

Hy-Ram

**Hydraulic
Impact
Breaker**

**Model
HR600**



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.



PM575478



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Table of Revision History for Document PM575478

<u>Effective Date</u>	<u>Page</u>	<u>Summary of Change</u>
2014, Sep	22	Revise Table 6.1 part number change XR washer (was 798064) and BR bolt (was 90566).
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.
2012, May	All	Original issue of PM575478

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1.0 Introduction and Scope

1.1 Purpose of This Manual

Table 1.1 About This Manual



Document ID.	PM575478
Type	Spare / Replacement Parts List
Current Status*	See Inside Cover
Product Name:	Mounted Hydraulic Impact Breaker
Series	Hy-Ram
Applicable Model[s]:	HR600
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. 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.

Content in the Safety, Operation & Maintenance Manual includes:

- Safety Information
- Equipment Serial Number and Model Identification
- Technical Data (Weight & 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 – [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
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

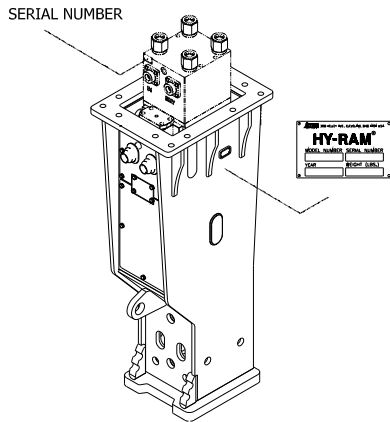


Fig 2-1 Equipment Identification

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 valve housing.

2.2 Equipment Identification Tag

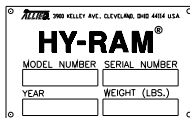


Fig 2-2 Equipment Identification Tag

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

- Allied Name and Address
- Product name
- 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: HR600

Part Number: 575279

Serial Number: _____

In Service Date: _____

Registration Date: _____


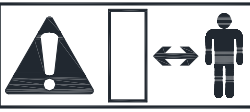

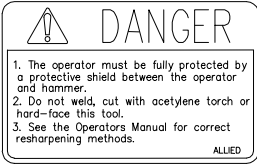

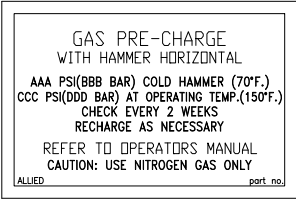
3.0 Safety and Information Labels [cont'd]

3.1 Label Description and Location On Equipment

Labels affixed to the Allied equipment communicate important information. Safety warnings alert to potential hazards, while other labels provide equipment identification and instructions important to operation and service.

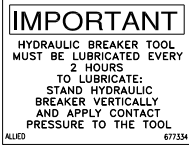




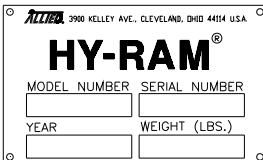
Keep safety labels clean. Words and illustrations must be legible. Replace damaged or missing labels before operating this equipment. Refer to Figure 3-15 for their placement on the equipment. The part numbers for labels are found in Table 3.2.

Table 3.1 Identification of Safety and Information Labels

Figure	Label	Description
3-1		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.
3-2		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.
3-3		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.
3-4		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.
3-5		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.
3-6		GAS PRE-CHARGE – Alerts personnel to the presence of gas under pressure inside the back head. Outlines measuring / charging procedures, including – <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 • Caution alerts personnel to use nitrogen gas only
3-7	REMOVED	

3.0 Safety and Information Labels [cont'd]

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.
3-9		LUBRICATION POINT – The location for lubricating the equipment is identified with a pictogram of a grease gun.
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 – Pictogram of hook identifies approved lift points for safe handling.
3-12		ALLIED LOGO – This decal is the Allied brand identifier and is a registered trademark of Allied Construction Products, LLC.
3-13	HR600	MODEL – Decal identifies the series and specific model.
3-14		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]

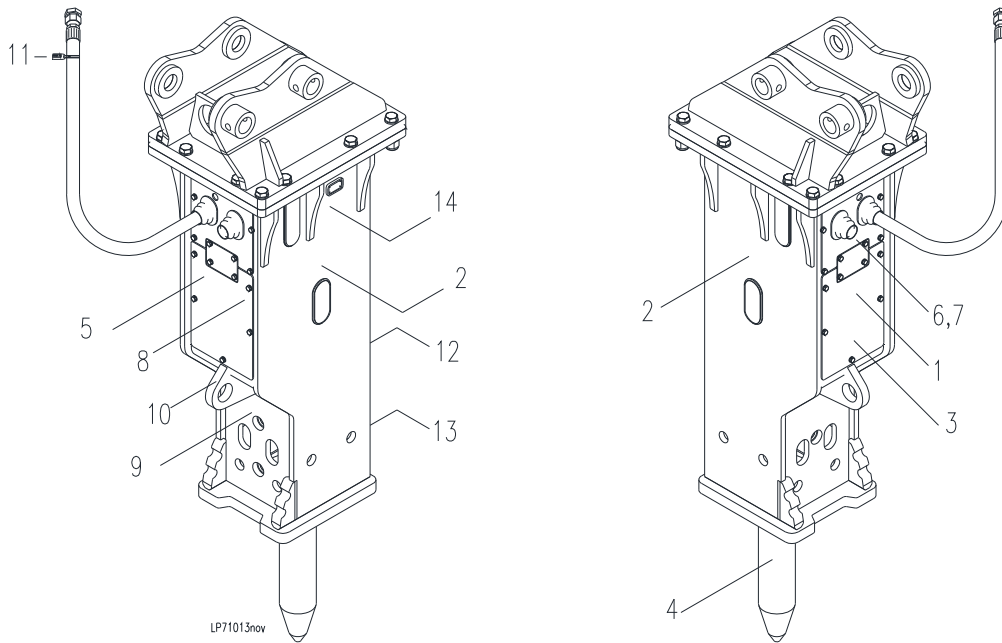


Fig. 3-15 Placement of Labels on Equipment

Table 3.1 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 1-13
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	657837	1	
5	Accumulator Warning	102756	1	
6	Back Head N2 Pressure	676896	1	
7	REMOVED	N/A	---	Use Discontinued
8	Lube w/ Tool In	677334	1	
9	Lubrication Points	A101725	2	
10	Lift Point	676982	1	
11	Pressure ID Tag	818676	1	Identifies the oil supply line "IN"
12	Allied	676656	1	
13	Model HR600	575498	1	
14	Equipment ID Tag	658833	1	Item 14 is not included in Set

4.1 Housing and Components

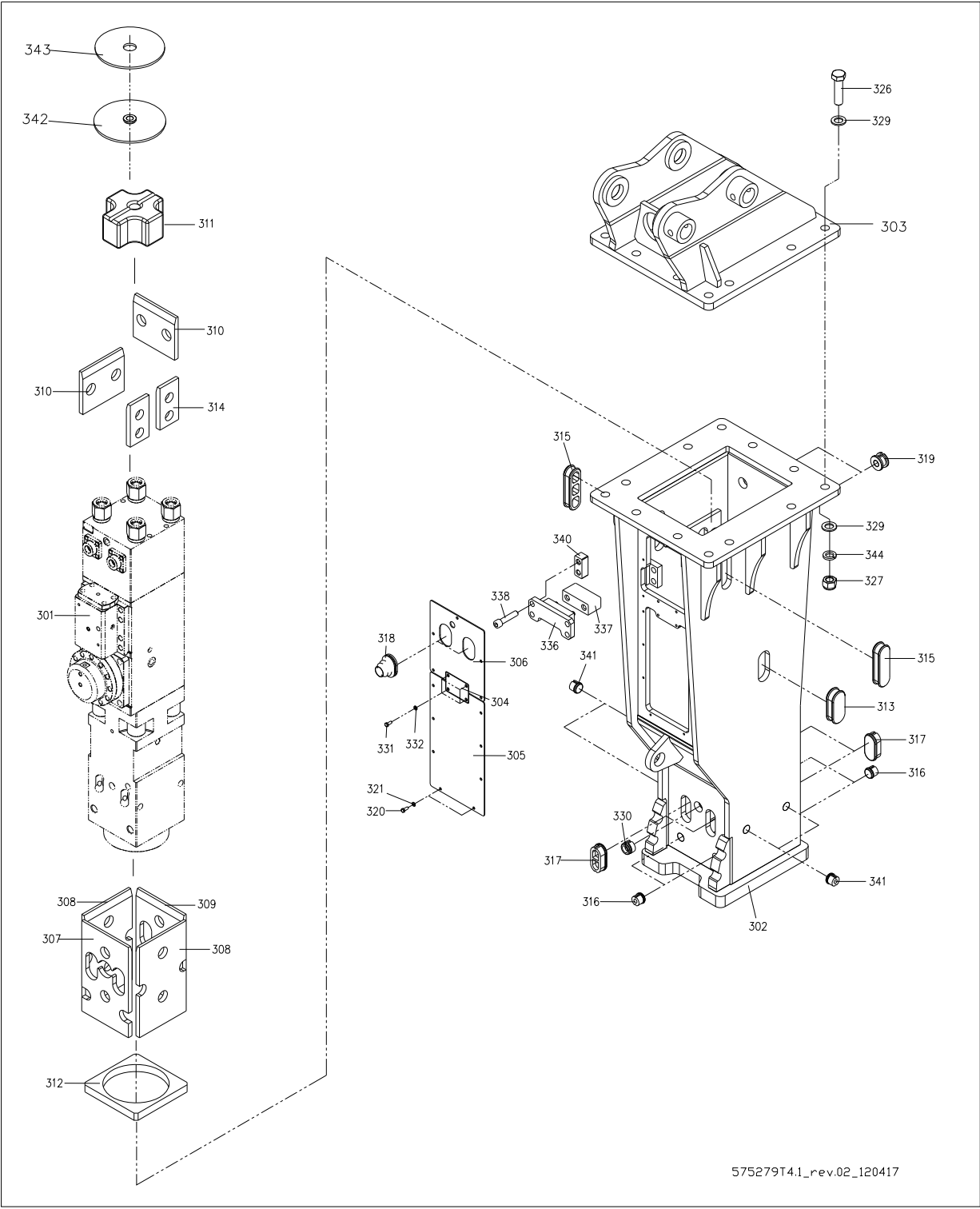


Fig. 4-1 Housing and Components

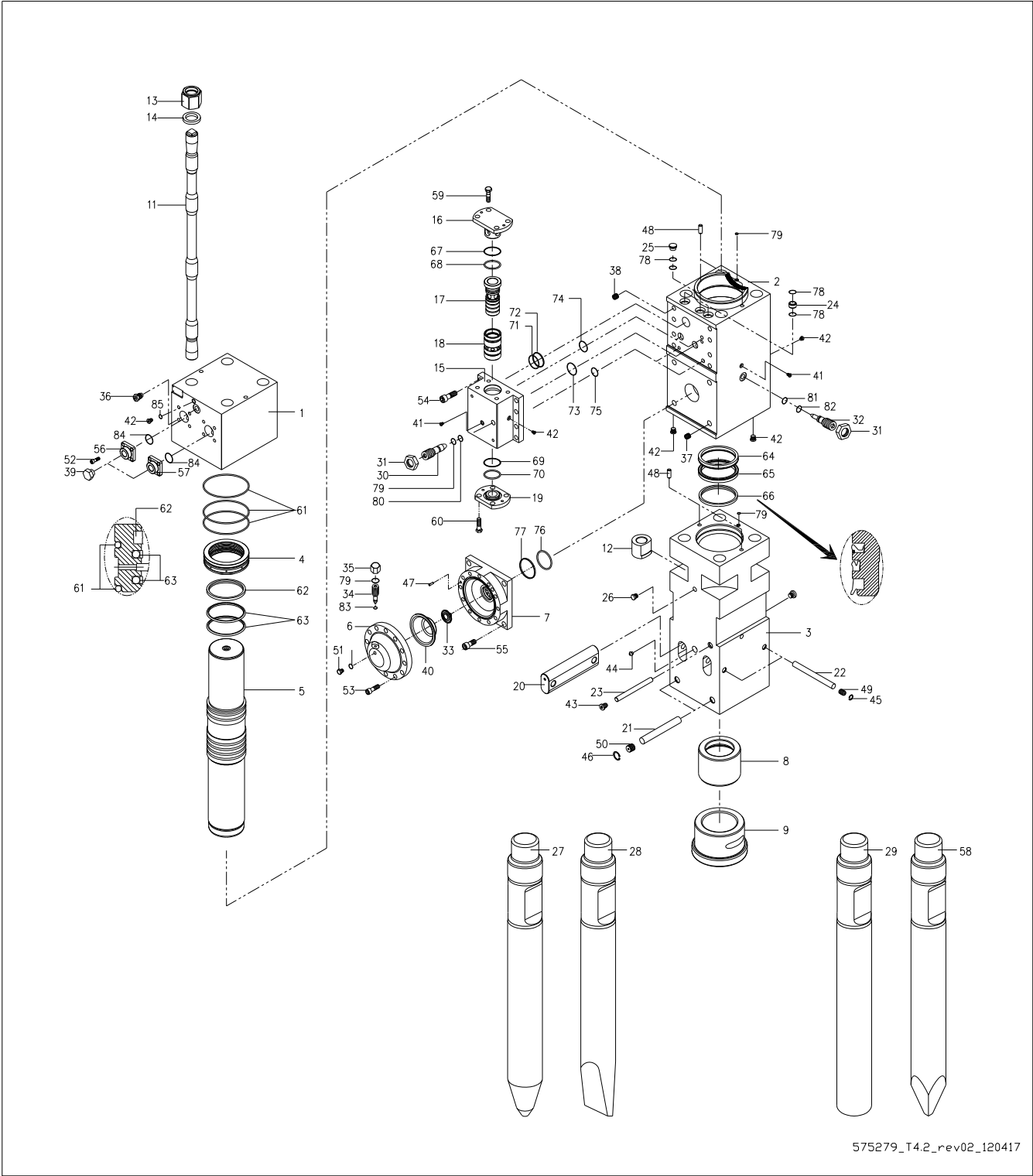
4.1 Housing and Components

Table 4.1 Housing & Buffer Components

Item	Description	Part No.	Qty	Remarks / Specifications
---	Hy-Ram Model HR600	575279	1	Standard Configuration - LR9
301	Breaker Assembly	---	1	Refer to Table 4.2
302	Housing Box	575553	1	Standard Configuration - LR9
303	Mounting Bracket – LR9	Varies	---	Not included - order separately. Section 6.
304	Cover Plate 3	A3003690	1	
305	Cover Plate 2	A3003660-01	1	
306	Cover Plate 1	A3003650-01	1	
307	Wear Plate	A3002050	1	¹⁾ Dimension change – interchangeable old-to-new
308	Wear Plate	A3002060	2	¹⁾ Dimension change – interchangeable old-to-new
309	Wear Plate	A3002070	1	¹⁾ Dimension change – interchangeable old-to-new
310	Wear Plate	A2002020	2	¹⁾ Dimension change – interchangeable old-to-new
311	Buffer (Top)	A2500180	1	
312	Buffer (Base)	A3000300	1	
313	Rubber Plug	A2000270	1	
314	Wear Plate	A5002330	2	
315	Plug (Rubber)	A2202550	2	
316	Plug (Rubber)	570997	4	
317	Plug (Rubber)	570996	4	
318	Rubber (In, Out)	A3000250	2	
319	Rubber	B400W270	2	
320	Cover Bolt	056158	13	
321	Washer	940237	13	
326	Mounting Fasteners	---	---	326,327,329,344 Refer to Table 6.1
330	Rubber Plug	B3200040	1	
331	Cover Bolt	90513	4	
332	Washer	840235	4	
336	Block W/A	A3000520-02	1	
337	Side Buffer	A2003820	1	
338	Socket Bolt	575468	4	
340	Tap Block	A18V36T0	2	
341	Rubber Plug	B6000130	4	
342	Top Plate Ass'y	101516	1	
343	Top Wearing Plate	101034	1	

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

4.2 Breaker Assembly



575279_T4.2_rev02_120417

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>
1	Back Head	A3006490	1	
2	Cylinder	A3006500	1	
3	Front Head	A3006510	1	
4	Seal Housing	A3006040-01	1	
5	Piston	A3006050	1	
6	Accumulator Cover	A3006060	1	
7	Accumulator Bottom	A3006070	1	
8	Upper Bushing	A3006080	1	
9	Tool Bushing	A3006090-02	1	
11	Side Rod	A3006110	4	
12	Nut - Side Rod Lower	A3006120	4	
13	Nut - Side Rod Upper	A3006130	4	
14	Washer - Side Rod	A3006140	4	
15	Valve Block	A3006150-03	1	
16	Oper. Valve Cover (Upper)	A3006160	1	
17	Oper. Valve Guide	A3006170	1	
18	Oper. Valve Spool	A3006180	1	
19	Oper. Valve Cover (Lower)	A3006190	1	
20	Tool Pin	A3006210-02	2	
21	Bushing Pin	A3006220	2	
22	Stop Pin	A3006230	2	
23	Upper Bushing Pin	A3006240	1	
24	Connection Bush	A3006250	2	
25	Plug Bush	A3006260	1	
26	Socket Plug	676158	1	
27	Tool Selection - Option	Varies	---	Refer to Section 4.4
28	Tool - Chisel	575269	1	
29	Tool Selection - Option	Varies	---	Refer to Section 4.4
30	Adjust Bolt 1	A3006311	1	
31	Adjust Nut	A3006320	2	
32	Adjust Bolt 2	A3006330	1	
33	Accumulator Inner Valve	A3006340	1	

4.2 Breaker Assembly - [cont'd]

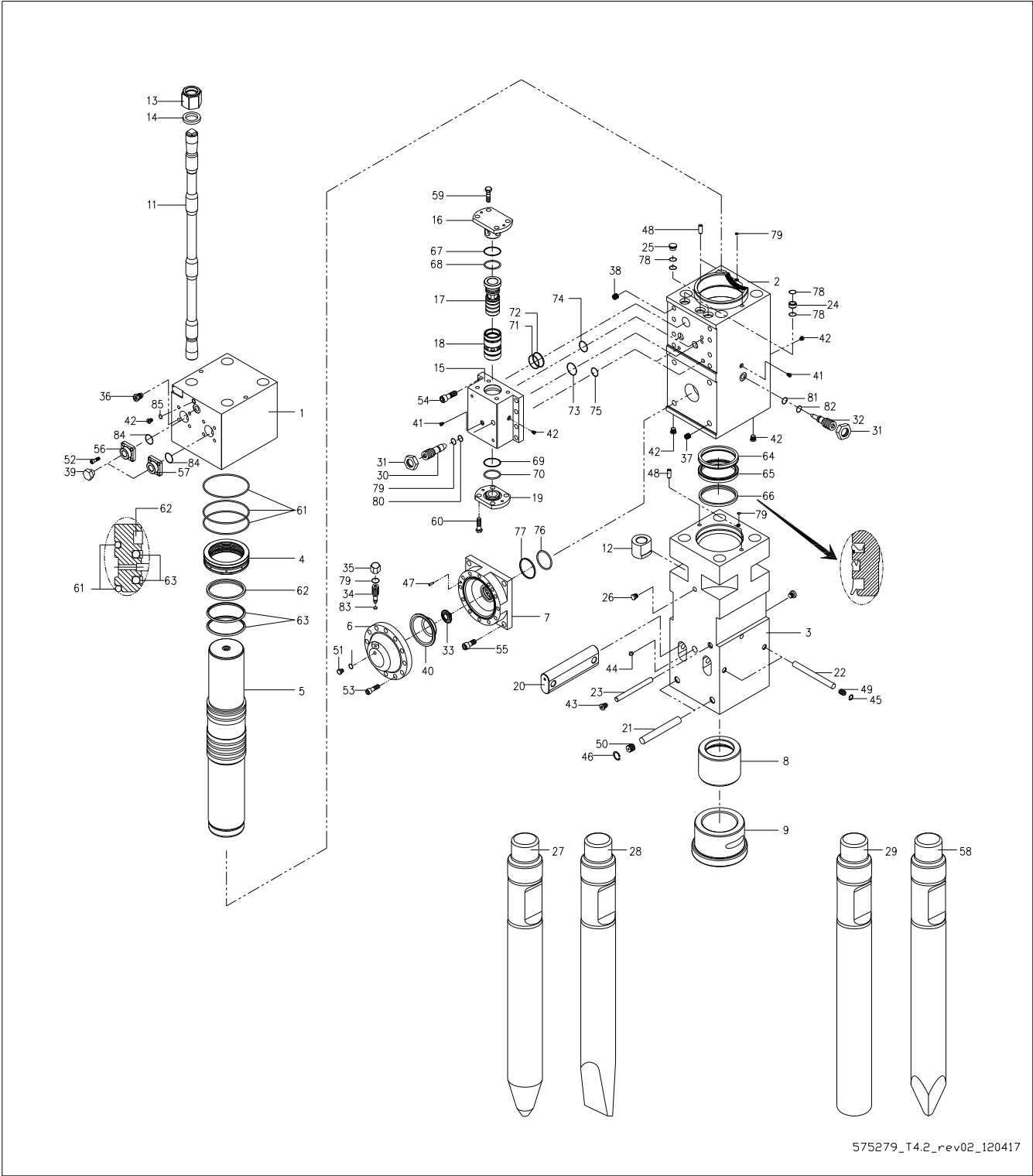


Fig. 4-2 Breaker Assembly

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>
34	Gas Charging Bolt	A3006350	1	
35	Gas Charging Cap	A3006360	1	
36	Gas Charging Valve Ass'y	A3006590	1	
37	Heli - Coil	A3006380	4	
38	Heli - Coil	A3006390	8	
39	Hex. Plug	A3006400	2	
40	Membrane	A2506460	1	
41	Socket Plug	676159	4	
42	Socket Plug	102241	5	
43	Socket Plug	676158	1	
44	Grease Nipple	816675	1	
45	Snap Ring	571801	2	
46	Snap Ring	570072	2	
47	Guide Pin	676183	1	
48	Guide Pin	102545	4	
49	Rubber Plug	571800	2	
50	Rubber Plug	102412	2	
51	Bolt	A2006510	1	
52	Socket Bolt	SB1420040	8	
53	Socket Bolt	103002	12	
54	Socket Bolt	SB2025070	8	
55	Socket Bolt	SB2430070	4	
56	Flange	A2006430	1	
57	Flange	A3006450	1	
58	Tool Selection - Option	Varies	---	Refer to Section 4.4
59	Hex. Bolt	HB2015060	4	
60	Hex. Bolt	90518	4	
61	O-Ring	572386	3	
62	Gas Seal	A3007020	1	
63	Step Seal	A3007030	2	
64	Buffer Ring	A3007240	1	
65	U-Packing	A3007220	1	
66	Wiper	A3007230	1	

4.2 Breaker Assembly - [cont'd]

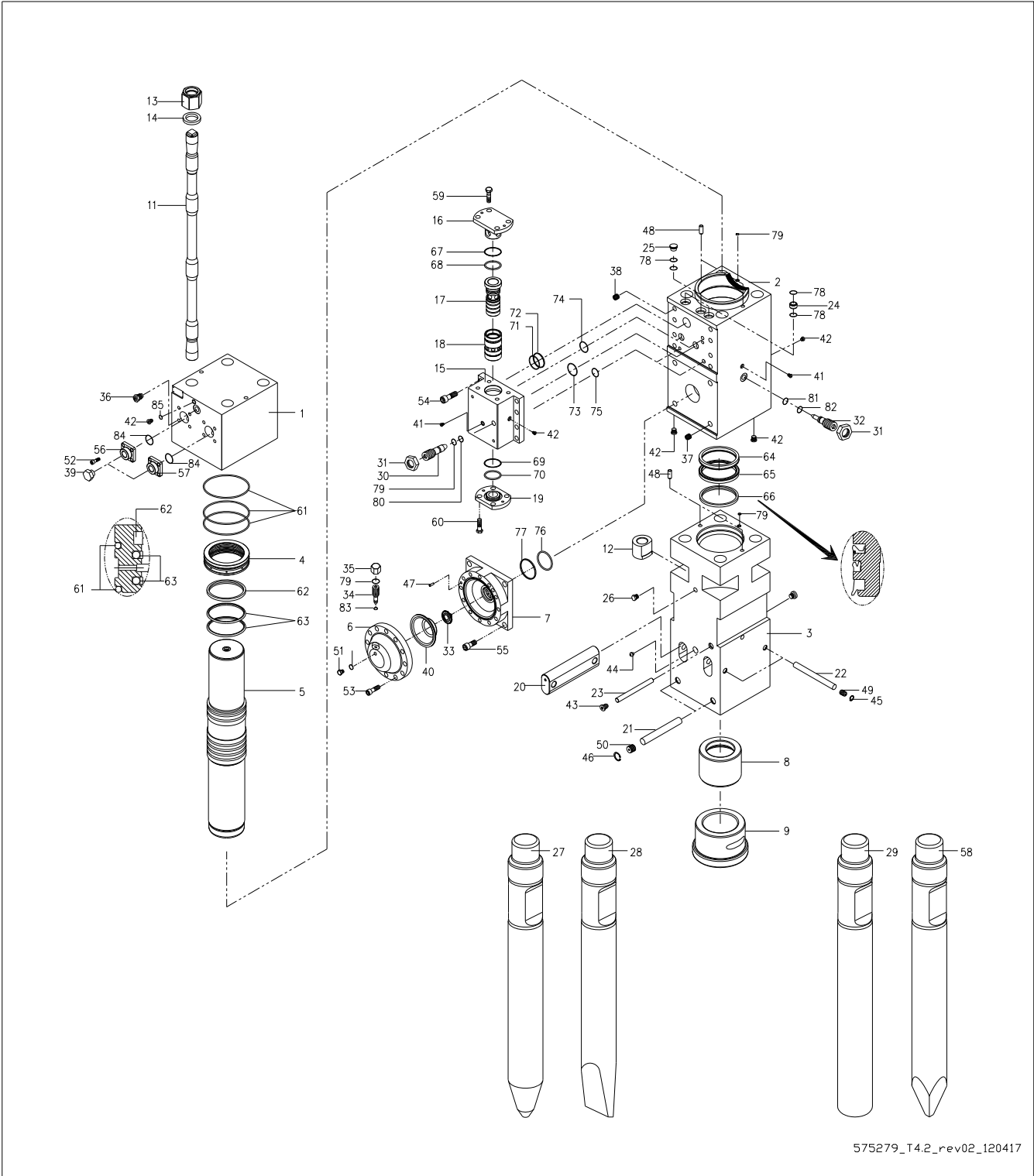


Fig. 4-2 Breaker Assembly

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>
67	O-Ring	A3007070	1	
68	Backup Ring	A3007080	1	
69	O-Ring	A3007090	1	
70	Backup Ring	A3007100	1	
71	O-Ring	100109	1	
72	Backup Ring	A3007110	1	
73	O-Ring	676251	1	
74	O-Ring	101781	2	
75	O-Ring	676204	2	
76	O-Ring	A3007200	1	
77	Backup Ring	A3007130	1	
78	O-Ring	A3007140	6	
79	O-Ring	571820	5	
80	Backup Ring	A3007160	1	
81	O-Ring	A3007170	1	
82	Backup Ring	A3007180	1	
83	O-Ring	A3007190	1	
84	O-Ring	667224	2	

4.3 Hydraulic Connections

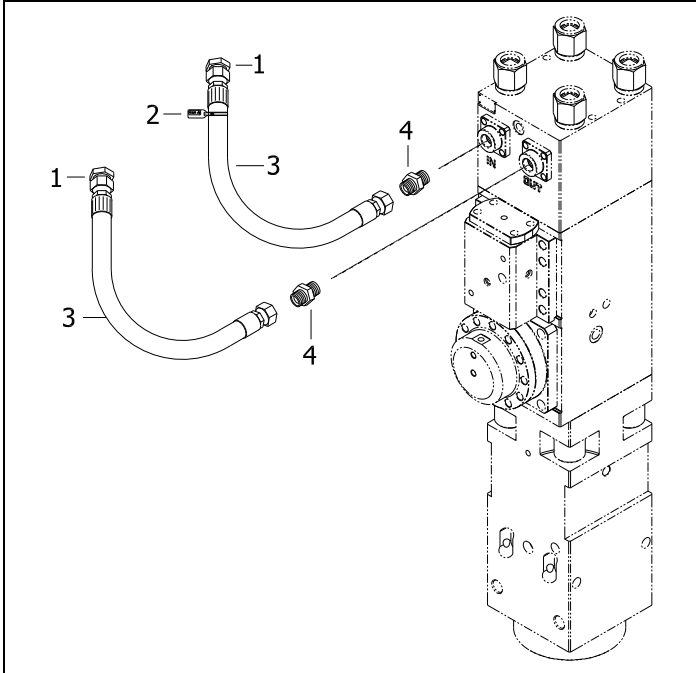


Fig. 4-3 Hydraulic Connections

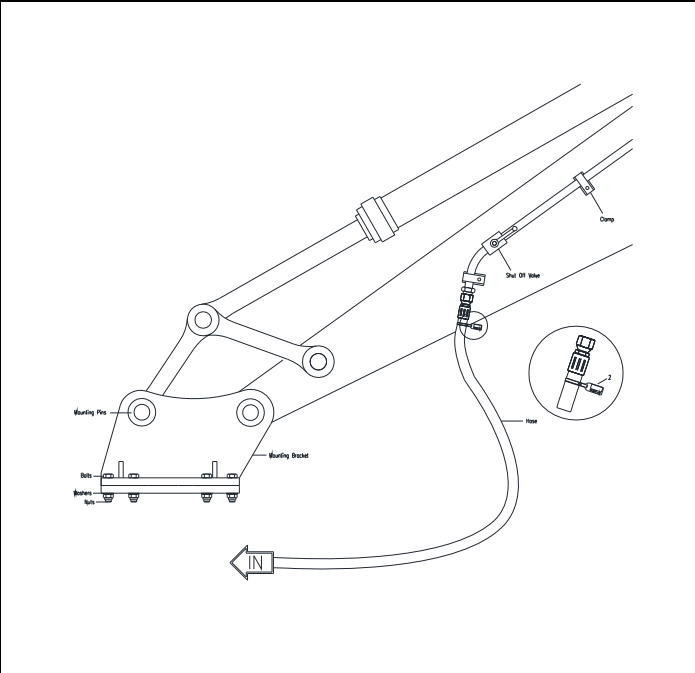


Fig. 4-4 Connections to Carrier - Typical

Table 4.3

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
1	Plug	815152	2	
2	“PRESSURE” ID Tag	818676	1	Identifies oil supply line “IN”
3	Hose	678011	2	
4	Adapter	667327	2	

4.4 Tool Selection – 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.

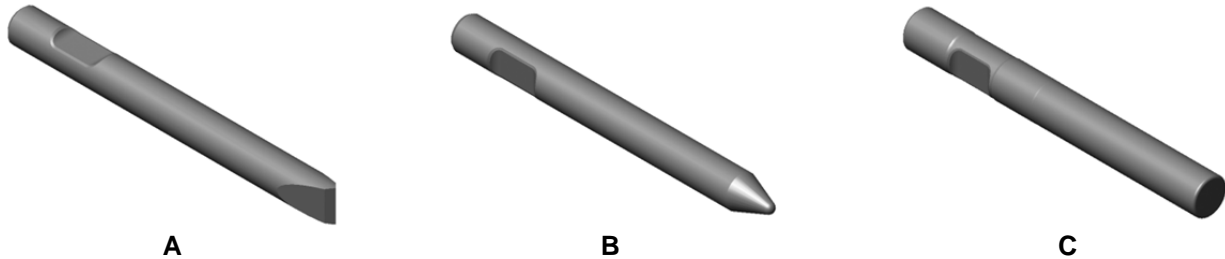


Fig. 4-5 Standard Tool Types A thru C.

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.

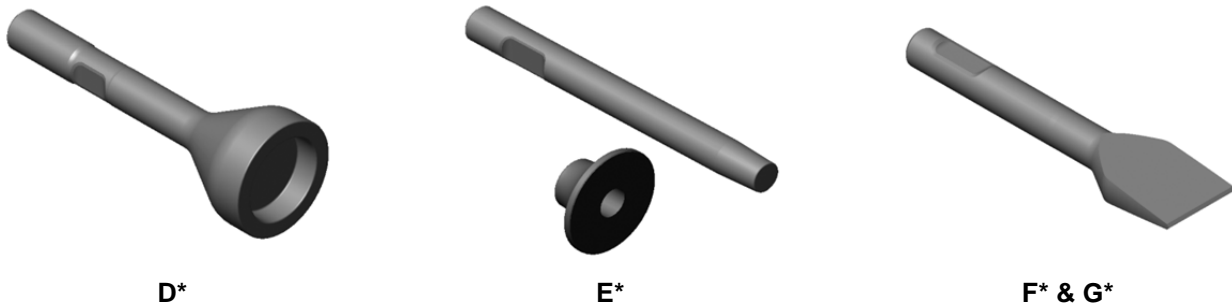


Fig 4-6 Specialty Tool Types D thru G.

General illustrations are shown. Actual tool design may vary.

*Not available for all models.

4.4 Tools – Standard and Specialty [cont'd]

Table 4.4

Item	Description	Part No.	TD ³⁾ in. x WL ⁴⁾ in. (mm)	Weight lbs. (kg.)
A ¹	Chisel Cross Cut	575269	6.02 (153) x 29 (737)	394 (179)
B	Conical Point	575389	6.02 (153) x 29 (737)	385 (175)
---	Chisel In-Line	--- ²	---	---
C	Blunt End	575399	6.02 (153) x 29 (737)	385 (175)
--- ²	Pyramid (Not Pictured)	--- ²	6.02 (153) x 29 (737)	374 (170)

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

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

³⁾ TD - Tool Diameter

⁴⁾ WL - Working Length

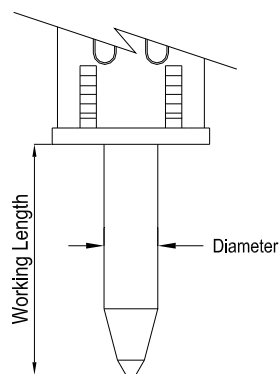


Fig. 4-6 Tool Working Length

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.

4.5.2 Chisel Paste Ordering Information

Table 4.5

Container	Packaging	Part No.
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 a single package.

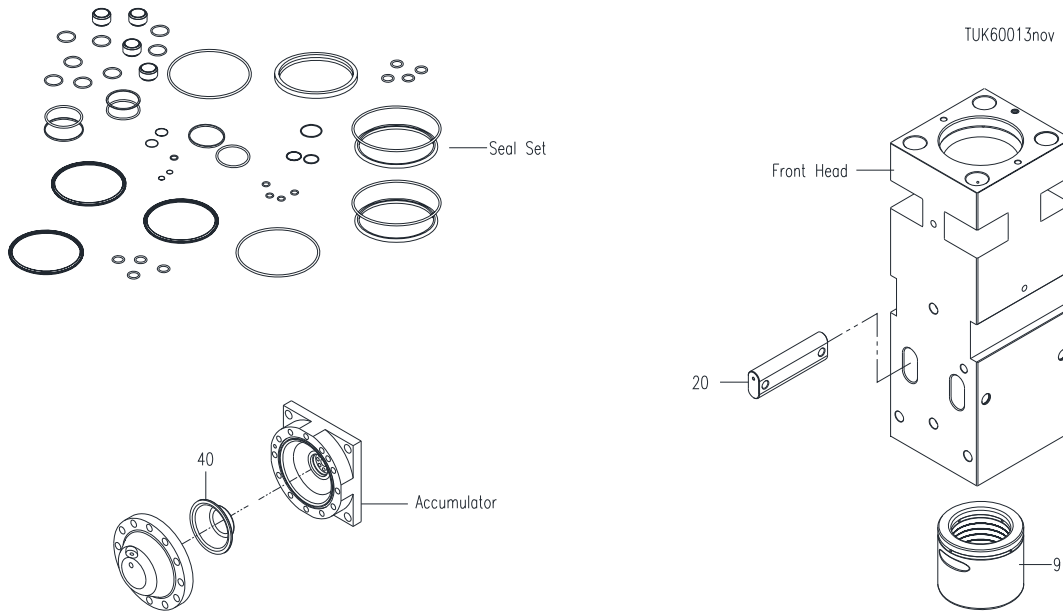


Fig. 5-1 Tune-up Kit

Table 5.1 Tune-up Kit

<u>Item</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty</u>	<u>Remarks / Specifications</u>
---	Tune-up Kit	575410	1	Kit includes all items in Table 5.1
---	Seal Set	575420	1	Set includes all items in Table 5.2
9	Lower Tool Bushing	A3006090-02	1	
20	Tool Retainer Pin	A3006210-02	2	
40	Membrane	A2506460	1	

5.2 Service Kits and Tools [cont'd]

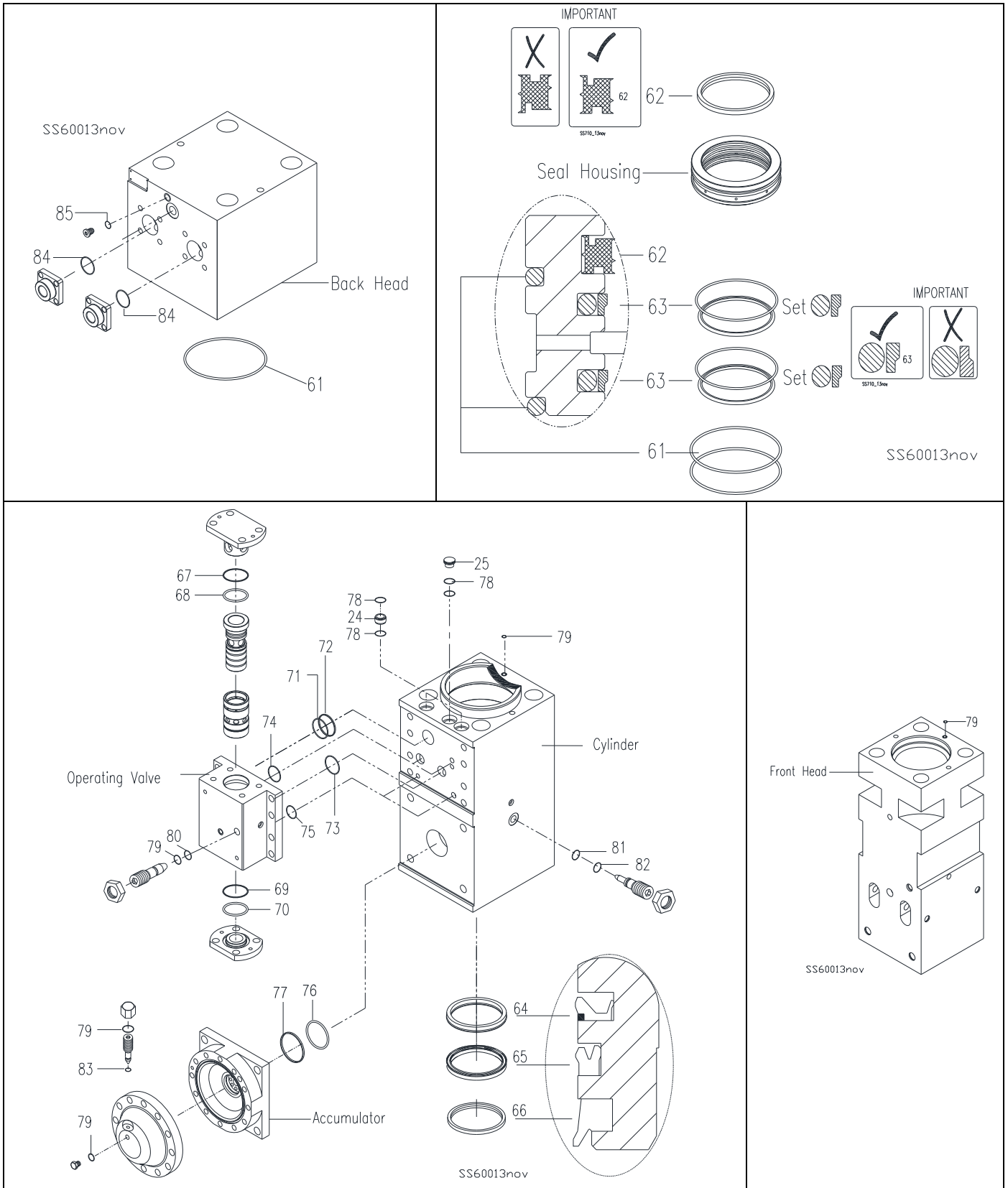


Fig. 5-2 Seal Positions - 575420

5.2 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	575420	1	Set includes all items in Table 5.2
24	Connection Bush	A3006250	2	
25	Plug Bush	A3006260	1	
61	O-Ring	572386	3	
62	Gas Seal	A3007020	1	
63	Seal Set	A3007030	2	SET- Includes Step Seal & O-Ring
64	Buffer Ring	A3007240	1	
65	U-Packing	A3007220	1	
66	Wiper	A3007230	1	
67	O-Ring	A3007070	1	
68	Backup Ring	A3007080	1	
69	O-Ring	A3007090	1	
70	Backup Ring	A3007100	1	
71	O-Ring	100109	1	
72	Backup Ring	A3007110	1	
73	O-Ring	676251	1	
74	O-Ring	101781	2	
75	O-Ring	676204	2	
76	O-Ring	A3007200	1	
77	Backup Ring	A3007130	1	
78	O-Ring	A3007140	6	
79	O-Ring	571820	5	
80	Backup Ring	A3007160	1	
81	O-Ring	A3007170	1	
82	Backup Ring	A3007180	1	
83	O-Ring	A3007190	1	
84	O-Ring	667224	2	
---	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

Apply thread lube to side rods at assembly. DO NOT apply Thread Lube to seals!

5.3 Service Tools - N2 Gas Charge Kit

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.

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.

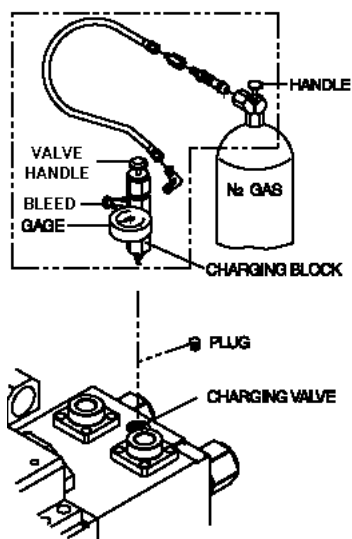


Fig. 5-3 N2 Gas Charge - Back Head

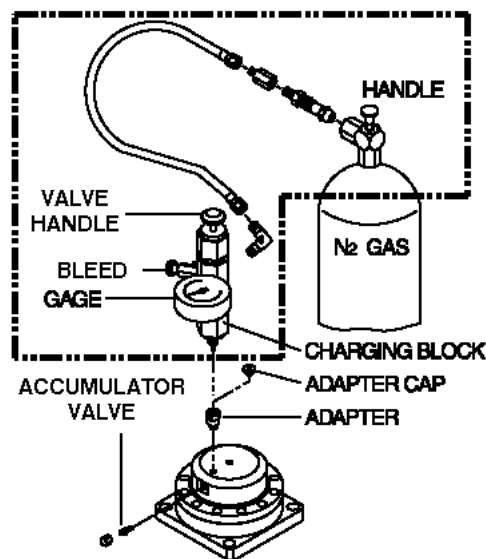


Fig. 5-4 N2 Gas Charge - Accumulator¹⁾

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 [N2]	N/A	---	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 Bracket Information

6.1 Mounting Bracket - Option

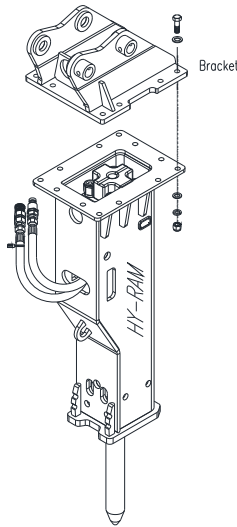


Fig. 6-1 Housing Box, Mounting Bracket & Bolt Set

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 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 can be found in Operation & Maintenance Manual.

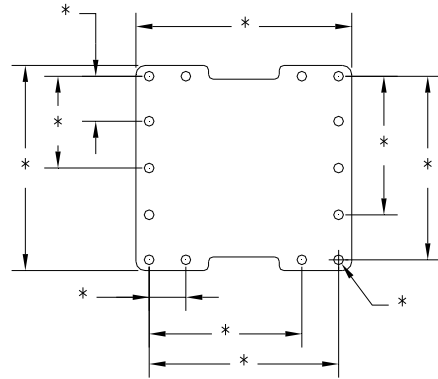


Fig. 6-2 Connection Plate – Dimensions Vary

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 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>
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 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 Breaker Hy-Ram Series
 Model HR600
 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

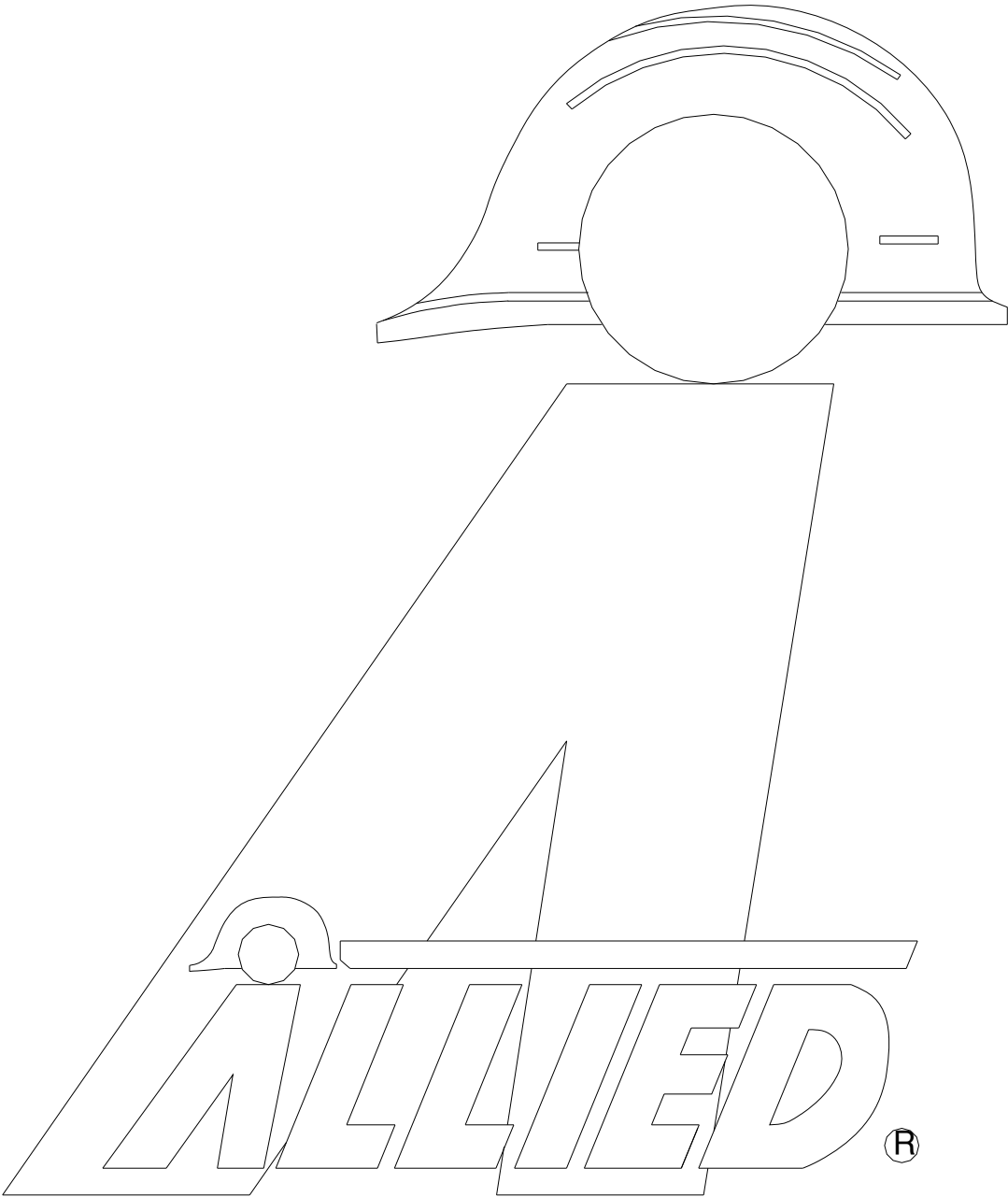
Your Name _____ Company Name _____
 Phone _____ Account Number _____
 Fax _____ Purchase order _____
 Email _____ Shipping carrier _____

*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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