

Hy-Ram

**Hydraulic
Impact
Breaker**

**Model
HR390**



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.



PM575475

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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 for Parts Manual 575475

<u>Effective Date</u>	<u>Page</u>	<u>Summary of Change</u>
2014_Sep	6,20	Revise Table 3.2 Item 7 removed-use is discontinued. Table 6.1 XR bolt change to 577485 (was 90566).
2013_Jun	8,12,17	Table 4.1, 4.2 revise part numbers. Table 4.1, items 304,305,306,307 add note: Dimension change – old / new fully interchangeable. Fig. 6-2 clarify profiles of seals.
2011_Sep	11,13	Part number change - new (former) 101330 (A1207010), 676257 (A2007120), 676204 (A2007110)
2011_Aug	19	Revise Table 7.1
2011_Jun	---	Original issue of PM575475_11jun

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1.0 Introduction & Scope

1.1 Purpose of This Manual

Table 1.1 About This Manual



Document ID.	PM575475
Type	Spare / Replacement Parts List
Current Status	See Inside Cover
Product Name:	Hydraulic Breaker
Series	Hy-Ram®
Applicable Model[s]:	HR390
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

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

SOM575469 For use with Models: HR330 thru HR390

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.

Content included in the Safety, Operation & Maintenance Manual:

- Safety Information
- Equipment Identification
- Installation and Set-up
- Pre-Operation Inspection
- How to Operate the Equipment
- Maintenance Schedule
- Lubrication
- N2 Gas Charging Instructions
- Tool and Guide Bushing – Inspection / Changing
- Troubleshooting
- Transporting, Removal, Lifting, & Storage
- Technical Data (Weight & General Dimensions)

1.0 Introduction and Scope – [cont'd]

1.3.2 Related Publications – cont'd

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

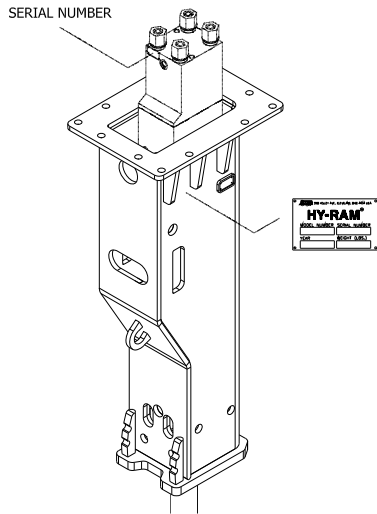


Fig 2-1 Equipment Identification

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

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

2.2 Equipment Identification Tag

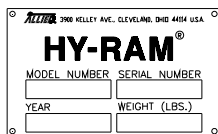


Fig 2-2 Equipment Identification Tag

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

- Allied Name and Address
- Product name – HY-RAM®
- 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 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.

Product Name: Hydraulic Breaker

Series: Hy-Ram

Model: HR390

Part Number: 575276

Serial Number: _____

In Service Date: _____

Registration Date: _____

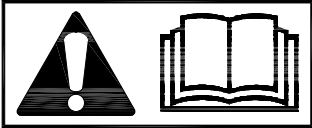

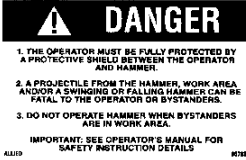
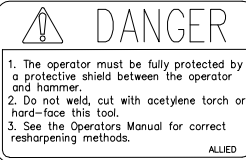

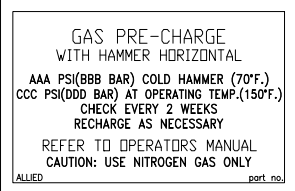
3.0 Safety, Information & Identification Labels

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 product identification and instructions important to operation and service.

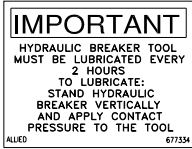
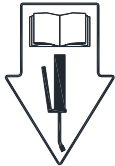
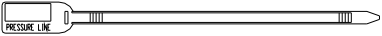


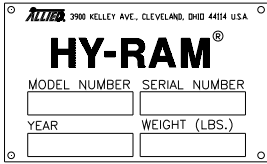
Keep labels clean so that words and illustrations are legible. Replace damaged or missing labels before operating this equipment. Refer to Table 3.1 for ordering information. Refer to Figure 3-15 for the position of the label on the equipment.

Table 3.1 Identification of Safety and Information Labels – cont'd

Figure	Label	Description
3-1		READ THE MANUAL – Safety Alert Symbol with pictogram of open book. It is important to read and understand information and follow instructions contained in the manual.
3-2		STAY CLEAR – Decal alerts personnel and by-standers to maintain a safe distance from the Breaker during operation.
3-3		FLYING DEBRIS – 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. NOTE: Place the smaller size decal in a conspicuous location inside the operator's cab.
3-4		TOOL SHARPENING – Decal warns against welding, cutting, or hard-facing the tool. It directs personnel to the Safety, Operation and Maintenance Manual for approved sharpening methods.
3-5		Pressurized Nitrogen Accumulator – Alerts personnel to the accumulator, warning of nitrogen gas under pressure. Directs personnel to the Safety Operation and Maintenance Manual for service instructions.
3-6		GAS PRE-CHARGE – Decal outlines measuring / charging the back head. Alerts personnel to the following – <ul style="list-style-type: none"> • Maintenance interval – every 2 weeks • Proper position when measured / charged • Charge pressure when COLD vs. HOT • Refers personnel to the Operation and Maintenance Manual • Cautions personnel to use N2 nitrogen gas only
3-7	REMOVED	

3.0 Safety, Information & Identification Labels

Table 3.1 Identification of Safety and Information Labels – cont’d

Figure	Label	Description
3-8		LUBRICATION – Decal identifies the lubrication point, frequency and importance of proper positioning with contact pressure applied to tool before lubricating. Risk of equipment damage if instructions are not followed.
3-9		Lubrication Point – Decal identifies lubrication points. Refer to the manual(s) for grease type, re-lubrication schedules and procedures.
3-10		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.
3-11		LIFT POINT – Decal identifies approved lift points.
3-12		ALLIED LOGO – This decal is the Allied brand identifier and is a registered trademark of Allied Construction Products, LLC.
3-13	HR390	MODEL – Model designation decal
3-14		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]

Table 3.2 Safety and Information Labels

Item	Description	Part No.	Qty	Remarks / Specifications
---	Label Set	575482	1-Set	Set includes 1-13
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	REMOVED	N/A	---	Use Discontinued
8	Lube w/ Tool In	677334	1	
9	Lube Point	A101725	1	
10	Pressure ID Tag	818676	1	Identifies the oil supply line "IN"
11	Lift Point	676982	1	
12	Allied	676655	1	
13	Model HR390	575495	1	
14	Equipment ID Tag	658833	1	Item 14 is not included in Set

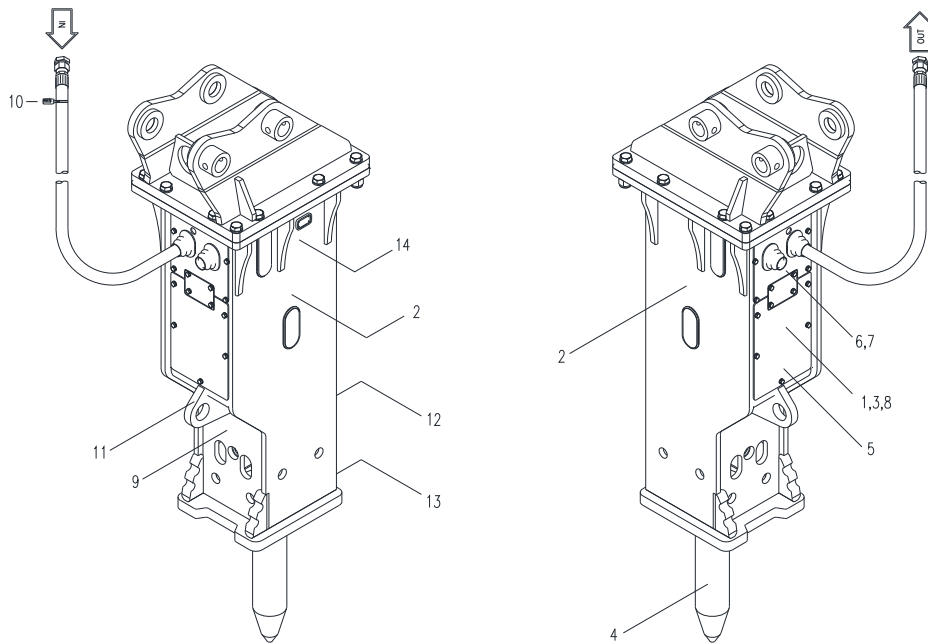


Fig. 3-15 Label Positions

4.1 Housing Box & Components

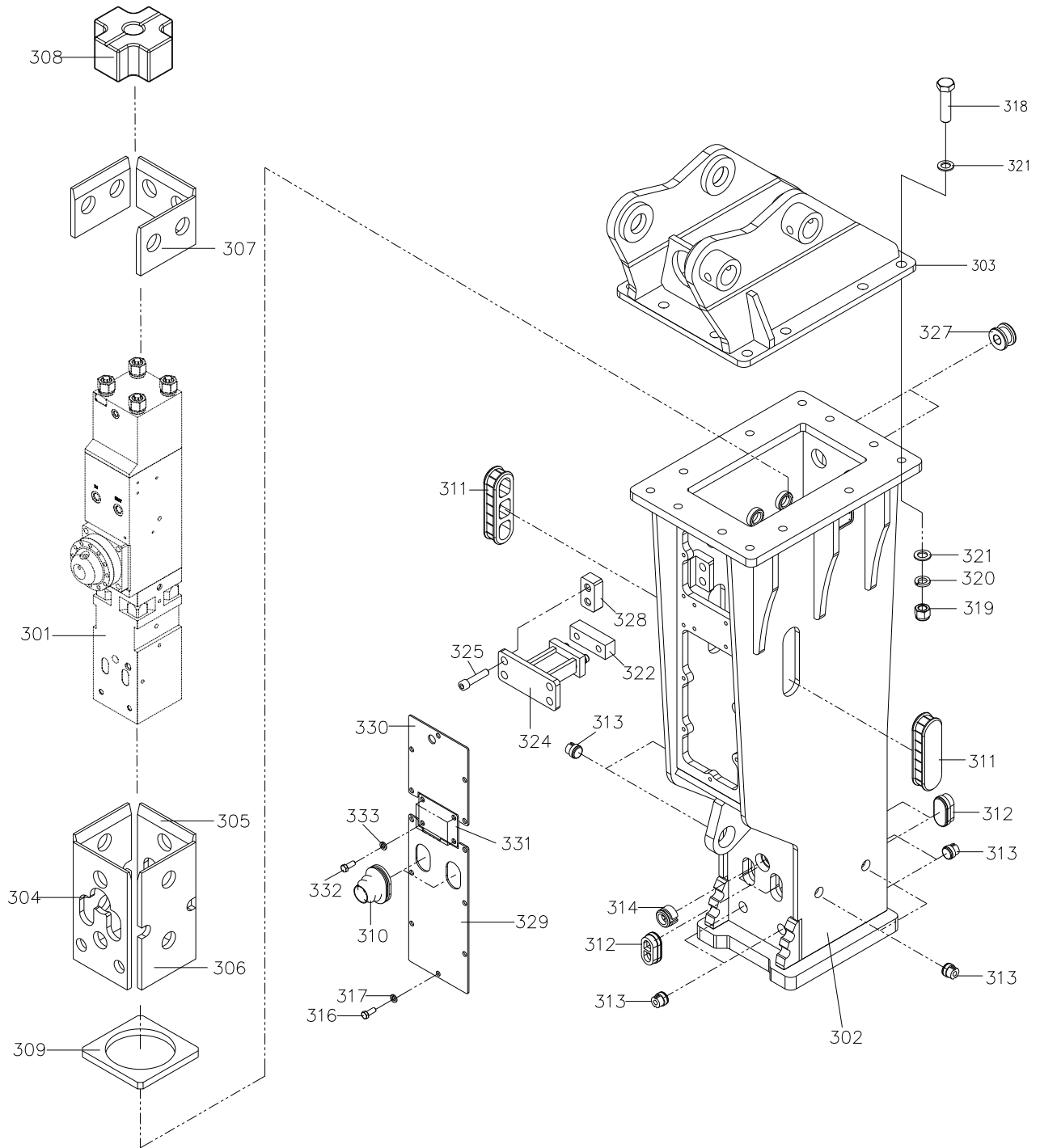


Fig. 4-1 Housing Box & Components

4.1 Housing Box & Components

Table 4.1 Housing Box & Components

Item	Description	Part No.	Qty	Remarks / Specifications
---	HY-RAM HR390	575276	1	Standard Configuration - SR w/o Bracket #303
301	Breaker Assembly	---	1	Refer to Figure 4-2
302	Box Housing	575550	1	Standard Mounting Configuration - SR
303	Mounting Bracket - SR	Varies	---	Not Included. Order Separately. Section 6
304	Wear Plate	A1202020	1	¹⁾ Dimension change – old / new interchangeable
305	Wear Plate	A1202030	1	¹⁾ Dimension change – old / new interchangeable
306	Wear Plate	A1202040	2	¹⁾ Dimension change – old / new interchangeable
307	Wear Plate	A1202050	3	¹⁾ Dimension change – old / new interchangeable
308	Top Buffer	A1206230	1	
309	Base Buffer	A1200190	1	
310	Rubber (In, Out)	A1200200	2	
311	Rubber Plug	A2202550	2	
312	Rubber Plug	A1201160	4	
313	Rubber Plug	A1201170	8	
314	Rubber Plug	575360	1	
316	Bolt	900023	16	
317	Spring Washer	840235	16	
318	Bolt	---	---	For Items 318,319,320,321 Refer to Section 6
319	Nut	---	---	
320	Washer	---	---	
321	Washer	---	---	
322	Side Buffer	A1201600	1	
324	Block W.A	A1202820	1	
325	Socket Bolt	577440	4	
327	Rubber Plug	B400W270	2	
328	Tap Block	A1201650	2	
329	Cover Plate	A1202840	1	
330	Cover Plate	A1202850	1	
331	Cover Plate - 3	A3003690	1	
332	Bolt HH	900023	4	M12 X 30
333	Washer	840235	4	M12

¹⁾ Change made to wear plate dimensions – Full interchangeability between old / new. Part numbers unchanged.

4.2 Breaker Assembly

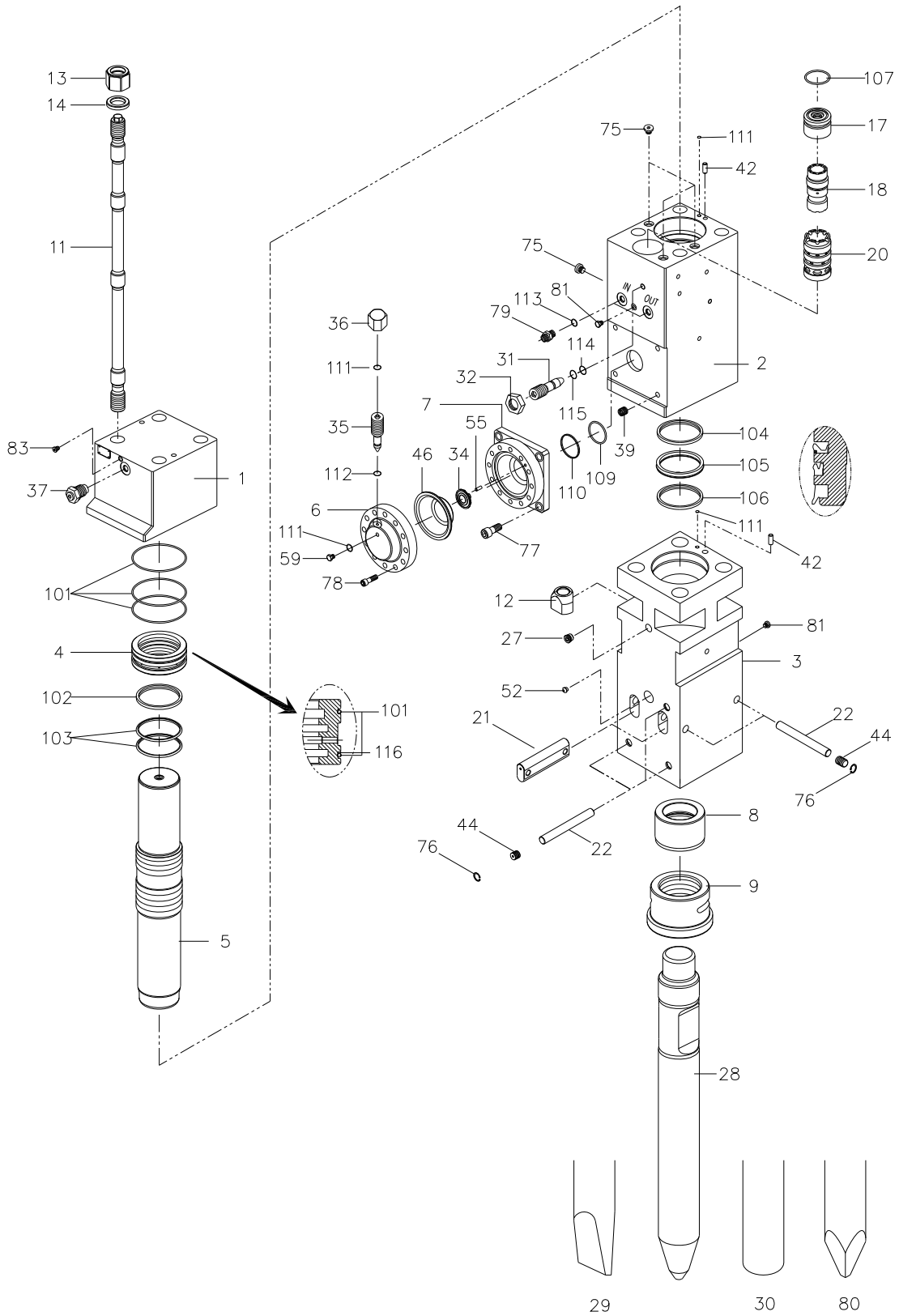


Fig. 4-2 Breaker Assembly

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

Item	Description	Part No.	Qty	Remarks / Specifications
301	Breaker Assembly	---	1	
1	Back Head	A1206010	1	
2	Cylinder	A1206530	1	
3	Front Head	A1206470	1	
4	Seal Housing	A1206100	1	
5	Piston	A1206050	1	
6	Accumulator Cover	A1206060	1	
7	Accumulator Bottom	A1206070	1	
8	Upper Bushing	A1206080	1	
9	Tool Bushing	A1206090-03	1	
11	Side Rod	A1206110	4	
12	Nut - Side Rod Lower	A1206120	4	
13	Nut - Side Rod Upper	A1206130	4	
14	Washer - Side Rod	A1206140	4	
17	Valve Plug	A1206170	1	
20	Valve Guide	A1206200	1	
21	Tool Pin	A1206480-01	2	
22	Bushing Pin	A1206220	5	
27	Socket Plug	676158	1	
28	Tool Selection	Varies	1	Items 28,29,30,80 Refer to Section 4.4
31	Adjust Bolt	A1206330	1	
32	Adjust Nut	HN161500	1	
34	Acc. Inner Valve	A1206340	1	
35	Gas Charging Bolt	A3006350	1	
36	Gas Charging Cap	A3006360	1	
37	Gas Charge Valve	A3006590	1	
39	Heli - Coil	A3006390	4	
42	Guide Pin	A2506420	2	
44	Rubber Plug	A2006440	5	
46	Membrane	676217	1	
52	Grease Nipple	816675	1	

4.2 Breaker Assembly – [cont'd]

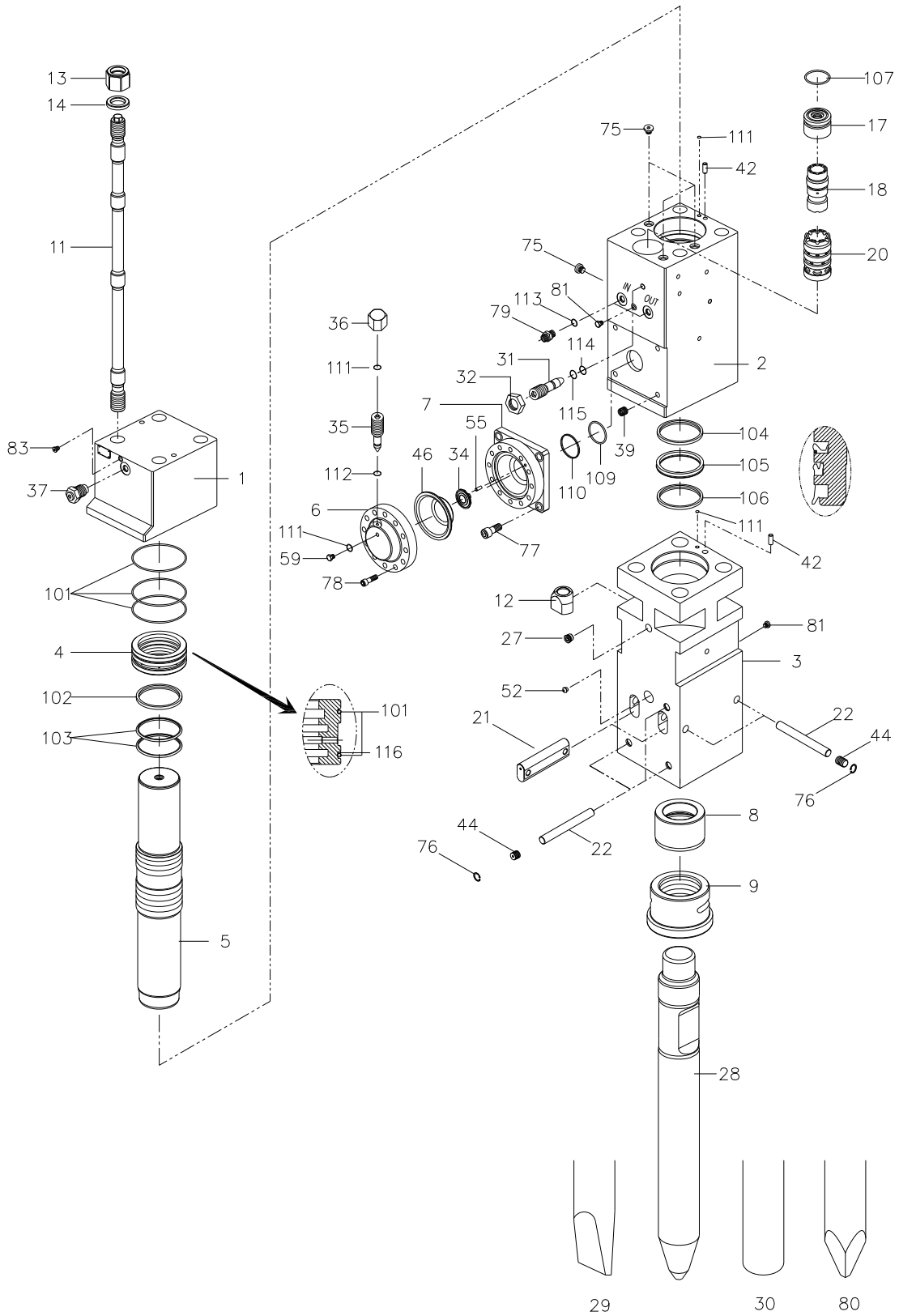


Fig. 4-2 Breaker Assembly

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

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
55	Guide Pin	676183	1	
59	Hex Head Bolt	A2006510	1	
75	Hex Socket Plug	90401	4	
76	Snap Ring	103034	5	
77	Bolt SH	575843	4	M20 X 70
78	Bolt SH	577681	12	M14 X 50
79	Adapter	667710	2	
81	Hex Socket Plug	676159	1	
83	Hex Socket Plug	102241	1	
101	O-Ring	101330	3	
102	Gas Seal	A1207020	1	
103	Step Seal	A1207030	2	Includes O-ring (x2)
104	Buffer Ring	A1207110	1	
105	U-Packing	A1207120	1	
106	Wiper	A1207130	1	
107	O-Ring	A1207070	1	
109	O-Ring	676257	1	
110	Backup Ring	A2007130	1	
111	O-Ring	571820	4	
112	O-Ring	A3007190	1	
113	O-Ring	676204	2	
114	O-Ring	A1206310	1	
115	Backup Ring	A1206320	1	
116	Backup Ring	A1207090	1	

4.3 Hydraulic Connections

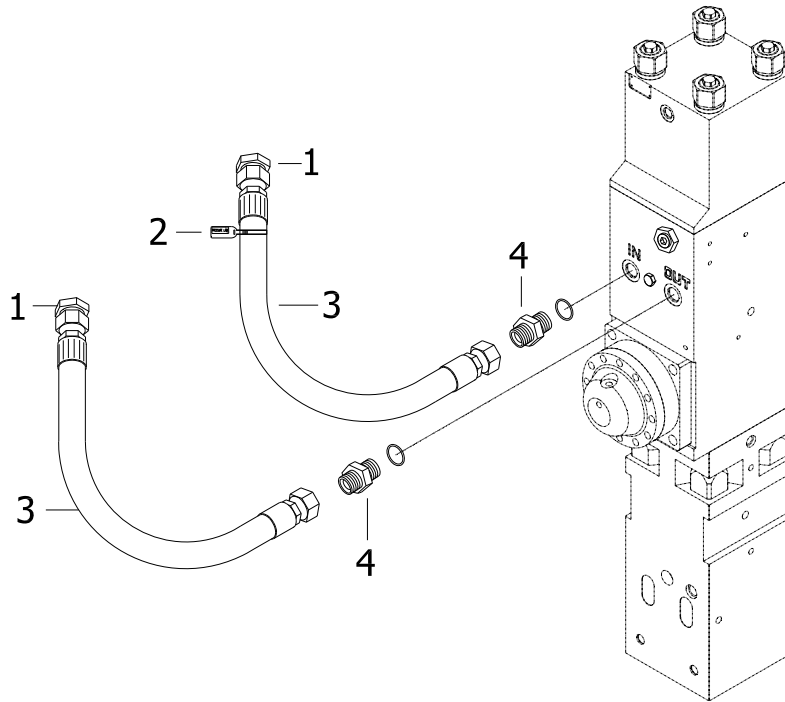


Fig. 4-3 Hydraulic Connections

Table 4.3 Hydraulic Connections

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
1	Plug	814453	2	
2	Pressure "IN" ID Tag	818676	1	Identifies the oil supply line "IN"
3	Hose	657642	2	
4	Adapter	667710	2	

4.4 Tool Selection Guide

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.

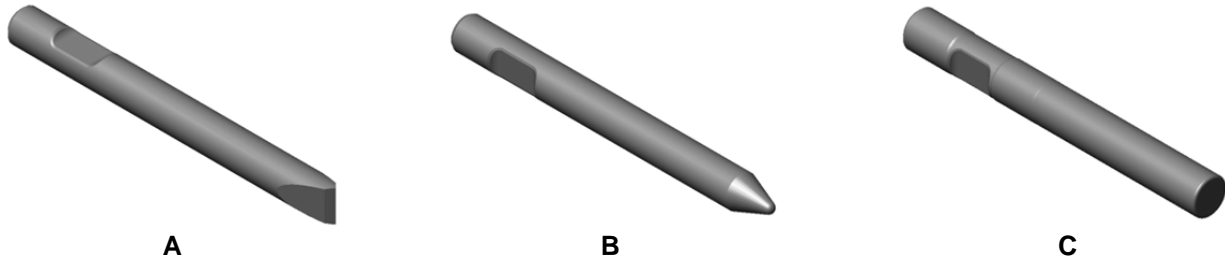


Fig. 4-5 Standard Tool Types A thru C.

4.4.2 Specialty Tools

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. For availability of tool types not listed, contact Allied.

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.

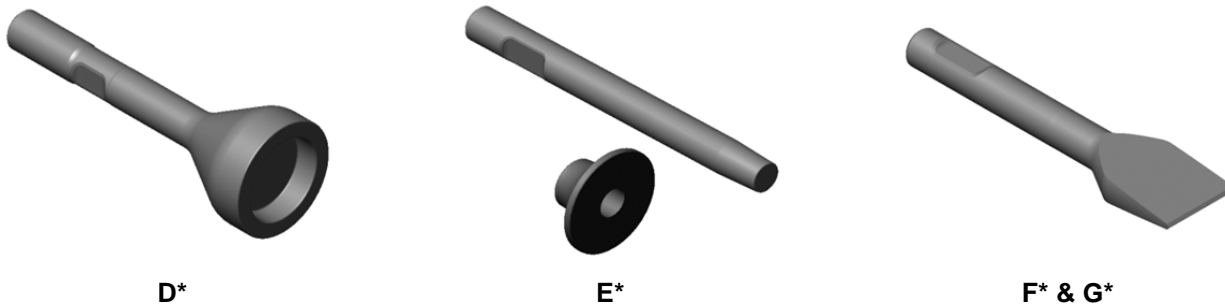


Fig 4-6 Specialty Tool Types D thru G.

General illustrations are shown. Actual tool design may vary.

*Not available for all models.

4.4 Tool Selection Guide – [cont'd]**Table 4.4**

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>TD x WL – in. [mm]</u>	<u>Weight – lbs. [kg.]</u>
28-B	Conical Point	575386	3.86 [98] x 19.4 [493]	110.2 [50]
29-A ¹⁾	Chisel Cross Cut	575266	3.86 in [98] x 19.4 [493]	112.3 [51]
---	Chisel In-Line	--- ²⁾	---	---
30-C	Blunt End	575396	3.86 [98] x 19.4 [493]	116.8 [53]
80 ²⁾	Pyramid (Not Pictured)	--- ²⁾	3.86 [98] x 19.4 [493]	108 [49]

¹⁾ **Standard tool supplied with Breaker in Bold**

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

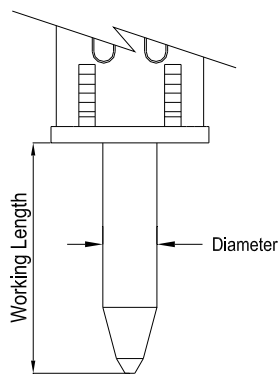


Fig. 4-6 Tool Working Length

4.5 Tool Lubrication**4.5.1 Allied Chisel Paste**

Wear costs money, sometimes lots of money. Without lubrication to prevent metal-to-metal contact, bushings and tools will quickly wear from friction related damage.

A key element in managing wear of the bushing and tool is through the regular use of a high-quality lubricant. Formulated as a 'specialty' lubricant, Allied Chisel Paste is ideally suited for use in applications requiring long-lasting protection against damage from heavy loaded, sliding motion and high heat.

Allied Chisel Paste performs exceptionally well in this application due to its 'unique blend' of liquid and dry film lubricants. Dry film lubricants, which include solids of molybdenum, graphite and copper, combine to form a highly effective layer that resists being squeezed out during periods of heavy loading (extreme pressure).

Grease labeled 'General / Multi-Purpose' will typically contain only modest amounts of solid lubricants or none at all. When the tool is loaded against the

bushing, the liquid lubricant is squeezed out, leaving metal surfaces unprotected.

Chisel Paste Packaging & Ordering Information

Table 4.5

<u>Container</u>	<u>Packaging</u>	<u>Part No.</u>
14.5 oz Tubes*	Qty x 10	574430
14.5 oz Tubes*	Qty x 30	574431
35 lb Bucket	Qty x 1	676698
120 lb 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.

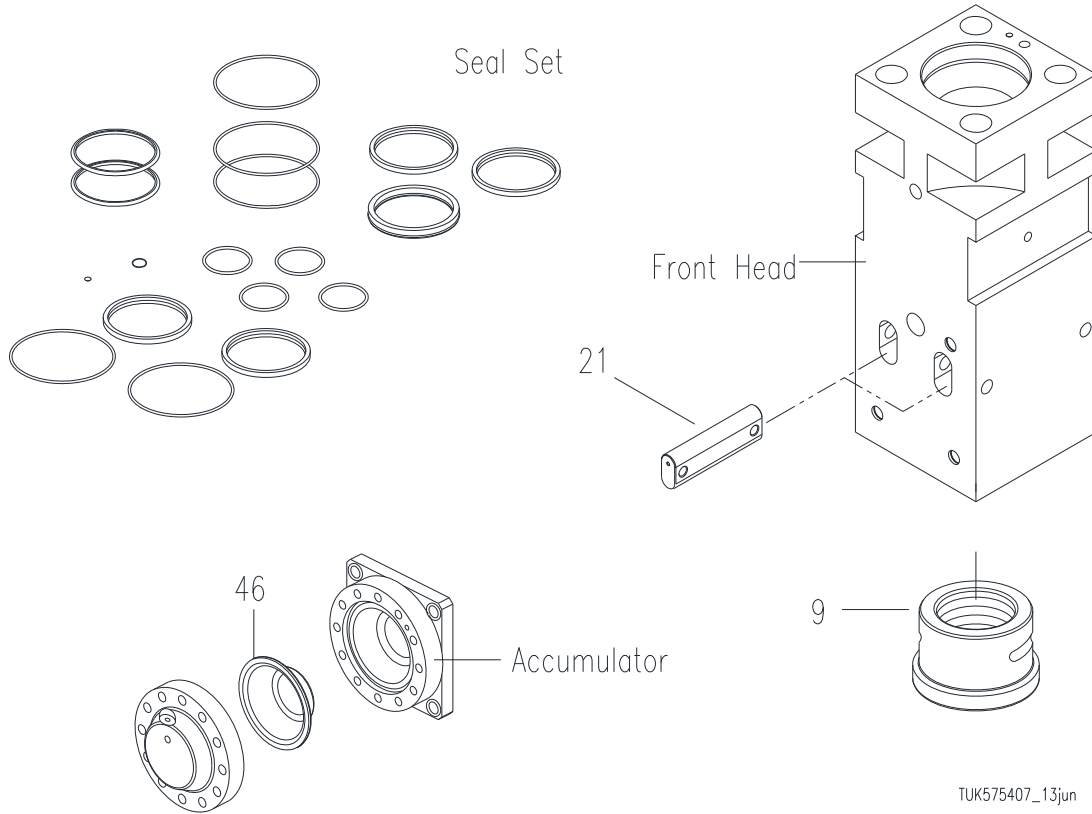


Fig. 5-1 Tune-up Kit

Table 5.1

Item	Part No.	Qty	Remarks / Specifications	
---	Tune-up Kit	575407	1	Kit includes 1,2,3,4
---	Seal Set	575417	1	
9	Lower Bushing	A1206090-03	1	
21	Tool Retainer	A1206480-01	2	
46	Membrane	676217	1	

5.1 Service Kits and Tools – [cont'd]

5.2 Seal Set

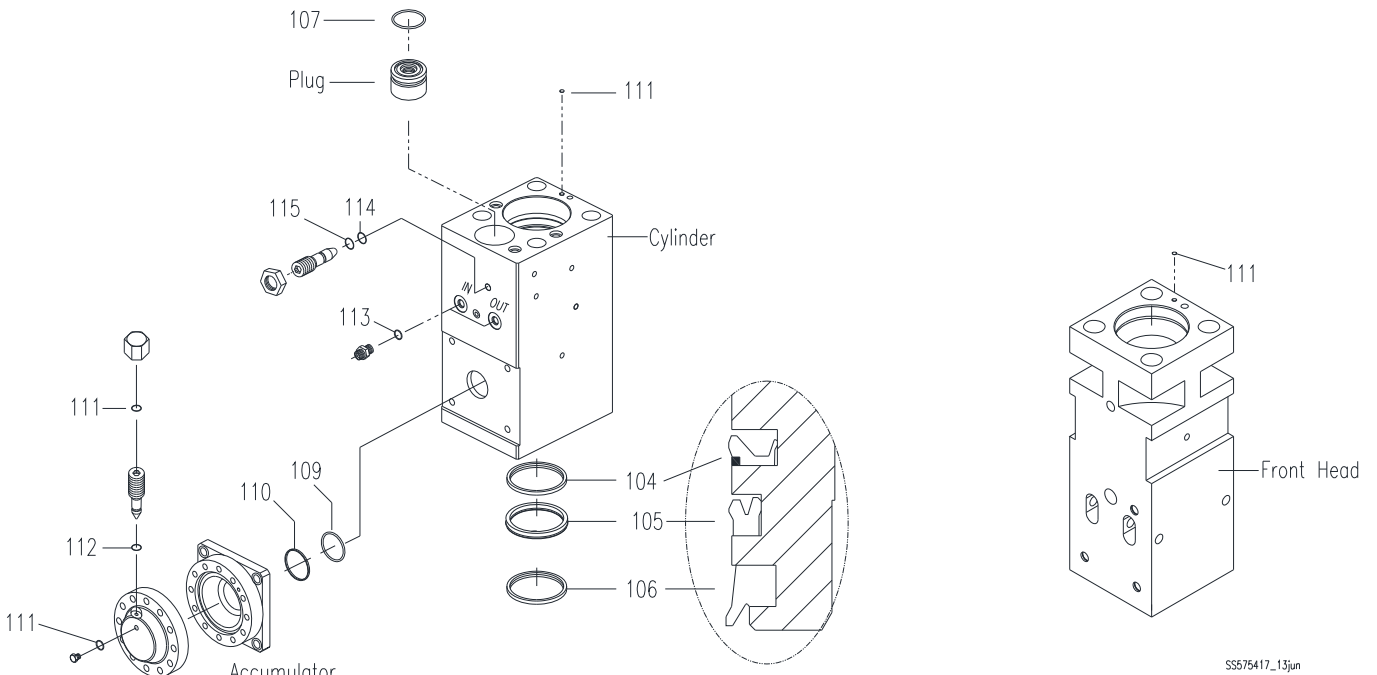
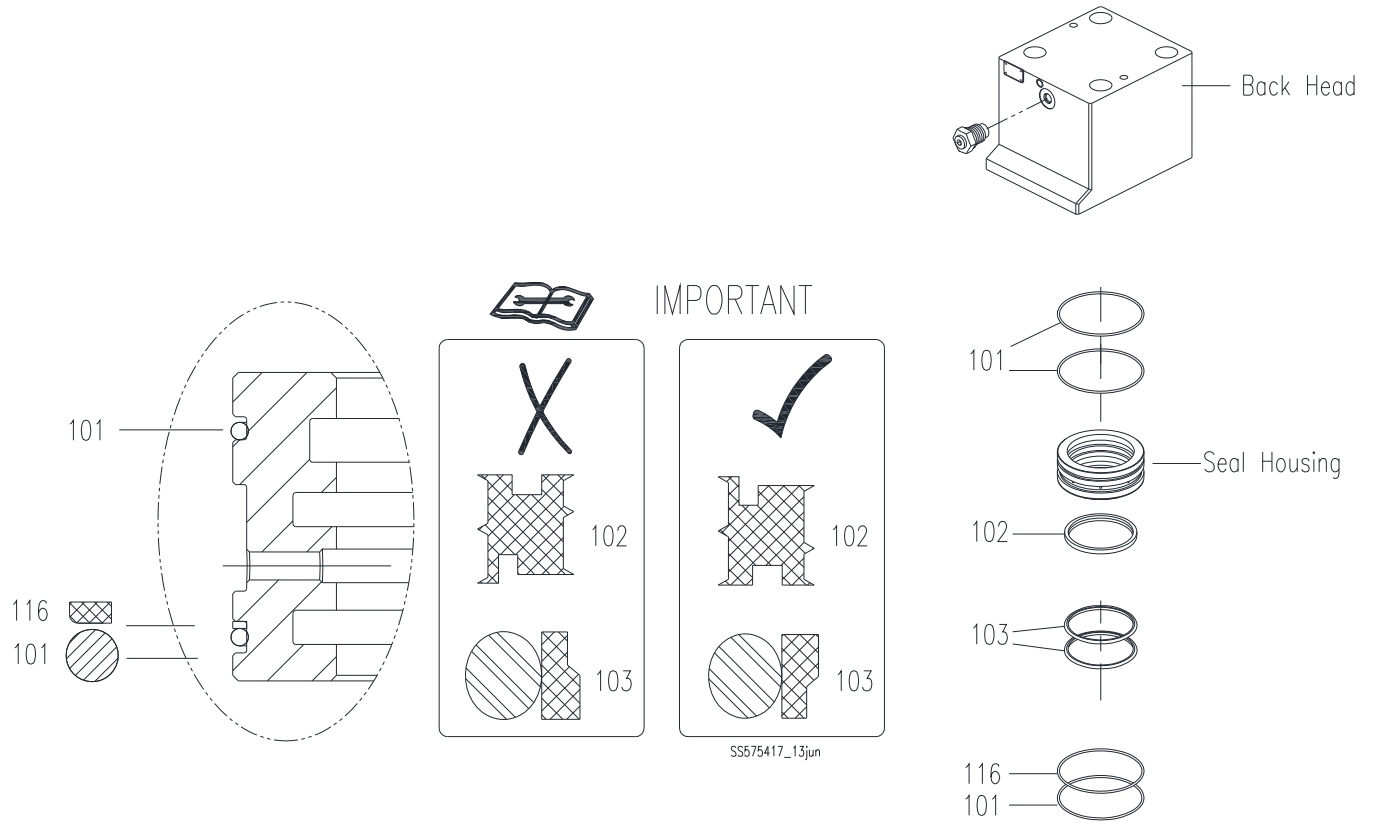



Fig. 5-2 Seal Positions / Orientation Detail


5.2 Service Kits and Tools – [cont'd]

Table 5.2 Seal Set

Item	Description	Part No.	Qty	Remarks / Specifications
---	Seal Set	575417	1-Set	Set includes items 101-107, 109-116 & thread lube
101	O-Ring	101330	3	
102	Gas Seal	A1207020	1	
103	Step Seal	A1207030	2	Includes O-ring (x2)
104	Buffer Ring	A1207110	1	
105	U-Packing	A1207120	1	
106	Wiper	A1207130	1	
107	O-Ring	A1207070	1	
109	O-Ring	676257	1	
110	Backup Ring	A2007130	1	
111	O-Ring	571820	4	
112	O-Ring	A3007190	1	
113	O-Ring	676204	2	
114	O-Ring	A1206310	1	
115	Backup Ring	A1206320	1	
116	Backup Ring	A1207090	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
	Refer to the manual for proper assembly.

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

5.3 Service Kits and Tools – [cont'd]

5.1 N2 Gas Charge Tool

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.

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

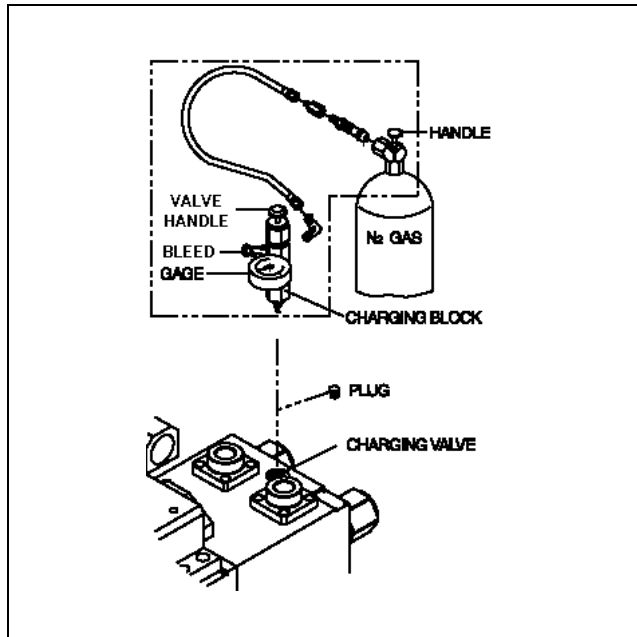


Fig. 5-3 Charge Pressure – Back Head

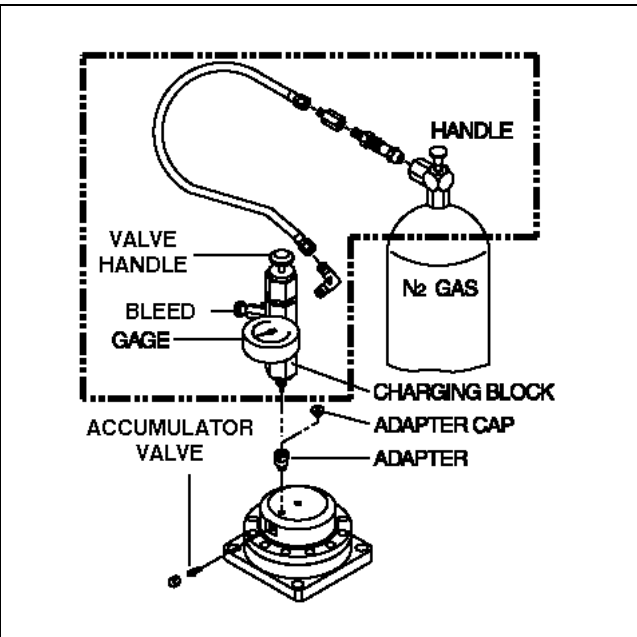


Fig. 5-4 N2 Charge Pressure - Accumulator¹⁾

Table 5.2 N2 Gas Charge Tool

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



Read, understand and follow all instructions given in Operation & Maintenance Manual 575469 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

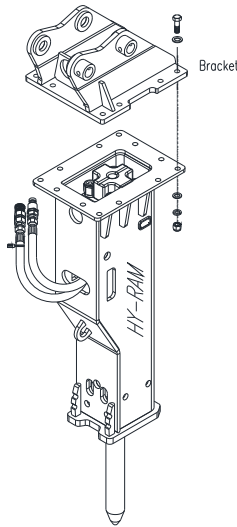


Fig. 6-1 Housing Box & Mounting Bracket

Hy-Ram series breakers come without mounting. 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 the make, model, series and serial number.

6.2 Connection Plate

The mounting bracket is bolted to a connection plate located at the top of the housing box. Refer to Figure 8-2. 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.

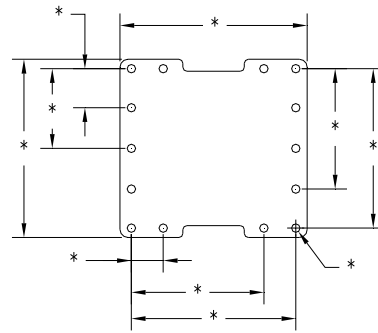


Fig. 6-2 Connection Plate – Dimensions Vary

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 8.1 Mounting Family & Hardware (Qty)

<u>Family</u>	<u>Model</u>	<u>Bolt</u>	<u>FL Washer</u>	<u>LK Washer</u>	<u>Nut</u>
XR	HR175	575555 (7)	667628 (14)	100088 (7)	575652 (7)
XR	HR230	901382 (7)	667628 (14)	100088 (7)	575652 (7)
BR	HR270	577485 (12)	921825 (24)	056245 (12)	90548 (12)
BR	HR290	577485 (12)	921825 (24)	056245 (12)	90548 (12)
SR	HR330	575556 (12)	798064 (24)	100088 (12)	575652 (12)
SR	HR390	951390 (12)	798064 (24)	100088 (12)	575652 (12)
MR	HR470	575557 (12)	901291 (24)	658529 (12)	90507 (12)
MR	HR560	575557 (12)	901291 (24)	658529 (12)	90507 (12)
LR9	HR600	90520 (12)	573029 (24)	573028 (12)	90519 (12)
LR10	HR710	573167 (12)	573029 (24)	573028 (12)	90519 (12)



Always tighten fasteners to proper torque. This information can be found in the Safety, Operation and Maintenance Manual 575469.

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 _____
 Model _____
 Serial No. _____

Complete information is required

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

Your contact information

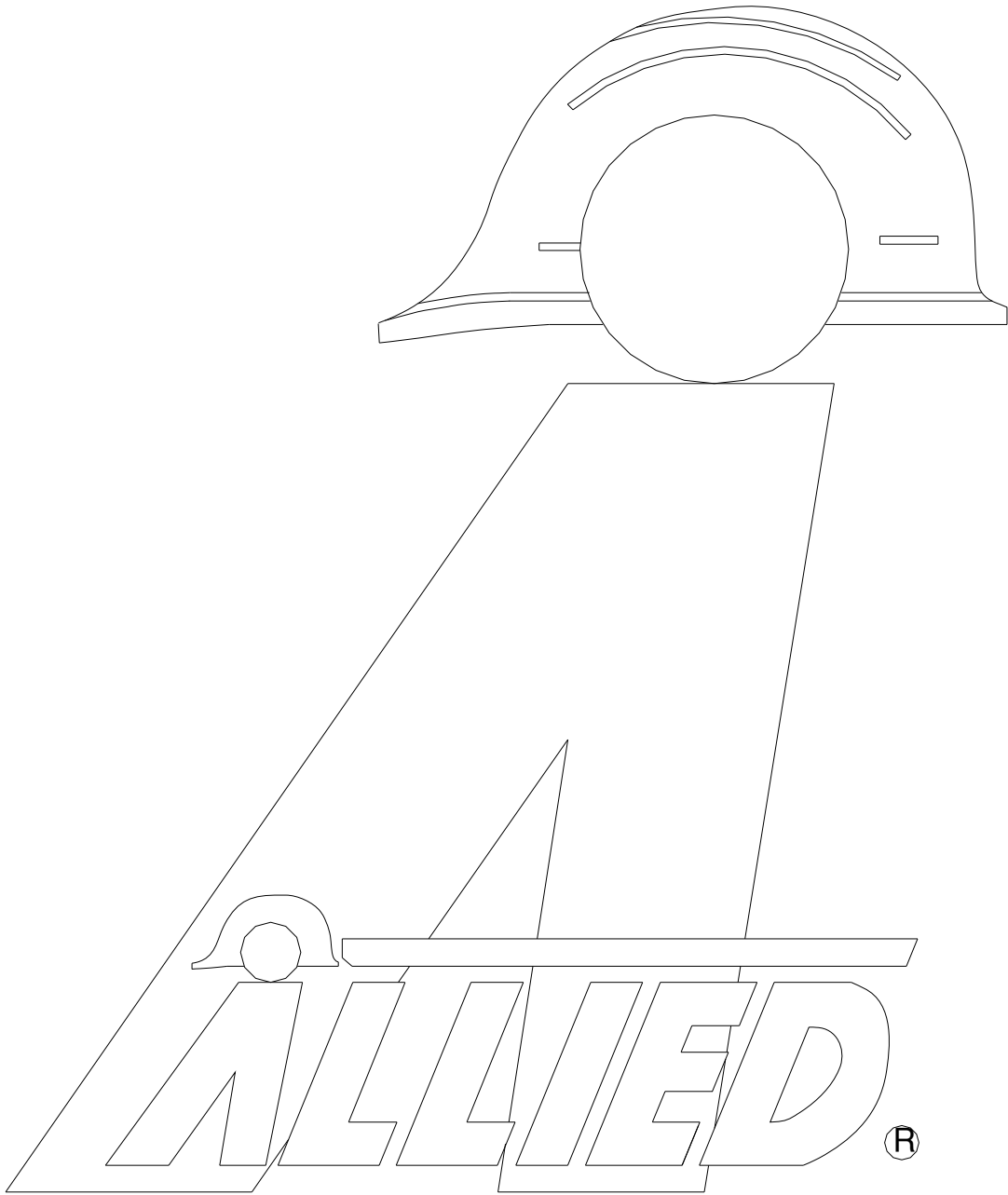
Your Name _____ Company Name _____
 Phone _____ Account Number _____
 Fax _____ Purchase order _____
 Email _____ Shipping carrier _____

*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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