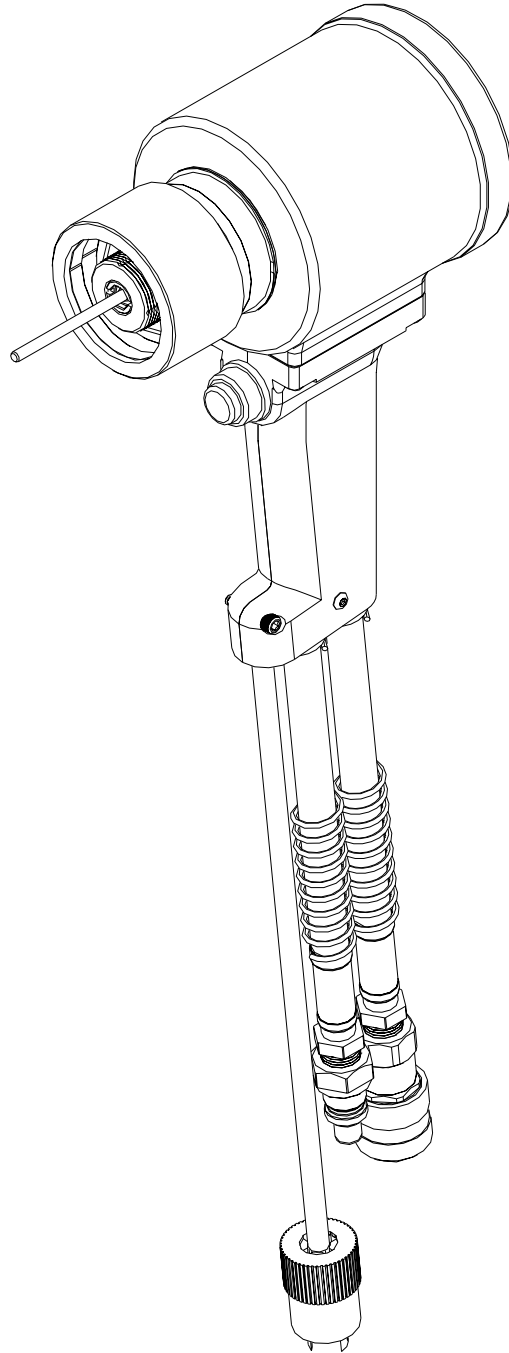


# GBP585/GBP585A

## INSTALLATION TOOL



**GAGE BILT**  
MADE IN U.S.A.

**GAGE BILT Inc.**  
44766 Centre Court (586) 226-1500  
Clinton Twp. MI 48038 (586) 226-1505 Fax  
e-mail:solutions@gagebilt.com / www.gagebilt.com

## NOTE

Please read this manual before servicing or using this tool. Comply with **WARNINGS** and **CAUTIONS** to prevent personal injury or damage to tool.

## WARNING

When operating installation equipment, always wear approved eye protection.

## SPECIFICATIONS

|                      |   |
|----------------------|---|
| Weight               | - 20 lbs.   |
| Hyd. Pressure Req'd. | - 5400-5700 psi <b>PULL</b><br>2200-2400 psi <b>RETURN</b>                |
| Hyd. Power Source    | - GBP940 Powerunit or equivalent  |
| Hydraulic Fluid      | - Fire resistant hydraulic fluid conforming with OSHA regulation 1926.302 |
| Setting Stroke       | - 1.600"  |
| Rated Pull Load      | - 40,000 lbs.   |

## DESCRIPTION

The GBP585 is a hydraulic installation tool capable of installing 5/8" and 3/4" Magna-Grip® or standard lockbolts. It weighs just under 20 lbs. and is our most powerful hand tool. It has a 1.600" rivet setting stroke and a rated pull load of 40,000 lbs.

The GBP585 installation tool operates on hydraulic pressure developed by the GBP940 Powerunit set at 5400-5700 psi PULL pressure and 2200-2400 psi RETURN pressure. The tool comes equipped with 24" hoses complete with quick disconnects.

NOSE ASSEMBLIES ARE NOT FURNISHED WITH THE RIVETER AND MUST BE ORDERED SEPARATELY.

## **WARNING**



Be sure there is adequate clearance for tool and operator's hands before proceeding as severe personal injury may result.

## **WARNING**

Do not pull on pin without collar, as it will eject forcibly when pintail breaks off and severe personal injury may result.

## **CAUTION**

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.

## **OPERATION**

When the tool is connected to a powerunit, operation is controlled by the button in the handle. When the button is depressed, a directional valve in the powerunit directs fluid the front side of the piston forcing it and the nose assembly collet rearward. This action causes the jaws to clamp onto the fastener pintail and pull the sheets together. The anvil is forced forward, swaging the collar into locking grooves of the fastener. Further force breaks the pintail off, approximately flush with the collar.

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 of the swaged fastener. The pintail ejector hydraulically pushes the spent pintail out of the nose assembly. When the piston is all the way forward it exposes another flat providing a smaller passage for fluid to be "dumped" back to tank.

## **MAINTENANCE**

The performance of any tool depends upon good maintenance practices. 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.
- \*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 downtime.

## **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.

## **TROUBLE SHOOTING**

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

### **1. NO OPERATION WHEN PEDDLE IS DEPRESSED**

- a.) Check powerunit power source.
- b.) Check hydraulic couplings; repair or replace.

### **2. SLOW OR PARTIAL OPERATION WHEN TRIGGER IS DEPRESSED**

- a.) Low hydraulic pressure. Check powerunit, adjust.
- b.) Cylinder Piston o'ring (12) could be worn or damaged. Replace.
- c.) Excessive wear or scoring on moving parts. Check and replace faulty parts.
- b.) Check hydraulic couplings; repair or replace.

### **3. TOOL OPERATES IN REVERSE**

- a.) Tool stops in back position. Hydraulic hoses are reversed. Correct.

### **4. HYDRAULIC OIL OVERHEATS**

- a.) 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.

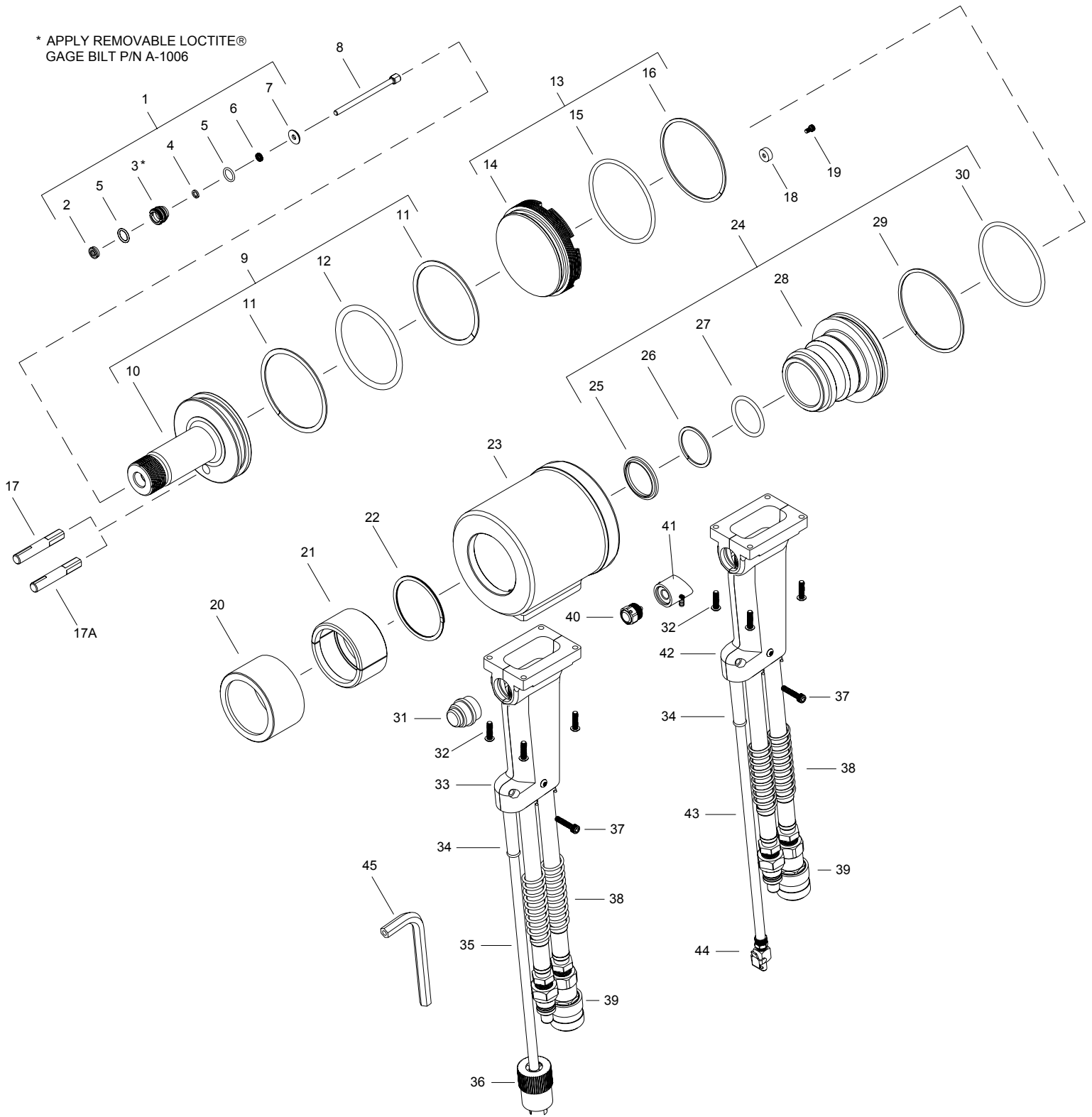
### **6. PINTAIL GROOVES STRIPPED DURING PULL STROKE**

- 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 using a sharp pointed object.
- 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 and clean before reassembling.

\* APPLY REMOVABLE LOCTITE®  
GAGE BILT P/N A-1006



## GBP585 Parts List

| Ref. No. | Part Number | Description                     | Qty. |
|----------|-------------|---------------------------------|------|
| 1        | 762006      | Ejector Gland Assy. (Inc. 2- 7) | 1    |
| 2*       | 750127      | Wiper                           | 1    |
| 3        | 762007      | Ejector Gland                   | 1    |
| 4*       | 401080      | Back-Up Ring                    | 1    |
| 5*       | 400779      | O'Ring                          | 2    |
| 6*       | 401411      | Quad Ring                       | 1    |
| 7        | 585117      | Washer Ejector                  | 1    |
| 8        | 505022      | Pintail Ejector                 | 1    |
| 9        | 585123      | Piston Assembly (Inc. 10-12)    | 1    |
| 10       | -----       | Piston                          | 1    |
| 11*      | 403752      | Back-Up Ring                    | 2    |
| 12*      | 403881      | O'Ring                          | 1    |
| 13       | 585226      | Cylinder Cap Assembly (14-16)   | 1    |
| 14       | -----       | Cylinder Cap                    | 1    |
| 15*      | 404498      | O'Ring                          | 1    |
| 16*      | 401162      | Back-Up Ring                    | 1    |
| 17       | 585022      | Relief Valve (GBP585)           | 1    |
| 17A      | 585056      | Relief Valve (GBP585A)          | 1    |
| 18       | 586124      | Locator                         | 1    |
| 19*      | 400047      | Socket Head Cap Screw           | 1    |
| 20       | 505024      | Retaining Sleeve                | 1    |
| 21       | 585002      | Split Ring Set                  | 1    |
| 22*      | 401521      | Retaining Ring                  | 1    |
| 23       | 585204      | Cylinder                        | 1    |
| 24       | 585105      | Adapter Assy. (Inc.25-30)       | 1    |
| 25*      | 406001      | Wiper                           | 1    |
| 26*      | 401147      | Back-Up Ring                    | 1    |
| 27*      | 404626      | O'Ring                          | 1    |
| 28       | -----       | Adapter                         | 1    |
| 29*      | 401162      | Back-Up Ring                    | 1    |
| 30*      | A-1075      | O'Ring                          | 1    |
| 31       | 585010      | Switch                          | 1    |
| 32*      | 404128      | Button Head Cap Screw           | 4    |
| 33       | 480127      | Handle Assembly (Inc.37)        | 1    |
| 34       | 585133      | Strain Relief Grommet           | 1    |
| 35       | 585034      | Control Cord Assembly (Inc. 36) | 1    |
| 36       | 585044      | Connector Assembly              | 1    |
| 37*      | 401218      | Socket Head Cap Screw           | 1    |
| 38       | 505034      | Hydraulic Hose                  | 2    |
| 39       | 585037      | Hydraulic Coupling Assembly     | 1    |
| 40       | 480137      | Trigger Assembly                | 1    |
| 41       | 480323      | Housing Assembly                | 1    |
| 42       | 480126      | Handle Assembly (Inc.37)        | 1    |
| 43       | 208126      | Air Tubing                      | 1    |
| 44       | 208127      | Quick Disconnect                | 1    |
| 45       | 750033      | Hex Key Ejector                 | 1    |
| 46**     | 585001      | Cylinder Cap Wrench             |      |

\*Service Kit 585001 contains a complete set of O'Rings, Back-Up Rings and Screws.

These items should be kept on hand at all times.

\*\*Ref No. 46 is not furnished with tool.

REV. 4/11

## OVERHAUL

If a tool is performing poorly or leaking badly, a complete overhaul may be necessary. Service Kit 585001 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'rings.

Disconnect hydraulic hoses and electrical cord (36) from powerunit. Remove couplers (36) from hoses (35) and drain. Remove retaining sleeve (20) and split ring set (21) and remove nose assembly. Push piston (10) back into cylinder (23) to empty all fluid from tool.

Unscrew button head cap screw (19) from cylinder cap (14). Using cylinder cap wrench (46) remove cylinder cap (14). Push piston (10) out rear of tool remove relief valve (17). Remove retaining ring (22) push adapter (28) out the rear of cylinder. Using ejector gland wrench (45) unscrew ejector gland assembly (1) from piston and remove pintail ejector (8). Using a small blunt object, remove o'rings, back-up rings and quad ring from components.

Remove socket head cap screw (32 & 34) from handle (33) and unscrew hydraulic hoses from cylinder.

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 part list. Relief valve must be installed with four flats towards the rear of the cylinder. When installing cylinder cap (14) make sure flats on cylinder cap (14) and flats on cylinder (23) line up flush so locator (18) will sit level between cap and cylinder. Coat hose fitting threads with a non-hardening Teflon thread compound such as Slic-tite® (GBP part no. 403237). **DO NOT USE TEFLON TAPE.**

# GBP585 - SELECTION CHART

| FASTENER                                    | DIA.               | NOSE ASSEMBLY |
|---|--------------------|---------------|
| LOCKBOLT<br>HIGH TENSILE PULL TYPE<br>C50L® | 5/8"               | 20-585-41     |
|   | 3/4"               | 24-585-46     |
| BOM®<br>BLIND OVERSIZE MANDREL              | 5/8"               | BOM20-585-41  |
|   | 3/4"               | BOM24-585-46  |
| HP8®  | 5/8"               | HP20-585-41   |
|   | 3/4"               | HP24-585-46   |
| MHP 10.9                                    | 16mm               | HP20-585-41   |
|   | *20mm <sub>1</sub> | HP20MM-585-46 |

C50L®, BOM®, AND HP8® ARE A REGISTERED TRADEMARKS OF ALCOA INC.

\*FOR NON-PRODUCTION APPLICATIONS ONLY.

1) POWER UNIT REQUIRES ADJUSTMENT TO 7,200 PSI FOR PULL AND 4,000 PSI FOR RETURN.

## NOSE ASSEMBLY KEY

20-585-41

A ~The first set of numerical digits represent the diameter of the fastener in 32nds of an inch (20/32)

B ~The second set of digits represent ONE of the tool models which MAY be used with this head (Model 585)

C ~The last set of numerical digits signify the "Gun Line," or reach of the pulling head to the nearest tenth of an inch. (41 is 4.1 inch "Gun Line")

## 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.**

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