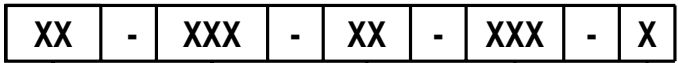


**Cleco®**



Series: \_\_\_\_\_

B1 (Shank Style) (Square Chisel)  
BR (Shank Style) (Round Chisel)

Tool Type: \_\_\_\_\_

C (Chisel)  
CNB (Chisel & Needle)

Throttle Type: \_\_\_\_\_

PT (Push)  
LT (Lever)  
BV (Pistol)

Kit:  
(Contains Case, Scaler, Whip Hose Extra  
Needle Set, 2-Chisels & Chisel Retainer Parts).

Nose Type: (CNB Only)

RD (Round)  
RET (Rectangular)

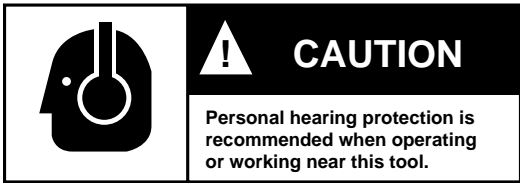
# Safety Recommendations

For your safety and the safety of others, read and understand the safety recommendations before operating any percussion tool.

## Always wear protective equipment and clothing.



For additional information on eye protection, refer to Federal OSHA Regulations, 29 CFR, Section 1910.133, Eye and Face Protection, and ANSI Z87.1, Occupational and Educational Eye and Face Protection. This standard is available from the American National Standards Institute, Inc., 11 West 42nd Street, New York, NY 10036.



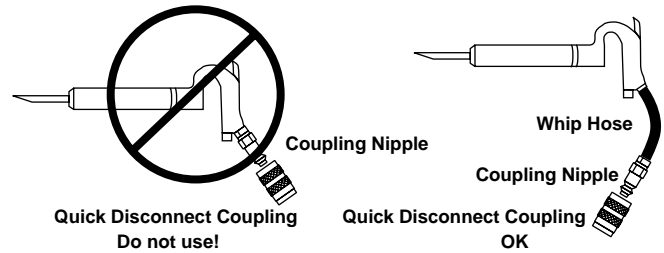
Hearing protection is recommended in high noise areas (above 85 dBA). Close proximity of additional tools, reflective surfaces, process noises, and resonant structures can substantially contribute to the sound level experienced by the operator. For additional information on hearing protection, refer to Federal OSHA Regulations, 29 CFR, Section 1910.95, Occupational Noise Exposure, and American National Standards Institute, ANSI S12.6, Hearing Protectors.

**Gloves and other protective clothing should be worn as required.** Properly fitted gloves cushion vibration and protect the fingers from pinching, scuffing and scraping and must be used when guiding the chisel on a workpiece.



Cleco percussion tools are designed to operate on 90 psig (6.2 bar) maximum air pressure. Excessive air pressure can damage the plunger and increases sound levels. Installation of a filter-regulator-lubricator in the air supply line ahead of the tool is highly recommended. Before the tool is connected to the air supply, check the throttle for proper operation (i.e.,

throttle moves freely and returns to closed position). Being careful not to endanger adjacent personnel, clear the air hose of accumulated dust and moisture. Attachment of a quick-disconnect air coupling directly to the inlet threads of a percussion tool can cause wear and failure of the coupling. Should the coupling fail, severe injury can result from the hose end violently whipping about. If a quick-disconnect air coupling is used, separate the coupling from the tool with a whip hose (1.5 feet minimum). Only use a whip hose with fittings of hardened steel or other material which is at least comparably resistant to shock. Do not use hose to lift or lower tool.



**WARNING** Cracked chisels or implements are hazardous. Visually inspect the chisel or implement for cracks before use. Make a practice of having all chisels magniflused before resharpener. Destroy and discard any chisel or implement that shows a crack.



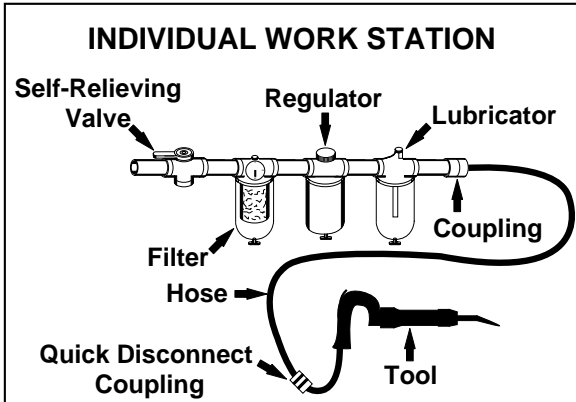
Correct selection of the chisel or other implement is important. Dull edges on the chisel ormoil point cause the energy of the percussion blow to be absorbed by the tool itself, instead of the workpiece, increasing the chance of chisel breakage. When operating percussion tools in explosive or flammable environments, use only non-sparking chisels or implements such as those made from beryllium copper. Also, do not use cupped rivet sets with Cleco percussion tools to drive nails. Blows not centered on the nail can cause the nail to ricochet off the work and strike the user.



Before removing a tool from service, after completing a job, or changing chisels or other bits, make sure the air line is shut off and drained of air. This will prevent the tool from operating if

# Safety Recommendations


the throttle is accidentally engaged. Use of a self-relieving valve within reach of the user of the tool is highly recommended.



Do not operate or trigger any percussion tool unless the chisel, scaling tool, rivet set, or other implement is in the tool and in contact with the workpiece or worksurface. Never point any percussion tool in the direction of another person or yourself, or deliberately eject a chisel. Failure to do so can cause serious injury and/or damage the tool.

Chisel or rivet set retainers are recommended and furnished as standard equipment. **Periodic inspection of the retainer for wear or damage is recommended since these devices can receive heavy abuse, particularly if the tool is run off the workpiece. Damaged retainers are dangerous, and can allow the ejection of a chisel or other implement. They must be replaced as necessary. Only use safety retainer type chisels, as shown in the operating instructions and service manual.** Also, it is good safety practice to erect suitable barriers to protect persons in surrounding or lower work areas from possible ejected tools.

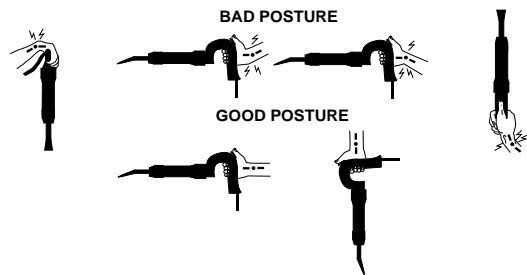
**! WARNING**



**Repetitive work motions and/or vibration may cause injury to hands and arms.**  
 Use minimum hand grip force.  
 Keep body and hands warm and dry.  
 Avoid anything that inhibits blood circulation.  
 Avoid continuous vibration exposure.  
 Keep wrists straight.  
 Avoid repeated bending of wrists and hands.

Some individuals may be susceptible to disorders of the hands and arms when performing tasks consisting of highly repetitive motions and/or exposure to extended vibration. **Cumulative** trauma disorders such as carpal tunnel syndrome and tendonitis may be caused or aggravated by repetitious, forceful exertions of the hands and arms. Vibration may contribute to a condition called Raynaud's Syndrome. These disorders develop gradually over periods of weeks, months, and years. It is presently unknown to what extent exposure to vibrations or repetitive motions may contribute to the disorders. Hereditary factors, vasculatory or circulatory problems, exposure to cold and dampness, diet, smoking and work practices are

thought to contribute to the conditions. Any user suffering prolonged symptoms of tingling, numbness, blanching of fingers, clumsiness or weakened grip, nocturnal pain in the hand, or any other disorder of the shoulders, arms, wrists, or fingers is advised to consult a physician. If it is determined that the symptoms are job related or aggravated by movements and postures dictated by the job design, it may be necessary for the employer to take steps to prevent further occurrences. These steps might include, but are not limited to, repositioning the workpiece or redesigning the workstation, reassigning workers to other jobs, rotating jobs, changing work pace, and/or changing the type of tool used so as to minimize stress on the operator. Some tasks may require more than one type of tool to obtain the optimum operator/tool/task relationship.



- **Tasks should be performed in such a manner that the wrists are maintained in a neutral position, which is not flexed, hyperextended, or turned side to side.**
- **Stressful postures should be avoided. Select a tool appropriate for the job and work location.**

Work gloves with vibration reducing liners and wrist supports are available from some manufacturers of industrial work gloves. Tool wraps and grips are also available from a number of different manufacturers. These gloves, wraps, and wrist supports are designed to reduce and moderate the effects of extended vibration exposure and repetitive wrist trauma. Since they vary widely in design, material, thickness, vibration reduction, and wrist support qualities, it is recommended that the glove, tool wrap, or wrist support manufacturer be consulted for items designed for your specific application. **Proper fit of gloves is important. Improperly fitted gloves may restrict blood flow to the fingers and can substantially reduce grip strength.**

This information is a compilation of general safety practices obtained from various sources available at the date of production. However, our company does not represent that every acceptable safety practice is considered herein, or that abnormal or unusual circumstances may not warrant or require additional procedures. Your work may require additional specific safety procedures. Follow these procedures as required by your company. For more information, see the latest edition of ANSI B186.1, Safety Code for Portable Air Tools, available from the American National Standards Institute, Inc., 11 West 42nd Street, New York, NY 10036.

## **⚠ WARNING**

Eye protection must be worn when disassembling tool or when air line is turned on. A self-relieving valve in close proximity to the repair station to bleed off air is recommended.

# OPERATING INSTRUCTIONS

The B1-C and BR-C series scalers are designed to operate on 90 psig air pressure using a 5/16" I.D. hose up to 8' in length. If additional length is required, a 3/8" I.D. or large hose should be connected to the 5/16" hose.

The air hose should be cleared of accumulated dirt and moisture, then one-half (1/2) teaspoon of 10W machine oil should be poured into the tool's air inlet before connecting the hose to the tool.

**IMPORTANT:** The handle should be checked after the first eight (8) hours and occasionally thereafter to make sure it is tight.

## LUBRICATION

An automatic in-line filter-lubricator is recommended as it increases tool life and keeps the tool in sustained operation. The in-line lubricator should be regularly checked and filled with a good grade of 10W machine oil. Never use a heavy oil, as this will cause a loss of efficiency. Proper adjustment of the in-line lubricator is performed by placing a sheet of paper next to the exhaust ports and holding the throttle open for approximately 30 seconds. The lubricator is properly set when a light stain of oil collects on the paper. Excessive amounts of oil should be avoided.

If the operation of the scaler becomes sluggish or erratic, pour one teaspoon of kerosene into the air inlet and operate the tool for a few seconds. Lubricate the tool as explained above after flushing.

## STORAGE

In the event that it becomes necessary to store the tool for an extended period of time (overnight, weekend, etc.), it should receive a generous amount of lubrication at that time and again when returned to service. Store the tool in a clean and dry environment. Alternatively, chippers and scalers may be put in a bucket of kerosene or light oil for extended periods of storage such as weekends or plant shutdowns.

Never use a heavy oil, as this will cause a loss of efficiency. If the operation of the scaler becomes sluggish or erratic, pour one teaspoon of kerosene into the air inlet and operate the tool for a few seconds. Lubricate the tool as mentioned above after flushing. The tool should always be lubricated before storage and when being returned to service.

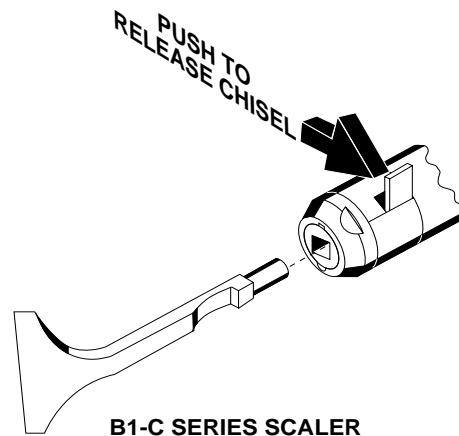
## CHISEL REMOVAL

### **⚠ WARNING**

Turn off the air and drain the air hose before removing any chisel or implement. Only used notched B1-C safety retainer chisels with B1-C scalers and notched BR-C safety retainer chisels with BR-C scalers. (See page 6)

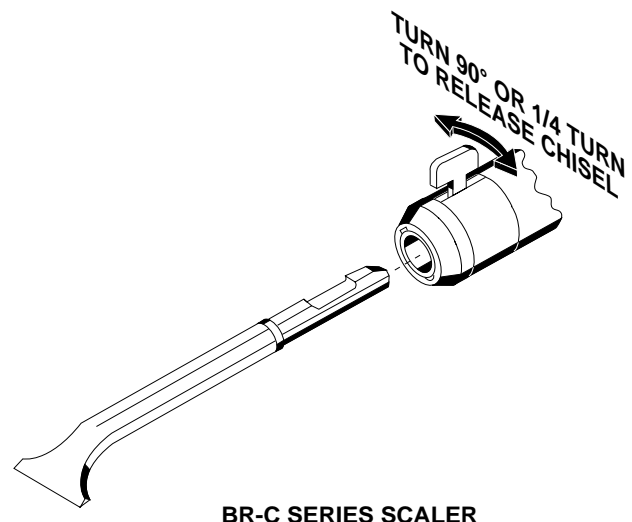
### B1-C MODELS:

Turn off the air and drain the air hose before attempting to remove chisel. Push the tang on the retainer, No. 832956, away from the barrel (as shown below) to remove the chisel.



### BR-C MODELS:

Turn off air and drain air hose before attempting to remove chisel. Rotate the retainer, No. 869314, 90° or 1/4 turn in either direction (as shown below) and to remove the chisel. Rotate the retainer back to its in-line position with the barrel after chisel replacement.



## **WARNING**

Eye protection must be worn when disassembling tool or when air line is turned on. A self-relieving valve in close proximity to the repair station to bleed off air is recommended.

# SERVICE INSTRUCTIONS

## DISASSEMBLY

To disassemble the tool, remove the chisel retainer clip and clamp the flats of the barrel in a soft-jawed vise. Loosen the handle locking ring, No. 832882, and unscrew and remove the handle. Note: Handle disassembly instructions are found on pages 8, 9, and 10.

After the handle has been removed, the valve assembly, consisting of the valve block, No. 832508, valve, No. 832196, and valve block button, No. 832173, may be removed from the barrel. The valve assembly is positioned together by the two (2) valve block pins, No. 844652. The valve assembly may be pulled apart to inspect the valve. After the valve assembly has been removed, invert the barrel and allow the plunger to drop out.

If either the barrel sleeve or the tool nose needs replacing, they should be pressed out the rear of the barrel.

## REASSEMBLY

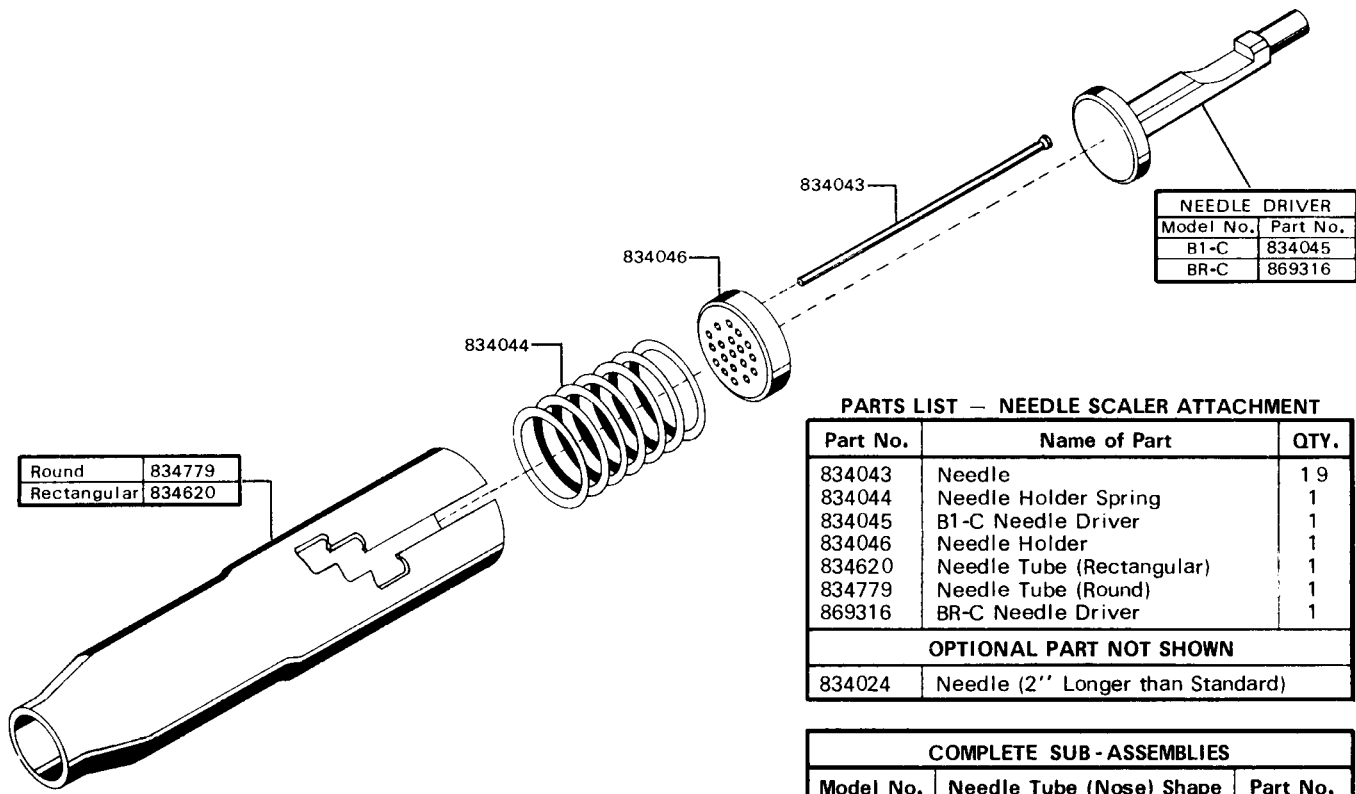
The tool is reassembled in the reverse order of disassembly. Wash all parts thoroughly in a solvent and inspect for damage or wear before reassembling the tool. Be sure all air passages in the barrel and valve assembly are free of any dirt or foreign matter.

**NOTE:** The screen bushing should be checked and either cleaned or replaced if necessary.

If the handle does not position as desired with respect to the chisel position, one or more handle positioning spacers, No. 832947, may be placed between the valve assembly and the handle. Use one spacer for about every 30 degrees desired. Always tighten the handle into the barrel until the valve assembly is tight against the barrel sleeve and then tighten the locking ring, No. 832882. After the tool is assembled, pour a few drops of 10W machine oil in the inlet bushing to ensure immediate lubrication of the complete tool.

Things to look for when repairing B1-C and BR-C scalers:

- (1) Worn out buffer, No. 833527, used in the B1, which is caused by operating the tool without any resistance against the chisel.
- (2) Excessive wear in the tool nose.
- (3) Worn or scored plunger usually caused by foreign particles entering the tool.
- (4) Worn or scored bore in the barrel sleeve caused by foreign particles entering the tool.
- (5) Rings worn in the wafer valve.



Round	834779
Rectangular	834620

NEEDLE DRIVER	
Model No.	Part No.
B1-C	834045
BR-C	869316

**PARTS LIST – NEEDLE SCALER ATTACHMENT**

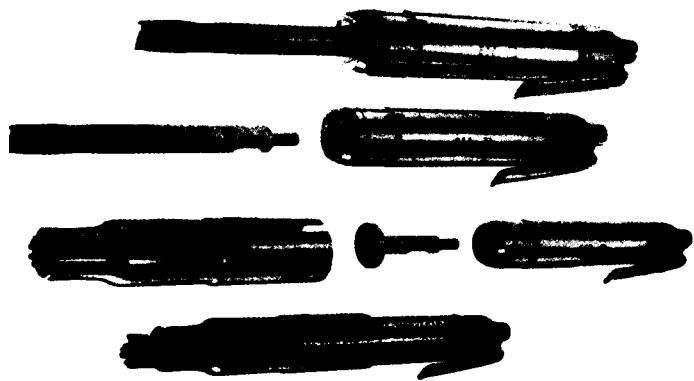
Part No.	Name of Part	QTY.
834043	Needle	1
834044	Needle Holder Spring	1
834045	B1-C Needle Driver	1
834046	Needle Holder	1
834620	Needle Tube (Rectangular)	1
834779	Needle Tube (Round)	1
869316	BR-C Needle Driver	1

**OPTIONAL PART NOT SHOWN**

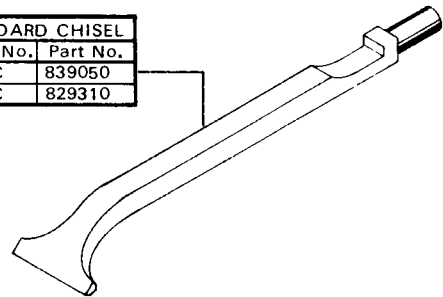
834024	Needle (2" Longer than Standard)	
--------	----------------------------------	--

**COMPLETE SUB-ASSEMBLIES**

Model No.	Needle Tube (Nose) Shape	Part No.
B1 - C	Round	831322
	Rectangular	831340
BR - C	Round	861734
	Rectangular	861733



STANDARD CHISEL	
Model No.	Part No.
B1-C	839050
BR-C	829310



**TWO TOOLS IN ONE**

To convert the Needle Scaler, all you do is remove the needle holder sleeve and replace the needle driver with the scaling chisel. No tools are necessary to remove or adjust the sleeve.

The "J" slot retainer has three positions, spaced 7/16" apart. As the needles wear or greater extension is desired, the needle housing can be telescoped back over the scaler barrel up to 7/8" additional needle extension. Needles that are 2" longer than standard are also available.

**B1-C SCALER CHISELS  
Safety Retainer Type**

Description	Size	Overall Length	Dimensions Cutting Edge	Part No.
Hardened Blank	1/2 in. Sq.	7-1/2 in.	.....	839052
Hardened Blank	1/2 in. Sq.	12 in.	.....	839053
Hardened Blank	1/2 in. Sq.	18 in.	.....	839054
Flat Chisel	1/2 in. Sq.	7-1/2 in.	3/4 in.	839051
Flat Chisel	1/2 in. Sq.	12 in.	3/4 in.	839341
Flat Chisel	1/2 in. Sq.	18 in.	3/4 in.	839335
Flat Chisel	1/2 in. Sq.	8 in.	1-1/2 in.	839467
Spoon Chisel	1/2 in. Sq.	7-1/4 in.	1-3/8 in.	839050
Spoon Chisel	1/2 in. Sq.	12 in.	1-3/8 in.	839299
Spoon Chisel	1/2 in. Sq.	18 in.	1-3/8 in.	839334
Spoon Chisel	1/2 in. Sq.	7-1/4 in.	1 in.	839740

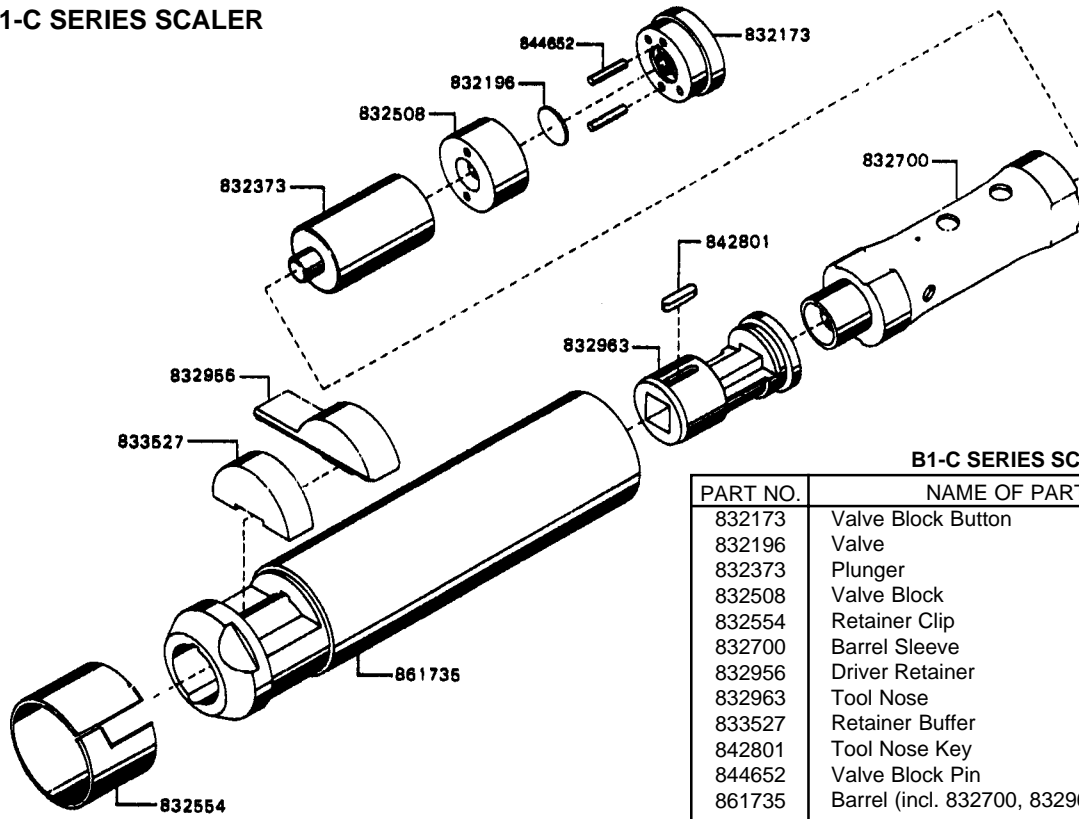
**STANDARD EQUIPMENT:** Spoon Chisel (839050).  
**OPTIONAL EQUIPMENT:** Any other B1-C Chisel listed.

**BR-C SCALER ("C" Type) CHISELS  
Safety Retainer Type**

Description	Dimensions Cutting Edge	Overall Length	Part No.
Blank	.....	6-1/2 in.	829172
Blank	.....	7-1/2 in.	829173
Short Wide Blade	1-1/4 in. x 1/8 in.	4-3/8 in.	829167
Narrow Blade	5/8 in. x 3/32 in.	3-7/8 in.	829168
Long Wide Blade	1-3/4 in. x 3/32 in.	8 in.	829165
Cold	3/4 in. x 3/32 in.	8-1/2 in.	829150
Scaling	1-1/4 in. x 3/32 in.	9 in.	829301
Spoon	1-3/8 in. x 3/32 in.	7-1/2 in.	829310

**STANDARD EQUIPMENT:** Spoon Chisel (829310).  
**OPTIONAL EQUIPMENT:** Any other BR-C Chisel listed.

### B1-C SERIES SCALER

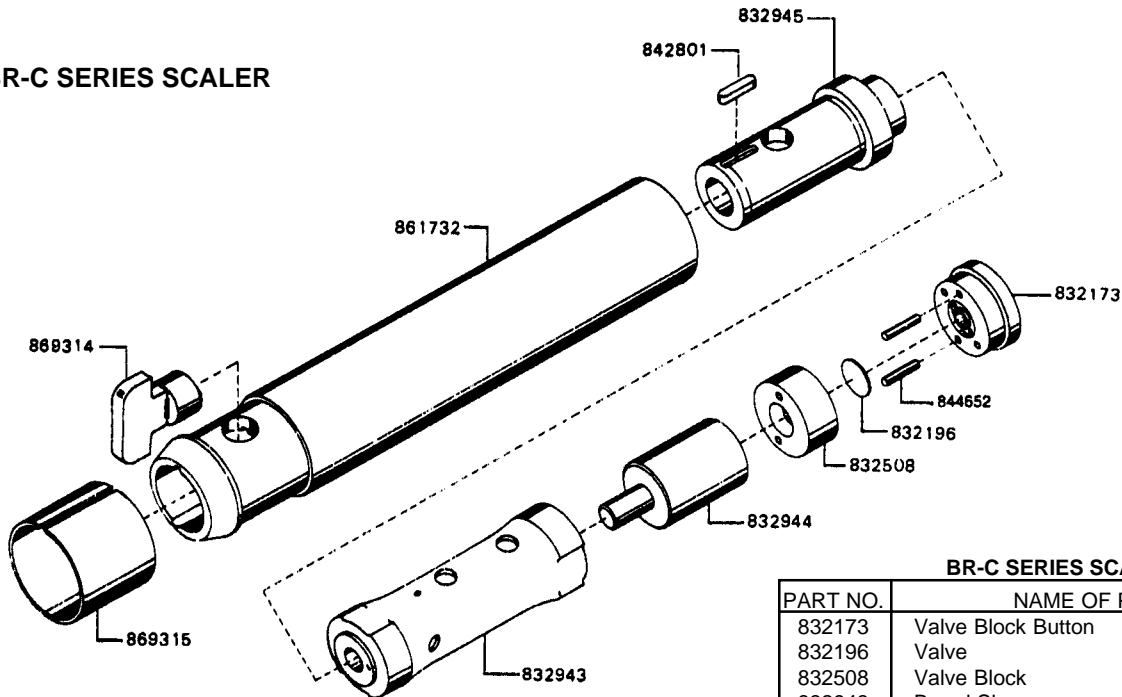


**B1-C SERIES SCALER**

PART NO.	NAME OF PARTS	QTY.
832173	Valve Block Button	1
832196	Valve	1
832373	Plunger	1
832508	Valve Block	1
832554	Retainer Clip	1
832700	Barrel Sleeve	1
832956	Driver Retainer	1
832963	Tool Nose	1
833527	Retainer Buffer	1
842801	Tool Nose Key	2
844652	Valve Block Pin	1
861735	Barrel (incl. 832700, 832963, 842801)	1

The complete valve block can be purchased as a subassembly using part no. 831109. NOTE: A heavy-duty retainer clip, no. 832654, is available as an accessory, but this clip cannot be used with the needle scaler attachment.

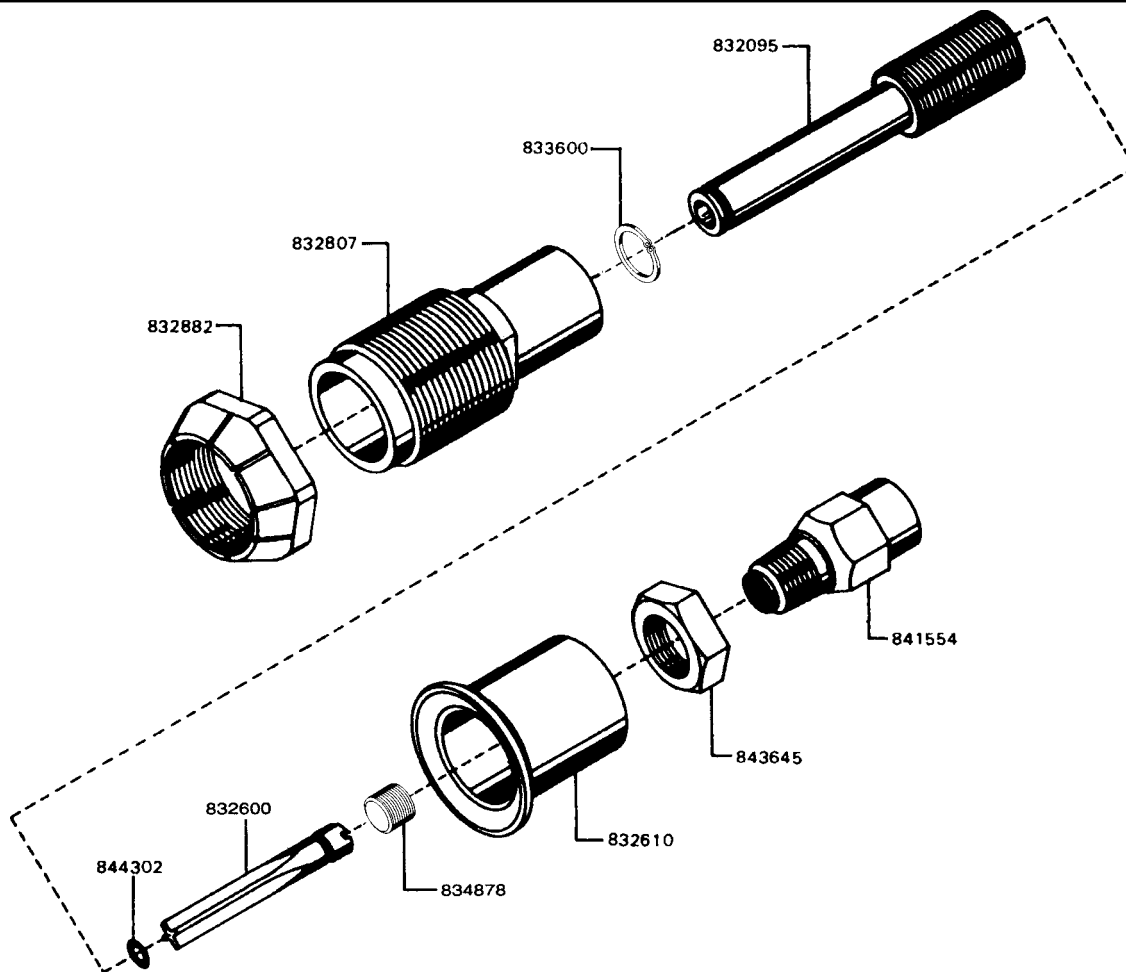
### BR-C SERIES SCALER



**BR-C SERIES SCALER**

PART NO.	NAME OF PART	QTY.
832173	Valve Block Button	1
832196	Valve	1
832508	Valve Block	1
832943	Barrel Sleeve	1
832944	Plunger	1
832945	Tool Nose	1
842801	Tool Nose Key	1
844652	Valve Block Pin	2
861732	Barrel (incl 832943, 832945, 842801)	1
869314	Driver Retainer	1
869315	Retainer Clip	1

The complete valve block can be purchased as a subassembly using part no. 831109.



### DISASSEMBLY INSTRUCTIONS FOR PT HANDLE

#### DISASSEMBLY

To disassemble the handle, push the controlling valve handle 832610, to the full open position and slide off the throttle valve casing retainer ring 833600. Remove the throttle valve casing. Unscrew the screen bushing and set screw, that will release the throttle valve assembly. The controlling valve handle 832610, and throttle valve casing lock nut 843645, may now be unscrewed from the throttle valve casing if necessary. The screen bushing should be cleaned and inspected before reassembly.

#### REASSEMBLY

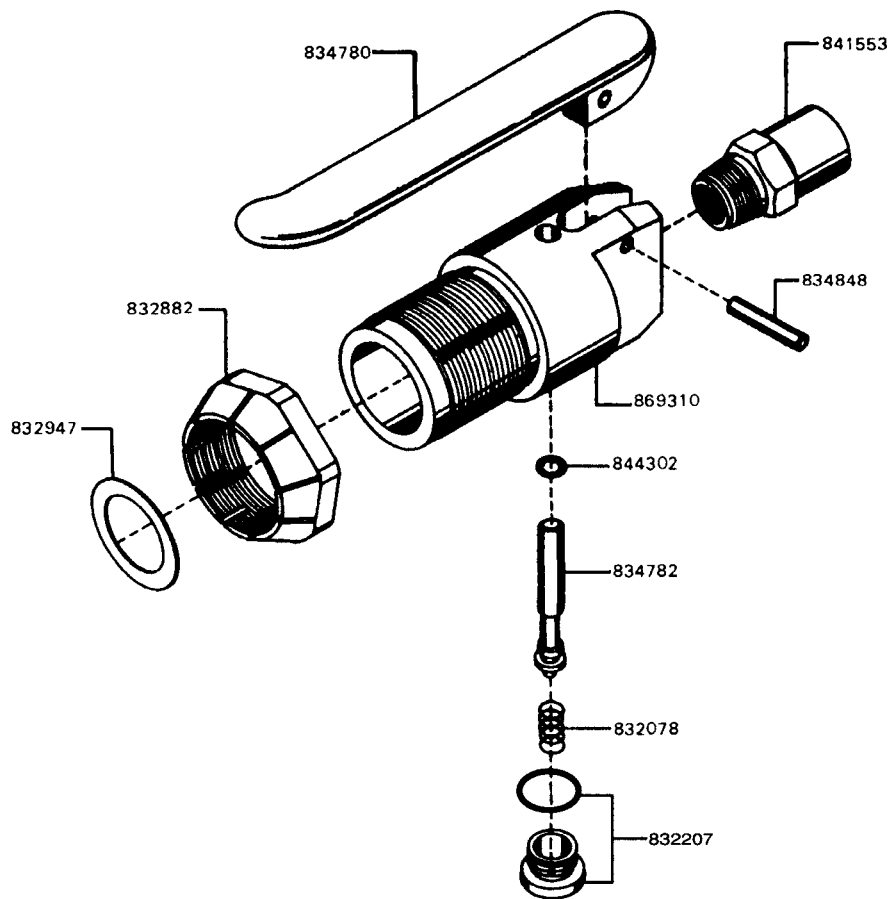
The handle is reassembled in the reverse order of disassembly. When assembling the throttle valve always use a new throttle valve seal 844302.

To adjust the throttle valve for the desired power, loosen throttle valve casing lock nut 843645, and screw the controlling valve handle to a position so that the desired blow is delivered when the handle is fully compressed. Then tighten the throttle valve casing lock nut to secure the controlling valve handle in this position.

### PARTS LIST — FOR PT HANDLE

PART NO.	NAME OF PART	QTY.
832095	Throttle Valve Casing	1
832600	Throttle Valve (incl. 844302-0)	1
832610	Controlling Valve Handle	1
832807	Handle	1
832882	Handle Locking Ring	1
833600	Throttle Valve Casing Retainer Ring	1
834878	Set Screw	1
841554	Screen Bushing	1
843645	Throttle Valve Casing Lock Nut	1
844302	"O"- ring 5/32 " x 9/32"	1

831219 — Complete handle includes (Part Nos. 832610 - 832807 - 832882 - 833600 - 841554 - 832095 - 843645 - 832600 - 844302 - 834878)



### DISASSEMBLY INSTRUCTIONS FOR C MODEL LT HANDLE

#### DISASSEMBLY

Unscrewing the throttle valve cap 832207, will allow the throttle valve spring 832078, and throttle valve 834782, to be removed from the handle. Using a suitable punch, drive out the throttle lever pin 834848, and remove the throttle lever 834780.

The screen bushing 841553, may be unscrewed for cleaning and inspection of the air screen.

#### REASSEMBLY

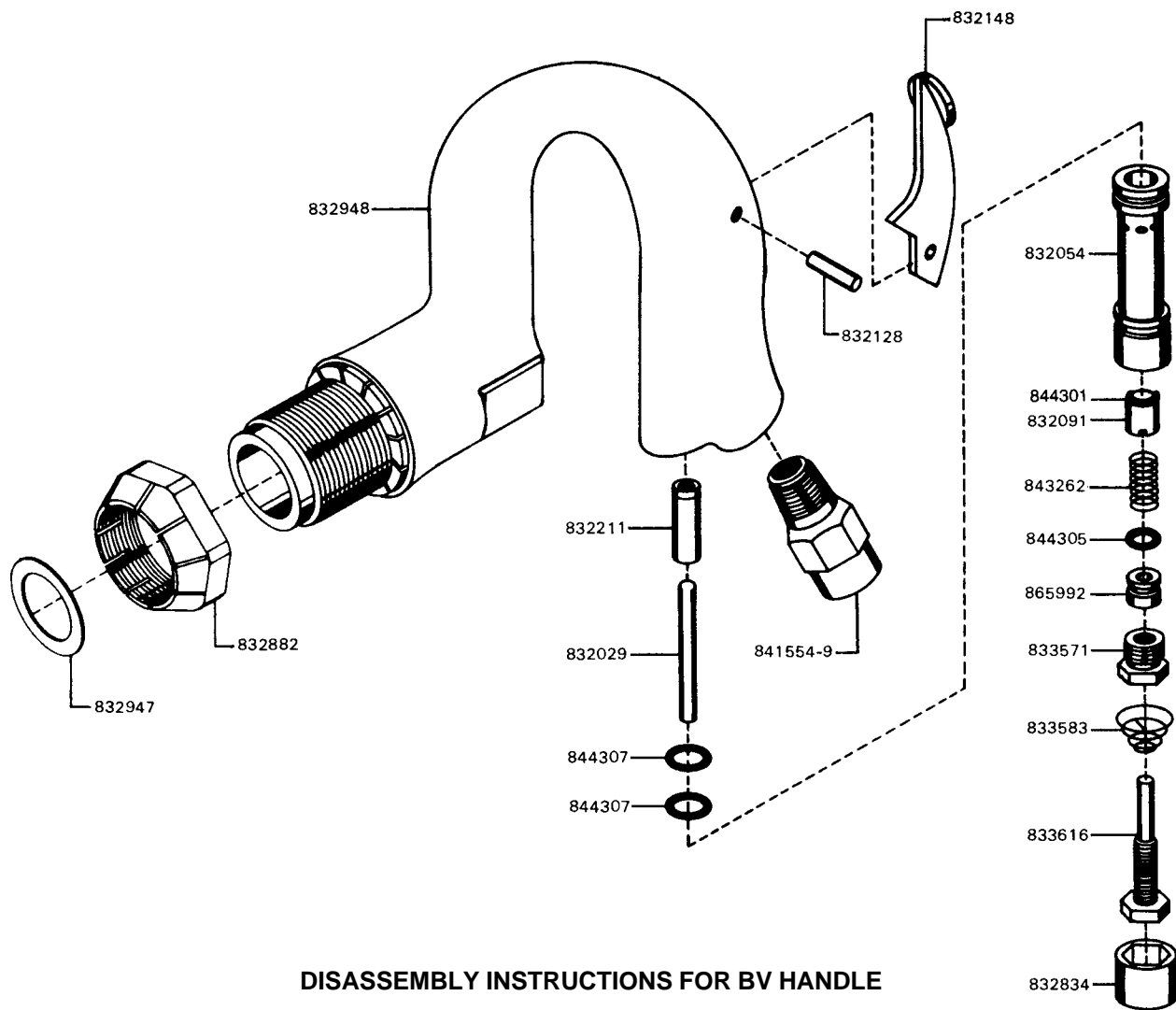
The handle is reassembled in the reverse order of disassembly. The throttle valve seal 844302, should be replaced before reassembly.

### PARTS LIST — FOR C MODEL LT HANDLE

PART NO.	NAME OF PART	QTY.
832078	Throttle Valve Spring	1
832207	Throttle Valve Cap(incl. "O"-ring)	1
832882	Handle Locking Ring	1
832947	Handle Positioning Spacer	*
834780	Throttle Lever	1
834782	Throttle Valve (incl. 844302)	1
834848	Throttle Lever Pin	1
841553	Screen Bushing	1
844302	"O"-ring 5/32" x 9/32"	1
869310	Handle	1

Handle subassembly 861731 includes — 832078 - 832882 - 834780 - 834782 - 834848 - 841553 - 869310 - 832207)

\* Number of spacers required is variable and are not included in the handle subassembly.



### DISASSEMBLY INSTRUCTIONS FOR BV HANDLE

#### DISASSEMBLY

To disassemble the handle, pull the regulating valve lock nut, No. 832834, away from the handle and turn in a counter-clockwise direction until the regulating valve adjusting screw, No. 833616, can be removed. This will allow the regulating valve cap, No. 833571, to be unscrewed. The nylon sleeve, No. 865992, spring, No. 843262, throttle valve, No. 832091, and the throttle valve pin, No. 832029, may now be removed from the throttle valve casing, No. 832054.

Should it be necessary to replace the throttle valve casing, screw a 7/16-20 bolt in the casing and using a suitable puller, remove it from the handle. The screen bushing, No. 841554, may be unscrewed for cleaning and inspection of the air screen.

#### REASSEMBLY

The handle is reassembled in the reverse order of disassembly. Always use new "O" rings to ensure a perfect seal.

### PARTS LIST — BV HANDLE

PART NO.	NAME OF PART	QTY.
832029	Throttle Valve Pin	1
832054	Throttle Valve Casing	1
832091	Throttle Valve (incl. 844301)	1
832128	Throttle Lever Pin	1
832148	Throttle Lever	1
832211	Throttle Valve Pin Bushing	1
832834	Regulating Valve Lock Nut	1
832882	Handle Locking Ring	1
832947	Handle Positioning Spacer	**
832948	Handle (incl. 832211)	1
833571	Regulating Valve Cap	1
833583	Regulating Valve Spring	1
833616	Regulating Valve Adjusting Screw	1
841554	Screen Bushing	1
843262	Throttle Valve Spring	1
844301	"O"-Ring 1/8" x 1/4"	1
844305	"O"-Ring 1/4" x 3/8"	1
844307	"O"-Ring 3/8" x 1/2"	2
865992	Nylon Sleeve	1

	SUBASSEMBLIES
831121	Handle (Part Nos. 831411 * - 832029 832054 - 832091 - 832128 - 832148 - 832211 - 832882 - 832948 - 841554 - 843262 - 844307)
831411*	Adjusting Screw (Part Nos. 832834 - 833571 - 833583 - 833616 - 844305 - 865992)

\*\* Number of spacers required is variable and are not included in the backhead subassembly.





**CooperTools**  
670 Industrial Drive  
Lexington, SC 29072  
Phone: (803) 359-1200  
Fax: (803) 359-2013  
[www.cooperindustries.com](http://www.cooperindustries.com)