content of this document, including descriptions, illustrations and specifications without prior notification. For product or document updates go to [www.alliedcp.com](http://www.alliedcp.com).

**Table of Revision History for PM575476**

<b><u>Effective Date</u></b>	<b><u>Page</u></b>	<b><u>Summary of Change</u></b>
2015, Aug	8	Table 4.1 & Fig.4-1 item 337 add newer type side buffer begin S/N-1340. Item 308 was A2006270.
2014, Sep	5,	Table 3.2 Item 7 removed-use is discontinued. Table 6.1 577485 (was 90566), 667628 (was 798064).
2013, May	14,19,20	Add O-ring 79; clarify seal orientation fig. 6-2.
2012, Mar	7	Table 4.1 Buffer part number now A2000180.
2011, Nov	15	Add A1806250 connection bush to seal set
2011, Aug	---	Original issue of PM575476

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## 1.0 Introduction and Scope

### 1.1 About This Manual

**Table 1.1 About This Manual**



Document ID.	PM575476
Type	Spare / Replacement Parts List
Current Status	See Inside Cover
Product Name:	Hydraulic Breaker
Series	Hy-Ram®
Applicable Model[s]:	HR470
Years of Manufacture:	Begin 2011
*Inquiries regarding this manual must include effective date shown on inside cover	

The material presented in this manual has been prepared in support of the product named in Table 1.1. It's intended solely for use with expressed model(s) and may be unsuitable with models unnamed.

The publication identified in Table 1.1 was created solely for information purposes and should not be considered all-inclusive. If further information is required, contact your local Allied dealer or the Allied Customer Service Department.

Parts Manuals do not include safety precautions or operating procedures. Figures depict views that are intended for parts identification and not for purposes of repair or service of the product. Material presented in this manual, including tables, figures, descriptions and captions, may show equipment that is optional.

How to use this Manual:

The Allied work tool consists of separate components and partial assemblies. Components are identified with the aid of figures, captions, item key, part name and quantity. If needed, 'remarks' and 'specifications' will further clarify the part's description or denote assignment with select unit(s) by serial number.

An order form is provided at the back of this manual. Prior to ordering parts, confirm that the information recorded on the equipment's identification label corresponds with Table 1.1. For the location of this label, refer to Section 2.0 of this manual.

The content of this document has been reviewed for accuracy. Allied Construction Products, LLC has endeavored to deliver the highest degree of accuracy

and every effort has made to provide information as complete as possible. However, continuous improvement of our products is an Allied policy. The material in this publication, including figures, captions, descriptions, remarks and specifications, describe the product at the time of its printing, and may not reflect the product in the future. A table of revision history for this document is found on the inside cover.

### 1.2 How To Order Replacement Publications

This manual is an integral part of this product. Keep it in a convenient location so that it is easily accessible for future reference.

Replacement manuals can be ordered by contacting your Allied dealer service center. These manuals may also be viewed and downloaded at: [www.alliedcp.com](http://www.alliedcp.com)

### 1.3 Related Publications

Allied Construction Products, LLC offers the following publications for the product identified in Table 1.1.

#### **Safety, Operation & Maintenance Manual 575582**

For use with Models: HR470 thru HR710

This manual has been prepared to assist the operator and maintenance personnel with the information necessary for the safe and proper use of the Allied Breaker.

The Safety, Operation & Maintenance Manual includes the following information:

- Safety Information
- Equipment Serial Number and Model Identification
- Technical Data (Weight & General Dimensions)
- Basic Guidelines for Installation and Set-up
- Pre-Operation Inspection
- How to Operate the Allied Work Tool
- Maintenance Schedule
- N2 Gas Charging Instructions
- Tool and Guide Bushing – Lubrication, Inspection, Wear Limits and Replacement
- Troubleshooting
- Removal From Carrier, Transporting, Lifting & Storage

## 1.0 Introduction & Scope – [cont'd]

### 1.3.2 AEM Safety Manual for Hydraulic Breakers

AEM Safety Manual for Hydraulic Breakers  
The Association of Equipment Manufacturers offers a safety manual designed for operators and maintenance personnel of hydraulic mounted breakers. The manual is available in Spanish, French and English. It is published in an illustrated format of sensible do's and don'ts, featuring typical daily situations on the job site. Content includes safety tips concerning the workplace and equipment, start up and shut down guidelines and special operating and maintenance precautions.

This publication is available by contacting:  
Association of Equipment Manufacturers  
Toll free 1-866-AEM-0442  
E-mail: [aem@aem.org](mailto:aem@aem.org)  
Website: [www.aem.org](http://www.aem.org)

Ask for FORM CMHB-1004, Hydraulic Mounted Breakers.

This publication is also available through Allied under part number 953076 (English). To order a copy, contact the Allied Customer Service Department.

## 2.0 Equipment Identification

### 2.1 Serial Number Location

Refer to Figure 2-1. The Serial Number assigned to this equipment can be found in the following locations:

1. Stamped on the Equipment Identification Tag
2. Stamped on the back head near the N2 gas charging valve.

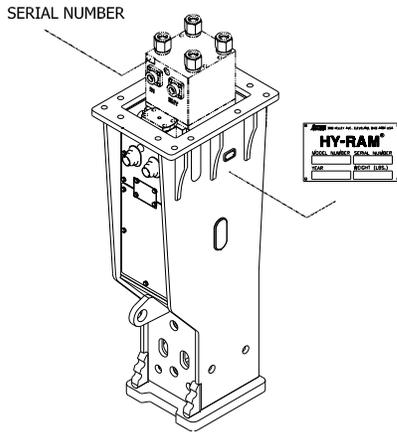


Fig 2-1 Equipment Identification

### 2.2 Equipment Identification Tag

The Equipment Identification Tag is affixed to the side of the housing. Confirm that the information contained on the Tag corresponds with the information provided in Section 1, Table 1.1.

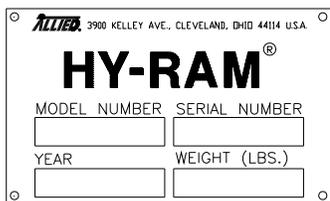


Fig 2-2 Equipment Identification Tag

The ID Tag provides the following information:

- Allied Logo
- Street Address, City, State - USA
- Product name
- Model number
- Serial number
- Year of manufacture
- Weight

### 2.3 Owner's Record of the Equipment

Your local Allied dealer requires complete information about the equipment to better assist you with questions regarding parts, warranty, operation, maintenance, or repair.

- Copy the Model and Serial Number from the Equipment Identification Tag to the space provided below.
- Indicate the date in which the Allied equipment was placed into service.
- Fill out the Warranty Registration form and return to Allied Construction Products, LLC.

Hy-Ram Model: HR470

Part Number: 575277

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

In Service Date: \_\_\_\_\_

Registration Date: \_\_\_\_\_

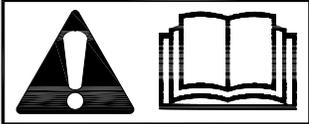
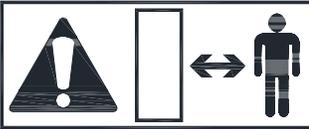
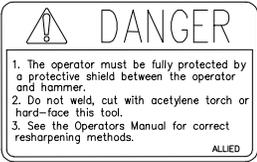
### 3.0 Safety, Information and Identification Labels

#### 3.1 Label Description and Position On Equipment

Labels affixed to the Allied equipment communicate important information. Safety labels alert personnel to potential hazards. Other labels provide product identification and instructions important to operation and service.

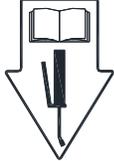
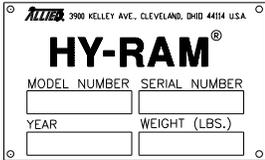
Keep labels clean so that words and illustrations are legible. Replace damaged or missing labels before operating this equipment. Refer to Table 3.2 for ordering information. Refer to Figure L-14 for the position of the label on the equipment.

**Table 3.1 Safety and Information Labels Identified**

Label	Fig.	Description
L1		<b>READ THE MANUAL</b> – Safety Alert Symbol with pictogram of open book. It is important to read and understand information and follow instructions contained in the manual.
L2		<b>STAY CLEAR</b> – Alerts personnel and by-standers to maintain a safe distance from the Breaker during operation.
L3		<b>FLYING DEBRIS</b> – Alerts personnel to the hazard of fragments becoming projectiles. It directs personnel to the Safety, Operation and Maintenance Manual for instructions about the use of a shield between the breaker and machine to protect the operator from injury. <b>NOTE: Place the smaller size decal in a conspicuous location inside the operator’s cab.</b>
L4		<b>TOOL SHARPENING</b> – Warns against welding, cutting, or hard-facing the tool. It directs personnel to the Safety, Operation and Maintenance Manual for approved sharpening methods.
L5		<b>Pressurized Nitrogen Accumulator</b> – Alerts personnel to the accumulator, warning of nitrogen gas under pressure. Directs personnel to the Safety Operation and Maintenance Manual for service instructions.
L6		<b>Gas Pre-Charge (Back Head Charge)</b> – Alerts personnel to the presence of gas under pressure inside the back head. <ul style="list-style-type: none"> <li>• Use nitrogen gas only – Do not substitute</li> <li>• Refer to service instructions found in the manual.</li> <li>• Charge pressure temperature COLD 70° F vs. HOT 150° F</li> </ul>
L7		<b>RE-LUBRICATION</b> – Outlines re-lubrication frequency and importance of proper positioning with contact pressure applied to tool before re-lubricating.

**3.0 Safety and Information Labels – [cont'd]**

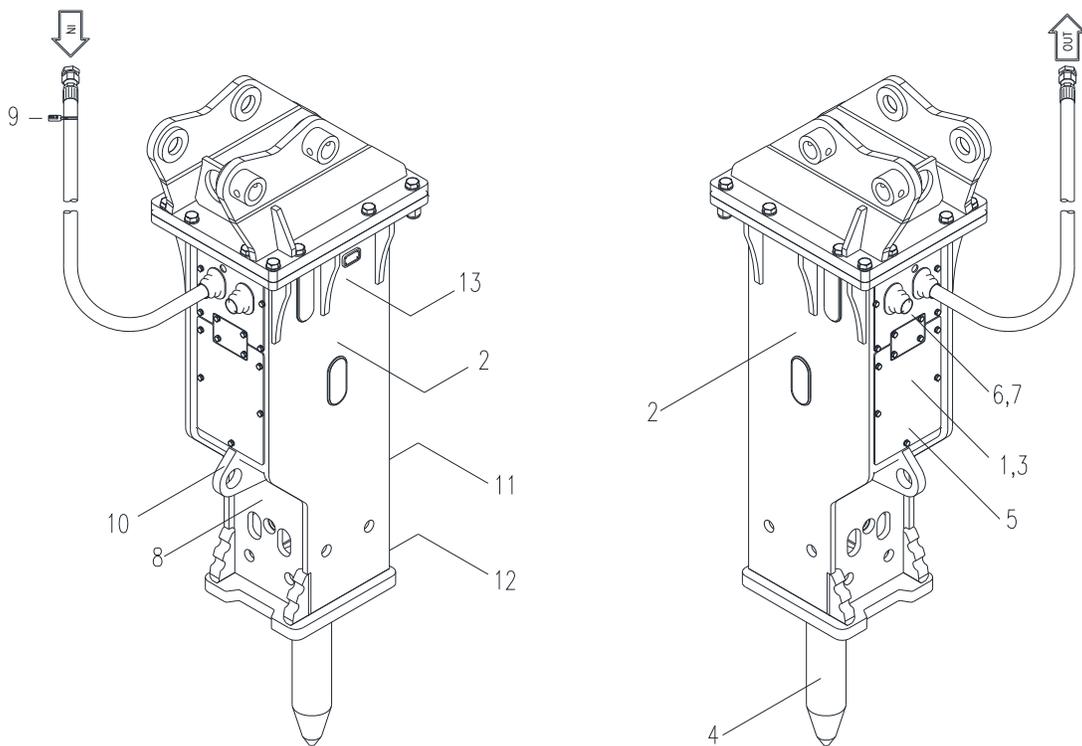
**Table 3.1 Safety and Information Labels Identified – cont'd**

<u>Label</u>	<u>Fig</u>	<u>Description</u>
L8		<b>LUBRICATION POINT</b> – Identifies lubrication points. Refer to the manual(s) for grease type, re-lubrication schedules and procedures.
L9		<b>OIL SUPPLY LINE "PRESSURE" I.D. TAG</b> – A red colored cable tie marked "PRESSURE LINE" is attached to the supply hose for ease of identification between hoses.
L10		<b>LIFT POINT</b> – Identifies approved lift points.
L11		<b>COMPANY LOGO</b> – This is the Allied brand identifier and is a registered trademark of Allied Construction Products, LLC.
L12	<b>HR470</b>	<b>MODEL</b> – Model designation decal
L13		<b>ID TAG</b> - Contains identifying information about the equipment, including: Manufacturer's name, address, product name, model number, serial number, year of manufacture, and weight.

**3.0 Safety and Information Labels – [cont'd]**

**Table 3.2 Safety and Information Labels**

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
---	Label Set	575486	1 (Set)	Set includes 1-12
1	Read the Manual / Instructions	676984	1	
2	Stay Clear	657841	2	
3	Danger (Large)	657840	1	
---	Danger (Small)	657839	1	Display in conspicuous location inside operator's cab
4	Tool Sharpening	657838	1	
5	Accumulator Warning	102756	1	
6	Back Head N2 Pressure	678944	1	
7	Lube w/ Tool In	677334	1	
8	Lube Point	A101725	1	
9	Pressure ID Tag	818676	1	Identifies the oil supply line "IN"
10	Lift Point	676982	1	
11	Allied	676655	1	
12	Model HR470	575496	1	
13	Equipment ID Tag	658833	1	Item 14 is not included in Set



**Fig. L-14 Label Positions**

4.1 Housing Box and Components

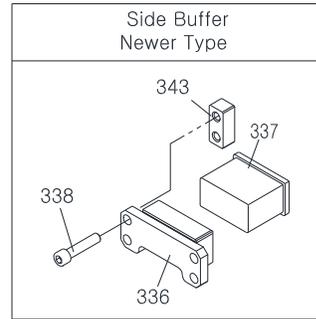
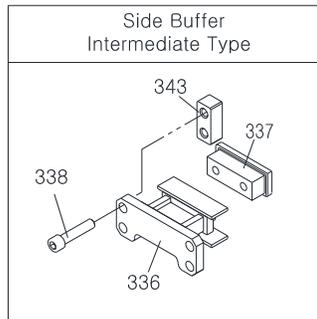
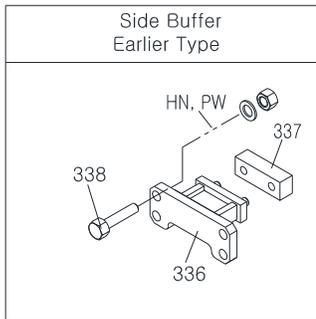
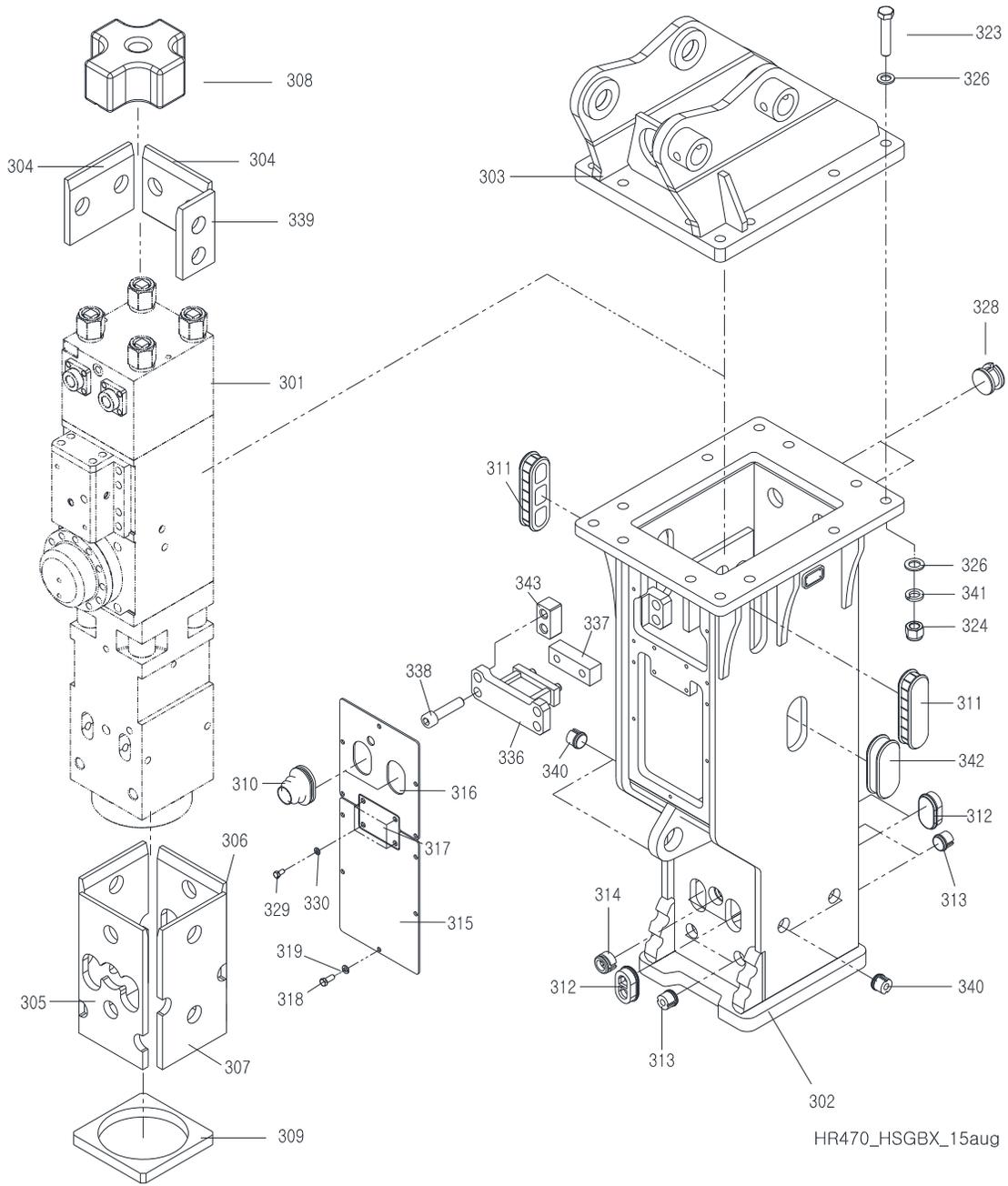


Fig. 4-1 Housing Box and Components

## 4.2 Breaker Assembly

**Table 4.1 Housing Box and Components**

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
---	<b>Hy-Ram Model HR470</b>	<b>575277</b>	<b>1</b>	<b>Standard configuration – MR</b>
301	Breaker Assembly	-	1	Refer to Table 4.2
302	Housing Box W.A	575551	1	Standard configuration – MR
303	Mounting Bracket - MR	Varies	---	Item 303 not included. Order separately. Refer to Section 6
304	Wear Plate	A2002020	2	
305	Wear Plate	A1800220	1	
306	Wear Plate	A1800230	1	
307	Wear Plate	A1800240	2	
308	Buffer Top	A200180	1	
309	Buffer Base	A1800250	1	
310	Rubber In, Out	A2000210	2	
311	Rubber Plug	A2202550	2	
312	Rubber Plug	571767	4	
313	Rubber Plug	572390	4	
314	Rubber Grease	575360	1	
315	Plate Cover 2	A1803630-02	1	
316	Plate Cover 1	A1803640-03	1	
317	Plate Cover 3	A3003690	1	
318	Bolt HH	658265	10	M10 x 20
319	Spring Washer	940237	10	M10
323	Bolt	---	---	
324	Hex Nut	---	---	For Items 323,324,326,341 Refer to Table 6.1
326	Flat Washer	---	---	
328	Rubber Plug	B400W270	2	
329	Bolt	900023	4	
330	Spring Washer	840235	4	
336.1	Block W.A	A18V3650-04	1	
336.2				
337.1	Side Buffer	A18V36S0	1	Earlier design
337.2				Later design – Begin S/N-1340
338	Bolt SH	576060	4	M24 x 100
339	Wear Plate	A5002330	1	
340	Rubber Plug	572959	4	
341	Spring Washer	---	---	For Items 323,324,326,341 Refer to Table 6.1
342	Rubber Plug	A2000270	1	
343	Tap Block	A18V36T0	2	For use with later design



## 4.2 Breaker Assembly

**Table 4.2 Breaker Assembly**

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
1	Back Head	A1806830	1	
2	Cylinder	A1806840	1	
3	Front Head	A1806870	1	
4	Seal Housing	A1806040	1	
5	Piston	A1806050	1	
6	Accumulator Cover	A1806060	1	
7	Accumulator Bottom	A1806930	1	
8	Upper Tool Bushing	A1806080	1	
9	Lower Tool Bushing	A1806820	1	
10	Thrust Ring	A1806100	1	
11	Side Rod	A1806110	4	
12	Nut - Side Rod Lower	A1806120	4	
13	Nut - Side Rod Upper	A1806130	4	
14	Washer - Side Rod	A1806140	4	
15	Valve Block	A1806150	1	
16	Valve Block Cover	A1806450	1	
17	Valve Guide	A1806170	1	
18	Valve Spool	A1806180	1	
19	Tool Pin	A1806210-02	2	
20	Bushing Pin 1	A1806220	2	
21	Bushing Pin 2	A1806230	3	
22	Connection Bush	A1806250	2	
23	Socket Plug (Ed-Or)	676158	1	
24	Tool Selection	Varies	1	For items 24,25,26,52 refer to Table 4.4
27	Adjust Bolt 1.	A2006310	1	
28	Adjust Nut	A2006320	2	
29	Adjust Bolt 2.	A3006330	1	
30	Acc.Inner V/V Ass'y	A3006340	1	
31	Gas Charging Bolt	A1806350	1	
32	Gas Charging Cap	A3006360	1	
33	Gas Charging Valve	A3006590	1	
34	Heli-Coil	A3006380	4	
35	Heli-Coil	A3006390	6	

4.2 Breaker Assembly – [cont'd]

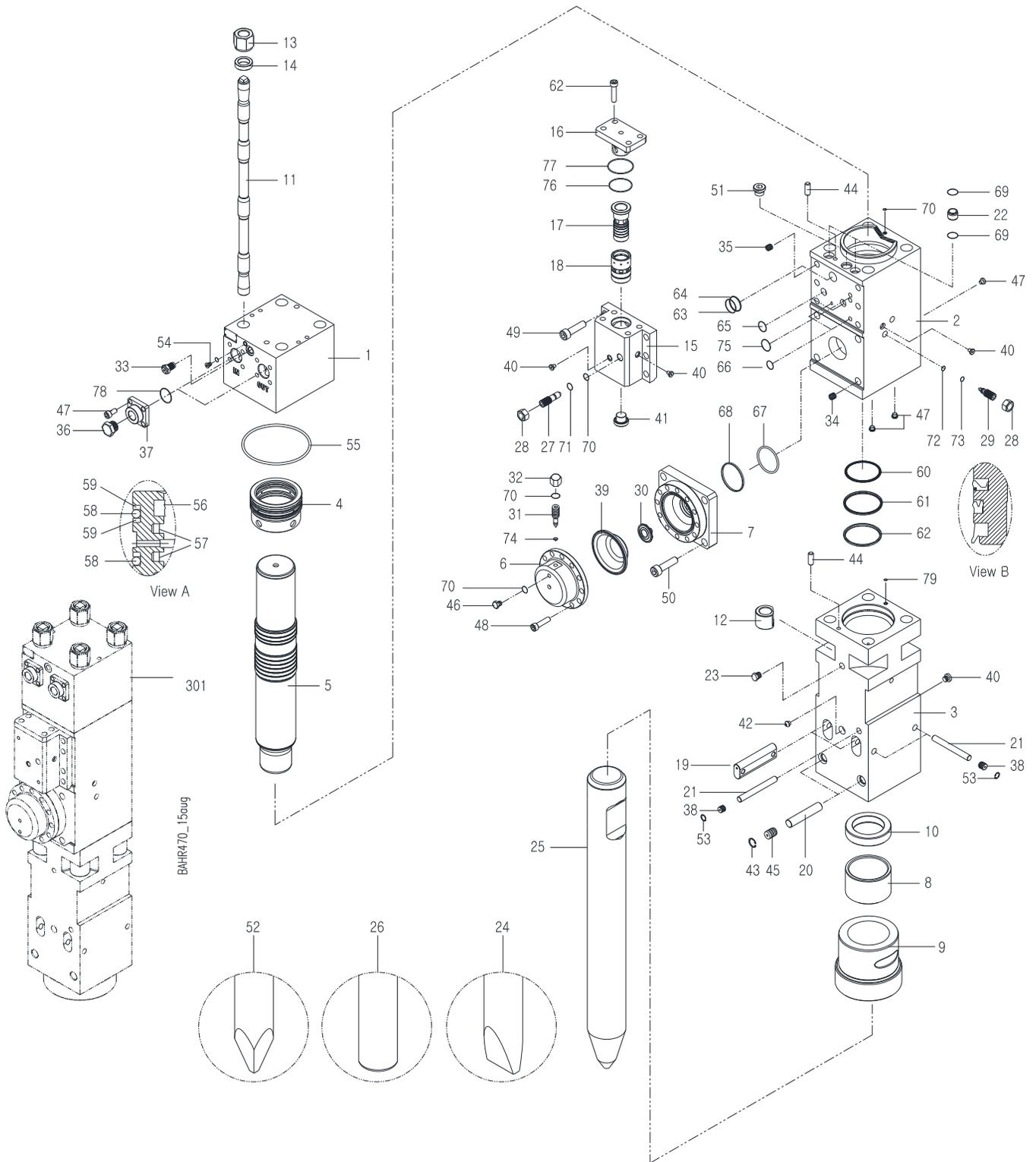


Fig. 4-2 Breaker Assembly

**4.2 Breaker Assembly – [cont'd]****Table 4.2 Breaker Assembly – [cont'd]**

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
36	Plug	A3006400	2	
37	Flange	A2006430	2	
38	Rubber Plug	676243	3	
39	Membrane	676217	1	
40	Socket Plug	676159	7	
41	Socket Plug	571708	1	
42	Grease Nipple	816675	1	
43	Snap Ring	A1806570	2	
44	Guide Pin	676183	2	
45	Rubber Plug	571800	2	
46	Hex Bolt	A2006510	1	
47	Socket Bolt	577939	8	
48	Socket Bolt	SB1615035	16	
49	Socket Bolt	SB2025060	6	
50	Socket Bolt	SB2430060	4	
51	Socket Plug	90401	1	
52	Tool Selection	Varies	1	For items 24,25,26,52 refer to Table 4.4
53	Snap Ring	B1006440	3	
54	Socket Plug	573577	1	
55	O-Ring	A1807010	1	
56	Gas Seal	A1807020	1	
57	Step Seal*	A1807030	2	*Includes O-ring (x2)
58	O-Ring	571699	2	
59	Backup Ring	A1807050	3	
60	Buffer Ring	A1807060	1	
61	U-Packing	A1807070	1	
62	Wiper	A1807080	1	
63	O-Ring	101781	1	
64	Backup Ring	A2007090	1	
65	O-Ring	676206	2	
66	O-Ring	676200	2	
67	O-Ring	A3007200	1	
68	Backup Ring	A3007130	1	

4.2 Breaker Assembly – [cont'd]

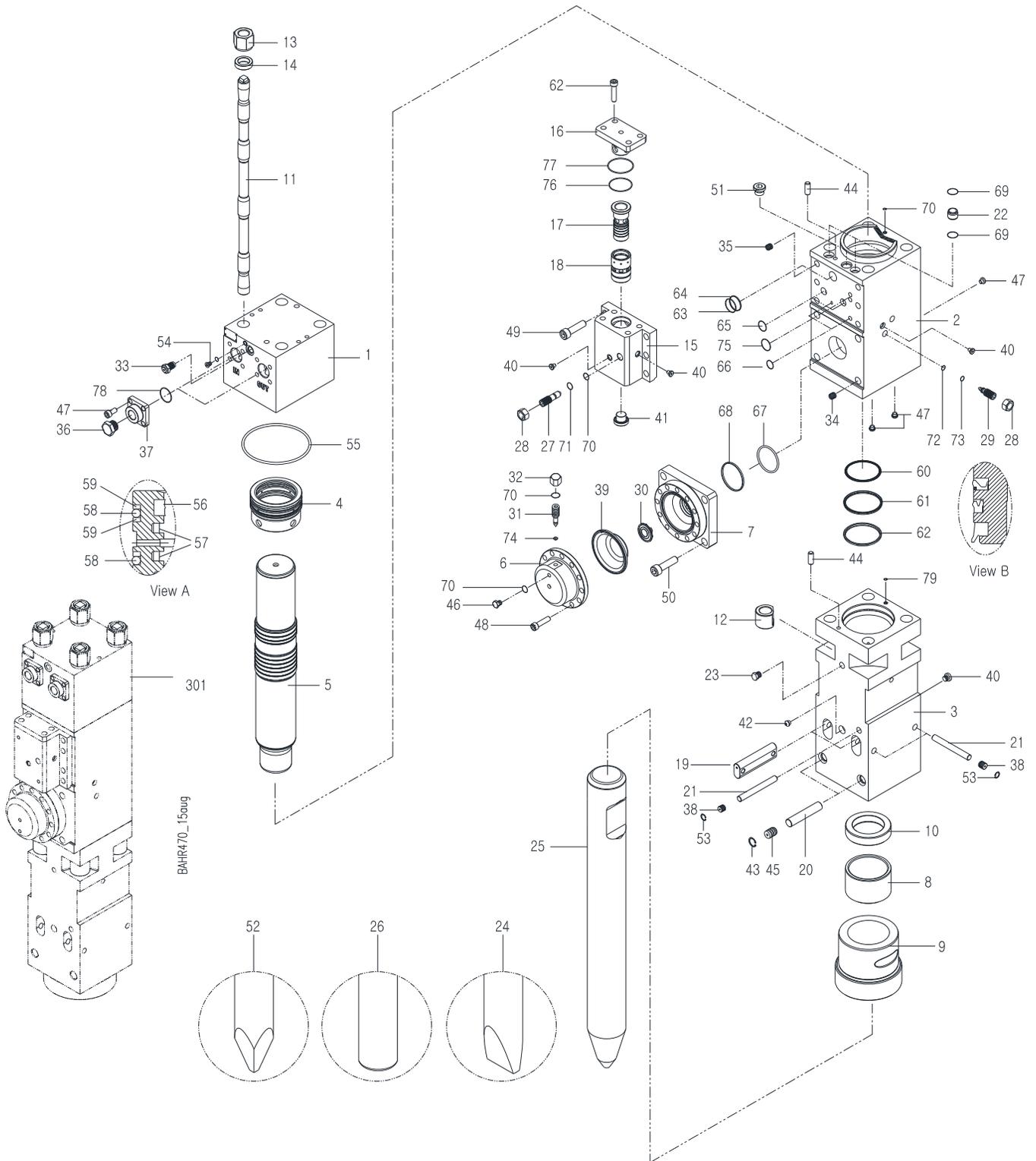


Fig. 4-2 Breaker Assembly

**4.2 Breaker Assembly – [cont'd]****Table 4.2 Breaker Assembly – [cont'd]**

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
69	O-Ring	A1807090	4	
70	O-Ring	571820	4	
71	Backup Ring	A3007160	1	
72	O-Ring	A3007170	1	
73	Backup Ring	A3007180	1	
74	O-Ring	A3007190	1	
75	O-Ring	571815	1	
76	O-Ring	100109	1	
77	Backup Ring	101788	1	
78	O-Ring	667224	2	
79	O-Ring	A2507380	1	

**Note: Seal set and Tune-up kit available. See separate tables for items included in each.**

**4.3 Hydraulic Connections**

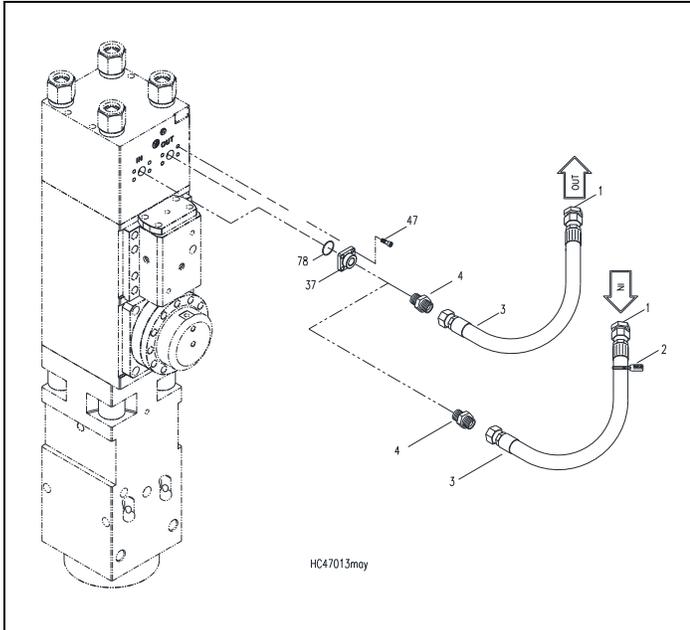


Fig. 4-3 Hydraulic Connections

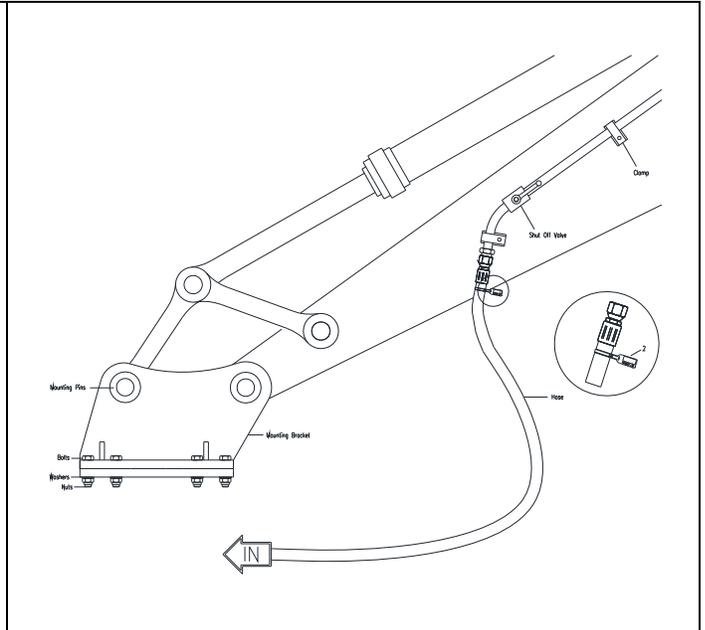


Fig. 4-4 Hydraulic Connections to Carrier - Typical

**Table 4.3 Hydraulic Connections**

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
1	Plug	814454	2	
2	“PRESSURE” ID Tag	818676	1	Identifies oil supply line “IN”
3	Hose	676124	2	
4	Adapter	667327	2	
37	Flange	A2006430	2	
47	Socket Bolt	SB1415035	8	
78	O-Ring	667224	2	

## 4.4 Tool Selection Guide – Standard & Specialty

### 4.4.1 Tools - Standard Type

The three most commonly used tool points for concrete demolition rock cutting and boulder reduction are the Conical, Chisel and Blunt.

**A. Chisel (Wedge – Cross Cut or In-Line)** – Suitable applications include soft rock and general demolition of concrete. The tool penetrates into the material, forcing it to separate. Useful when cutting action is required, e.g. benching and trenching.

**B. Conical Point** - Same applications as the chisel. The conical point penetrates the material and its shape makes it less prone to twisting which can lead to burring of the tool's retainer pin.

**C. Blunt Tool** – Designed for impact breaking. The blunt tool is effective in secondary breaking of oversize rock or boulder reduction.

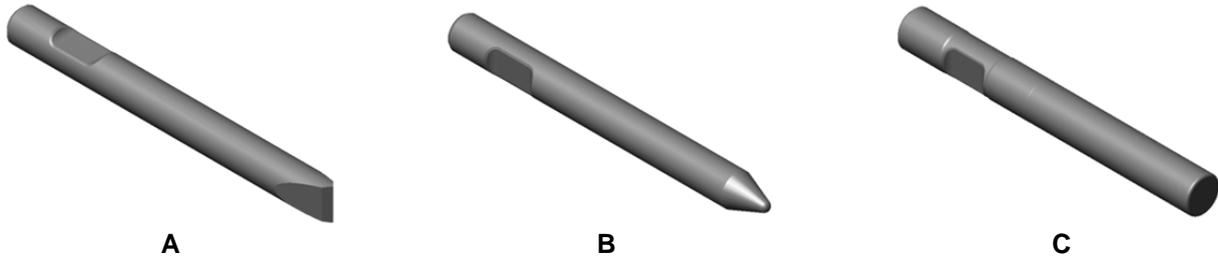


Fig. 4-5 Standard Tool Types Identified A thru C.

### 4.4.2 Tools - Specialty Type\*

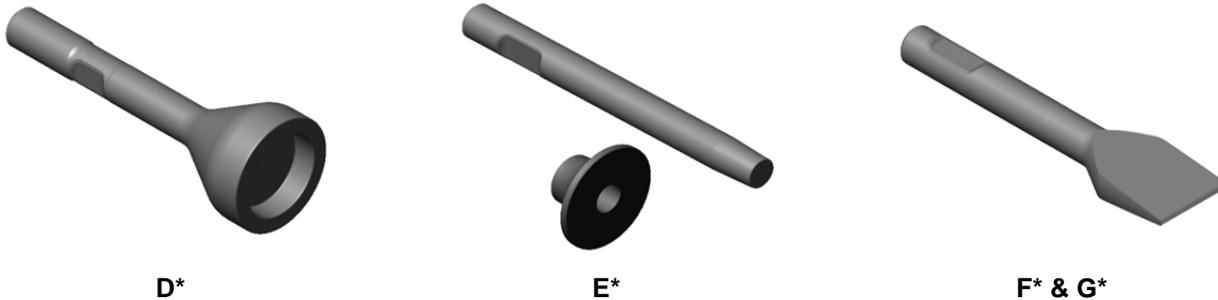


Fig 4-6 Specialty Tool Types Identified D thru G.

Specialty tools have a specific purpose or function designed into each tool. These tools can extend the versatility of a hammer, thus increasing productivity and eliminating the need for additional equipment.

- D. Post Driver** – For driving posts, pipes, etc.
- E. Tamper** – Designed to compact loose material.
- F. Frost Cutter** – For cutting into frozen ground.
- G. Asphalt Cutter** – Designed to cut seams in asphalt for removal. Useful when removing asphalt to dig a trench. Available in Cross-Cut and In-Line configurations.

General illustrations shown. Actual design may vary. For availability of tool types not listed, contact Allied.  
\*Not available for all models.

## 4.4 Tool Selection – Standard and Specialty

Table 4.4

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>TD<sup>3)</sup> in. x WL<sup>4)</sup> in. [mm]</u>	<u>Weight lbs. [kg.]</u>
28 B	Conical Point	575387	4.72 (120) x 28 [707]	194 [88]
<b>29 A<sup>1</sup></b>	<b>Chisel Cross Cut</b>	<b>575267</b>	<b>4.72 (120) x 28 [707]</b>	<b>198 [90 kg.]</b>
---	Chisel In-Line	--- <sup>2</sup>	---	---
30 C	Blunt End	575397	4.72 (120) x 28 [707]	209 [95 kg.]
80 <sup>2</sup>	Pyramid (Not Pictured)	--- <sup>2</sup>	4.72 (120) x 28 [707]	190 [86 kg.]

<sup>1)</sup> Standard tool supplied with breaker in Bold

<sup>2)</sup> For availability of tool types not listed, contact Allied

<sup>3)</sup> TD - Tool Diameter

<sup>4)</sup> WL - Working Length

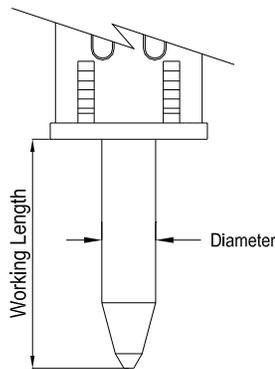


Fig. 4-7 TD & WL

## 4.5 Lubrication For Bushing and Tool

### 4.5.1 Allied Chisel Paste

Wear costs money, sometimes lots of money. Without proper lubrication, bushings and tools will quickly wear from friction related damage.

When choosing grease to lubricate the bushing and tool, it's important to emphasize that the "right type" is equally important as "how much" and "how often".

A key element in minimizing wear is through the regular use of a high-quality lubricant. Formulated as a 'specialty' lubricant, Allied Chisel Paste is ideally suited for use in heavy loaded, sliding motion and high temperature applications.

Allied Chisel Paste outperforms 'Multi-purpose' type grease, when used in this application, due to its unique formula with added solids. Solid lubricants, which include fine particles of molybdenum, graphite and copper, combine to form a protective layer between metal parts which minimize direct surface

contact during periods of heavy loading (extreme pressure).

Grease labeled 'General / Multi-Purpose' may contain modest amounts of solid lubricants - if any at all. At times when the tool is thrust against the bushing, the liquid lubricant is squeezed out, exposing unprotected surfaces to damage from friction.

Many factors, including operator technique, determine whether the breaker will remain productive. But with attention to preventive maintenance practices, including timely lubrication, and through the regular use of Allied Chisel Paste, the usable service life of these parts can be maximized while the cost to replace them and loss of production from down time is minimized.

### 4.5.2 Chisel Paste

<u>Container</u>	<u>Packaging</u>	<u>Part No.</u>
14.5 oz. Cartridge*	Qty x 10	574430
14.5 oz. Cartridge*	Qty x 30	574431
35 lbs. Bucket	Qty x 1	676698
120 lbs. Drum	Qty x 1	679968

\* 14 oz. cartridge fits standard grease gun

## 5.0 Service Kits and Tools

### 5.1 Tune-up Kit

All breakers require regular maintenance and periodic parts replacement. Follow the recommended service schedule to maintain reliable service.

Tune-up kits can help restore performance by replacing common wear parts. Tune-up kits offer the convenience of combining parts that usually need to be replaced at the same time into one pre-packaged kit.

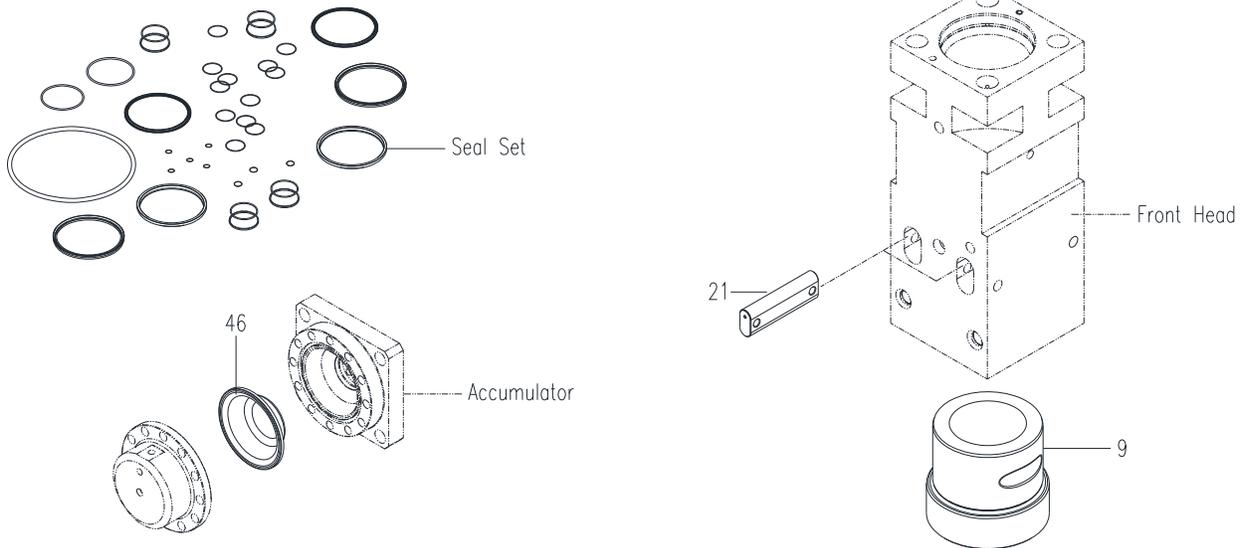


Fig. 5-1 Components of Tune-up Kit Identified

Table 5.1 Tune-up Kit

Item	Description	Part No.	Qty	Remarks / Specifications
---	<b>Tune-up Kit</b>	<b>575408</b>	<b>1</b>	<b>Kit includes items in Table 5.1</b>
---	Seal Set	575418	1	Set includes items in Table 5.2
9	Lower Tool Bushing	A1806820	1	
21	Tool Pin	A1806210-02	2	
46	Membrane	676217	1	

**5.0 Service Kits and Tools**

**5.2 Seal Set - 575418**

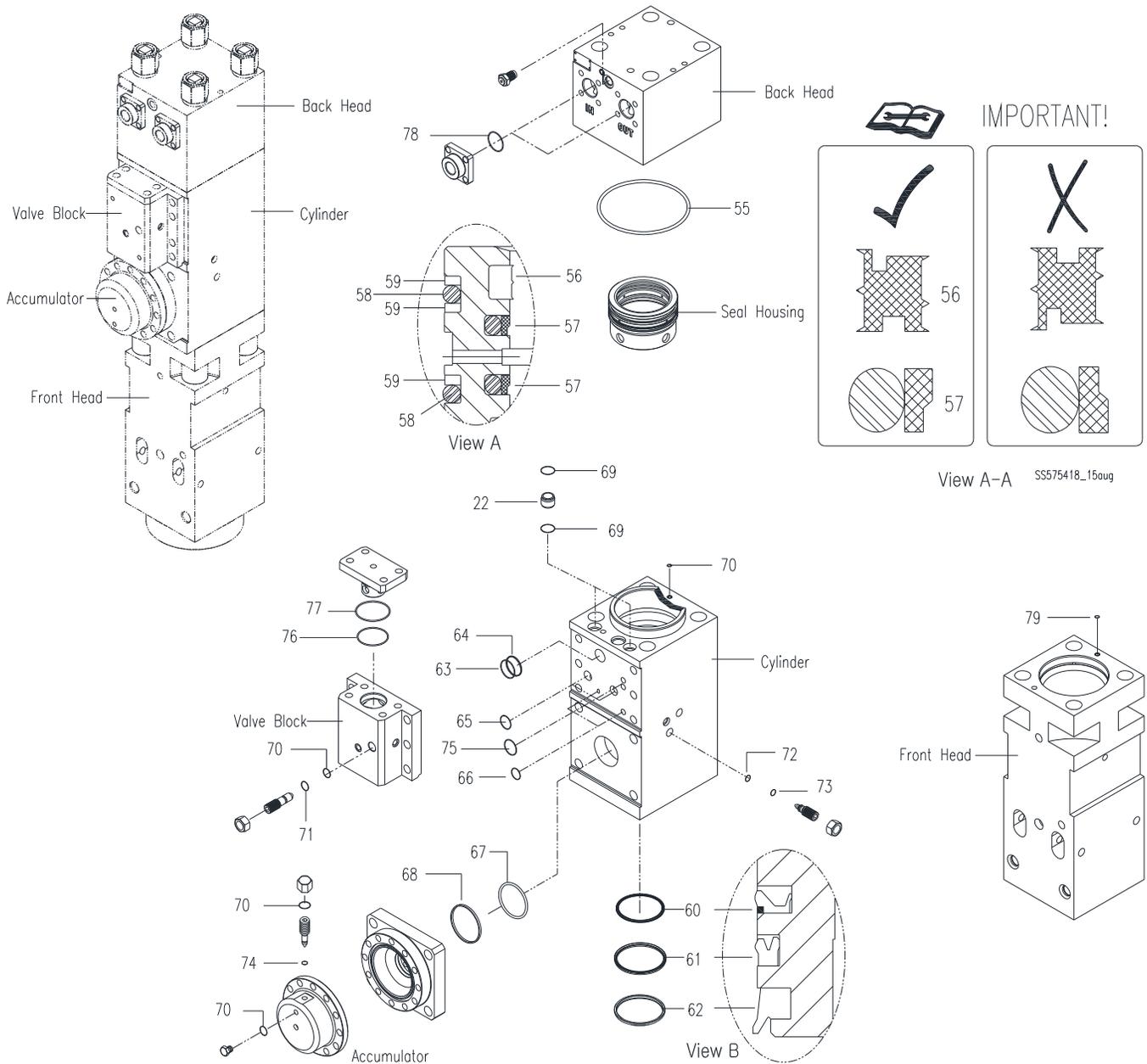


Fig. 5-2 Seal Positions Identified



Refer to the Safety, Operation & Maintenance Manual for assembly instructions.

## 5.0 Service Kits and Tools

**Table 5.2 Seal Set**

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
---	<b>Seal Set</b>	<b>575418</b>	<b>1</b>	<b>Set includes all items in Table 5.1</b>
22	Connection Bush	A1806250	2	
55	O-Ring	A1807010	1	
56	Gas Seal	A1807020	1	
57	Step Seal*	A1807030	2	*Includes O-ring (x2)
58	O-Ring	571699	2	
59	Backup Ring	A1807050	3	
60	Buffer Ring	A1807060	1	
61	U-Packing	A1807070	1	
62	Wiper	A1807080	1	
63	O-Ring	101781	1	
64	Backup Ring	A2007090	1	
65	O-Ring	676206	2	
66	O-Ring	676200	2	
67	O-Ring	A3007200	1	
68	Backup Ring	A3007130	1	
69	O-Ring	A1807090	4	
70	O-Ring	571820	5	
71	Backup Ring	A3007160	1	
72	O-Ring	A3007170	1	
73	Backup Ring	A3007180	1	
74	O-Ring	A3007190	1	
75	O-Ring	571815	1	
76	O-Ring	100109	1	
77	Backup Ring	101788	1	
78	O-Ring	667224	2	
79	O-Ring	A2507380	1	
---	Thread Lube	676927	1	Included with set. Follow application instructions

### IMPORTANT

Contamination interferes with reliable operation and will shorten component life. Prevent dirt and debris from entering the hydraulic system. Always work in a clean area. Keep seals properly stored in their original sealed package until ready for use.

### IMPORTANT

Seal Set includes packet of Thread Lube. Apply thread lube to side rods at assembly. DO NOT apply Thread Lube to seals!

## 5.0 Service Tools - N2 Gas Charge Kit

### 5.1 N2 Gas Charge Tool - General Description

Designed for use with all Hy-Ram models, the charge kit adapts to both the back head and accumulator<sup>1)</sup>. Periodic checking of the back head pressure will detect whether it is sufficiently charged. Proper function of the breaker is accomplished through accurate charging.

The accumulator<sup>1)</sup> is a self-contained pressure vessel with an elastic membrane dividing the inner chamber. The lower chamber is used to receive, store and discharge pressurized oil. Pressurized gas is stored in the upper chamber. Reliable operation of the breaker along with optimal membrane life is accomplished through proper filling of the charge pressure.

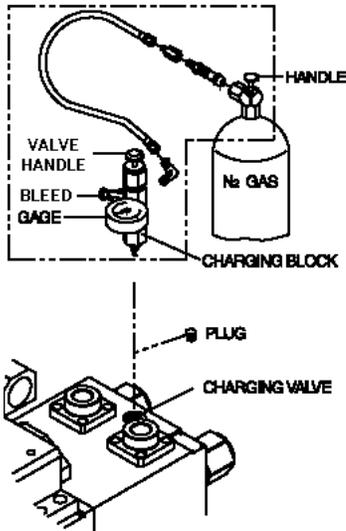


Fig. 5-3 N2 Gas Charge - Back Head Position

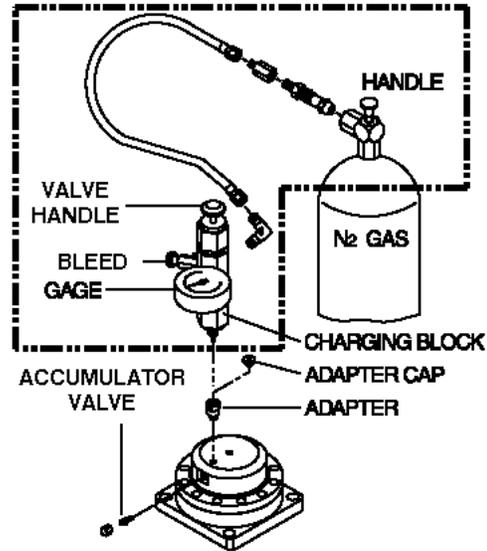


Fig. 5-4 N2 Gas Charge – Accumulator Position

Table 5.3 N2 Gas Charge Kit

Item	Description	Part No.	Qty	Remarks / Specifications
1	N2 Gas Charge Kit	575427	1	Kit includes items 2,3,4,5
2	Charge Valve with Gauge	---	1	"Charging Block"
3	Extension	---	1	"Adapter"
4	Hose	---	1	
5	Gas Bottle Adapter	---	1	
6	Nitrogen Gas Bottle	N/A	1	Not Supplied (Source Locally)



For your safety, read, understand and follow all instructions given in Operation & Maintenance Manual 575582 for the safe and proper use of this tool.

## 6.0 Mounting Bracket – Not Included

### 6.1 Mounting Bracket

The mounting bracket (not included – order separately) is bolted to a connection plate located at the top of the housing box.

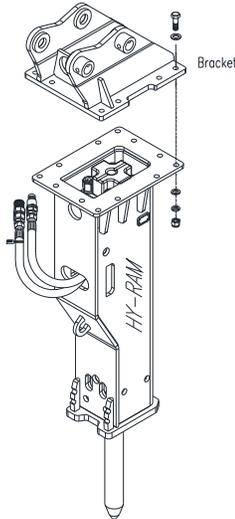


Fig. 6-1 Housing Box, Mounting Bracket & Bolt Set

Allied offers an array of mounting brackets to fit virtually any carrier, including those equipped with pin-grab or hook style mounting couplers.

To order a mounting bracket, complete information about the carrier (and coupler) is required – including:

Carrier make \_\_\_\_\_  
 Model \_\_\_\_\_  
 Series \_\_\_\_\_  
 Serial number \_\_\_\_\_  
 Coupler make \_\_\_\_\_  
 Model \_\_\_\_\_  
 Series \_\_\_\_\_  
 Serial Number \_\_\_\_\_

Refer to Figure 6-2. The thickness of the plate, as well as other dimensions, including the quantity, diameter and spacing of the bolt holes will vary between breaker models.

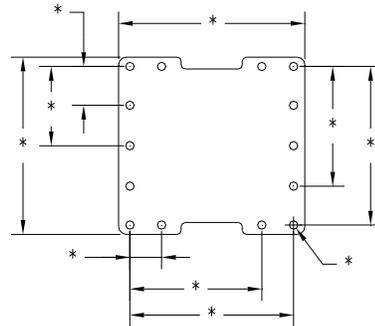


Fig. 6-2 Connection Plate Dimensions

In Table 6.1, 'Family' identifies the connection plate that's been appointed to the standard housing box. Other work tools from Allied, including the Ho-Pac®, share the same Family types.

Table 6.1 Mounting Family & Hardware (QTY)

<u>Family</u>	<u>Model</u>	<u>Bolt</u>	<u>FL Washer</u>	<u>LK Washer</u>	<u>Nut</u>
MR	HR470	575557 (12)	901291 (24)	658529 (12)	90507 (12)
MR	HR560	575557 (12)	901291 (24)	658529 (12)	90507 (12)



Always follow the recommended tightening torque of all fasteners. These can be found in the Operation and Maintenance Manual 575582.

## 7.0 How To Order Spare Parts

Your local Allied dealer requires the Product Name, Model and Serial Number to better assist you with questions regarding parts, warranty, operation, maintenance, or repair. This information should be noted in Section 2.3 of this manual.

Product Hydraulic Impact Breaker  
 Model Hy-Ram HR470  
 Serial No. \_\_\_\_\_

Please fill out completely

Line	Description	Part Number	Quantity	Price
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Your contact information

Your Name \_\_\_\_\_ Company Name \_\_\_\_\_  
 Phone \_\_\_\_\_ Account Number \_\_\_\_\_  
 Fax \_\_\_\_\_ Purchase order \_\_\_\_\_  
 Email \_\_\_\_\_ Shipping carrier \_\_\_\_\_

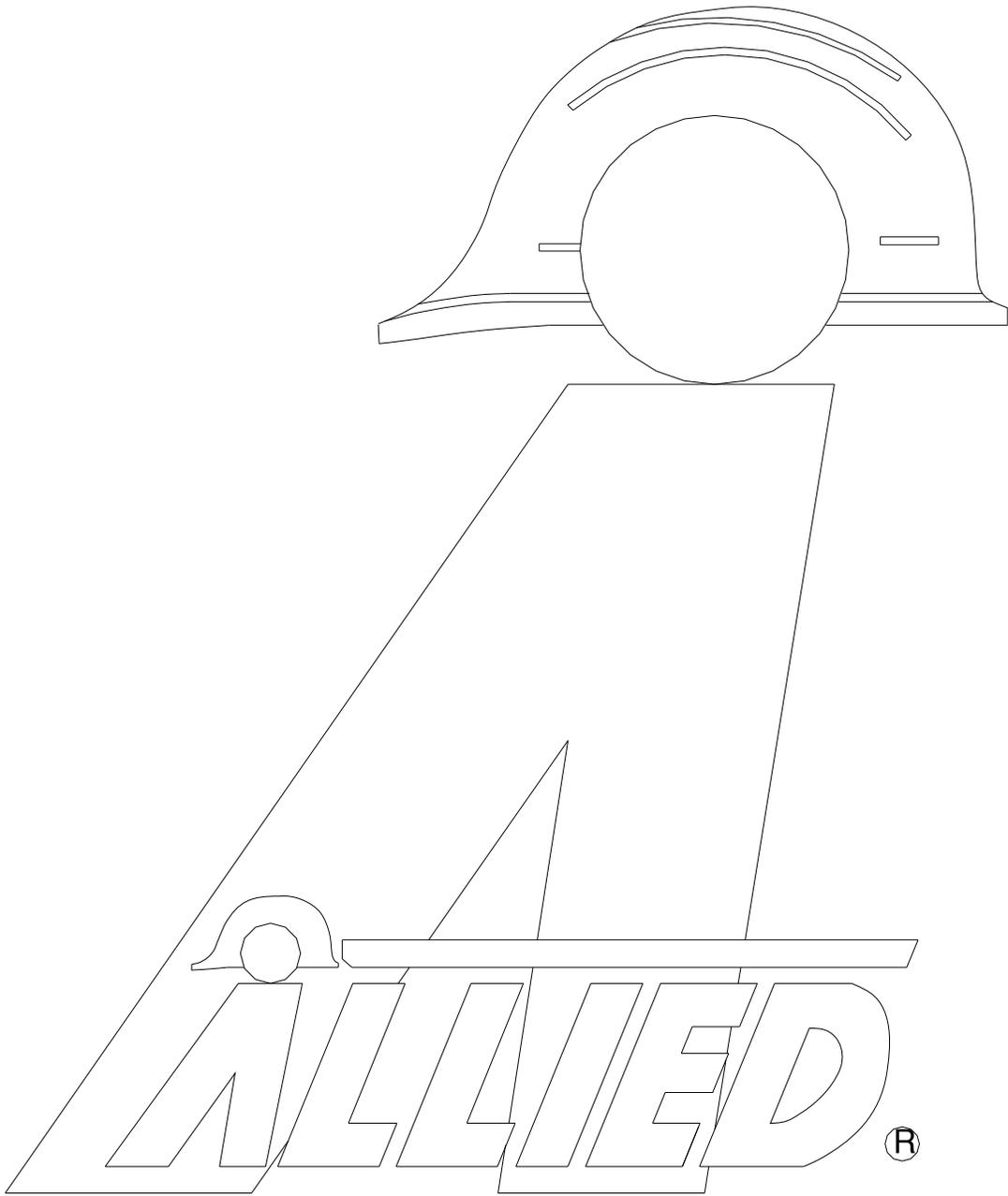
\*See note below

Billing Address \_\_\_\_\_ Shipping Address \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**\*Note: All backordered parts will be shipped when available via the same method as the original order unless initialed and checked below:**

Initials \_\_\_\_\_  
 Ship complete order only  
 Ship available parts and contact customer on disposition of backordered parts  
 Other – specify below





**ALLIED**<sup>®</sup>  
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