STANLEY®

BR87
HYDRAULIC BREAKER

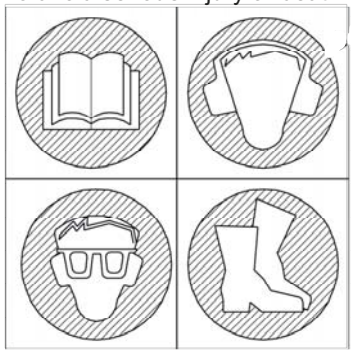
⚠ WARNING

SERIOUS INJURY OR DEATH COULD RESULT FROM IMPROPER REPAIR OR SERVICE OF THIS TOOL.

REPAIRS AND/OR SERVICE TO THIS TOOL MUST ONLY BE DONE BY AN AUTHORIZED AND CERTIFIED DEALER.

⚠ WARNING

To avoid serious injury or death



SAFETY, OPERATION AND MAINTENANCE
SERVICE MANUAL

CE

OPS/MAINT USA / CE
Printed in U.S.A.
09471 1/2006 ver 3

Stanley Hydraulic Tools
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SERVICING THE STANLEY HYDRAULIC breaker. This manual contains safety, operation, and routine maintenance instructions. Stanley Hydraulic Tools recommends that servicing of hydraulic tools, other than routine maintenance, must be performed by an authorized and certified dealer. Please read the following warning.

⚠ WARNING

SERIOUS INJURY OR DEATH COULD RESULT FROM THE IMPROPER REPAIR OR SERVICE OF THIS TOOL.

REPAIRS AND / OR SERVICE TO THIS TOOL MUST ONLY BE DONE BY AN AUTHORIZED AND CERTIFIED DEALER.

For the nearest authorized and certified dealer, call Stanley Hydraulic Tools at the number listed on the back of this manual and ask for a Customer Service Representative.

CERTIFICATE OF CONFORMITY

CERTIFICATE OF CONFORMITY

STANLEY
Hydraulic Tools

I, the undersigned: Winterling, David

Surname and First names

Hereby certify that the construction plant or equipment specified hereunder:

1. Manufacturer: Stanley Hydraulic Tools, 3810 Naef Road, Milwaukie, Oregon USA
2. Representative in the Union: Stanley Svenska AB, Box 9054, 400 92 Göteborg, SWEDEN
3. Category: Hydraulic Hand Held Concrete Breaker
4. Make: Stanley Hydraulic Tools
5. Type: BR8713201
6. Type serial number of equipment: ALL
7. Year of manufacture: Beginning 2002

Has been manufactured in conformity with the provisions of the Machinery Directive 98/37/EC

Harmonized standard applied: EN 792-4

We also declare that it meets the specification of Noise Directive 2000/14/EC, measured in accordance to the Conformity Evaluation Method set out in Annex VI para. 5 and evaluated during production as in Annex VI para. 6, 2nd procedure.

8. Noise related value: 38 kg
9. Measured sound power on equipment representative of this type: 110 LwA
10. Guaranteed sound power level for this equipment: 111 LwA
11. Notified body for EC directive 2000/14/EC: 0404

SMP Svensk Maskinprovning AB
Fyrisborgsgatan 3
754 50 Uppsala, SWEDEN

12. Special Provisions: None

Issued at Stanley Hydraulic Tools, Milwaukie, Oregon USA
Date: 8/21/02

Signature 

Position: Engineering Manager

P/N 52575 Rev.2, 1/17/06

SAFETY SYMBOLS

Safety symbols and signal words, as shown below, are used to emphasize all operator, maintenance and repair actions which, if not strictly followed, could result in a life-threatening situation, bodily injury or damage to equipment.

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

⚠ WARNING — **This safety alert and signal word indicate an imminently hazardous situation which, if not avoided, will result in death or serious injury.**

⚠ WARNING — **This safety alert and signal word indicate a potentially hazardous situation which, if not avoided, could result in death or serious injury.**

⚠ CAUTION — **This safety alert and signal word indicate a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.**

CAUTION — **This signal word indicates a potentially hazardous situation which, if not avoided, may result in property damage.**

NOTICE — **This signal word indicates a situation which, if not avoided, will result in damage to the equipment.**

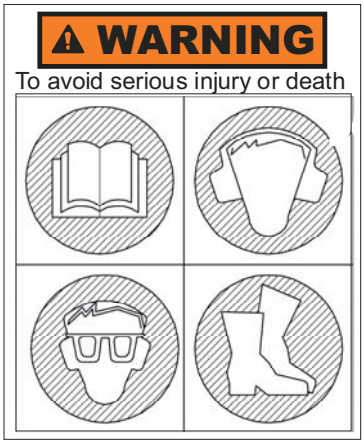
IMPORTANT — **This signal word indicates a situation which, if not avoided, may result in damage to the equipment.**

Always observe safety symbols. They are included for your safety and for the protection of the tool.

LOCAL SAFETY REGULATIONS

Enter any local safety regulations here. Keep these instructions in an area accessible to the operator and maintenance personnel.

SAFETY PRECAUTIONS



Tool operators and maintenance personnel must always comply with the safety precautions given in this manual and on the stickers and tags attached to the tool and hose.

These safety precautions are given for your safety. Review them carefully before operating the tool and before performing general maintenance or repairs.

Supervising personnel should develop additional precautions relating to the specific work area and local safety regulations. If so, place the added precautions in the space provided in this manual.

The BR87 Hydraulic Breaker will provide safe and dependable service if operated in accordance with the instructions given in this manual. Read and understand this manual and any stickers and tags attached to the tool and hoses before operation. Failure to do so could result in personal injury or equipment damage.

• Operator must start in a work area without bystanders. The operator must be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.

• Establish a training program for all operators to ensure safe operation.

• Do not operate the tool unless thoroughly trained or under the supervision of an instructor.

• Always wear safety equipment such as goggles, ear, head protection, and safety shoes at all times when operating the tool.

• Do not inspect or clean the tool while the hydraulic power source is connected. Accidental engagement of the tool can cause serious injury.

• Supply hoses must have a minimum working pressure rating of 2500 psi/175 bar.

• Be sure all hose connections are tight.

• The hydraulic circuit control valve must be in the “OFF” position when coupling or uncoupling the tool. Wipe all couplers clean before connecting. Use only lint-free cloths. Failure to do so may result in damage to the quick couplers and cause overheating of the hydraulic system.

• Do not operate the tool at oil temperatures above 140°F/60°C. Operation at higher oil temperatures can cause operator discomfort and may damage the tool.

• Do not operate a damaged, improperly adjusted, or incompletely assembled tool.

• Do not weld, cut with an acetylene torch, or hardface the tool bit.

• To avoid personal injury or equipment damage, all tool repair, maintenance and service must only be performed by authorized and properly trained personnel.

• Do not exceed the rated limits of the tool or use the tool for applications beyond its design capacity.

• Always keep critical tool markings, such as lables and warning stickers legible.

• Always replace parts with replacement parts recommended by Stanley Hydraulic Tools.

• Check fastener tightness often and before each use daily.

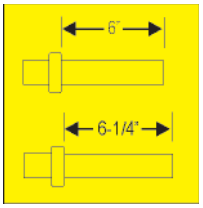
• Never operate the tool if you cannot be sure that underground utilities are not present.

• Do not wear loose fitting clothing when operating the tool.

TOOL STICKERS & TAGS

28409
Composite Decal

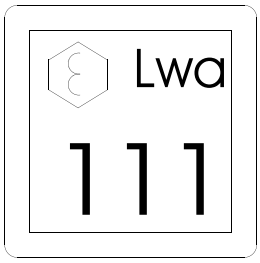
11207
Circuit Type C Decal



11208
Hex Shank Decal

CE

28322
CE Decal



66656
Sound Level Decal

10180
Caution Decal

STANLEY
Stanley Hydraulic tools
Division of the Stanley Works
3810 SE Naef Road
Milwaukie, OR 97267

28376
Stanley Decal

BR87 BREAKER

WEIGHT: 82 lb / 37 kg
FLOW: 9 gpm / 34 lpm
PRESSURE: 2000 psi / 140 bar
EASI-RIDE Pat No. 4614241

28381
BR87 Name Tag
(Models BR8713201 & BR8717201 Only)

STANLEY
Stanley Hydraulic Tools
Division of The Stanley Works
3810 SE Naef Road
Milwaukie, OR 97267 USA

BR87 BREAKER
FLOW: 7-9 gpm/26-34 lpm
PRESSURE: 1500-2000 psi
105-140 bar
ACCUMULATOR CHARGE
800 psi/55 bar Nitrogen
EASI-RIDE™ Pat No. 4614241

07892
BR87 Name Decal

The safety tag (p/n 15875) at right is attached to the tool when shipped from the factory. Read and understand the safety instructions listed on this tag before removal. We suggest you retain this tag and attach it to the tool when not in use.

DANGER

1. FAILURE TO USE HYDRAULIC HOSE **LABELED AND CERTIFIED AS NON-CONDUCTIVE** WHEN USING HYDRAULIC TOOLS ON OR NEAR ELECTRICAL LINES MAY RESULT IN DEATH OR SERIOUS INJURY.

   BEFORE USING HOSE **LABELED AND CERTIFIED AS NON-CONDUCTIVE** ON OR NEAR ELECTRIC LINES BE SURE THE HOSE IS **MAINTAINED AS NON-CONDUCTIVE**. THE HOSE SHOULD BE REGULARLY TESTED FOR ELECTRIC CURRENT LEAKAGE IN ACCORDANCE WITH YOUR SAFETY DEPARTMENT INSTRUCTIONS.

2. A HYDRAULIC LEAK OR BURST MAY CAUSE OIL INJECTION INTO THE BODY OR CAUSE OTHER SEVERE PERSONAL INJURY.

   A **DO NOT** EXCEED SPECIFIED FLOW AND PRESSURE FOR THIS TOOL. EXCESS FLOW OR PRESSURE MAY CAUSE A LEAK OR BURST.

   B **DO NOT** EXCEED RATED WORKING PRESSURE OF HYDRAU LIC HOSE USED WITH THIS TOOL. EXCESS PRESSURE MAY CAUSE A LEAK OR BURST.

   C CHECK TOOL HOSE COUPLERS AND CONNECTORS DAILY FOR LEAKS. **DO NOT** FEEL FOR LEAKS WITH YOUR

IMPORTANT

READ OPERATION MANUAL AND SAFETY INSTRUCTIONS FOR THIS TOOL BEFORE USING IT.

USE ONLY PARTS AND REPAIR PROCEDURES APPROVED BY STANLEY AND DESCRIBED IN THE OPERATION MANUAL.

TAG TO BE REMOVED ONLY BY TOOL OPERATOR.

SEE OTHER SIDE

DANGER

D DO NOT LIFT OR CARRY TOOL BY THE HOSES. DO NOT ABUSE HOSE. DO NOT USE KINKED, TORN OR DAMAGED HOSE.

3. MAKE SURE HYDRAULIC HOSES ARE PROPERLY CONNECTED TO THE TOOL BEFORE PRESSURING SYSTEM. SYSTEM PRESSURE HOSE MUST ALWAYS BE CONNECTED TO TOOL "IN" PORT. SYSTEM RETURN HOSE MUST ALWAYS BE CONNECTED TO TOOL "OUT" PORT. REVERSING CONNECTIONS MAY CAUSE REVERSE TOOL OPERATION WHICH CAN RESULT IN SEVERE PERSONAL INJURY.

4. DO NOT CONNECT OPEN-CENTER TOOLS TO CLOSED-CENTER HYDRAULIC SYSTEMS. THIS MAY RESULT IN LOSS OF OTHER HYDRAULIC FUNCTIONS POWERED BY THE SAME SYSTEM AND/OR SEVERE PERSONAL INJURY.

5. BYSTANDERS MAY BE INJURED IN YOUR WORK AREA. KEEP BYSTANDERS CLEAR OF YOUR WORK AREA.

6. WEAR HEARING, EYE, FOOT, HAND AND HEAD PROTECTION.

7. TO AVOID PERSONAL INJURY OR EQUIPMENT DAMAGE, ALL TOOL REPAIR MAINTENANCE AND SERVICE MUST ONLY BE PERFORMED BY AUTHORIZED AND PROPERLY TRAINED PERSONNEL.

IMPORTANT

READ OPERATION MANUAL AND SAFETY INSTRUCTIONS FOR THIS TOOL BEFORE USING IT.

USE ONLY PARTS AND REPAIR PROCEDURES APPROVED BY STANLEY AND DESCRIBED IN THE OPERATION MANUAL.

TAG TO BE REMOVED ONLY BY TOOL OPERATOR.

SEE OTHER SIDE

SAFETY TAG P/N 15875 (shown smaller then actual size)

HYDRAULIC HOSE REQUIREMENTS

HOSE TYPES

Hydraulic hose types authorized for use with Stanley Hydraulic Tools are as follows:

❶ Certified non-conductive

❷ Wire-braided (conductive)

❸ Fabric-braided (not certified or labeled non-conductive)

Hose ❶ listed above is the only hose authorized for use near electrical conductors.

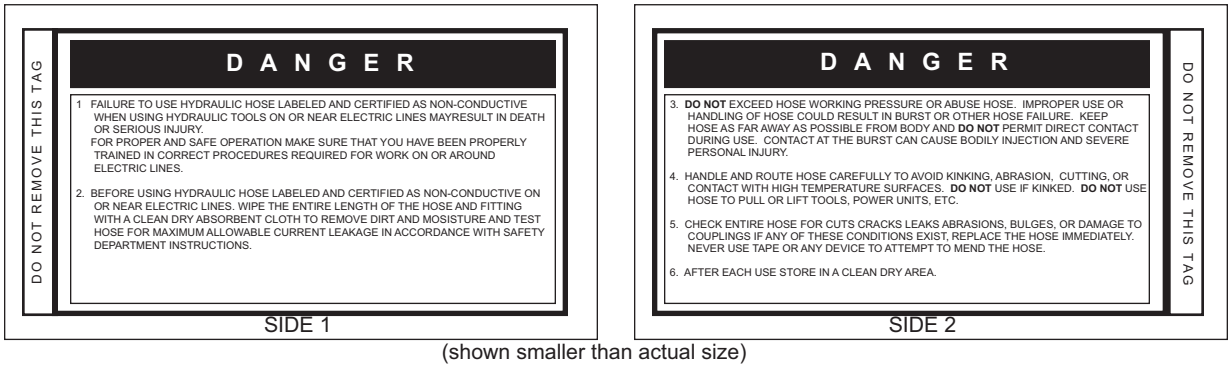
Hoses ❷ and ❸ listed above are **conductive** and **must never** be used near electrical conductors.

HOSE SAFETY TAGS

To help ensure your safety, the following DANGER tags are attached to all hose purchased from Stanley Hydraulic Tools. DO NOT REMOVE THESE TAGS.

If the information on a tag is illegible because of wear or damage, replace the tag immediately. A new tag may be obtained from your Stanley Distributor.

THE TAG SHOWN BELOW IS ATTACHED TO "CERTIFIED NON-CONDUCTIVE" HOSE



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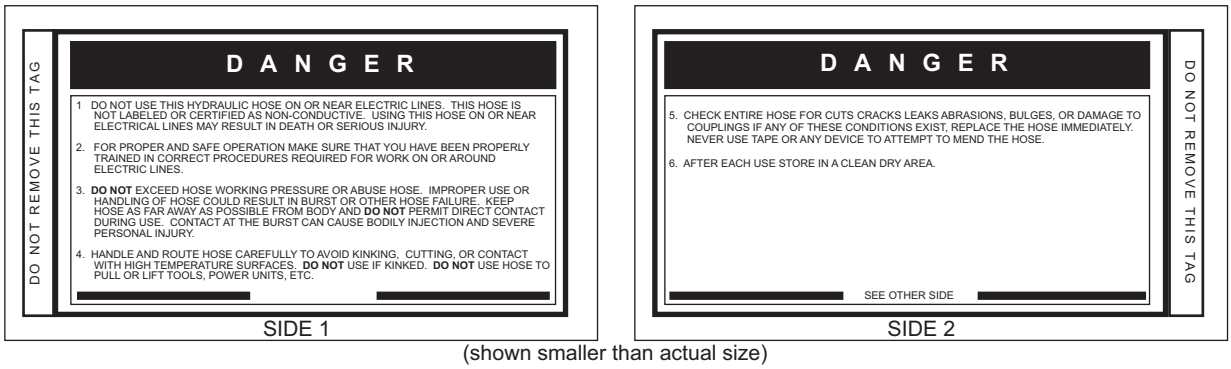
THE TAG SHOWN BELOW IS ATTACHED TO "CONDUCTIVE" HOSE.



(shown smaller than actual size)

HOSE PRESSURE RATING

The rated working pressure of the hydraulic hose **must be equal to or higher than** the relief valve setting on the hydraulic system.

HTMA REQUIREMENTS

HYDRAULIC SYSTEM REQUIREMENTS	TOOL CATEGORY  TYPE 1	 TYPE II	TYPE III	TYPE RR
FLOW RATE	4-6 gpm (15-23 lpm)	7-9 gpm (26-34 lpm)	11-13 gpm (42-49 lpm)	9-10.5 gpm (34-40 lpm)
TOOL OPERATING PRESSURE (at the power supply outlet)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)
SYSTEM RELIEF VALVE SETTING (at the power supply outlet)	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)	2200-2300 psi (152-159 bar)
MAXIMUM BACK PRESSURE (at tool end of the return hose)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)
Measured at a max. fluid viscosity of: (at min. operating temperature)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)
TEMPERATURE Sufficient heat rejection capacity to limit max. fluid temperature to: (at max. expected ambient temperature)	140° F (60° C)	140° F (60° C)	140° F (60° C)	140° F (60° C)
Min. cooling capacity at a temperature difference of between ambient and fluid temps	3 hp (2.24 kW) 40° F (22° C)	5 hp (3.73 kW) 40° F (22° C)	7 hp (4.47 kW) 40° F (22° C)	6 hp (5.22 kW) 40° F (22° C)
NOTE: Do not operate the tool at oil temperatures above 140° F (60° C). Operation at higher temperatures can cause operator discomfort at the tool.				
FILTER Min. full-flow filtration Sized for flow of at least: (For cold temp. startup and max. dirt-holding capacity)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)
HYDRAULIC FLUID Petroleum based (premium grade, anti-wear, non-conductive) VISCOSITY (at min. and max. operating temps)	100-400 ssu*	100-400 ssu*	100-400 ssu* (20-82 centistokes)	100-400 ssu*
NOTE: When choosing hydraulic fluid, the expected oil temperature extremes that will be experienced in service determine the most suitable temperature viscosity characteristics. Hydraulic fluids with a viscosity index over 140 will meet the requirements over a wide range of operating temperatures.				

*SSU = Saybolt Seconds Universal

NOTE:
These are general hydraulic system requirements. See tool Specification page for tool specific requirements.

OPERATION

The recommended hose size is .500 inch/12 mm I.D. up to 50 ft/15 m long and .625 inch/16 mm I.D. minimum up to 100 ft/30 m.

PRE-OPERATION PROCEDURES

CHECK POWER SOURCE

1. Using a calibrated flowmeter and pressure gauge, check that the hydraulic power source develops a flow of 7-9 gpm/26-34 lpm at 1500-2000 psi/105-140 bar.

2. Make certain the hydraulic power source is equipped with a relief valve set to open at 2100-2250 psi/145-155 bar maximum.

INSTALL TOOL BIT

1. Rotate the latch on the breaker foot downward (pointing away from the tool).

2. Insert the tool bit into the foot and pull the latch up to lock the tool bit in place.

CONNECT HOSES

1. Wipe all hose couplers with a clean, lint-free cloth before making connections.

2. Connect the hoses from the hydraulic power source to the tool fittings or quick disconnects. It is a good practice to connect return hoses first and disconnect them last to minimize or avoid trapped pressure within the tool.

3. Observe flow indicators stamped on hose couplers to ensure that fluid flow is in the proper direction. The female coupler on the tool hose is the inlet coupler.

4. Move the hydraulic circuit control valve to the ON position to operate the tool.

NOTE:
If uncoupled hoses are left in the sun, pressure increase within the hoses may make them difficult to connect. When possible, connect the free ends of the hoses together.

OPERATION PROCEDURES

1. Observe all safety precautions.

2. Install the appropriate tool bit for the job.

3. Place the bit firmly on the surface to be broken.

4. Squeeze the trigger to start the breaker. Adequate down pressure is very important. When the tool bit breaks through the obstruction or becomes bound, release the trigger and reposition the tool bit.

NOTE:
Partially depressing the trigger allows the tool to run at slow speed. Slow-speed operation permits easier starting of the tool bit into the work surface.

5. To start, break an opening (hole) in the center of the surface. After making a hole, break portions of the material into the original opening. For best productivity, the breaking should be done around the original hole.

The size of the broken material will vary with the strength and thickness of the base material and the amount of any reinforcement wire or rebar.

Harder material or more reinforcing wire or rebar will require taking smaller bites. To determine the most effective bite, start with 2 in. / 50 mm or smaller bites.

Bites can then be gradually increased until the broken piece becomes too large, requiring increased time to break off the piece.

Sticking of the tool bit occurs when too large a bite is being taken and the tool bit hammers into the material without the material fracturing. This causes the tool bit to become trapped in the surrounding material.

6. The underwater model requires preventative maintenance after each day's use underwater and prior to being placed in storage. See the General Service Notes section in this manual for this maintenance procedure.

COLD WEATHER OPERATION

If the breaker is to be used during cold weather, preheat the hydraulic fluid at low engine speed. When using the normally recommended fluid, fluid temperature should be at or above 50° F/10° C (400 ssu/82 centistokes) before use.

Damage to the hydraulic system or breaker can result from use with fluid that is too viscous or thick.

EQUIPMENT PROTECTION & CARE

NOTICE

In addition to the Safety Precautions found in this manual, observe the following for equipment protection and care.

- Make sure all couplers are wiped clean before connection.
- The hydraulic circuit control valve must be in the “OFF” position when coupling or uncoupling hydraulic tools. Failure to do so may result in damage to the quick couples and cause overheating of the hydraulic system.
- Always store the tool in a clean dry space, safe from damage or pilferage.
- Make sure the circuit PRESSURE hose (with male quick disconnect) is connected to the “IN” port. The circuit RETURN hose (with female quick disconnect) is connected to the opposite port. Do not reverse circuit flow. This can cause damage to internal seals.
- Always replace hoses, couplings and other parts with replacement parts recommended by Stanley Hydraulic Tools. Supply hoses must have a minimum working pressure rating of 2500 psi/172 bar.
- Do not exceed the rated flow (see Specifications in this manual for correct flow rate and model number). Rapid failure of the internal seals may result.
- Always keep critical tool markings, such as warning stickers and tags legible.
- Do not force a small breaker to do the job of a large breaker.
- Keep tool bit sharp for maximum breaker performance. Make sure that tool bits are not chipped or rounded on the striking end.
- Never operate a breaker without a tool bit or without holding it against the work surface. This puts excessive strain on the breaker foot.
- Tool repair should be performed by experienced personnel only.
- Make certain that the recommended relief valves are installed in the pressure side of the system.
- Do not use the tool for applications for which it was not intended.

TROUBLESHOOTING

PROBLEM	CAUSE	REMEDY
Tool does not run.	Power unit not functioning.	Check power unit for proper flow and pressure (7-9 gpm/26-34 lpm, 1500-2000 psi/105-140 bar.
	Couplers or hoses blocked.	Remove restriction.
	Pressure and return line hoses reversed at ports.	Be sure hoses are connected to their proper ports.
	Mechanical failure of piston or automatic valve.	Disassemble breaker and inpsect for damaged parts.
Tool does not hit effectively.	Power unit not functioning.	Check power unit for proper flow and pressure (7-9 gpm/26-34 lpm, 1500-2000 psi/105-140 bar.
	Couplers or hoses blocked.	Remove restriction.
	Low accumulator charge (pressure hose will pulse more than normal).	Recharge accumulator. Replace diaphragm if charge loss continues.
	Fluid too hot (above 140°F/60°C).	Provide cooler to maintain proper fluid temperature (130°F/55°C).
	The collar support is not sliding freely in the foot bore.	Remove, clean and replace as required. Make sure hex bushing is in the proper location.
Tool operates slow.	Low gpm supply from power unit.	Check power unit for proper flow (7-9 gpm/ 26-34 lpm).
	High backpressure.	Check hydraulic system for excessive backpressure (over 250 psi/17 bar).
	Couplers or hoses blocked.	Remove restriction.
	Orifice plug blocked.	Remove restriction.
	Fluid too hot (above 140°F/60°C) or too cold (below 60°F/16°C).	Check power unit for proper fluid temperature. Bypass cooler to warm the fluid or provide cooler to maintain proper temperature.
	The collar support is not sliding freely in the foot bore.	Remove, clean and replace as required. Make sure hex bushing is in the proper location.
	Relief valve set too low.	Adjust relief valve to 2100-2250 psi/145-155 bar.
Tool gets hot.	Hot fluid going through tool.	Check power unit. Be sure flow rate is not too high causing part of the fluid to go through the relief valve. Provide cooler to maintain proper fluid temperature (140°F/60°C max). Check the relief valve setting. Eliminate flow control devices.
Fluid leakage on tool bit.	Lower piston seal failure.	Replace seal.
Fluid leakage through charge valve cap.	Upper piston seal failure or accumulator o-ring failure or accumulator charge loss or failure.	Replace seals, recharge or replace accumulator diaphragm.
Fluid leakage around trigger.	Valve spool seal failure.	Replace seals.

CHARGING THE ACCUMULATOR

ACCUMULATOR TESTING PROCEDURE

To check or charge the accumulator the following equipment is required:

31254 Charge Kit: which includes the following.
• Accumulator Tester (Part Number 02835).
• Charging Assembly (Part Number 15304).
(p/n 15304 includes a liquid filled gauge with snub valve, hose and fittings.)

• NITROGEN bottle with an 1000 psi/70 bar minimum charge. (Not included in 31254 Charge Kit.)

1. Remove the valve cap assembly from the breaker.

2. Remove the protective cap and loosen the 5/8-inch hex locking nut on the tool charging valve 1-1/2 turns.

3. Holding the chuck end of Accumulator Tester (Part Number 02835) turn the gauge fully counterclockwise to ensure that the stem inside the chuck is completely retracted.

4. Thread the tester onto the accumulator charging valve. Do not advance the gauge-end into the chuck-end. Turn as a unit. Seat the chuck on the accumulator charging valve and hand tighten only.

5. Advance the valve stem of the tester by turning the gauge-end clockwise until a pressure is read on the gauge (charge pressure should be 700-900 psi/48-62 bar).

6. If pressure is OK unscrew the gauge-end from the chuck to retract the stem, then unscrew the entire tester assembly from the accumulator charging valve. If pressure is low, charge the accumulator as described in the following paragraph.

7. Tighten the 5/8-inch hex locking nut on the tool charging valve. Be careful not to overtighten. Install the protective cap and valve cap assembly.

ACCUMULATOR CHARGING

1. Perform steps 1 through 4 of the accumulator testing procedure above.

2. Connect the chuck of the charging assembly to the charging valve on the accumulator tester or, if preferred, remove the tester from the charging valve and connect the charging assembly chuck directly to the charging valve.

3. Adjust the regulator to the charging pressure of 800 psi/55 bar.

NOTE:
It may be necessary to set the gauge at 850-900 psi/59-62 bar to overcome any pressure drop through the charging system.

4. Open the valve on the charging assembly hose.

5. When the accumulator is fully charged close the valve on the charging assembly hose and remove the charging assembly chuck from the accumulator tester or tool charging valve.

6. If the accumulator tester has been used, be sure to turn the gauge-end fully counterclockwise before removing the tester from the charging valve of the tool.

7. Tighten the 5/8-inch hex locking nut on the tool charging valve and replace the protective cap.

8. Replace the valve cap assembly.

GENERAL SERVICE NOTES

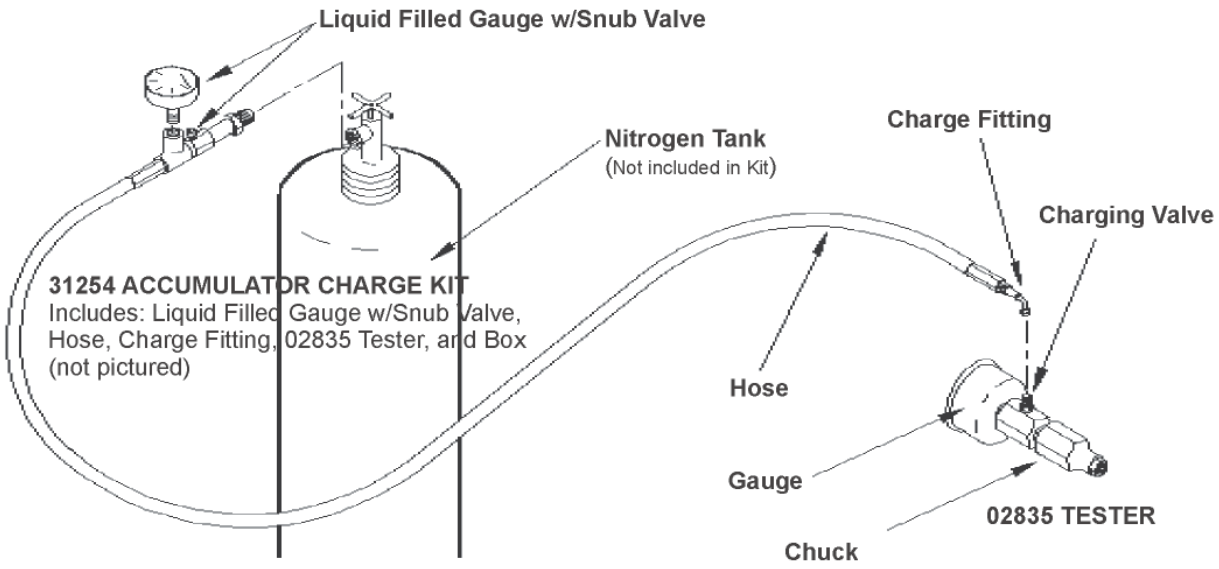
1. If the breaker is repainted after servicing, be sure to mask off the vent in the valve cap assembly. Do not allow paint to enter the IN and OUT ports or the bore of the foot assembly.

2. If the handle grips need to be replaced.

a. Remove the old grips and clean the handle.

b. Wash the new grips and the handle clean and dry, simply push or drive the grips on. DO NOT lubricate the parts. The grips will not be secure on the handle if any grease or oil is used.

CHARGING THE ACCUMULATOR



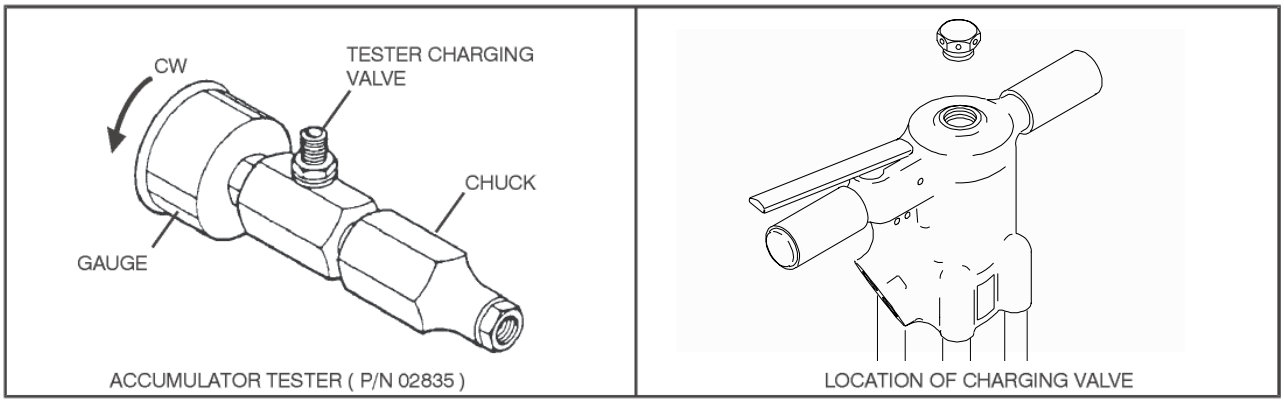


Figure 2

UNDERWATER MODEL PREVENTATIVE MAINTENANCE

After each use, the movable portions of the tool that were exposed to water should be flushed with a water displacing oil such as WD40. Remove any remaining water and debris as follows:

1.Turn the tool upside down (without the tool bit) and spray oil through the drive hex and side holes in the breaker foot assembly to displace any remaining water in the lower piston cavity.

2. Spray oil into the On/Off valve trigger slot area.

3. Dip or spray the entire tool.

4. Cycle the tool hydraulically several times before storing away.

SPECIFICATIONS

Pressure Range	1500-2000 psi/105-140 bar
Flow Range	7-9 gpm / 26-34 lpm
Optimum Flow	8 gpm / 30 lpm
Maximum Back Pressure	250 Psi/17 bar
Connect Size & Type	3/8 in. Male Pipe Hose Ends
Weight	80 lbs / 36 kg
Length	27 in. / 68 cm
Width	16 in. / 40 cm
System Type	Open or Closed Center HTMA Type II
Port Size	SAE 8 o-ring
Guaranteed Sound Power Level	111 dBA
Sound Pressure Level at Operator	102 dBA
Vibration Level	21.5 m/sec^2

ACCESSORIES

1-1/8 in. Hex x 6 in. Shank

Moil Point, 14 in. Long UC	02333
Chisel Point, 14 in. Long UC	03990
3-inch Chisel, 14 in. Long UC	02334
Clay Spade, 5-1/2 in. Blade	02331
Asphalt Cutter, 5 in. Blade, 11 in. Long	02332
Asphalt Wedge	08106
Ground Rod Driver, 1-in. Rod	04176

1-1/4 in. Hex x 6 in. Shank

Asphalt Cutter, 5 in. Blade, 11 in. Long UC	02335
Moil Point, 14 in. Long UC	02336
3-inch Chisel, 14 in. Long UC	02337
1- inch Chisel, Heavy Duty, 14 in. Long UC	02338
Ground Rod Driver, 1 in. Rod	04367
Moil Point, Heavy Duty, 18 in. Long UC	04404
Clay Spade, 8 in./20 cm Blade	04405
Asphalt Wedge	08119
Clay Spade, 5-1/2 in. Blade	09262

Test Equipment

Accumulator Tester	02835
Flow and Pressure Tester	04182
Accumulator Charge Kit (Inlcludes 02835 Tester, 15304 Accumulator Charge Assy and 372047 Box)	31254
Accumulator Charge Assy (Incl. Liquid Filled Gauge with Valve, Hose and Charge Fitting)	15304

UC denotes dimension measured from bttom tip of tool to bottom surface of collar.

SERVICE TOOLS

O-Ring Tool Kit	04337
Seal Kit	05485
Accumulator Disassembly Tool	05508
Accumulator cylinder Puller	05640
Split Rings	04908
Flow Sleeve Installation Spacer	04909
Flow Sleeve Removal Tube	04910

SERVICE

Good maintenance practice keeps the breaker on the job and increases its service life.

The most important maintenance practice is to keep the hydraulic fluid clean at all times. Contaminated hydraulic fluid causes rapid wear and/or failure of internal parts.

Follow the procedure contained in the HTMA Requirements under HYDRAULIC SYSTEM REQUIREMENTS section of this manual to ensure peak performance from the tool.

Never disassemble the tool unless proper troubleshooting procedures have isolated the problem to an internal part. Disassemble it only to the extent necessary to replace the defective part. KEEP CONTAMINANTS SUCH AS DIRT AND GRIT AWAY FROM INTERNAL PARTS AT ALL TIMES.

Always determine and correct the cause of the problem prior to assembly. Further wear and tool failure can result if the original cause is not corrected.

BREAKER DISASSEMBLY

PRIOR TO DISASSEMBLY

Clean exterior of tool.

Obtain Seal Kit (Part Number 05485). Replace all seals exposed during disassembly. Note orientation of seals before removing them. Install new seals in the same way.

DISASSEMBLY

1. Secure the breaker in a bench vise with the “IN” and “OUT” ports up, clamping on the flow sleeve tube between the side rods. Soft vise jaws are recommended.

2. Remove the pigtail hose assemblies.

Note:
The breaker is full of oil and will drip from the ports when the hoses are removed.

3. Remove the valve cap assembly (1-3/8 inch hex) from the top of the handle. Loosen the (5/8 inch hex) charging valve lock nut 1-1/2 turns. Discharge the accumulator down to approximately 20 psi/1.4 bar.

IMPORTANT

Do not completely discharge the accumulator at this time.

4. Remove the four side rod nuts (1 inch hex). Remove foot assembly by tapping top of flange or latch with a plastic or rubber hammer.

5. To service the foot assembly, proceed as follows:

a. The latch, detent, spring and rubber sleeves are accessible when the bolt and stop nut are removed (1-1/16 in. hex).

b. To service the hex bushing on units with Easi-Ride™ foot, use a 1-3/8 in./35 mm diameter steel rod 10 in./25 cm long. Remove the latch and use the rod to push the hex bushing from flange end of the foot toward latch end. A 25 ton press is required.

To service the hex bushing on units with non Easi-Ride™ foot, use a 1-1/8 in./28 mm diameter steel rod 7 in./18 cm long. Remove the latch and use the rod to push the hex bushing from flange end of the foot toward latch end. A 25 ton press is required.

Note:
On Easi-RideTM models, the collar support must be removed to service the hex bushing. Press down on the collar support from the latch end to retract it from the retaining ring (a long bolt with large washers may be placed through the foot assembly to hold the collar support in the retracted position). Push a 3/16 in./5 mm punch through the side hole in the foot to dislodge the round wire retaining ring, allowing it to be removed with a hooked tool. Once the retaining ring has been removed, the retaining bolt can be loosened, or pressure removed to remove the collar support and spring.

⚠ WARNING

The collar support is spring loaded. Take precaution to relax spring tension before removal.

c. To install the hex bushing, push the busing from the latch end toward flange end of the foot. One end of the bushing is tapered to aid assembly.

SERVICE

Note:
Align hex as shown in Figure 1 for proper tool bit alignment.

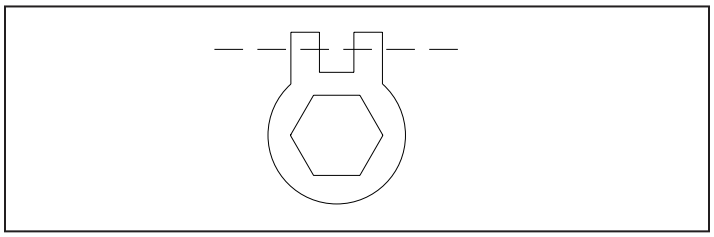


Figure 1. Hex Alignment

6. Remove handle and flow sleeve assembly from flow sleeve housing and clamp in vise on flow sleeve tube between side rods. Soft vise jaws are recommended.

7. Using a plastic or rubber hammer, tap the piston toward the handle until it stops.

Note:
When moving piston, oil will come out of the IN and OUT ports and flow sleeve.

8. Remove handle assembly from flow sleeve assembly by tapping on the ends of the alternate side rods with a plastic or rubber hammer while pulling on the handle.

9. If the automatic valve body remains in the handle assembly when the flow sleeve tube assembly is removed, proceed to Step 10. If it remains in the flow sleeve tube assembly it must be removed as follows:

a. Remove the piston and washer.

b. Place split rings (part number 04908) between the automatic valve body and flow sleeve tube.

c. Place flow sleeve assembly (with split rings in place) on the flow sleeve removal tube (part number 04910) with the automatic valve body down.

d. Using an arbor press and an aluminum disc or accumulator cylinder puller (part number 05640) to protect the flow sleeve, push on the flow sleeve to remove the automatic valve body.

IMPORTANT

Use a rag in the bottom of the removal tube to protect the automatic valve body when it drops out.

e. The automatic valve, four 5/16 x 2 in./8 mm x 51 mm push pins from the flow sleeve and two 3/16 x 1-1/4 in./5 mm x 32 mm push pins from the automatic valve body will come out.

f. Proceed to Step 12.

10. Remove the piston and automatic valve from the handle end of the flow sleeve. Remove the four 5/16 x 2 in./8 mm x 51 mm push pins by turning the flow sleeve on end.

11. Remove the two 3/16 x 1-1/4 in./5 mm x 32 mm push pins from the automatic valve body by turning the handle assembly on end.

12. Remove the flow sleeve from the flow sleeve tube as follows:

a. Place split ring (part number 04908) on top of the flow sleeve removal tube (part number 04910).

b. Place the flow sleeve tube assembly on top of the split rings.

c. Using an arbor press and an aluminum disc or accumulator cylinder puller (part number 05640) to protect the flow sleeve, push the flow sleeve out of the tube.

IMPORTANT

Use a rag in the bottom of the removal tube to protect the flow sleeve when it drops out.

13. Remove the accumulator assembly and automatic valve body from the handle by placing a 3/4 in. hex deep socket with a 6 in./15 cm extension over the charging valve and tapping the extension with a plastic or rubber hammer.

Note:
Make sure the thin washer between the automatic valve body and the accumulator chamber is properly located in its counterbore before driving the automatic valve body and accumulator out of the handle.

Note:
The accumulator cylinder may remain in the handle if the accumulator charge is below 20 psi/1.4 bar.

To remove the cylinder use the accumulator cylinder puller (part number 05640) which will seat on the inside lower contour of the accumulator cylinder, use a rod that extends through the charge valve hole in the handle and drive out the cylinder by tapping on the rod or use a slide hammer through the 1/2 in./12.5 mm hole provided in the puller.

14. Remove washer from the end of automatic valve body counterbore.

15. Discharge the accumulator assembly completely.

16. To remove the accumulator chamber and diaphragm from the accumulator cylinder, place the assembly on (part number 05508 and 04910) disassembly tools. Use a rag in the bottom of (part number 04910) tube to protect the accumulator chamber.

Drive chamber and diaphragm out by tapping or pushing wih an arbor press on the charge valve end while protecting the valve with a 3/4 in. hex deep socket.

17. Squeeze the accumulator diaphragm and slide it off the charge valve end of the accumlator chamber.

18. remove cup seal and back-up washer from the accumulator chamber.

19. Secure the accumulator chamber in a vise with soft jaws to remove the charging valve.

IMPORTANT

Avoid damage to the contours of the chamber.

20. Remove the trigger from the handle by driving out the 1/4 in./6.4 mm diameter spirol pin.

21. Remove valve spool by driving out two 3/16 x 1-3/8 in./5 x 35 mm roll pins and tap the end of the spool. The valve spring will eject the spool from the bore bringing the washer and bushing with it.

22. Remove the valve spool spring by turning the handle on end.

23. Remove the orifice plug from the bottom of the valve spool bore with a long 1/4 in. hex wrench.

PRIOR TO ASSEMBLY

Clean all parts with a degreasing solvent.

Ensure that all seals that were exposed have been repalced with new parts.

Apply clean grease or o-ring lubricant to all parts during reassembly.

Obtain seal kit (Part Number 05485) so all seals exposed during disassembly can be replaced during assembly.

Note:
For orientation of parts identified in the following procedures, see the parts list exploded view illustration at the back of this manual.

1. Check all parts for evidence of excessive wear, scoring, or obvious damage. Pay particular attention to seal and other running surfaces, looking for scratches or other signs of fluid contamination caused defects. Dirty or water contaminated fluid can cause scratches on running component surfaces.

2. Examine all exposed seals and o-rings for worn spots or damage caused by overheating or ingestion of contaminants. Although all exposed o-rings and seals must be replaced during assembly of the unit, this inspection should be performed to help identify related faulty components and the cause of an experienced or potential malfunction.

3. All components exhibiting excessive wear or deep scratches can usually be touch up using emery cloth. Thoroughly clean all parts before assembly.

4. Apply clean grease or o-ring lubricant to all close fitting parts and seals during assembly.

BREAKER ASSEMBLY

1. Install the orifice plug in the bottom of the valve spool bore with a long 1/4 in. hex wrench.

2. Replace (in this order), the spring, valve spool, bushing (with wiper ring toward stem end of valve spool) and washer in valve spool bore. Secure by driving the two 3/16 x 1-3/8 in./5 x 35 mm spirol pins through the handle on top of the washer.

Note:
Properly intalled spirol pins will be centered in the handle and their split lines aligned as shown in Figure 2.

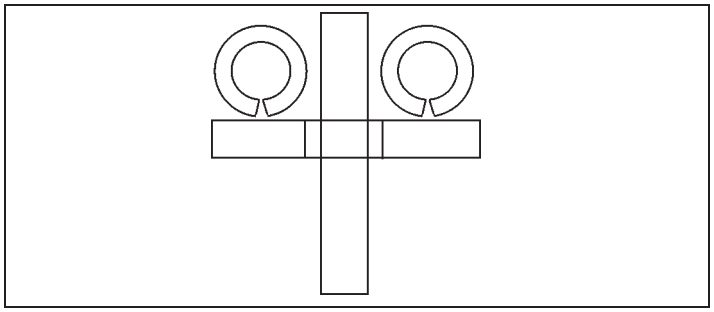


Figure 2. Spirol Pins

3. Replace the trigger. Install 1/4 in./6.4 mm diameter spirol pin. To ease installation of pin, align tirgger with a 1/4 in./6mm diameter rod or punch from the opposite side of the handle.

4. Screw the charging valve into the accumulator chamber.

5. Apply a light coating of WD40® to the accumulator chamber and slide accumulator diaphragm on from charging valve end.

6. Use grease or rubber lubricant on the inside of the accumulator cylinder and outside diameter of the diaphragm. Push the accumulator chamber and diaphragm, charging valve end first, halfway into the accumulator cylinder. The parts are assembled from the end of the cylinder with the chamfer on the outside diameter. Be sure the accumulator diaphragm is free of wrinkles and the seal bead is in its groove before completing the assembly. An arbor press may be required to completely seat the assembly using short movements during the last 1/2 in./12 mm of travel to gently seat the diaphragm.

IMPORTANT

Do not use a hammer or powered arbor press.

7. Test the charge accumulator assembly as follows:

a. Place the assembly in a vise with soft jaws clamping on ends of the accumulator chamber.

IMPORTANT

Do not overtighten and distort accumulator cylinder.

b. Loosen the 5/8 in. hex charging valve lock nut 1-1/2 turns.

c. Charge accumulator with nitrogen to 800 pis/55 bar. It may be necessary to charge 50-75 psi/3.4-5 bar to overcome the pressure drop through the charging system.

d. Check for leaks.

e. Discharge the accumulator.

8. Verify that the CAUTION decal shown in Figure 3 is attached to the accumulator chamber. This sticker must be in good physical condition and it contents legible. Replace if worn or damaged.

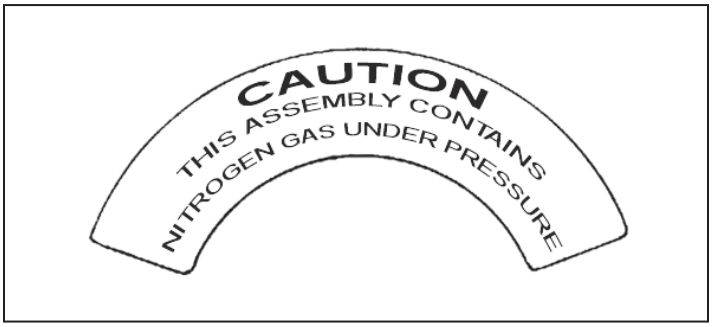


Figure 3. Accumulator Caution Decal

9. Replace the back-up washer and cup seal (lips facing out) in the accumulator chamber counterbore.

10. Install the accumulator assembly into the handle, charging valve end first, using an arbor press with an aluminum disc or accumulator cylinder puller (part number 05640) to protect parts.

11. Place the flow sleeve installation spacer (part number 04909) on the base of an arbor press. Lubricate the **entire** bore of the flow sleeve tube and position it over the spaer with the outside diameter o-ring groove up.

12. The flow sleeve has a wide groove around the outise of one end. Install this end first. Press the flow sleeve into the flow sleeve tube, using an aluminum disc or accumulator cylinder puller (part number 05640) to protect the part, until the sleeve is **flush** with the tube. Do not seat flow sleeve on spacer at this time.

13. Install four 5/16 x 1-1/4 in./8 mm x 51 mm push pins, tapered end up in the flow sleeve.

14. Install two 3/16 x 1-1/4 in./5 mm x 32 mm push pins, tapered end up in the automatic valve body. Install the automatic valve, small diameter first, into the valve body.

Note:
the push pins must be installed such that the flat, ground faces bear on the flange of the automatic valve.

15. Align dowl pin and place the automatic valve body with the side holes up on top of the flow sleeve and allow the valve to drop and pilot into the bore of the flow sleeve.

16. Use an aluminum disc or accumulator cylinder puller (part number 05640) to protect parts and push the automatic valve body into the flow sleeve tube until the flow sleeve stops on the installation spacer. The bottom of the two side holes in the valve body will be tangent to the top edge of the flow sleeve tube when properly seated.

17. Install the piston, large end first in the flow sleeve assembly from the valve body end.

18. Using a large amount of grease, install the washer small end first on the stem of the piston. Be sure the washer is against the valve body.

19. Place the handle assembly, side rods up, in the arbor press. Holding the piston by its lower end so it does not drop out, place flow sleeve assembly in the handle assembly. A light press will be required.

IMPORTANT

Press on the flow sleeve tube only. Press evenly all around so that the tube assembly is straight when seated.

Optional Assembly:
Place the flow sleeve assembly horizontally in a vise and slide the handle assembly in place, driving home with a rubber or plastic hammer.

Note:
Installation spacer may be required to keep the flow sleeve from moving.

20. Clamp the flow sleeve housing in a vise and slide the handle and flow sleeve assembly in place, with “IN” and “OUT” ports up.

21. Install the foot assembly using a plastic or rubber hammer. Align the foot latch with the “IN” and “OUT” ports on the handle.

22. Replace the four side rod nuts. Tighten in 20 ft. lb./25 Nm increments to 75 ft. lb./100Nm in pattern shown in Figure 4.

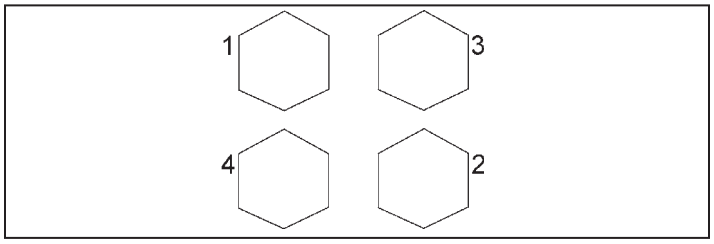


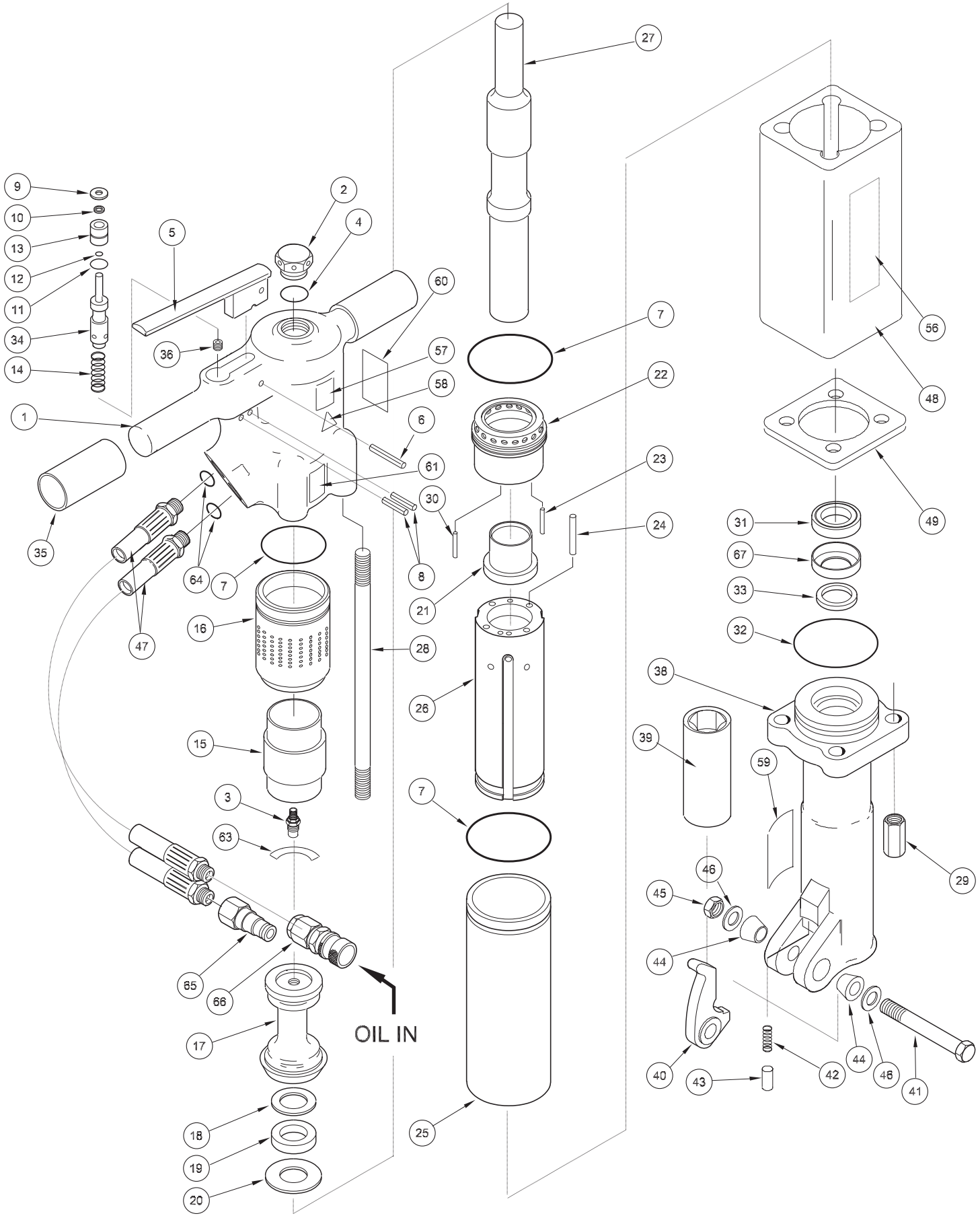
Figure 4. Bolt Pattern Tightening

23. Charge the accumulator with nitrogen as described in CHARGING THE ACCUMULATOR section in this manual.

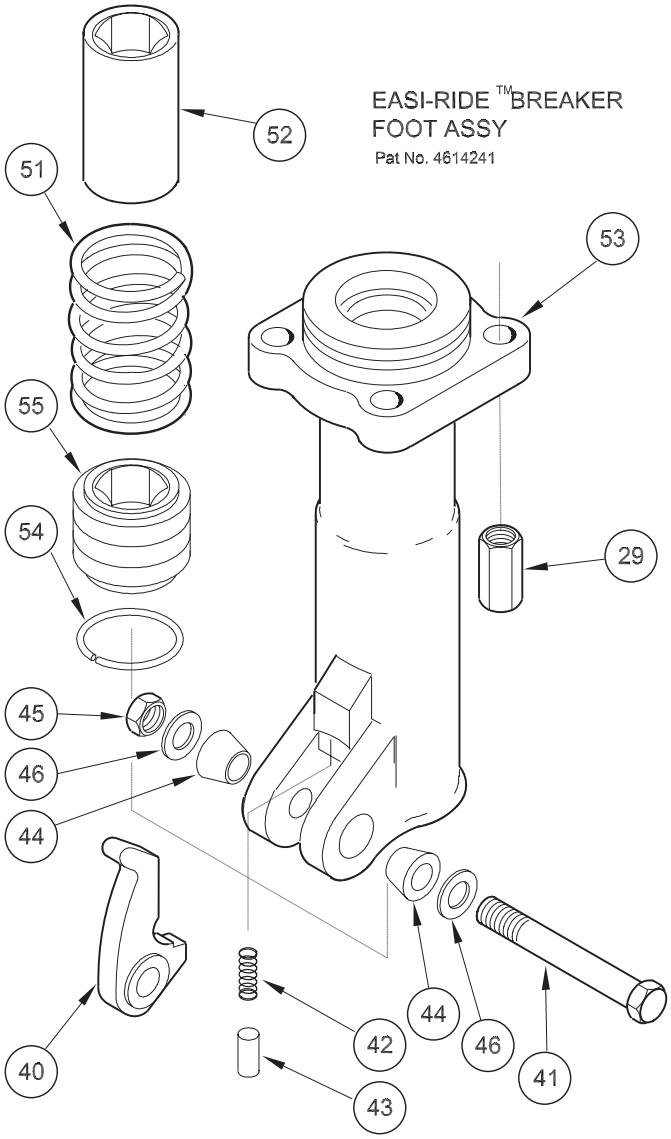
24. Install the valve cap assembly.

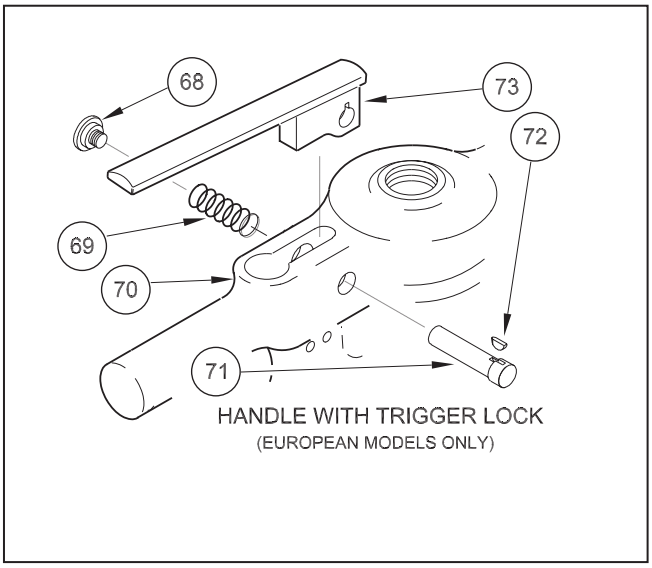
25. Install the pigtail hose assemblies.

BR87 PARTS ILLUSTRATION



BR87 PARTS ILLUSTRATION





BR87 PARTS LIST

Item No.	Part No.	Qty	Description
1	06185 11435	1	Handle Assy. (Incl. Item 35) Breaker Handle (Trigger Lock Models Only)
2	04050	1	Valve Cap Assy.
3	04051	1	Charging Valve
4	04052	1	O-Ring
5	04053 11434	1	Trigger Trigger (Trigger Lock Models Only)
6	00844	1	Spirol Pin
7	04054	3	O-Ring
8	22891	2	Spirol Pin, 3/16 x 1-5/8
9	04055	1	Washer
10	04056	1	Rod Wiper
11	00293	1	O-Ring
12	01362	1	O-Ring
13	04057	1	Bushing
14	04058	1	Spring
15	04059	1	Accumulator Diaphragm
16	04060	1	Accumulator Cylinder
17	05309	1	Accumulator Chamber Assy.
	06889	**1**	**Accumulator Assembly (Incl. Items 3, 7, 15 thru 19)**
18	05301	1	Back-up Washer
19	05307	1	Cup Seal
20	04064	1	Washer
21	04065	1	Automatic Valve
22	04066	1	Automatic Valve Body
23	04571	2	Push Pin, 3/16 x 1-1/4
24	04067	4	Push Pin, 5/16 x 2
25	04068	1	Flow Sleeve Tube
26	04069	1	Flow Sleeve
27	16812	1	Piston
28	04071	4	Side Rod
29	04075	4	Side Rod Nut
30	07890	1	Roll Pin, 3/16 x 1-1/2
31	34127	1	Cup Seal
32	04073	1	O-Ring
33	04074	1	Rod Wiper
34	04077	1	Valve Spool, OC
35	02494	2	Handle Grip
36	05465	1	Orifice Plug
37	05466 05467	1	Foot Assy. 1-1/8 Hex (Incl. Items 31-33 & 38-46 and 67) Foot Assy. 1-1/4 Hex (Incl. Items 31-33 & 38-46 and 67)
38	05484	1	Foot Assy. (Incl. Items 33-67)
	07523	**1**	**Easi-Ride™ Foot Assy. 1-1/8 Hex (Incl. Items 33, 40 thru 46 and 51 thru 55)**
	07486	**1**	**Easi-Ride™ Foot Assy. 1-1/4 Hex (Incl. Items 33, 40 thru 46 and 51 thru 55)**
39	04081 04597	1	Hex Bushing, 1-1/8 Hex Hex Bushing, 1-1/4 Hex
40	01837	1	Latch
41	04983	1	Bolt

Item No.	Part No.	Qty	Description
42	01744	1	Spring
43	01745 08411	1	Detent, 1.000 OAL, (Serial No. 1707 and Below) Detent, 1.250 OAL, (Serial No. 1708 and Above)
44	01269	2	Rubber Sleeve, 1.000
45	04984	1	Stop Nut
46	04985	2	Spring Washer
47	09546	2	Pigtail Hose Assy.
48	05265	1	Flow Sleeve Housing
49	24666	1	Elastometric Spacer
51	07515	1	Spring
52	07517 07518	1	Hex Bushing, 1-1/8 Hex Bushing, 1-1/4
53	11614	1	Breaker Foot Assy.
54	07522	1	Retaining Ring
55	08115 08116	1	Collar Support Assy. 1-1/8 w/Wear Rings Collar Support Assy. 1-1/4 w/Wear Rings
56	07892 28381	1	Nameplate Decal Nameplate Decal (BR8713201 & BR8717201 Only)
57	28322	1	CE Decal
58	11207	1	Circuit Type “D” Decal
59	11208	1	Hex Shank Length Decal
60	66656	1	Sound Power Level Decal
61	28409	1	Composite Decal
62	---	-	No Item
63	10180	1	Caution Decal
64	01605	2	O-Ring (Incl. with Item 47)
65	03973	1	Flush Face Coupler, Male
66	03972	1	Flush Face Coupler, Female
	24069	1	Coupler Set (Used on BR87130E and BR87120)
67	05464	1	Seal Insert
68	01003	1	Button
69	11430	1	Spring
70	11435	1	Handle
71	11431	1	Lock Pin
72	11432	1	Key
73	11434	1	Trigger

SEAL KIT PART NUMBER 05485

Part No.	Qty	Description
00293	1	O-Ring
00678	1	O-Ring
01362	1	O-Ring
01605	2	O-Ring
04052	1	O-Ring
04054	3	O-Ring
04056	1	Rod Wiper
04073	1	O-Ring
04074	1	Rod Wiper
05307	1	Cup Seal
05641	1	O-Ring
34127	1	Cup Seal

WARRANTY

Stanley Hydraulic Tools (hereinafter called “Stanley”), subject to the exceptions contained below, warrants new hydraulic tools for a period of one year from the date of sale to the first retail purchaser, or for a period of 2 years from the shipping date from Stanley, whichever period expires first, to be free of defects in material and/or workmanship at the time of delivery, and will, at its option, repair or replace any tool or part of a tool, or new part, which is found upon examination by a Stanley authorized service outlet or by Stanley’s factory in Milwaukie, Oregon to be DEFECTIVE IN MATERIAL AND/OR WORKMANSHIP.

EXCEPTIONS FROM WARRANTY

NEW PARTS: New parts which are obtained individually are warranted, subject to the exceptions herein, to be free of defects in material and/or workmanship at the time of delivery and for a period of 6 months after the date of first usage. Seals and diaphragms are warranted to be free of defects in material and/or workmanship at the time of delivery and for a period of 6 months after the date of first usage or 2 years after the date of delivery, whichever period expires first. Warranty for new parts is limited to replacement of defective parts only. Labor is not covered.

FREIGHT COSTS: Freight costs to return parts to Stanley, if requested by Stanley for the purpose of evaluating a warranty claim for warranty credit, are covered under this policy if the claimed part or parts are approved for warranty credit. Freight costs for any part or parts which are not approved for warranty credit will be the responsibility of the individual.

SEALS & DIAPHRAGMS: Seals and diaphragms installed in new tools are warranted to be free of defects in material and/or workmanship for a period of 6 months after the date of first usage, or for a period of 2 years from the shipping date from Stanley, whichever period expires first.

CUTTING ACCESSORIES: Cutting accessories such as breaker tool bits are warranted to be free of defects in material and or workmanship at the time of delivery only.

ITEMS PRODUCED BY OTHER MANUFACTURERS: Components which are not manufactured by Stanley and are warranted by their respective manufacturers.

a. Costs incurred to remove a Stanley manufactured component in order to service an item manufactured by other manufacturers.

ALTERATIONS & MODIFICATIONS: Alterations or modifications to any tool or part. All obligations under this warranty shall be terminated if the new tool or part is altered or modified in any way.

NORMAL WEAR: any failure or performance deficiency attributable to normal wear and tear such as tool bushings, retaining pins, wear plates, bumpers, retaining rings and plugs, rubber bushings, recoil springs, etc.

INCIDENTAL/CONSEQUENTIAL DAMAGES: To the fullest extent permitted by applicable law, in no event will STANLEY be liable for any incidental, consequential or special damages and/or expenses.

FREIGHT DAMAGE: Damage caused by improper storage or freight handling.

LOSS TIME: Loss of operating time to the user while the tool(s) is out of service.

IMPROPER OPERATION: Any failure or performance deficiency attributable to a failure to follow the guidelines and/or procedures as outlined in the tool’s operation and maintenance manual.

MAINTENANCE: Any failure or performance deficiency attributable to not maintaining the tool(s) in good operating condition as outlined in the Operation and Maintenance Manual.

HYDRAULIC PRESSURE & FLOW, HEAT, TYPE OF FLUID: Any failure or performance deficiency attributable to excess hydraulic pressure, excess hydraulic back-pressure, excess hydraulic flow, excessive heat, or incorrect hydraulic fluid.

REPAIRS OR ALTERATIONS: Any failure or performance deficiency attributable to repairs by anyone which in Stanley’s sole judgement caused or contributed to the failure or deficiency.

MIS-APPLICATION: Any failure or performance deficiency attributable to mis-application. “Mis-application” is defined as usage of products for which they were not originally intended or usage of products in such a matter which exposes them to abuse or accident, without first obtaining the written consent of Stanley. PERMISSION TO APPLY ANY PRODUCT FOR WHICH IT WAS NOT ORIGINALLY INTENDED CAN ONLY BE OBTAINED FROM STANLEY ENGINEERING.

WARRANTY REGISTRATION: STANLEY ASSUMES NO LIABILITY FOR WARRANTY CLAIMS SUBMITTED FOR WHICH NO TOOL REGISTRATION IS ON RECORD. In the event a warranty claim is submitted and no tool registration is on record, no warranty credit will be issued without first receiving documentation which proves the sale of the tool or the tools’ first date of usage. The term “DOCUMENTATION” as used in this paragraph is defined as a bill of sale, or letter of intent from the first retail customer. A WARRANTY REGISTRATION FORM THAT IS NOT ALSO ON RECORD WITH STANLEY WILL NOT BE ACCEPTED AS “DOCUMENTATION”.

NO ADDITIONAL WARRANTIES OR REPRESENTATIONS

This limited warranty and the obligation of Stanley thereunder is in lieu of all other warranties, expressed or implied including merchantability or fitness for a particular purpose except for that provided herein. There is no other warranty. This warranty gives the purchaser specific legal rights and other rights may be available which might vary depending upon applicable law.

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