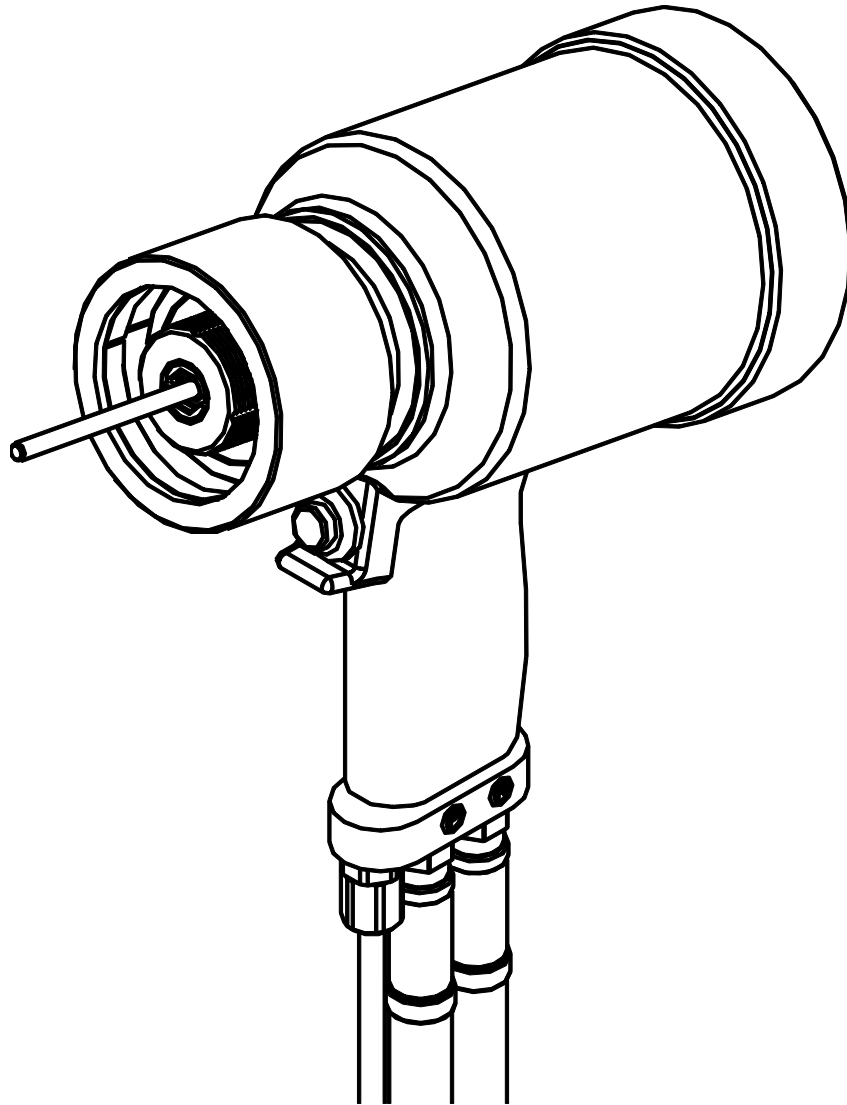


# GBP2628

## INSTALLATION TOOL



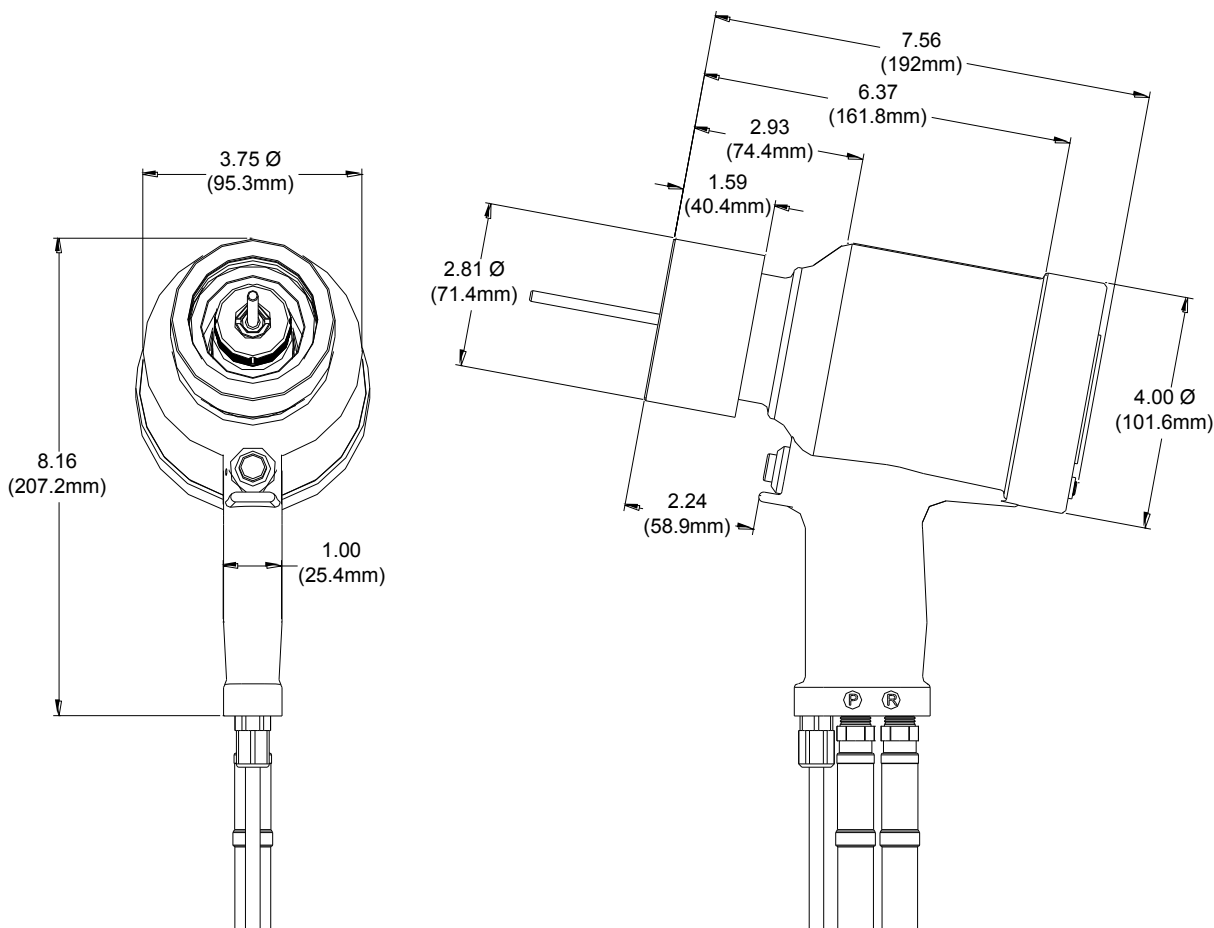
**GAGE BILT**  
MADE IN U.S.A.

**GAGE BILT Inc.**

44766 Centre Court (586) 226-1500  
Clinton Twp. MI 48038 (586) 226-1505 Fax  
e-mail: [solutions@gagebilt.com](mailto:solutions@gagebilt.com) / [www.gagebilt.com](http://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

<b>Weight</b>	- 20.8 lbs. (9.43 kg)
<b>Hyd. pressure req'd</b>	- 7,400 psi (510.2 bar) PULL 3,200 psi (220.6 bar) RETURN
<b>Hyd. Power Source</b>	- GBP940 Powerunit or equivalent
<b>Hydraulic fluid</b>	- Fire resistant hydraulic fluid conforming with OSHA regulation 1926.302.
<b>Setting stroke</b>	- 1.812" (46mm)
<b>Rated pull load</b>	- 45,769 lbs. (203.58 kN) @ 7,400 psi (210.2 bar)

# SAFETY WARNINGS



**NOTE:**  
PLEASE READ THIS MANUAL BEFORE SERVICING OR USING THIS TOOL.  
REVIEW ALL WARNINGS AND CAUTIONS TO PREVENT  
SEVERE PERSONAL INJURY OR DAMAGE THE TOOL.



## **CAUTION:**

GAGE BILT TOOLS ARE ONLY APPROVED AND RECOMMENDED TO INSTALL HUCK®, AVDEL®, CHERRY®, POP® AND OTHER FASTENERS WHEN USED BY PERSONS WITH SPECIFIC TRAINING OF BLIND RIVET AND LOCKBOLT INSTALLATION EQUIPMENT. THIS TOOL IS NOT RECOMMENDED FOR ANY OTHER INTENT. GAGE BILT WILL BE PLEASED TO ADVISE ON ANY PROPOSED MODIFICATION.

## **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**

Do not operate without Stat-O-Seal (S572) and cap screw (402482). Pressurized hydraulic fluid may cause severe personal injury.

## **WARNING**

When operating, repairing or overhauling tool, wear approved eye protection. Do not look in front of nose assembly or rear of tool when installing fastener.

## **WARNING**

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

## **WARNING**

Do not operate if deflector, bottle, catcher bag or vacuum tube is removed or damaged, broken pintails may eject forcibly from rear of tool. Severe personal injury may result.

## **CAUTION**

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

## **CAUTION**

Keep Nose Assemblies clean and free of chips and debris.

## **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**

Do not use beyond the design intent.

## **WARNING**

Tool must be maintained in a safe working condition at all times and examined on a regular daily basis for damage or wear. Any repair should be done by qualified personnel trained on Gage Bilt procedures.

## **WARNING**

It is required to use hearing protection. A test was carried out in a simulated work environment where the background level was 73.2 DBA. In this condition the max level was 81.5 DBA. Therefore, it is required where prolonged use, hearing protection be used.

## **WARNING**

Where prolonged use is foreseen, it is recommended a tool balancer be used. Check suspension device to ensure that it is secure.

## **WARNING**

Risk of crushing exists if nose assembly is not attached.

## **WARNING**

Do no use tool in explosive atmosphere.

## **WARNING**

It is recommended tool be operated 50 out of every 60 minutes, where prolonged use is expected.

## **WARNING**

### **Shock:**

It is recommended operator wear a suitable glove during operation where prolonged use is expected.

## **CAUTION**

Tool is not to be used as a hammer.

## **WARNING**

Air pressure not to exceed 100 psi., except where noted

## **DESCRIPTION**

The GBP2628 is a hydraulic installation tool capable of installing 1/2", 5/8" & 3/4" lockbolts and 12mm & 16mm MHP 10.9 lockbolts. It weighs 20.8 lbs (9.43 kg) and can be operated in any position. It has a 1.812" (46mm) rivet setting stroke and a rated pull load of 45,769 lbs (203.58 kN) @ 7,400 psi. (510.2 bar).

Normal operating pressure is set at 7,400 psi. (510.2 bar) PULL pressure and 3,200 psi. (220.6 bar) RETURN pressure, enabling the tool to pull all the fasteners listed on the selection chart without adjusting pressures. Powerunit may be set to the pressures only needed to pull your specific fastener using 942280 pressure setting gauge. The tool comes equipped with 24" hoses and electric cord kit complete with quick disconnects.

**NOSE ASSEMBLIES ARE NOT FURNISHED WITH THE TOOL AND MUST BE ORDERED SEPARATELY**

## **OPERATION**

When the tool is connected to a powerunit, operation is controlled by a button in the handle. 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 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 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.

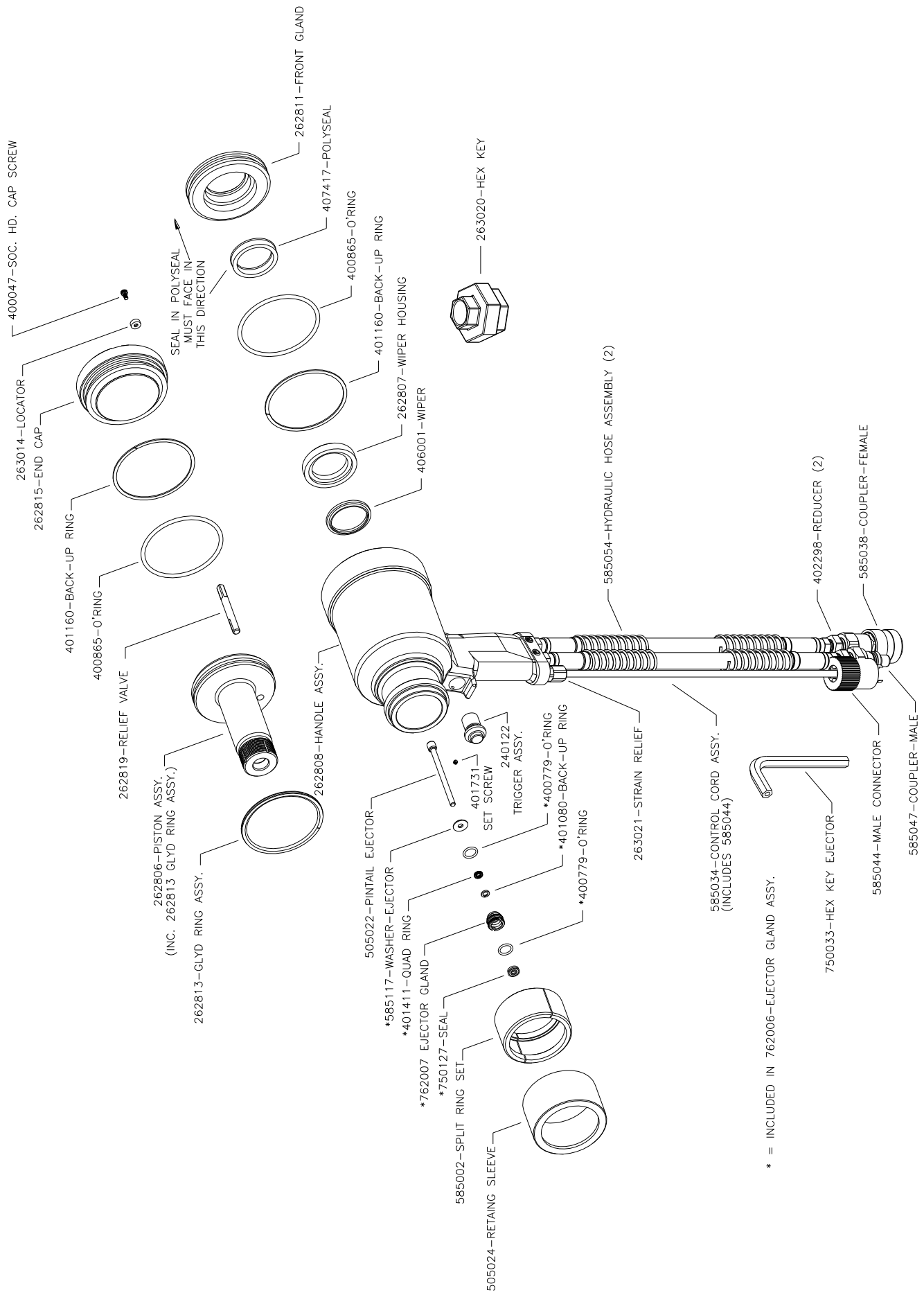
## **MAINTENANCE**

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.



\* = INCLUDED IN 762006—EJECTOR GLAND ASSY.

## 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; repair or replace.
2. **SLOW OR PARTIAL OPERATION WHEN TRIGGER IS DEPRESSED**
  - a.) Low hydraulic pressure. Check powerunit, adjust.
  - b.) Cylinder Piston Glyd Ring Assy. (262813) 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 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.

## OVERHAUL

If a tool is performing poorly or leaking badly, a complete overhaul may be necessary. Service Kit GBP2628KS 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® (Gage Bilt part no. 402723) or other lubricant is recommended during reassembly to prevent tearing or distorting of o'rings.

Disconnect hydraulic hoses (585054) and electrical cord (585034) from powerunit. Remove couplers (585038 & 585047) from hoses (585054) and drain. Remove retaining sleeve (505024), split ring (585002) and nose assembly. Remove screw (400047) locator (263014) and using hex key (263020) remove end cap (262815). Push piston assembly (262806) rearward to expose front gland (262811), polyseal (407417), wiper housing (262807) and wiper (406001). Remove these items then remove piston assembly (262806).

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. Coat hose fitting threads with a non-hardening teflon thread compound such as Slic-tite® (Gage Bilt part no. 403237). **DO NOT USE TEFLON TAPE.**

# GBP2628 SELECTION CHART

FASTENER	DIA.	NOSE ASSEMBLY
LOCKBOLT HIGH TENSILE PULL TYPE C50L® LD AVDELOK®	1/2"	16-7624-40
	5/8"	20-585-41
	3/4"	24-585-46
BOM® AVBOLT®	1/2"	BOM16-7624-40
	5/8"	BOM20-585-41
	3/4"	BOM24-585-46

C50L® AND BOM® ARE REGISTERED TRADEMARKS OF ALCOA INC. AVDELOK® AND AVBOLT® ARE REGISTERED TRADEMARKS OF AVDEL UK LIMITED

**THE GBP2628 IS APPROVED TO INSTALL THE ABOVE FASTENERS.**

NOTE: THE LAST 2 DIGITS OF THE NOSE ASSEMBLY REPRESENTS THE LENGTH THE NOSE ASSEMBLY EXTENDS FROM THE TOOL. (I.e. -40 = 4.0 inches) 7/11

## 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 the 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 EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY.**

HUCK® IS A REGISTERED TRADEMARK OF ALCOA INC. AVDEL® IS A REGISTERED TRADEMARK OF AVDEL UK LIMITED. CHERRY® IS A REGISTERED TRADEMARK OF CHERRY AEROSPACE. POP® IS A REGISTERED TRADEMARK OF EMHART TECHNOLOGIES. TEFLON® IS A REGISTERED TRADEMARK OF E.I. DUPONT DE NEMOURS & CO. LUBRIPLATE® IS A REGISTERED TRADEMARK OF FISKE BROTHERS REFINING CO. SLIC-TITE® IS A REGISTERED TRADEMARK OF LA-CO INDUSTRIES INC.