

Hy-Ram

**Hydraulic
Impact
Breaker**

**Model
HR560**



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.



PM575477

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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.

Table of Revision History of PM575477

<u>Effective Date</u>	<u>Page</u>	<u>Summary of Change</u>
2015, Sep	8,12	Table 4-1 add item 311.1 & 311.2. Add 332.1 & 332.2. Add 338, part number 572959. Item 320 qty-4. Table 4.2 item 60 was SB1415035.
2014, Sep	6,8	Table 3.2 Item 7 removed-use is discontinued. Table 4.1 Items 317,320,323,324,325 Part number change
2014, Mar	12,20	Table 4.2 & Table 5.2 revise part numbers.
2013, Nov	8,19	Fig. 5-2 Clarify seal profile to help ensure correct orientation at assembly. Table 4.1 Dimension change to wear plates – Full interchangeability old-to-new is preserved. Part numbers unchanged.
2011, Jul	14,15	Add Item 25 qty-2 & Item 26 qty-1 to seal kit 575419. Revise Table 7.1.
2011, Jun	---	Original Issue of Parts Manual 575477

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1.0 Introduction & Scope

1.1 About This Manual

Table 1.1 About This Manual



Document ID.	PM575477
Type	Spare / Replacement Parts List
Current Status*	See Inside Cover
Product Name:	Mounted Hydraulic Impact Breaker
Series	Hy-Ram®
Applicable Model[s]:	HR560
Years of Manufacture:	Begin 2011
*Inquiries regarding this manual must include effective date shown on inside cover	

The material 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, captions and descriptions 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 has made every effort 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. If replacement manuals are required, they may be ordered by contacting your Allied dealer service center. Manuals may also be viewed and downloaded at: www.alliedcp.com

1.3 Related Publications

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

1.3.1 Safety, Operation & Maintenance Manual SOM575582

Applicable Models: Hy-Ram Series HR470-HR710

The Safety, Operation and Maintenance Manual has been prepared to assist the operator and maintenance personnel with the information necessary for the safe and proper use of the Allied work tool.

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

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
Website: 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

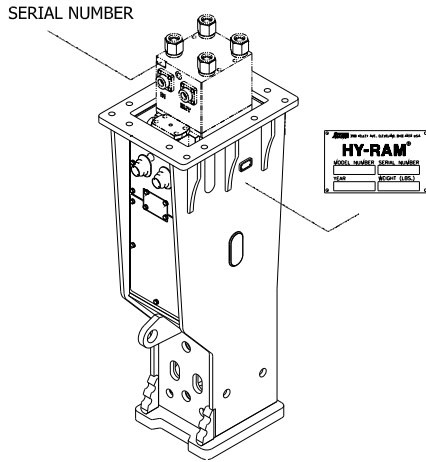


Fig 2-1 Equipment Identification

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 valve.

2.2 Equipment Identification Tag

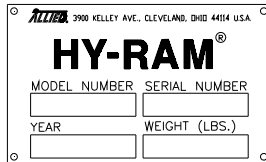


Fig 2-2 Equipment Identification Tag

The Equipment Identification Tag is affixed to the housing. It provides the following information:

- Manufacturer's name
- Address
- Product name
- Model number
- Serial number
- Year of manufacture
- Weight

Confirm that the information contained on the Tag corresponds with the information provided in Section 1, Table 1.1.

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.

- Record the equipment's serial number to the space provided below. This information may be obtained from the Equipment Identification Tag. Refer to Fig 2-1 for the location of the tag.
- Indicate the date in which the Allied equipment was placed into service.
- Indicate the date in which the Warranty Registration form was completed and returned to Allied.

Product Name: Hydraulic Breaker

Series: Hy-Ram

Model: HR560

Part Number: 575278

Serial Number: _____

In Service Date: _____

Registration Date: _____




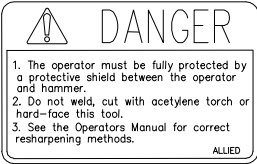

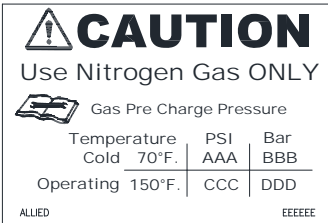

3.0 Safety, Identification & Information Labels

3.1 Label Description and Location On Equipment

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

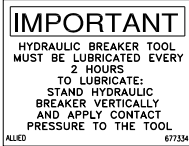
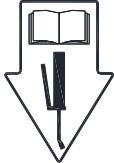
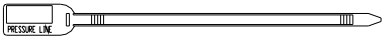

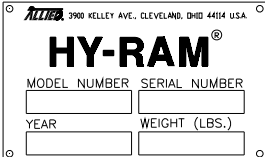
Keep safety labels clean so that words and illustrations are legible. Replace damaged or missing labels before operating this equipment. Refer to Figure L-14 for placement of label on the equipment and Table 3.2 for part numbers.

Table 3.1

Label	Figure	Description
L1		Read The Manual - Safety Alert Symbol with pictogram of open book. Gives notice of the importance of reading the manual(s) for information and/or instructions.
L2		Keep Clear - Pictogram displays arrow distancing worker safely from recognized hazard which is represented by the box. Breakers, or any other work tool, pose risk of injury to workers if they are not kept at a safe distance. Never operate the work tool with workers inside the work zone.
L3		Flying Debris Hazard – Alerts personnel to the hazard of fragments becoming projectiles. A protective guard to shield the operator must be installed before operation of the breaker. Personnel are directed to the Operator’s Manual for safety instructions. NOTE: A smaller sized version of this decal is to be displayed in a conspicuous location inside the operator’s cab.
L4		Personal Protection Equipment / Tool Re-sharpening – Alerts personnel to provide protective shielding between the operator and breaker. It also warns against welding, cutting, or hard-facing the tool. Personnel are directed to the Operator’s Manual for approved re-sharpening methods.
L5		Pressurized Nitrogen Accumulator – Alerts personnel to the presence of the accumulator, warning of nitrogen gas under pressure. Directs personnel to the Operation and Maintenance Manual for safe handling and service instructions.
L6		Gas Pre-Charge (Back Head Charge) – Alerts personnel to the presence of gas under pressure inside the back head. <ul style="list-style-type: none"> • Use nitrogen gas only – Do not substitute • Refer to service instructions found in the manual. • Charge pressure temperature COLD 70° F vs. HOT 150° F
L7		Lift Point – Pictogram of hook identifies approved lift points for safe handling.

3.0 Safety, Identification & Information Labels

Table 3.1

Fig.	Label	Description
L8		LUBRICATION – Decal provides re-lubrication frequency. Risk of equipment damage through unapproved methods. Strict attention to all procedures must be followed. Stand breaker upright with contact pressure applied at tool. OK to lube.
L9		Lubrication Point – Pictogram of instruction manual and grease gun is used to identify lubrication points. Read the manual(s) for application instructions, grease type and re-lubrication schedule.
L10		OIL SUPPLY LINE “PRESSURE” I.D. TAG – A red colored cable tie marked “PRESSURE LINE” is attached to the supply hose for ease of identification between hoses.
L11		COMPANY LOGO – This decal is the Allied brand identifier and is a registered trademark of Allied Construction Products, LLC.
L12	HR560	MODEL – Decal identifies the series and specific model.
L13		EQUIPMENT ID TAG - 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]

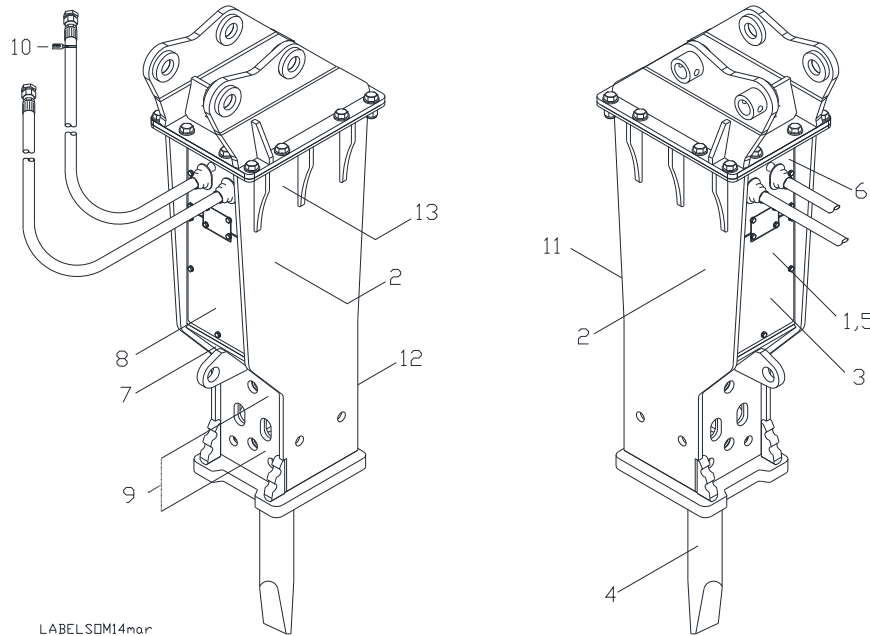


Fig. L14 Position of Labels on Equipment

Table 3.2 Safety, Identification and Information Labels

Pos	Description	Part No.	Qty	Remarks / Specifications
---	Label Set	575487	1 Set	Set includes 1-12
1	Read Instructions	676984	1	
2	Stay Clear	657841	2	
3.1	Danger (Large)	657840	1	
3.2	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 Gas Charge	575509	1	
7	Lift Point	676982	1	
8	Lube w/ Tool In	677334	1	
9	Lubrication Points	A101725	2	
10	Pressure ID Tag	818676	1	Identifies the oil supply line "IN"
11	Allied	676655	1	
12	HR560	575495	1	
13	Equipment ID Tag	658833	1	Item 13 is not included in Set

4.1 Housing Components

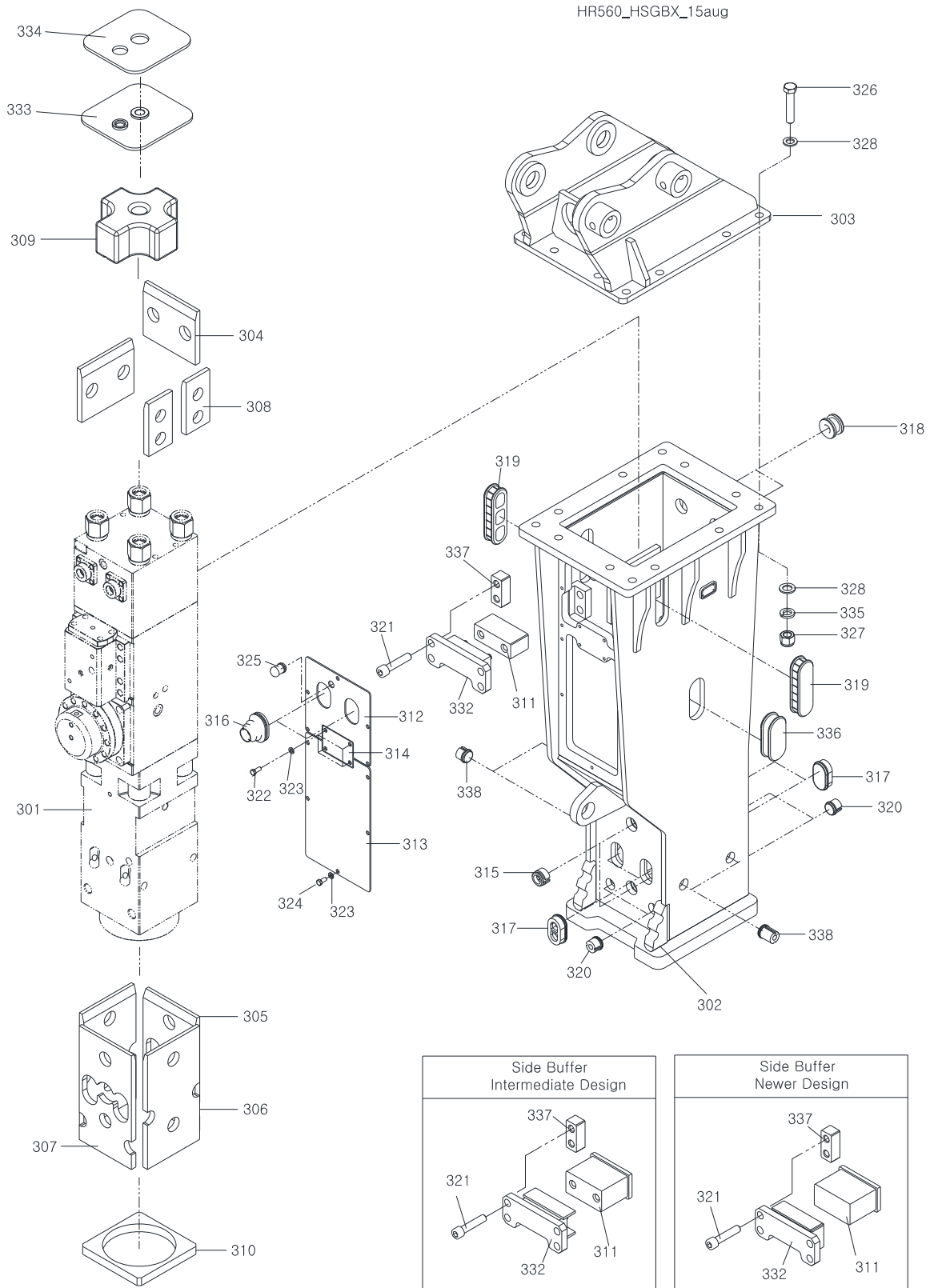


Fig. 4-1

4.1 Breaker Assembly

Table 4.1 Housing Box and Components

Item	Description	Part No.	Qty	Remarks / Specifications
---	HYRAM HR560	575278	1	Standard MR Configuration
301	Breaker Assembly	-	1	
302	Housing Box	575552	1	Standard MR Configuration
303	Mounting Bracket - MR	Varies	---	Not Included – Order Separately Section 7
304	Wear Plate	A2202460	2	¹⁾ Dimension change – interchangeable old-to-new
305	Wear Plate	A2202470	1	¹⁾ Dimension change – interchangeable old-to-new
306	Wear Plate	A2202480	2	¹⁾ Dimension change – interchangeable old-to-new
307	Wear Plate	A2202490	1	¹⁾ Dimension change – interchangeable old-to-new
308	Wear Plate	A2202500	2	
309	Top Buffer	A2000180	1	
310	Base Buffer	A2000190	1	
311.1	Side Buffer	A2003890	1	²⁾ Change – interchangeable only as a set
311.2		A2005150		²⁾ Change – interchangeable only as a set
312	Plate Cover 1	A2202510	1	
313	Plate Cover 2	A2202520	1	
314	Plate Cover 3	A3003690	1	
315	Rubber Grease	B3200040	2	
316	Rubber In, Out	A2000210	2	
317	Rubber Plug	571767	4	
318	Rubber Plug	B400W270	2	
319	Rubber Plug	A2202550	2	
320	Rubber Plug	572390	4	
321	Socket Bolt	575468	4	
322	Hex Bolt	056242	4	
323	Spring Washer	840235	14	
324	Hex Bolt	658265	10	
325	Rubber (Plug)	573150	1	
326	Bolt	---	---	Items 326,327,328,335 Refer to Section 7
327	Nut	---	---	
328	Flat Washer	---	---	
332.1	Block W.A	A2005110-08	1	²⁾ Change – interchangeable only as a set
332.2		A2005110-09		²⁾ Change – interchangeable only as a set
333	Top Plate Assembly	A2002370	1	
334	Top Wearing Plate	A2002380	1	
335	Spring Washer	---	---	Items 326,327,328,335 Refer to Section 7
336	Rubber (Plug)	A2000270	1	
337	Tap Block	A2005260	2	
338	Rubber Plug	572959	4	

¹⁾ Dimension change to wear plates – Full interchangeability old-to-new is preserved. Part numbers unchanged

4.2 Breaker Assembly

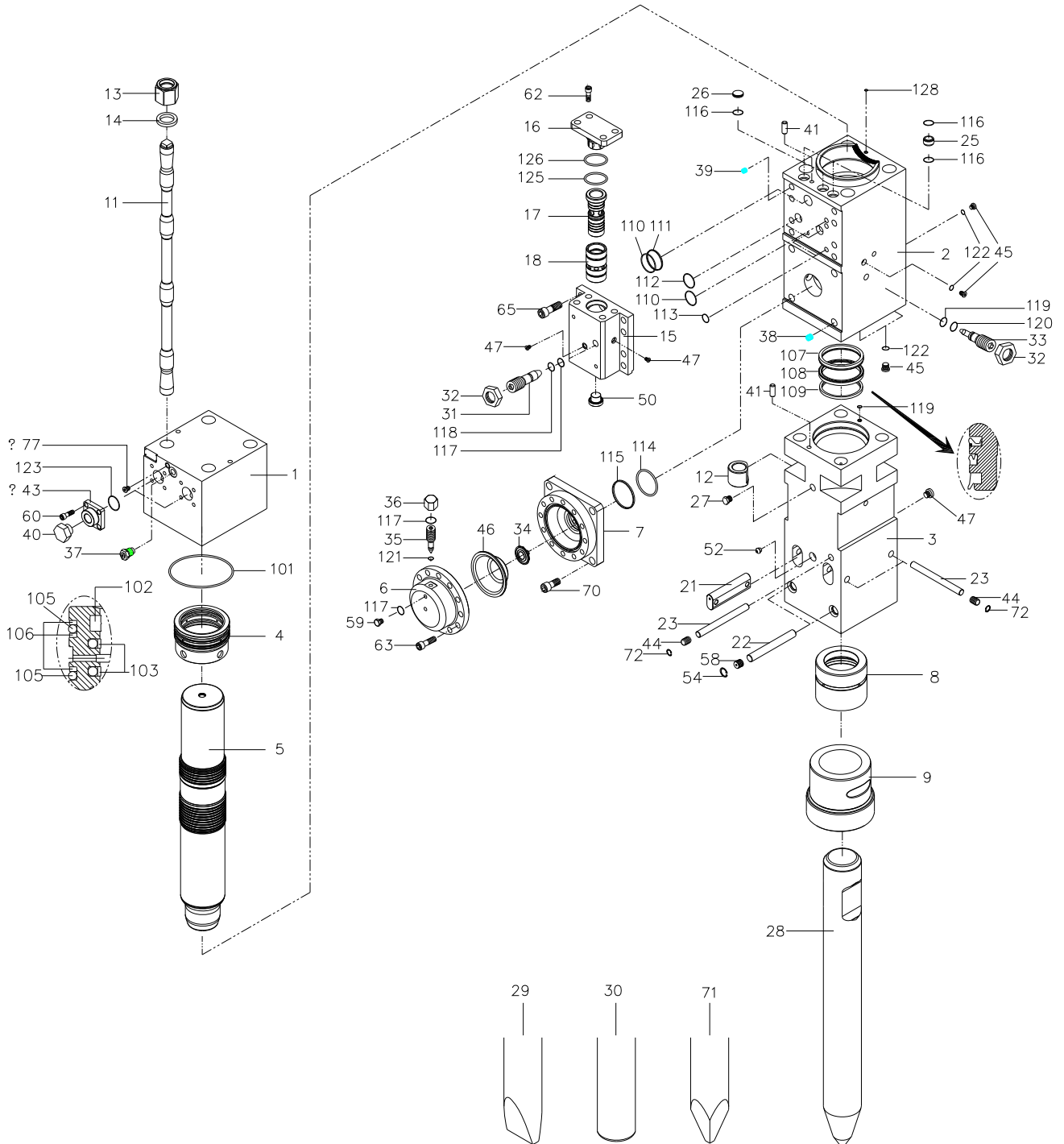


Fig. 4-2

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	A2006740	1	
2	Cylinder	A2206110	1	
3	Front Head	A2206120	1	
4	Seal Housing	A2206040	1	
5	Piston	A2206050	1	
6	Accumulator Cover	A2006061	1	
7	Accumulator Bottom	A2006830	1	
8	Upper Bushing	A2206080	1	
9	Tool Bushing	A2206130	1	
11	Side Rod	A2006110	4	
12	Nut - Side Rod Lower	A2006330	4	
13	Nut - Side Rod Upper	A2006130	4	
14	Washer - Side Rod	A2006140	4	
15	Valve Block	A2006150	1	
16	Valve Cover	A2006320	1	
17	Spool Guide	A2006170	1	
18	Valve Spool	A2006180	1	
21	Tool Pin	A2006240	2	
22	Bushing Pin	A2006220	2	
23	Upper Bushing Pin	A2006230	3	
25	Connection Bush	A2006250	2	
26	Plug Bush	A2006260	1	
27	Socket Plug	A0606180	1	
28	Tool Selection	Varies	---	Items 28,29,30,71 Refer to Section 5
31	Adjust Bolt 1	A2006310	1	
32	Adjust Nut	A3006320	2	
33	Adjust Bolt 2	A3006330	1	
34	Acc. Inner Valve Ass'y	A3006340	1	
35	Gas Charging Bolt	A3006350	1	
36	Gas Charging Cap	A3006360	1	
37	Gas Charging Valve	A3006590	1	
38	Heli - Coil	A3006380	4	
39	Heli - Coil	A3006390	8	
40	See Section 4.5	---	---	Item 40 Refer to Section 4.5

4.2 Breaker Assembly

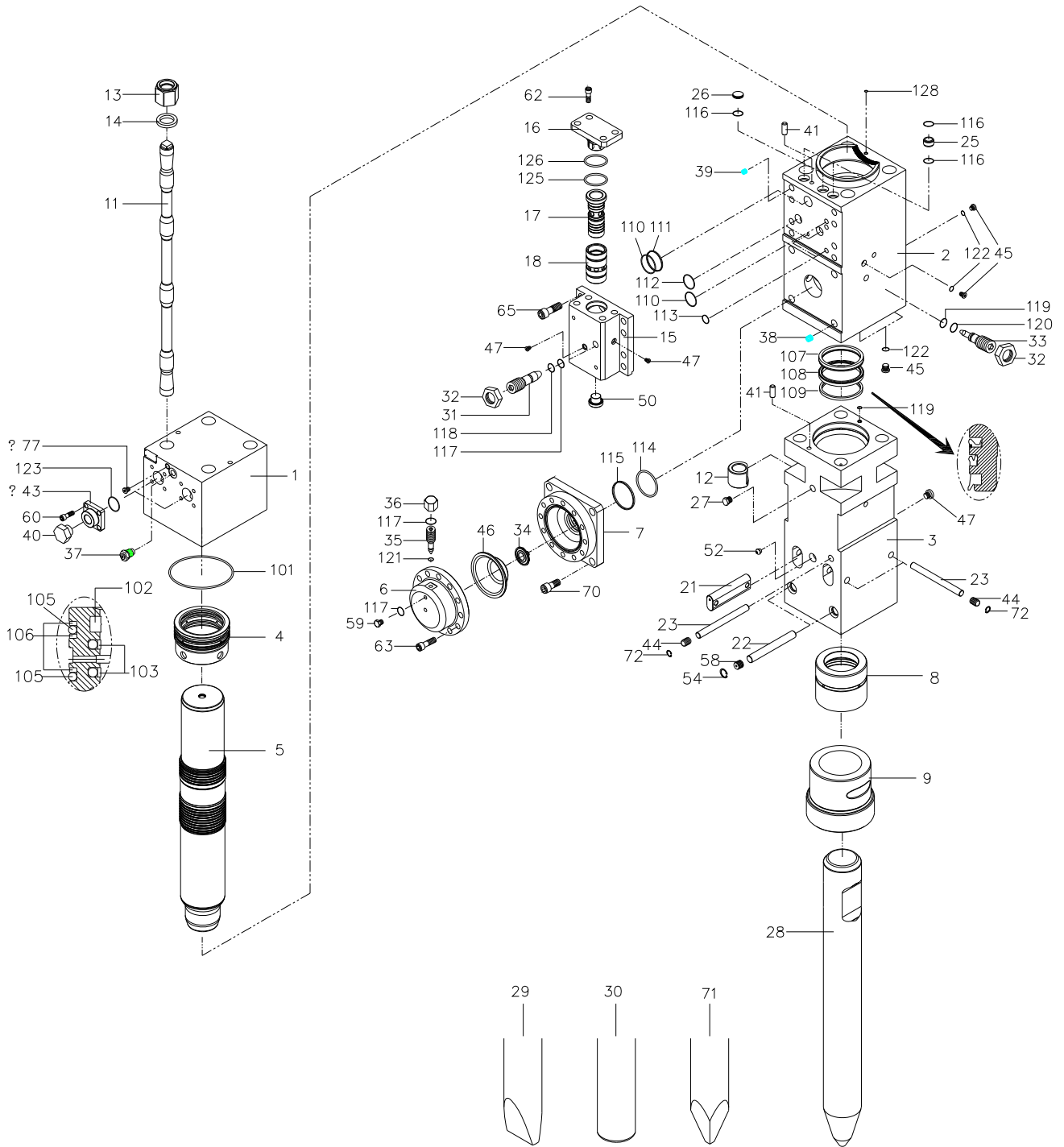


Fig. 4-2

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>
41	Guide Pin	A2006360	2	
43	Flange	A2006430	2	
44	Rubber Plug	676243	3	
45	Socket Plug	A2006450	4	
46	Membrane	A2006460	1	
47	Socket Plug	676159	3	
50	Hex Socket Plug	571708	1	
52	Grease Nipple	816675	1	
54	Snap Ring	570072	2	
58	Rubber Plug	102412	2	
59	Head Bolt	A2006510	1	
60	Bolt	SB1415035	8	
62	Bolt	676218	4	
63	Bolt	667625	12	
65	Bolt	SB2025055	8	
70	Bolt	900009	4	
72	Snap Ring	B1006440	3	
77	Socket Plug	573577	1	
78	Nipple	A2007230	1	
79	Adapter	BHSSG101	1	
101	O-Ring	572387	1	
102	Gas Seal	A2007010	1	
103	Seal Set	A2007020	2	Set Includes O-ring & Step Seal (each 1x)
104	O-Ring	A2007220	1	
105	O-Ring	A2007040	2	
106	Backup Ring	A2007050	3	
107	Buffer Ring	A2107250	1	
108	U - Packing	A2107260	1	
109	Wiper	A2107270	1	
110	O-Ring	101781	2	
111	Backup Ring	A2007090	1	
112	O-Ring	571815	2	
113	O-Ring	A2007110	2	
114	O-Ring	A3007200	1	

4.2 Breaker Assembly

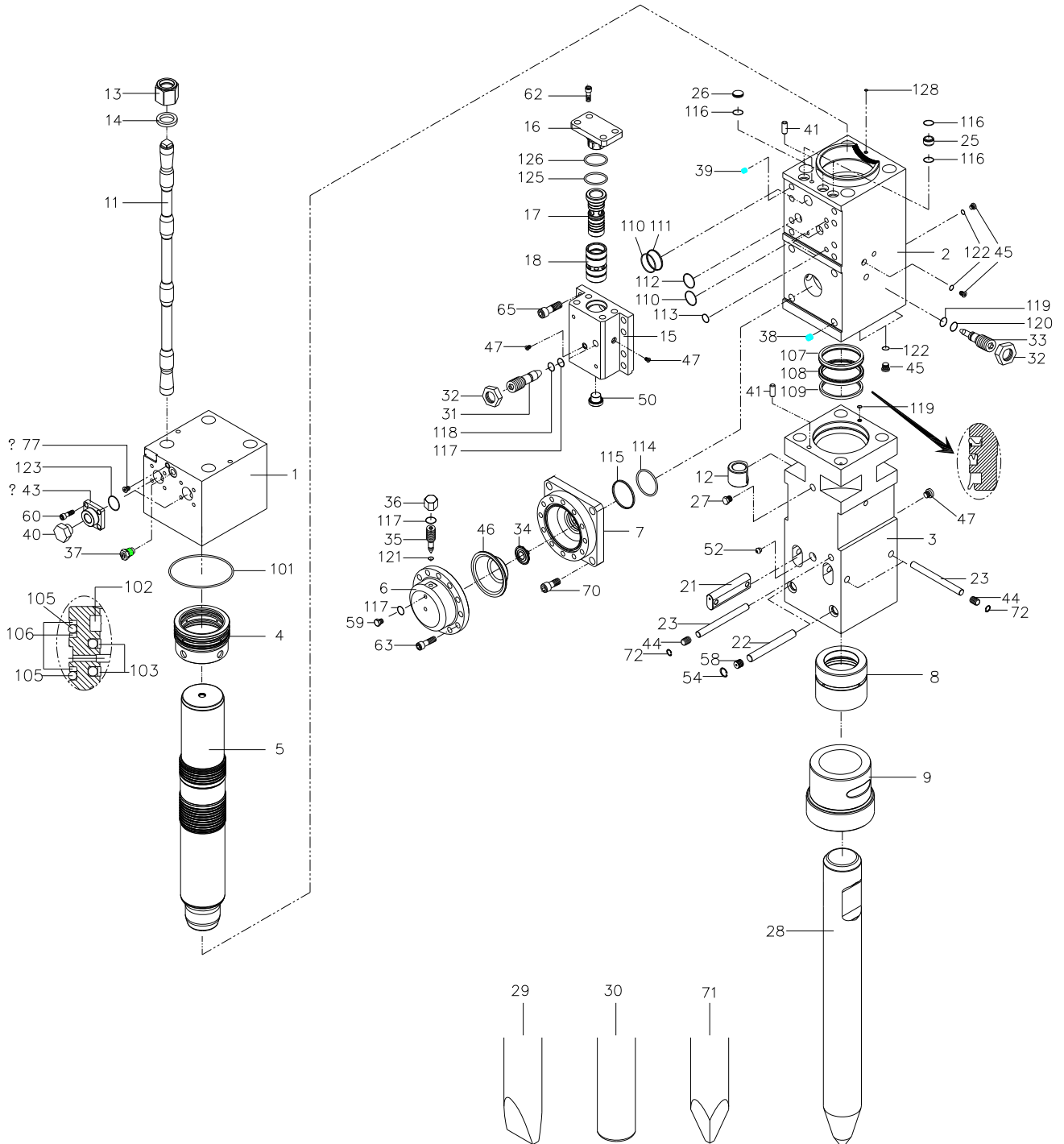


Fig. 4-2

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>
115	Backup Ring	A3007130	1	
116	O-Ring	A2007140	5	
117	O-Ring	B1807310	3	
118	Backup Ring	A3007160	1	
119	O-Ring	A3007170	2	
120	Backup Ring	A3007180	1	
121	O-Ring	A3007190	1	
122	O-Ring	A2007150	4	
123	O-Ring	B6007330	2	
125	O-Ring	B4007200	1	
126	Backup Ring	B6007360	1	
128	O-Ring	A2007220	1	

4.3 Hydraulic Connections

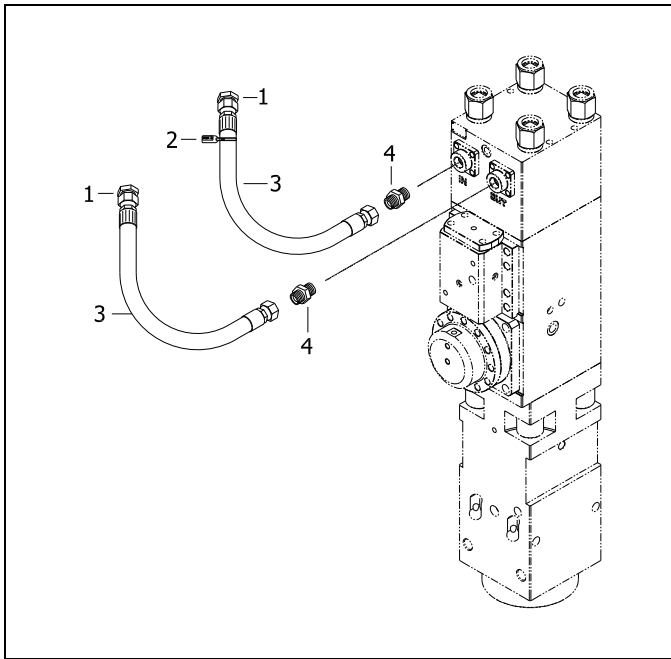


Fig. 4-3 Hydraulic Connections At Breaker

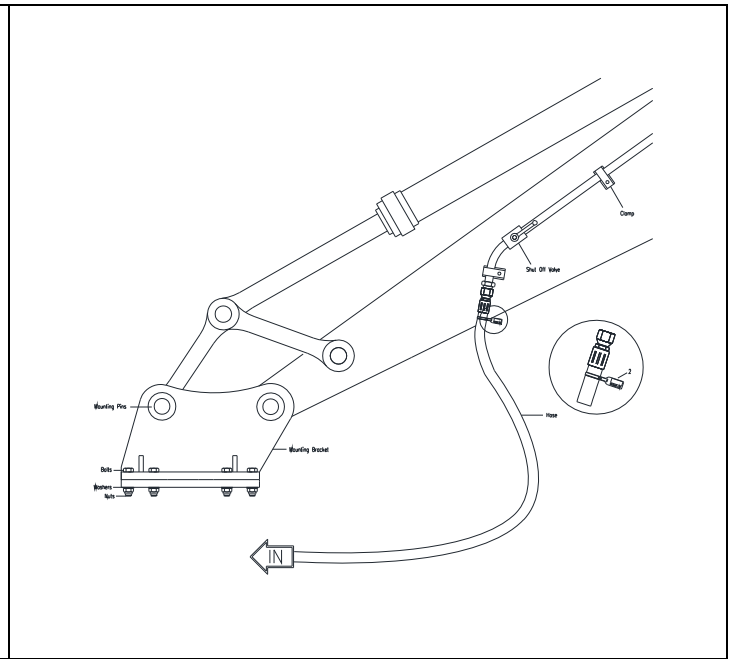


Fig. 4-4 Hydraulic Connections To Carrier - Typical

Table 4.3

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
1	Plug	814454	2	
2	Pressure "IN" ID Tag	818676	1	Identifies the oil supply line "IN"
3	Hose	676124	2	
4	Adapter	667327	2	

4.4 Tools - Standard and Specialty

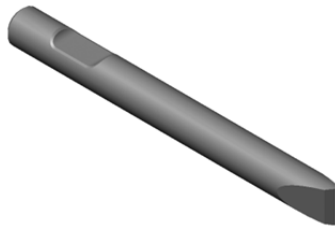
4.4.1 Standard Tools

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

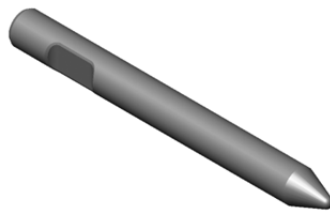
A. Chisel (Wedge – Cross Cut or In-Line) – Suitable applications include soft rock and general demolition of concrete. The tool penetrates into the material, forcing it to separate. Useful when cutting action is required, e.g. benching and trenching.

B. Conical Point – 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.

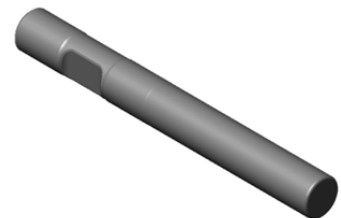
C. Blunt Tool – Designed for impact breaking. The blunt tool is effective in secondary breaking of oversize rock or boulder reduction.



A



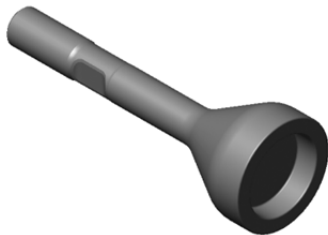
B



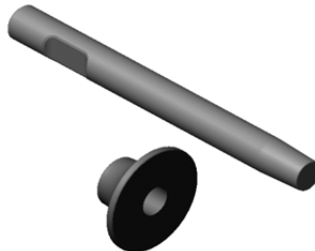
C

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

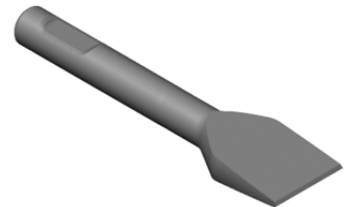
4.4.2 Specialty Tools



D*



E*



F* & G*

Fig 4-6 Specialty Tool Types D thru G.

Specialty tools have a specific purpose or function designed into each tool. These tools can extend the versatility of a breaker, 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 are shown. Actual tool design may vary.

*Not available for all models.

For availability of tool types not listed, contact Allied.

4.4 Tool Selection Guide - Standard & Specialty

Table 4.4

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>TD³⁾ in. x WL⁴⁾ in. [mm]</u>	<u>Weight – lbs. [kg]</u>
28-B	Conical Point	575388	5.5 [140] x 29 [740]	288.5 [131]
29-A¹	Chisel Cross Cut	575268	5.5 [140] x 29 [740]	295 [134]
---	Chisel In-Line	--- ²⁾	---	---
30-C	Blunt End	575398	5.5 [140] x 27.7 [705]	302 [137]
71 ²⁾	Pyramid (Not Pictured)	--- ²⁾	5.5 [140] x 29 [740]	286 [130]

¹⁾ Denotes standard tool supplied with breaker

²⁾ For availability of tool types not listed, contact Allied

³⁾ TD - Tool Diameter

⁴⁾ WL - Working Length

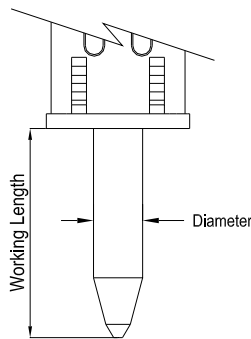


Fig. 4-6 TD & WL

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 Ordering Information

Table 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 typically need to be replaced at the same time into a single package.

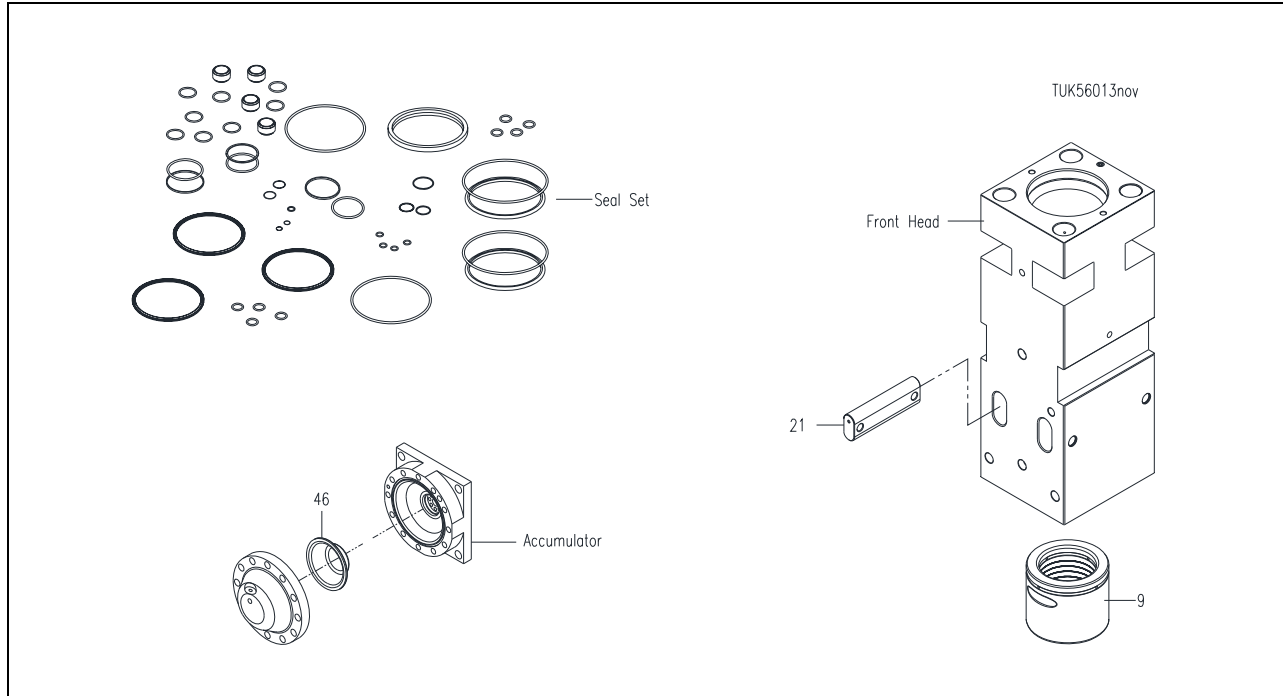


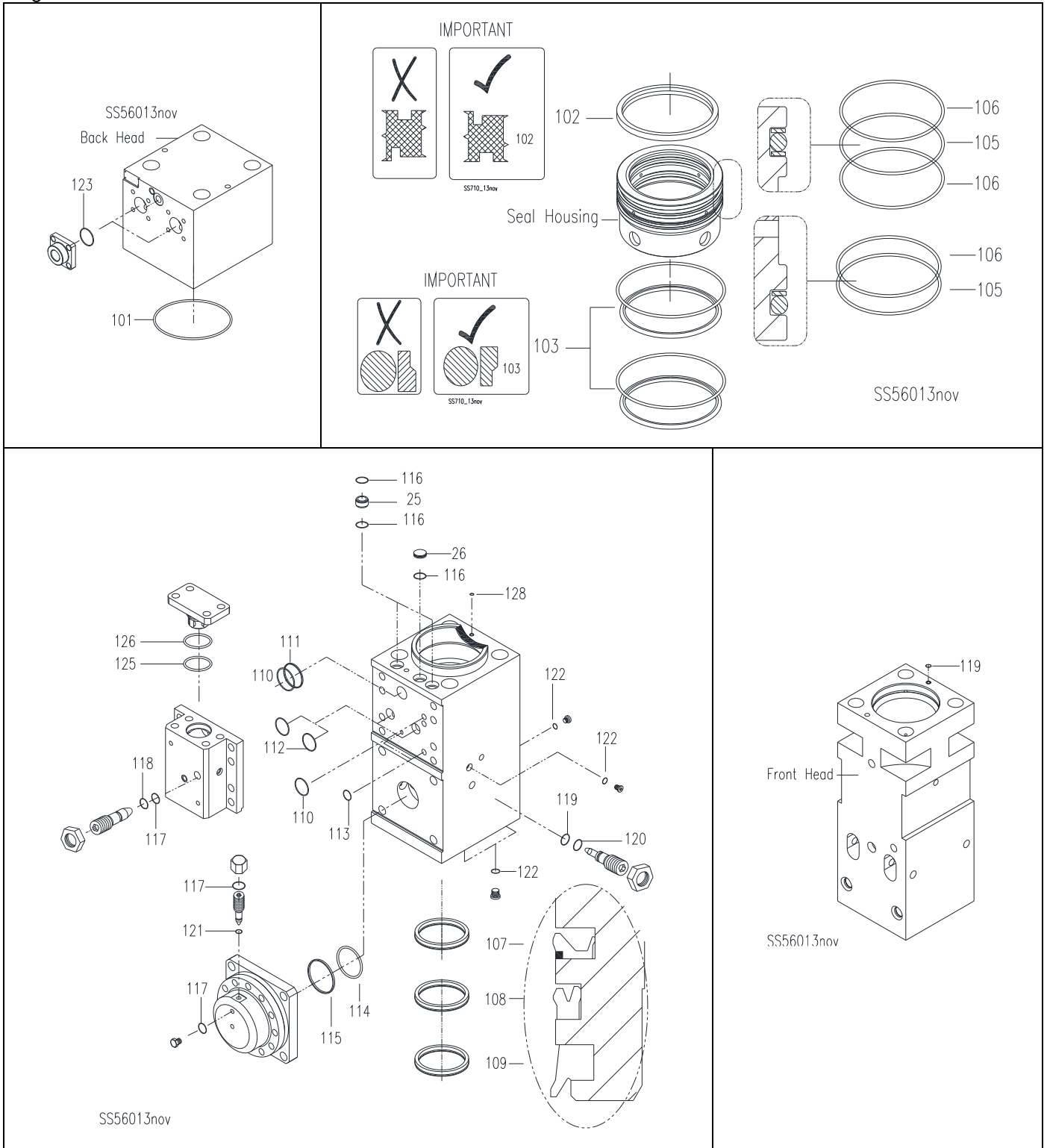
Fig. 5-1 Tune-up Kit

Table 5.1

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
---	Tune-up Kit	575409	1	Kit includes all items listed in Table 5.1
---	Seal Set	575419	1	
9	Lower Tool Bushing	A2206130	1	
21	Tool Retainer	A2006240	2	
46	Membrane	A2006460	1	

5.0 Service Kits and Tools

Fig. 5-2 Seal Positions - 575419



Follow Assembly Instructions

5.0 Service Kits and Tools – [cont'd]

Table 5.2 Seal Set

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
---	Seal Set	575419	1	Includes all items in Table 5.2
25	Connection Bush	A2006250	2	
26	Plug Bush	A2006260	1	
101	O-Ring	572387	1	
102	Gas Seal	A2007010	1	
103	Seal Set	A2007020	2	Each set includes O-ring & Step Seal (1 each)
104	O-Ring	A2007220	1	
105	O-Ring	A2007040	2	
106	Backup Ring	A2007050	3	
107	Buffer Ring	A2107250	1	
108	U - Packing	A2107260	1	
109	Wiper	A2107270	1	
110	O-Ring	101781	2	
111	Backup Ring	A2007090	1	
112	O-Ring	571815	2	
113	O-Ring	A2007110	2	
114	O-Ring	A3007200	1	
115	Backup Ring	A3007130	1	
116	O-Ring	A2007140	5	
117	O-Ring	B1807310	3	
118	Backup Ring	A3007160	1	
119	O-Ring	A3007170	2	
120	Backup Ring	A3007180	1	
121	O-Ring	A3007190	1	
122	O-Ring	A2007150	4	
123	O-Ring	B6007330	2	
125	O-Ring	B4007200	1	
126	Backup Ring	B6007360	1	
128	O-Ring	A2007220	1	
---	Thread Lube	676927	1	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

Apply thread lube included in seal set to threads of side rods at assembly. *DO NOT apply Thread Lube to seals!*

5.0 Service Kits and Tools

5.3 N2 Gas Charge Tool - General Description

Designed for use with all Hy-Ram models, the charge kit adapts to both the back head and accumulator¹⁾. Periodic checking of the back head pressure will detect whether it is sufficiently charged. Proper function of the breaker is accomplished through accurate charging.

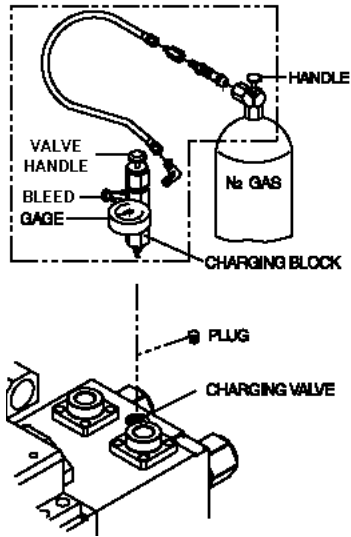


Fig. 5-3 Back Head Charge

The accumulator¹⁾ 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 the upper chamber. Reliable operation of the breaker along with optimal membrane life is accomplished through proper filling of the charge pressure.

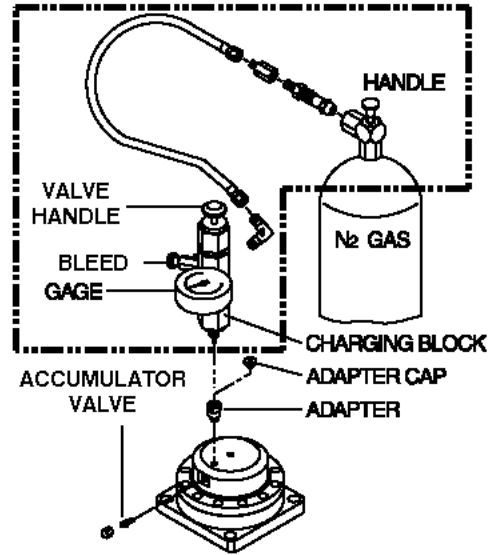


Fig. 5-4 Accumulator Charge

Table 5.3 N2 Gas Charge Tool

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

¹⁾ Not all Hy-Ram models are equipped with an accumulator

6.0 Mounting Information

6.1 Mounting Bracket - Option

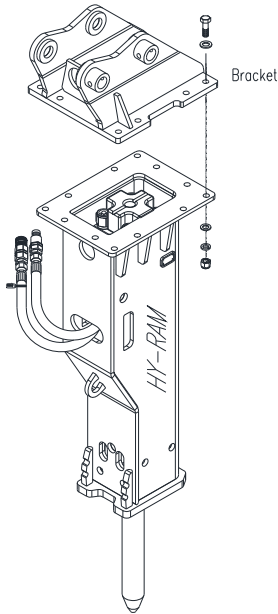


Fig. 6-1 Housing Box, Mounting Bracket & Bolt Set

Hy-Ram series breakers come without mounting. Installation of a mounting bracket (sold separately) is required before the Breaker can be attached to a carrier. Allied offers an array of bolt-on mounting brackets to fit virtually any carrier, including those equipped with pin-grab or hook-type quick mounting couplers.

To order a mounting bracket, complete information about the carrier (and coupler) is required: including the make, model, series and serial number.

6.2 Connection Plate

The mounting bracket is bolted to the connection plate located at the upper end of the housing box. Dimensions of the connection plate, including thickness, spacing, quantity and diameter of the bolt holes, will vary between small, medium and large size breakers. Dimensions for the connection plate are found in the Safety, Operation & Maintenance Manual.

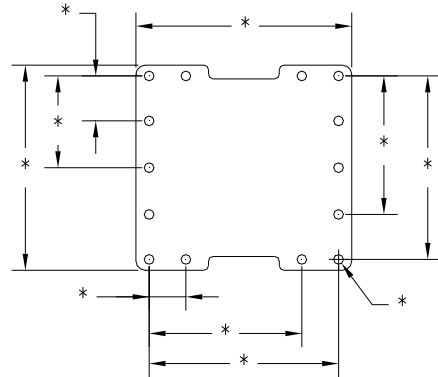


Fig. 6-2 Connection Plate - Dimensions Vary

In Table 6.1, the mounting 'Family' designates a sizing system used by Allied to identify a given connection plate. Other Allied work tools, including the Ho-Pac[®], utilize these same mounting Families.

Figures and descriptions represent standard configurations. Tables and figures are common to all serial numbers except where noted.

Table 6.1 Mounting Family & Hardware (QTY)

Family	Model	Bolt	FL Washer	LK Washer	Nut
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 HR560
 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

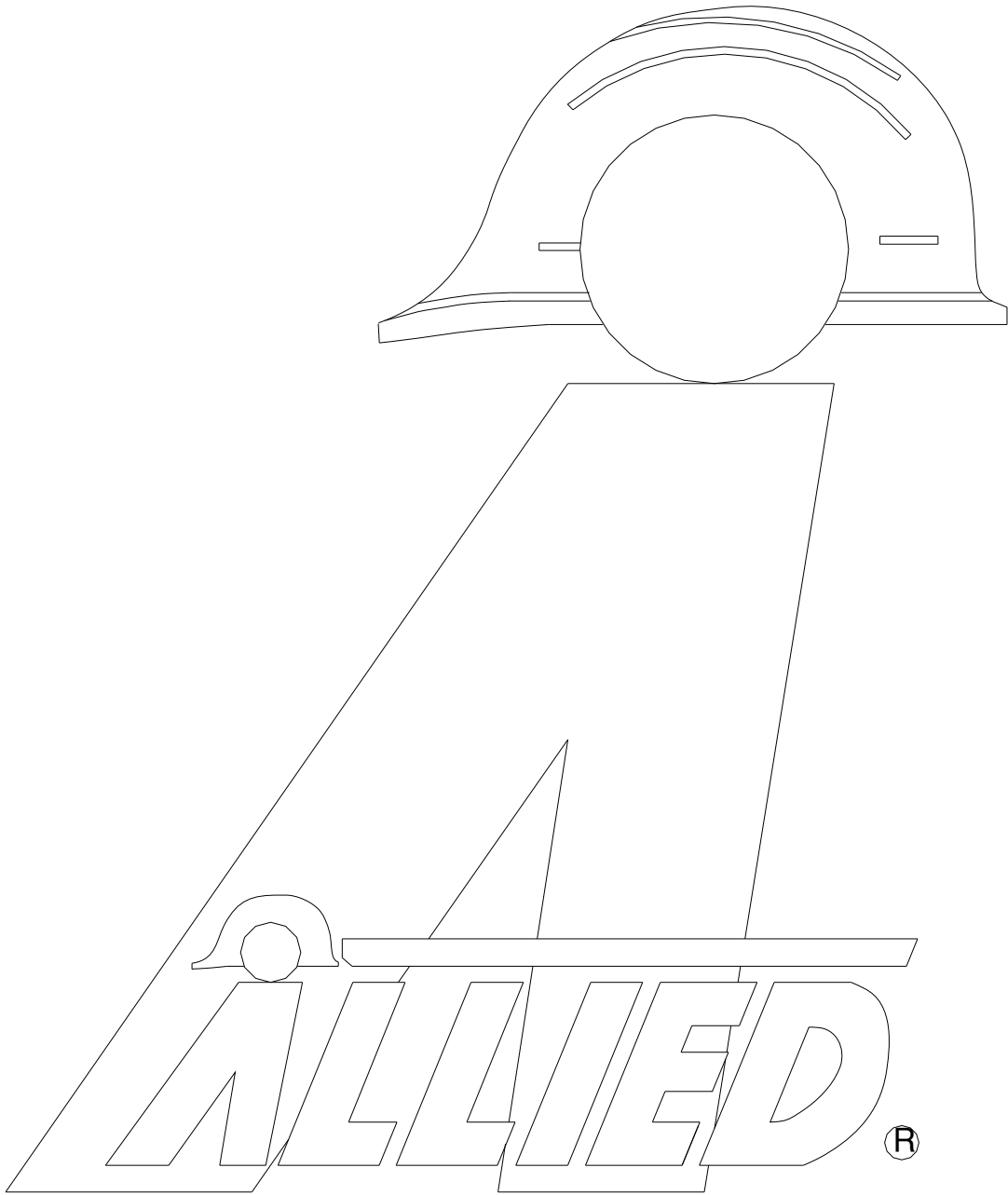
Your Name _____ Company Name _____
 Phone _____ Account Number _____
 Fax _____ Purchase order _____
 Email _____ Shipping carrier _____

*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



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