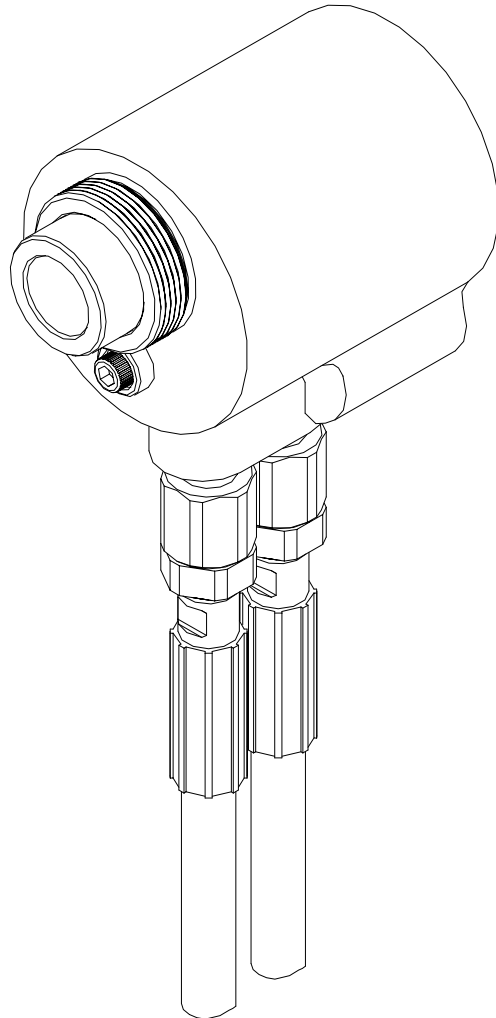


GBP205

GBP205A

HYDRAULIC INSTALLATION TOOL



GAGE BILT TOOLS ARE AVAILABLE WORLDWIDE
E-MAIL US FOR A DISTRIBUTOR NEAR YOU.

GAGE BILT
MADE IN U.S.A.

GAGE BILT PRODUCTS CORP.

44766 Centre Court

(586) 226-1500

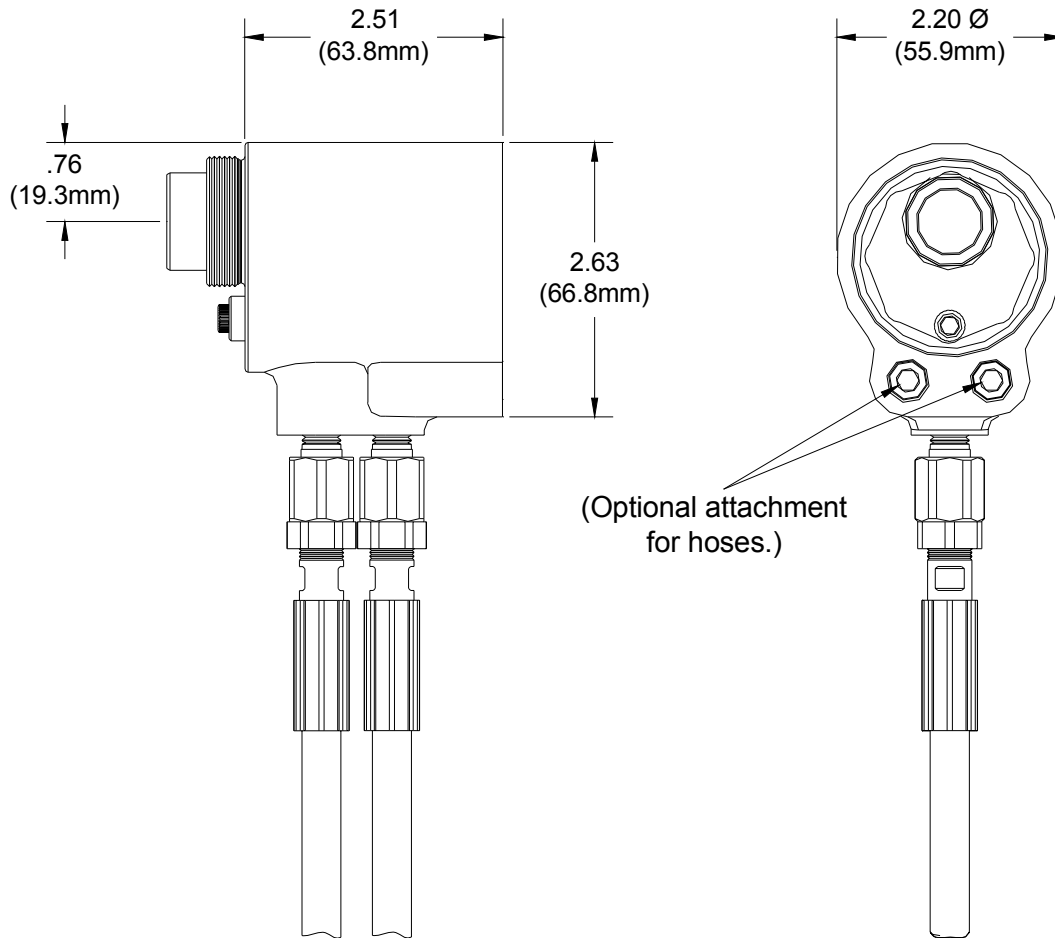
Clinton Twp. MI 48038

(586) 226-1505 Fax

e-mail: solutions@gagebilt.com / www.gagebilt.com

TABLE OF CONTENTS

<u>Description</u>	<u>Page</u>
Warnings.....	3
Description, Operation and Maintenance.....	4
Parts Lists.....	5
Trouble Shooting and Overhaul.....	6
Nose Assembly Selection Chart.....	7



SPECIFICATIONS

Weight	- 4 lbs.
Hyd. Pressure Req'd.	- 5400-5600 psi PULL 2200-2400 psi RETURN
Hyd. Power Source	- GBP940 or GBP910A Powerunit or equivalent.
Hydraulic Fluid	- Fire resistant hydraulic fluid conforming with OSHA regulation 1926.302.
Setting Stroke	- .750"
Rated Pull Load	- 10,000 lbs.



NOTE:

PLEASE READ THIS MANUAL BEFORE SERVICING OR USING THIS TOOL. COMPLETE WITH WARNINGS AND CAUTIONS TO PREVENT SEVERE PERSONAL INJURY OR DAMAGE THE TOOL.



CAUTION:

GAGE BILT TOOLS ARE APPROVED TO INSTALL HUCK®, AVDEL®, CHERRY®, POP® AND OTHER FASTENERS WHEN USED BY PERSONS WITH SPECIFIC TRAINING OF BLIND RIVET AND LOCKBOLT INSTALLATION EQUIPMENT.

WARNING

Do not pull fastener unless it is placed in an assembly, pin will eject forcibly when pintail breaks off. Severe personal injury may result.

WARNING

Always disconnect tool from powerunit before performing any maintenance to any tool or nose assembly. Insure that all connections are proper and there are no visible leaks from tool or hoses before connecting to power.

WARNING

When operating installation equipment always wear approved eye protection. Do not look in front of nose assembly or rear of tool when installing fastener.

CAUTION

Insure that nose assembly and tip are properly matched for the fastener being installed.

WARNING

Installation of fasteners may exceed acceptable noise levels. Use approved hearing protection.

WARNING

Be sure there is adequate clearance for tool and operator's hands before proceeding. Keep fingers clear of any moving parts. Keep fingers clear from fasteners and installed materials. Severe personal injury may result.

CAUTION

Keep Nose Assemblies clean and free of chips and debris.

WARNING

Hydraulic power units that deliver high pressure for the "PULL" and "RETURN" and are not equipped with relief valves are specifically not recommended and may be dangerous.

DESCRIPTION

Covered under Patent No. 5,371,933

The GBP205 and the GBP205A are hydraulic installation tools designed specifically for the efficient installation of a wide range of blind rivets and lockbolt fasteners thru 3/8" diameter, and the installation of interference fit Hi-Lite pins. It weighs just under 4 lbs. and can be operated in any position with one hand. It has a .750 rivet setting stroke.

The GBP205 installation tool operates on hydraulic pressure developed by the GBP940 Powerunit, set at 5600 psi maximum PULL pressure and 2400 psi maximum RETURN pressure. The tool comes equipped with 12 feet of hydraulic hoses and couplings, electric switch and cord. The GBP205A installation tool operates on hydraulic pressure developed by the GBP910A Powerunit set at 5600 psi maximum PULL pressure and 2400 psi maximum RETURN pressure. The tool comes equipped with 12 ft. hydraulic hoses and couplings, air trigger and tubing.

ALL GBP HYDRAULIC INSTALLATION TOOLS ARE COMPATIBLE WITH HUCK POWERIG'S. NOSE ASSEMBLIES ARE NOT FURNISHED WITH THE RIVETER AND MUST BE ORDERED SEPARATELY.

OPERATION

When the tool is connected to a Powerunit, operation is controlled by a trigger or switch in the handle. To send the signal, the GBP205A incorporates an air trigger; the GBP205 an electric switch. When the button is depressed, a directional valve in the Powerunit directs fluid to the front side of the piston forcing it and the nose assembly collet rearward. This action causes the jaws to clamp on the fastener pintail and pull the material together. During a lockbolt installation sequence, the anvil is forced over the collar, swaging it into locking the grooves of the fastener. Further force breaks the pintail off approximately flush with the collar. The pull-in sequence is started in the same manner, but the pull-in mandrel may be grabbed a number of times. Releasing the trigger allows the operator to advance the tool on the pin for installations that require greater than .750 stroke.

When the piston nears the end of its stroke it exposes flats on the back of the unloading valve. These flats "dump" fluid back to the Powerunit tank. When the button is released the directional valve reverses fluid flow to the back of the piston and pushes the nose assembly off to the swaged fastener. The spent pintail is forced out the back of the nose assembly with the insertion of the next fastener.

MAINTENANCE

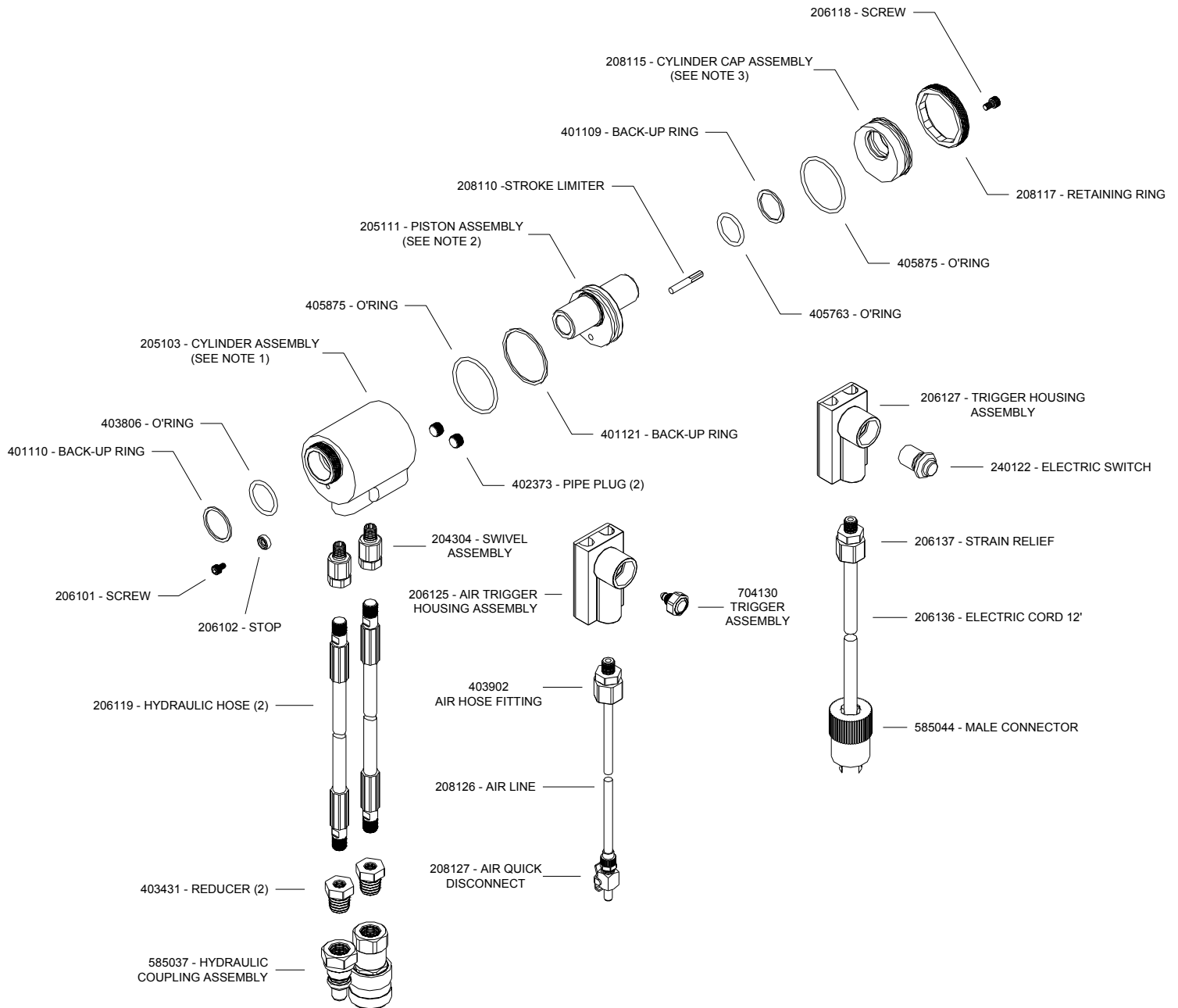
The performance of any tool depends upon the practice of good maintenance. Following these minimal requirements for service and care will extend the life of your tool.

- *Only use a hydraulic power source equipped with relief valves and pressures set within specified limits. Consult Powerunit Manual for procedure to set Pull and Return pressures.
- *Keep hydraulic system free of dirt. Avoid letting couplers contact a dirty floor.
- *Do not use as a hammer to force fasteners into holes or otherwise abuse tool.
- *Proper care by operators is necessary in maintaining full productivity and reducing down time.

WARNING

Be sure Powerunit is disconnected before cleaning, or when replacing worn or damaged components. Severe personal injury may occur if power source is not disconnected.

GBP205/GBP205A PARTS LIST



NOTES

1. 205103 includes: 401110, 403806 & 402373 (2)
2. 205111 includes: 405875 & 401121
3. 208115 includes: 405763, 401109 & 405875
4. 206120 complete Air Trigger Assembly includes: 206125, 704130, 403902, 208126 & 208127
5. 206131 complete Electric Trigger Assembly includes: 206127, 240122, 206137, 206136 & 585044
6. To reduce stroke to .625" order part numbers 208109 unloading valve & 205112 stroke limiter.

TROUBLE SHOOTING

Providing all maintenance conditions have been met, follow this systematic approach to diagnosis.

1. **NO OPERATION WHEN TRIGGER IS DEPRESSED**
 - a.) Check powerunit power source.
 - b.) Control cord may be loose or damaged.
 - c.) Faulty trigger. Replace.
 - d.) Check hydraulic couplings; tighten, repair or replace.
2. **SLOW OR PARTIAL OPERATION WHEN TRIGGER IS DEPRESSED**
 - a.) Low hydraulic pressure. Check powerunit, adjust.
 - b.) Cylinder Piston O'ring (405875) could be worn or damaged. Replace.
 - c.) Excessive wear or scoring on moving parts. Check and replace faulty parts.
3. **TOOL OPERATES IN REVERSE**
 - a.) Tool stops in back position. Hydraulic hoses are reversed. Correct.
4. **HYDRAULIC OIL OVERHEATS**
 - a.) Powerunit motor rotation reversed. Electrical connections reversed. See powerunit instruction manual.
 - b.) Restrictions in either hydraulic lines, hoses or couplings. Check and tighten, clean or replace.
5. **OIL LEAKAGE**
 - a.) Hydraulic oil leaks from connections. Tighten threaded connections. Do not use teflon tape.
 - b.) Oil leaks from tool. Determine source of leak and replace worn or defective O'rings and back-up rings.
6. **PINTAIL GROOVES STRIPPED DURING PULL STROKE**
 - a.) Nose Assembly must be pushed onto fastener fully.
 - b.) Chips may have collected in chuck jaws. Disassemble nose assembly, clean jaws in mineral spirits or use a sharp pointed object to remove chips. Relube surfaces jaws ride on.
 - c.) Chuck jaws may be worn or damaged. Replace.
 - d.) Pintail too short for jaws to properly grip. Select proper grip length fastener.
 - e.) Excessive gap between sheets. Reduce gap before attempting to install fastener.
7. **NOSE ASSEMBLY WON'T ACCEPT FASTENER PINTAIL**
 - a.) Spent fastener stem may be jammed in pulling head. Disassemble and check for worn or broken parts in nose assembly. Replace defective parts, clean and relube jaws before reassembling.

OVERHAUL

If a tool is performing poorly or leaking badly, a complete overhaul may be necessary. Service Kit 208100 contains a complete set of o'rings, back-up rings and screws.

Perform overhaul in a clean, well lit area using care not to scratch or nick any smooth surface that comes in contact with an o'ring. Use of lubriplate (GBP part no. 402723) or other lubricant is recommended during reassembly to prevent tearing or distorting of o'ings.

Disconnect hydraulic hoses and electrical cord or air line from powerunit. Remove couplers (585037) from hoses and drain. Push piston (205111) back into cylinder (205103) to empty all fluid from tool. Push piston back to the front of cylinder.

Unscrew socket head cap screw (206118) from retaining ring (208117) using a spanner wrench to remove retaining ring. Push piston back until cylinder cap (208115) falls out of cylinder. Push piston (205111) out the rear of the cylinder. Remove loading valve (208110) from the piston. Using a small blunt object, remove o'rings and back-up rings from components.

Clean parts in mineral spirits or other o'ring compatible solvent being sure to clean o'ring grooves. Inspect components for scoring, excessive wear or damage.

Reassembly sequence is opposite of disassembly. Be sure relative positions of o'rings and back-up rings are as shown in exploded view and parts list. Relief valve must be installed with flats towards the rear and must enter notch in the rear of adapter. Coat hose fitting threads with a non-hardening teflon thread compound such as slictite (GBP part no. 403237). **DO NOT USE TEFLON TAPE.**

GBP205 SELECTION CHART

FASTENER	DIA.	NOSE ASSEMBLY
PULL-IN HI-LITE	9/16"	HL18-205B-35
	5/8"	HL20-205B-35
	3/4"	HL24-205B-35
	7/8"	HL28-205B-35
	1"	HL32-205B-35
	1-1/4"	HL36-205B-35
LOCKBOLT, NAS SHEAR PULL TYPE, NAS TENSION PULL TYPE, NASS = SHEAR & GP NAST = TENSION	1/4"	NAS08-205A-31
	5/16"	NAS10-205A-31
	3/8"	NAS12-205A-31
Light weight Groove Proportion LOCKBOLT	1/4"	LGP08-205A-31
	5/16"	LGP10-205A-31
	3/8"	LGP12-205A-31
MS90353S & U & MS90354S & U MS21140S & U & MS21141S & U CR7000 SERIES BACB30YY, YU, & YT	1/4"	SB08-205A-35
	5/16"	SB10-205A-35
	3/8"	SB12-205A-35

THE GBP205 IS APPROVED TO INSTALL THE ABOVE FASTENERS.

*TO REDUCE STROKE TO .625" UNLOADING VALVE (208109) AND STROKE LIMITER (208112) ARE AVAILABLE

NOTE: THE LAST 2 DIGITS OF THE NOSE ASSEMBLY REPRESENTS THE LENGTH THE NOSE ASSEMBLY EXTENDS FROM THE TOOL. (I.e. -25 = 2.5 inches)

GAGE BILT ALSO SUPPLIES PIN & COLLAR SWAGE INSPECTION GAGES TO CERTIFY CORRECT SWAGE INSTALLATION.



WARRANTY

Seller warrants that all goods covered by this catalog will conform to applicable specifications and will replace, or repair, F.O.B. our plant, any goods providing defective from faulty workmanship, or material, for 90 days from date of shipment.

Said warranty to remain in effect if and only if such goods are used in accordance with all instructions as to maintenance, operation, and use set forth in manuals and instruction sheets furnished by seller.

Sellers obligation under this warranty shall be limited to the repair or rework of the goods supplied or replacement thereof, at Seller's option, and in no case is to exceed the invoice value of said goods. Under no circumstances will seller be liable for incidental or consequential damages or for damages incurred by the buyer or subsequent user in repairing or replacing defective goods or if the goods covered by this warranty are reworked or subjected to any type of additional processing.

This warranty is void if Seller is not notified in writing of any rejections or defects within 90 days after the receipt of the material by the customer.

THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY.