ORIGINAL INSTRUCTIONS

GB745SHAVT

INSTALLATION TOOL

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

Registered to
ISO 9001:2015

GAGE BILT
MADE in USA

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GAGE BILT

DECLARATION OF CONFORMITY

MANUFACTURER: Gage Bilt Inc. 44766 Centre Ct., Clinton Twp., Michigan U.S.A. +1(586-226-1500)

WE DECLARE THAT THE EQUIPMENT SPECIFIED HEREIN CONFORMS TO THE FOLLOWING DIRECTIVES AND STANDARDS

Machinery Directive 2006/42/EC

EN ISO 12100-1 & 12100-2:2010

EN ISO 11148-1:2011

The Supply of Machinery (Safety) Regulations 2008

EU REPRESENTATIVE: Edgar Hausmann GmbH Förster-Busch-Str. 10 D-34346 Hann. Münden Germany

EQUIPMENT DESCRIPTION: GB745SHAVT FASTENER INSTALLATION TOOL

This procuct specified above conforms to the above dlrectives and standards.

SIGNATURE:

NAME: TIM SIMMONS
PRODUCT MANAGER
CLINTON TWP., MI U.S.A.
FEB 2023
+1(586) 226-1500

UK CA

CE

WARRANTY

Seller warrants that all goods covered by this catalog will conform to applicable specifications and will replace or repair, EXW our plant, any goods providing defective from faulty workmanship, or material, for 1 year 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.

Seller 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 1 year after the receipt of the material by the customer. **THIS WARRANTY IS MADE IN LEIU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY.**

DESCRIPTION

⚠ WARNING: Any other use is forbidden.

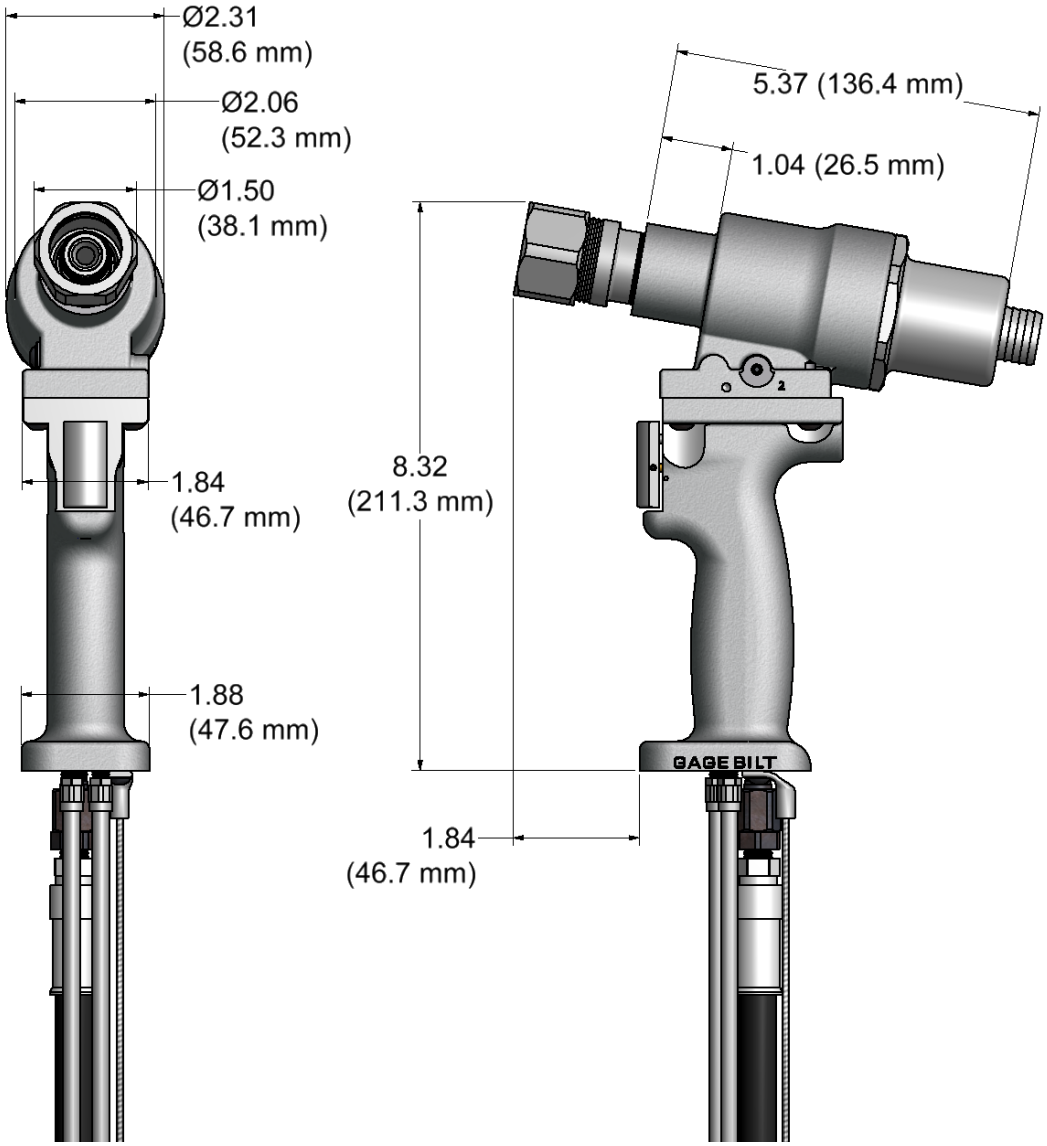
The GB745SHAVT is a pneumatic-hydraulic split handle installation tool designed specifically for the efficient installation of blind rivets, lockbolts and MAGNA-GRIP® fasteners. This tool's unique "split" system provides the operator with a lightweight ergonomic tool. The handle and head assembly when held in hand weighs 3.00 lbs. (1.36kg). The GB745SHAVT split handle installation tool operates in conjunction with the GB808 powerunit and comes with 8 ft. of hose.

NOSE ASSEMBLIES ARE NOT FURNISHED WITH THE TOOL AND MUST BE ORDERED SEPARATELY. (Please contact Gage Bilt for more nose assembly options).

ENVIRONMENTAL USE

⚠ WARNING: Do not operate in an explosive atmosphere.

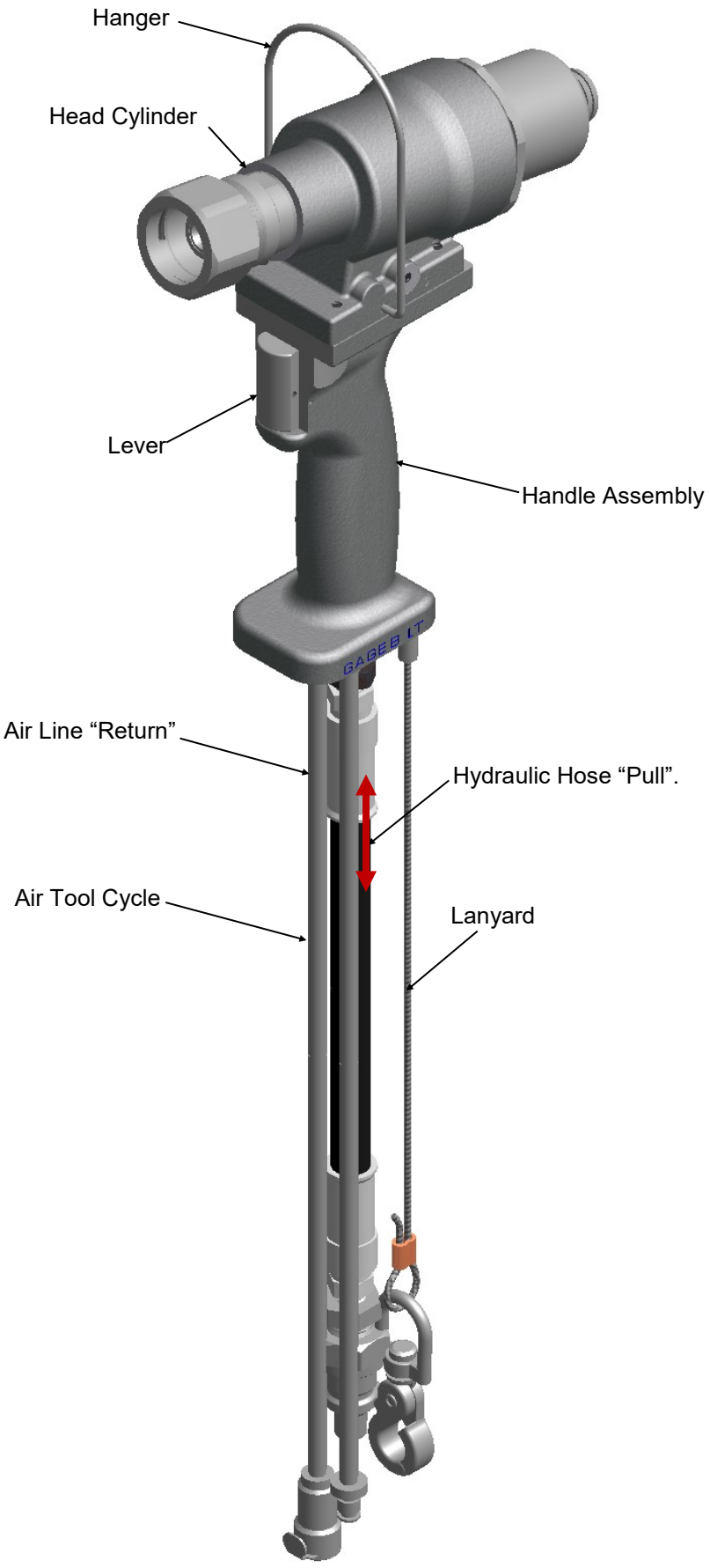
The GB745SHAVT can be operated between 0ºF - 118ºF (-17.8ºC / 47.8ºC)



SPECIFICATIONS

Hand Held Weight	-	**3.00 lbs. (1.36kg)**
Air pressure req'd	-	**90 - 100 p.s.i. (6.2 - 9.6 bar)**
Hyd. Power Source	-	**GB808 series**
Hydraulic oil	-	**Manufacturer supplied hydraulic oil AW32 (or equivalent).**
Setting stroke	-	**.620" (15.7 mm)**
Rated pull load	-	**GB808 series - 4,500 lbs. (20.0 kN)**
Vibration	-	**Tested – No Hazards Found**

DESCRIPTION OF FUNCTIONS



Images may not reflect actual tool

SAFETY WARNINGS

TERMS AND SYMBOLS

- Product complies with requirements

- Product complies with requirements

- Hearing protection and eye protection

- Read manual prior to using equipment

- Wear safety boots

WARNINGS - Must be understood to avoid severe personal injury.

CAUTIONS - show conditions that will damage equipment and/or structure.

Notes - are reminders of required procedures.

GENERAL SAFETY RULES:

1. For multiple hazards, read and understand the safety instructions before installing, operating, repairing, maintaining, changing accessories on, or working near the assembly power tool for non-threaded mechanical fasteners.
2. Only qualified and trained operators shall install, adjust or use the assembly power tool for non threaded mechanical fasteners.
3. Do not modify this assembly power tool for non-threaded mechanical fasteners. Modifications can reduce effectiveness of safety measures and increase the risks to the operator.
4. Do not discard safety instructions; give them to the operator.
5. Do not use assembly power tool for non-threaded mechanical fasteners if it has been damaged.
6. Tools shall be inspected monthly to verify all ratings and markings required are legible. The employer/user shall contact the manufacturer to obtain replacement marking labels when necessary.

ADDITIONAL SAFETY RULES FOR PNEUDRAULIC POWER TOOLS:

1. Air under pressure can cause severe injury.
2. Always shut off air supply, drain hose of air pressure and disconnect tool from air supply when not in use, before changing accessories or when making repairs.
3. Never direct air at yourself or anyone else.
4. Whipping hoses can cause severe injury. Always check for damage or loose hoses and fittings.
5. Cold air shall be directed away from hands.
6. Whenever universal twist couplings (claw couplings) are used, lock pins shall be installed and whip check safety cables shall be used to safeguard against possible hose-to-tool or hose-to-hose connection failure.
7. Do not exceed the maximum air pressure stated on the tool or manual.
8. Never carry an air tool by the hose.

PROJECTILE HAZARDS:

1. Disconnect the tool from the energy source when changing inserted tools/nose assemblies or accessories.
2. Be aware that failure of the workpiece, accessories, or the inserted tool/nose assembly itself can generate high-velocity projectiles.
3. Always wear impact resistant eye protection during operation of the tool.
4. Ensure that the workpiece is securely fixed.
5. Check that the means of protection from ejection of fastener and/or stem is in place and operative (such as the deflector, pintail collection bottle or catcher bag).
6. Forcible ejection of the mandrel from the front of the nose assembly is possible.

OPERATING HAZARDS:

1. Use of tool can expose the operator's hands to hazards, including crushing, impacts, cuts, abrasions and heat. Wear suitable gloves to protect hands.
2. Operators and maintenance personnel shall be physically able to handle the bulk, weight and power of the tool.
3. Hold the tool correctly; be ready to counteract normal or sudden movements and have both hands available.
4. Maintain a balanced body position and secure footing.
5. Release the start-and-stop device in the case of interruption of energy supply.
6. Use only lubricants recommended by the manufacturer.
7. Avoid unsuitable postures as it is likely for these positions not to allow counteracting of normal or unexpected movement of the tool.
8. If the tool is fixed to a suspension device, make sure that fixation is secure.
9. Beware of the risk of crushing or pinching if nose equipment is not fitted.
10. Due to the tool weight, it is recommended safety shoes be worn during operation.
11. It is recommended tool be operated not more than 50 out of every 60 minutes, where prolonged use is expected.

REPETITIVE MOTIONS HAZARDS:

1. When using the tool, the operator can experience discomfort in the hands, arms, shoulders, neck or other parts of the body.
2. While using the tool, the operator should adopt a comfortable posture while maintaining a secure footing and avoiding awkward or off balanced postures. The operator should change posture during extended tasks; this can help avoid discomfort and fatigue.
3. If the operator experiences symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensations or stiffness, these warning signs should not be ignored. The operator should tell the employer and consult a qualified health professional.

ACCESSORY HAZARDS:

1. Disconnect tool from energy supply before changing the nose assembly or accessory.
2. Use only sizes and types of accessories approved by the manufacturer. Do not use other types or sizes of accessories.

WORKPLACE HAZARDS:

1. Slips, trips and falls are major causes of workplace injury. Be aware of slippery surfaces caused by use of tool and also of trip hazards caused by the air line or hydraulic hose.
2. Proceed with care in unfamiliar surroundings. There could be hidden hazards, such as electricity or other utility lines.
3. The tool is not intended for use in potentially explosive atmospheres and is not insulated against contact with electrical power.
4. Ensure that there are no electrical cables, gas pipes, etc., which can cause a hazard if damaged by the tool.

NOISE HAZARDS:

1. Exposure to high noise levels can cause permanent, disabling hearing loss and other problems, such as tinnitus (ringing, buzzing, whistling or humming in the ears). Therefore, risk assessment and the implementation of appropriate controls for these hazards are essential.
2. Appropriate controls to reduce the risk may include actions such as damping materials to prevent workpieces from "ringing".
3. Always use hearing protection.
4. Operate and maintain the assembly power tool for non-threaded mechanical fasteners as recommended in the instruction handbook, to prevent an unnecessary increase in the noise level.
5. Select, maintain and replace the consumable/inserted tool as recommended in the instruction handbook, to prevent an unnecessary increase in noise.
6. If the power tool has a silencer, always ensure that it is in place and in good working order when the power tool is being operated.

VIBRATION HAZARDS:

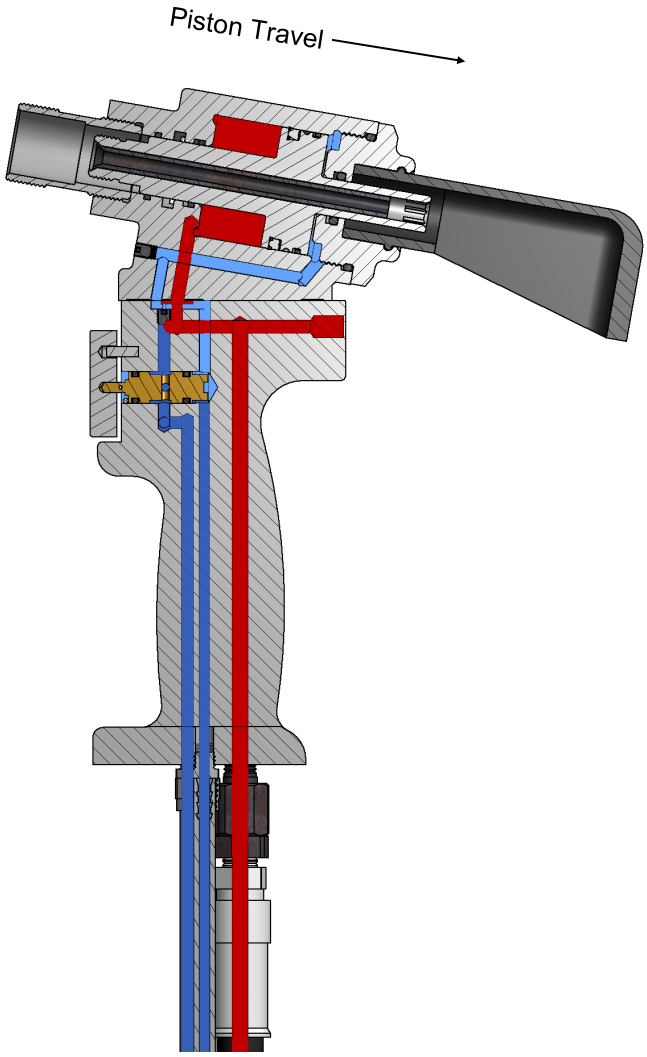
1. Exposure to vibration can cause disabling damage to the nerves and blood supply of the hands and arms.
2. Wear warm clothing when working in cold conditions and keep your hands warm and dry.
3. If you experience numbness, tingling, pain or whitening of the skin in your fingers or hands, stop using the assembly power tool for non-threaded mechanical fasteners, tell your employer and consult a physician.
4. Support the weight of the tool in a stand, tensioner or balancer, because a lighter grip can then be used to support the tool.

PRINCIPLE OF OPERATION

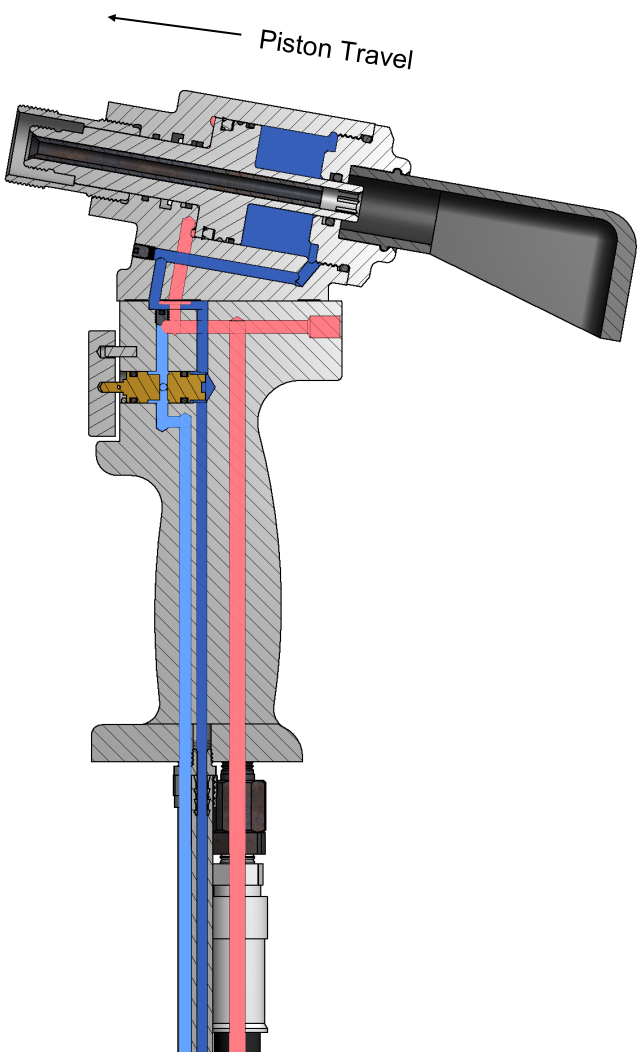
When the tool is connected to a powerunit, operation is controlled by the actuator lever assembly. When the lever is depressed, oil is sent to the front side of the piston forcing it and the nose assembly collet rearward. This action causes the jaws to clamp on the fastener pintail and pull the material together. Further force breaks the pintail off.

When the lever is released the piston spring returns forward. The spent pintail is forced out the back of the nose assembly with the insertion of the next fastener.

PULL Cycle



RETURN Cycle



Pressurized Air
Unpressurized Air
Pressurized Oil
Unpressurized Oil

Images may not reflect actual tool

HOW TO SET-UP THE GB745SHAVT

WARNING: Only qualified and trained operators shall install, adjust or use the assembly power tool for non-threaded mechanical fasteners.

WARNING: Operator MUST read and understand all warnings and cautions.

WARNING: It is required that eye protection, hearing protection and safety boots be worn at all times while handling this equipment.

WARNING: The users or the user's employer must assess specific risks that could be present as a result after each use based on their application.

- ***Ensure 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.***
- ***Verify that hydraulic hose fittings and couplings, air and electrical connections are secure.***
- ***Verify the air lines and/or hydraulic hoses are not a trip hazard.***
- ***Ensure that there are no electrical cables, gas pipes, etc., which can cause a hazard if damaged by the tool.***
- ***Do not use as a hammer to force fasteners into holes or otherwise abuse tool.***

WARNING: Do not actuate fastener in the air. Personal injury from fastener ejecting may occur.

WARNING: Ensure air hose is securely connected to avoid possible hose whipping.

WARNING: Always disconnect air supply when tool is not in use to prevent accidental start-up.

WARNING: Do not operate this tool without deflector, pintail catcher bag or pintail collection bottle in place

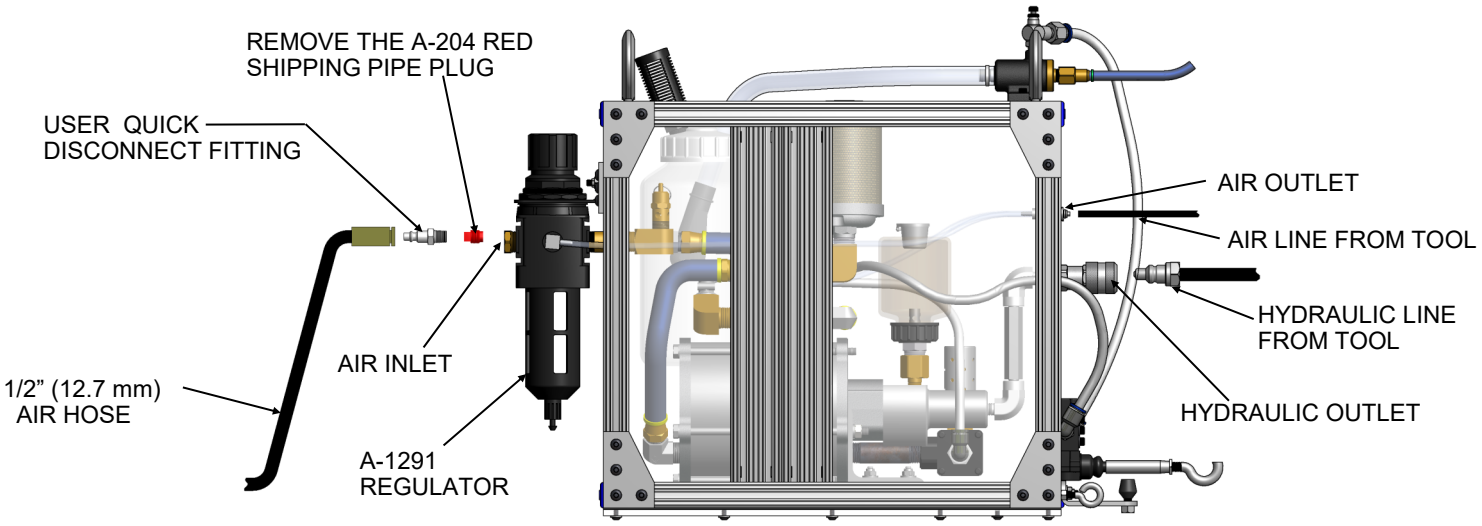
CAUTION: Do not use beyond the design intent.

The tool is shipped with a plastic plug in the air inlet connector. The connector has a 1/4 - 18 NPT female pipe thread to accept end-user air hose fitting. The tool comes with oil and is ready to use.

1. **Remove red plastic shipping pipe plug (A-204) from air inlet on regulator (A-1291) and screw in your quick disconnect (air) fitting.**
2. **Open cap on top of oil reservoir and fill with AW-32 oil or equivalent to approximately 3/4 full, if required.**
3. **Connect the installation tools hydraulic line, air line, vacuum line and lanyard to powerunit. (Make sure all connections are secure).**
4. **Connect air supply using 1/2" (12.7 mm) air line min. Set air pressure to 90 - 100 P.S.I. (6.2 - 6.9 bar) Max. on regulator (A-1291).**
5. **Cycle tool five times.**
6. **Disconnect air supply.**
7. **Attach nose assembly.**
8. **Reconnect air supply.**

ATTACHING NOSE ASSEMBLY:

(MAY VARY DEPENDING ON NOSE OR TOOL)
(SEE DATA SHEET FOR COMPLETE ASSEMBLY INSTRUCTIONS)



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HOW TO USE THE GB745SHAVT

WARNING: Only qualified and trained operators shall install, adjust or use the assembly power tool for non-threaded mechanical fasteners.

WARNING: Operator **MUST** read and understand all warnings and cautions.

WARNING: It is required that eye protection, hearing protection and safety boots be worn at all times while handling this equipment.

WARNING: The users or the user's employer must assess specific risks that could be present as a result after each use based on their application.

- *Ensure 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.*
- *Verify that hydraulic hose fittings and couplings, air and electrical connections are secure.*
- *Verify the air lines and/or hydraulic hoses are not a trip hazard.*
- *Ensure that there are no electrical cables, gas pipes, etc., which can cause a hazard if damaged by the tool.*
- *Do not use as a hammer to force fasteners into holes or otherwise abuse tool.*

WARNING: Do not actuate fastener in the air. Personal injury from fastener ejecting may occur.

WARNING: Ensure air hose is securely connected to avoid possible hose whipping.

WARNING: Always disconnect air supply when tool is not in use to prevent accidental start-up.

WARNING: Do not operate this tool without deflector, pintail catcher bag or pintail collection bottle in place

CAUTION: Do not use beyond the design intent.

Lockbolts

1. Insert fastener through the work piece.

2. Slide collar over fastener.

Note: Always hold tool so pulling head is perpendicular to surface of material in which fastener is being installed. Exert firm pressure against fastener during installation.

3. Insert fastener into nose assembly.

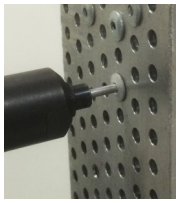
4. Press actuator to start cycle.
5. Release actuator as soon as fastener breaks.
6. Repeat steps 1 - 5.

Blind Fasteners

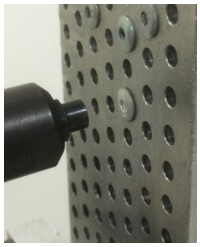
1. Insert fastener into workpiece.

2. Insert fastener into nose assembly.

Note: Always hold tool so pulling head is perpendicular to surface of material in which fastener is being installed. Exert firm pressure against fastener during installation.



3. Press actuator to start cycle.



4. Release actuator as soon as fastener breaks.
5. Repeat steps 1 - 4.

Images may not reflect actual tool or fastener

DAILY MAINTENANCE

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

⚠ **WARNING: Excessive contact with hydraulic oil and lubricants should be avoided.**

⚠ **WARNING: Maintenance personnel MUST read and understand all warnings and cautions.**

⚠ **WARNING: Disconnect tool from its power source before performing maintenance, cleaning or when replacing worn or damaged components. Severe personal injury may occur if power source is not disconnected.**

⚠ **WARNING: Read material Safety Data Sheet documents for all applicable materials.**

Note:

- **Dispose of hydraulic oil in accordance with manufacture safety datasheet.**
- **All tool materials are recyclable except rubber o'rings, seals and wipers.**

The performance of any tool depends upon good maintenance practices. Following these minimal requirements daily will extend the life of your tool.

***Only use a clean dry air supply set at 90 - 100 p.s.i. (6.2 - 6.9 bar) Max. equipped with a filter-regulator to prevent wear.**

***Check tool and nose assembly for damage. (Replace/Repair if necessary). See Overhaul for tool repair (pg. 13 - 14).**

***Inspect all hoses and couplings for wear, damage and leaks. Replace/Repair if necessary. (*See hydraulic thread preparation below)*.**

***Verify that hydraulic hose fittings and couplings, air and electrical connections are secure. Tighten, Replace or Repair if necessary (*See hydraulic thread preparation below)*.**

***Cycle the tool several times to assure there are no leaks during use.**

*** Keep hydraulic system free of dirt. Avoid letting couplers contact a dirty floor.**

*** Proper care by operators is necessary in maintaining full productivity and reducing downtime.**

***Keep nose assemblies, especially jaws, clean and free of chips and debris. Lube jaws and collet surfaces that jaws ride on with light machine oil on a daily basis.**

***All Screwed End Caps, Base Covers, Air Fittings, Air Actuators, Screws and Nose Assemblies are to be examined at the end of each working shift to check that they are secure.**

WEEKLY MAINTENANCE

- **Keep the hydraulic system full (only use AW-32 or equivalent) and free of air on a weekly basis or as needed. (See Filling and Bleeding pg. 11).**

SEE TROUBLESHOOTING (PG. 12) AND OVERHAUL (PGS. 13 - 14) FOR FURTHER GUIDANCE.

HYDRAULIC THREAD PREPARATION

IMPORTANT: **Be sure to use thread sealant on all hydraulic fittings, Loctite® 545 or equivalent or a non-hardening Teflon® thread compound such as Slic-tite®. Tighten until fitting feels snug and then continue to tighten 1/2 to 1 full turn. *CAUTION:* Over tightening can easily distort the threads. DO NOT USE TEFLON® TAPE. *CAUTION:* Teflon® tape is an excellent thread sealer, however, if it is not properly applied, pieces of Teflon® may enter the hydraulic system and cause a malfunction or damage.**

TORQUE SPECIFICATIONS

Socket Head Cap Screws (402479) = 40 inch lbs. (4.52 Nm).
End Cap Assembly (748118) = 45 foot lbs. (61 Nm).
Button Head Cap Screws (402482) = 35 - 40 inch lbs. (3.95 - 4.52 Nm). *(DO NOT OVERTIGHTEN).*

FILLING AND BLEEDING PROCEDURE

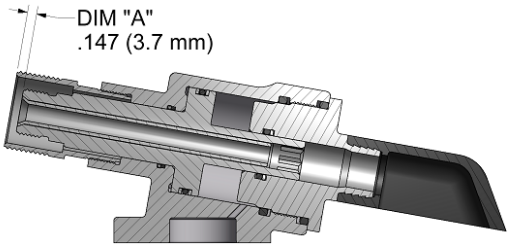
⚠ WARNING: Do not cycle tool without air bleeder assembly (704153), or the screw and stat-o-seal, installed in tool head. Severe personal injury could result.

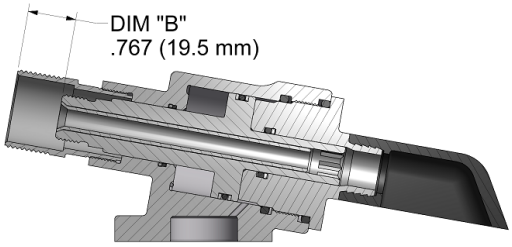
⚠ WARNING: Use CAUTION when removing screws, air bleeder assembly (704153) and fill bottle (745263). Hydraulic oil may be under pressure.

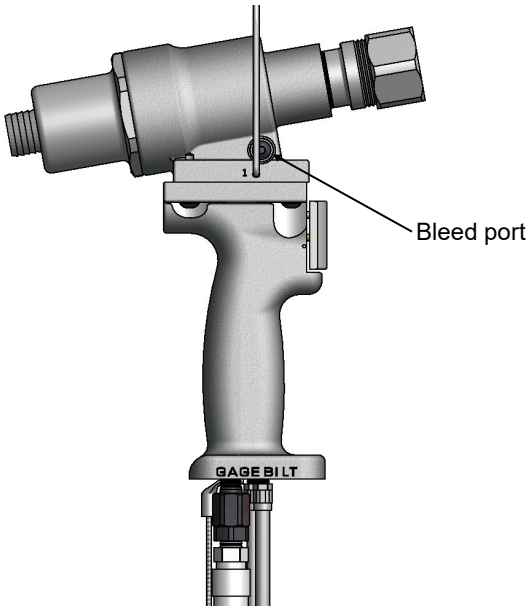
⚠ CAUTION: When bleeding tool, ensure tubing is free from kinks or other obstructions.

1. **Disconnect air supply from the powerunit.**
2. **Fill oil reservoir approximately 3/4 full. Use hydraulic oil (AW-32 or equivalent).**
3. **Carefully remove button head cap screw (402482) and stat-o-seal (S572) from hole (marked #1) on the right side of head cylinder (745366).**
4. **Provide a suitable container to bleed oil into.**
5. **Reduce air pressure to 40 psi. (2.76 bar) during bleeding procedure. Connect air supply to powerunit.**
6. **Point the bleed port towards a container, push lever (704345) down and hold. (Block bleed port using a small piece of rubber material before releasing lever (704345) to prevent ingestion of air into powerunit).**
7. **Repeat until clear oil streams from port. Check reservoir after each cycle and refill when required. Do NOT drain reservoir below minimum.**
8. **On last cycle of oil, hold lever (704345) down. Install button head cap screw (402482) and stat-o-seal (S572) prior to releasing the lever (704345) and torque to 35 - 40 inch lbs. (3.95 - 4.52 Nm). (Do NOT over-tighten)**
9. **Check stroke of .620" (15.8 mm) using instructions a thru c and diagrams below. We recommend using dial calipers.**
   - **a. With the lever (704345) released, check dimension (A).**
   - **b. Holding lever (704345) in, check dimension (B).**
   - **c. Subtract dimension (A) from dimension (B). If stroke is not consistent within 1/64" (.0156) repeat steps 1 - 9 until stroke met.**

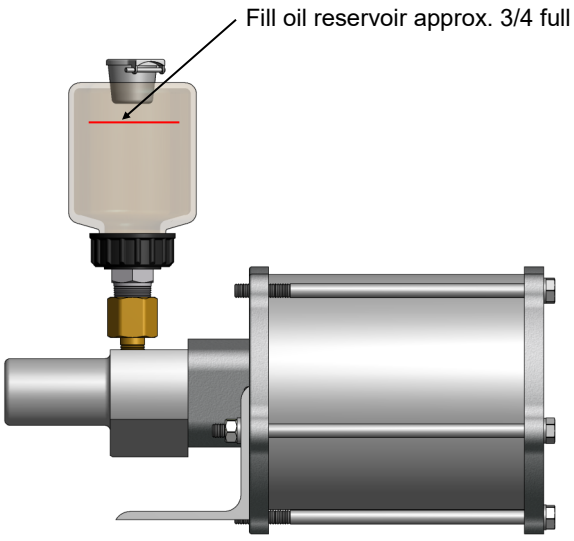
For your consideration, Gage Bilt offers a depth gage (Pt.# A-1935) to help simplify and more accurately check your tool stroke. Please contact Gage Bilt for more information.







HANDLE/TOOL



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BOOSTER

TROUBLESHOOTING

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

1. NO OPERATION WHEN LEVER (704345) IS DEPRESSED.

a.) Check powerunit power source.

b.) Faulty actuator assembly. Replace.

c.) Check hydraulic couplings; tighten, repair or replace.

2. SLOW OR PARTIAL OPERATION WHEN LEVER (704345) IS DEPRESSED.

a.) Low hydraulic pressure. Check oil level.

b.) Back-up rings (401119) or O'ring (403815) on the piston (745310) could be worn or damaged. Replace.

c.) Excessive wear or scoring on moving parts. Check and replace faulty parts.

3. OIL LEAKAGE.

a) DO NOT OPERATE WITH OIL LEAKING FROM TOOL. HIGH PRESSURE OIL MAY CAUSE SEVERE PERSONAL INJURY.

b.) Hydraulic oil leaks from connections. Tighten threaded connections. ***(See hydraulic thread preparation).***

c.) Oil leaks from tool. Determine source of leak and replace worn or defective o'rings and back-up rings.

4. 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. Re-lube 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.

5. 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 re-lube jaws before reassembling.

b.) Check vacuum line is not kinked and that the bend radius is not too small.

c.) 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.

d.) Verify Tool and Nose Assembly are correct for fastener.

6. PINTAIL IS NOT BEING VACCUMED THROUGH.

a.) Check the vacuum line is not kinked and that the bend radius is not too small.

b.) Check vacuum pressure using vacuum gage (703567) (sold separately).
Note: Offset nose assemblies must be check by removing the vacuum line from the nose assembly.

c.) Press gage against the vacuum line or nose assembly to create seal.
Optimum vacuum pressure at nose assembly must be between 15-22 inHg.

OVERHAUL

⚠ WARNING: Only qualified and trained personnel shall perform overhaul.

⚠ WARNING: Personnel must read and understand all warnings and cautions.

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

⚠ WARNING: Disconnect tool from its power source before performing overhaul. Severe personal injury may occur if power source is not disconnected.

⚠ WARNING: Excessive contact with hydraulic oil and lubricants must be avoided (See safety data sheet documents for all applicable materials).

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

⚠ WARNING: Use only Gage Bilt hydraulic hoses and couplings, or equivalent, rated for 10,000 psi. (689.5 bar) working pressure.

⚠ WARNING: Ensure air hose is securely connected to avoid possible hose whipping (Air Actuated Tools only).

⚠ WARNING: Depress lever (704345) and disconnect from air, with the piston in the rear position, before overhaul. Severe personal injury may occur if air hose is not disconnected. USE CAUTION when forcing piston rod assembly downward with head cylinder removed. Hydraulic oil will eject forcibly from handle assembly.

Note:

- **Dispose of hydraulic oil in accordance with manufacture safety datasheet.**
- **All tool materials are recyclable except rubber o'rings, seals and wipers.**
- ***Use of SERVICE KIT (745020), which contains a complete set of o'rings, back-up rings, screws, washers and gasket, can achieve a complete overhaul.***

If a tool is performing poorly or leaking, a complete overhaul may be necessary.

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® #630-AA (Gage Bilt part no. 402723) or equivalent during reassembly to prevent tearing or distorting of o'rings.

1. **Disconnect air supply.**
2. **Disconnect hydraulic coupler-male (585047) from power supply and air line (704311) from pump.**
3. **Remove hydraulic coupler-male (585047) from reducer bushing (403431) and drain hydraulic hose (A-317) into an approved container.**
4. **Remove complete nose assembly and extensions (if applicable) from tool.**
5. **Remove four button head cap screws (402489) separating handle assembly (700344) from head cylinder (745366).**
6. **Replace o'ring (S832) and gasket (745124).**
7. **Remove end cap assembly (748118) and carefully push piston (745310) out of head cylinder (745366).**
8. **Using a small blunt object, remove back-up rings (401119) and o'ring (403815) from piston (745310) and o'ring (A-261) and back-up ring (401092) from inside head cylinder (745366).**
9. **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.**

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.

TOOL DISPOSAL

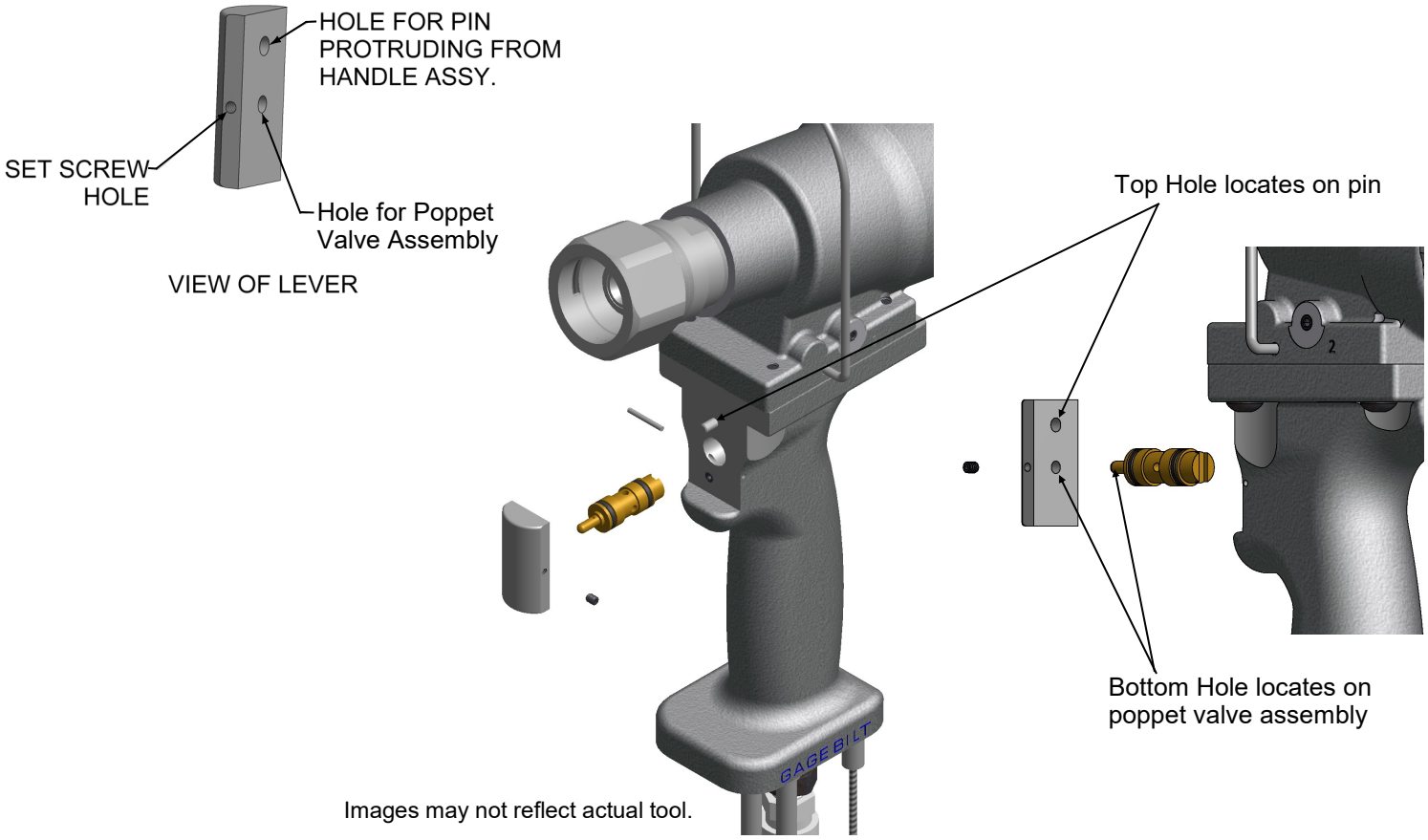
1. **When tool life is met, drain hydraulic oil from tool and dispose of the hydraulic oil in accordance with the safety datasheet.**
2. **Disassemble tool and remove all rubber o'rings, seals, wipers and hydraulic hoses. All tool materials are recyclable except rubber o'rings, seals, wipers and hydraulic hoses. Dispose of rubber materials in accordance with the material safety datasheet.**

POPPET VALVE ASSEMBLY

WARNING: Disconnect tool from its power source before poppet valve assembly (703651) removal or installation. Severe personal injury may occur if power source is not disconnected.

CAUTION: Use caution when removing the poppet valve assembly (703651) from the handle assembly (700344).

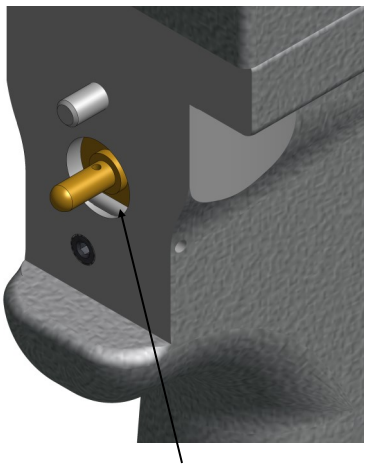
CAUTION: Ensure all parts are assembled properly and correctly fastened to the tool before using.



Images may not reflect actual tool.

REMOVING POPPET VALVE ASSEMBLY (703651)

1. **Loosen and remove set screw and lever from handle assembly (700344).**
2. **Remove pin from handle assembly (700344).**
3. **Pull poppet valve assembly (703651) from handle assembly (700344). If unable to remove by hand, pull out using pliers being careful not to compromise the poppet valve assembly (703651).**

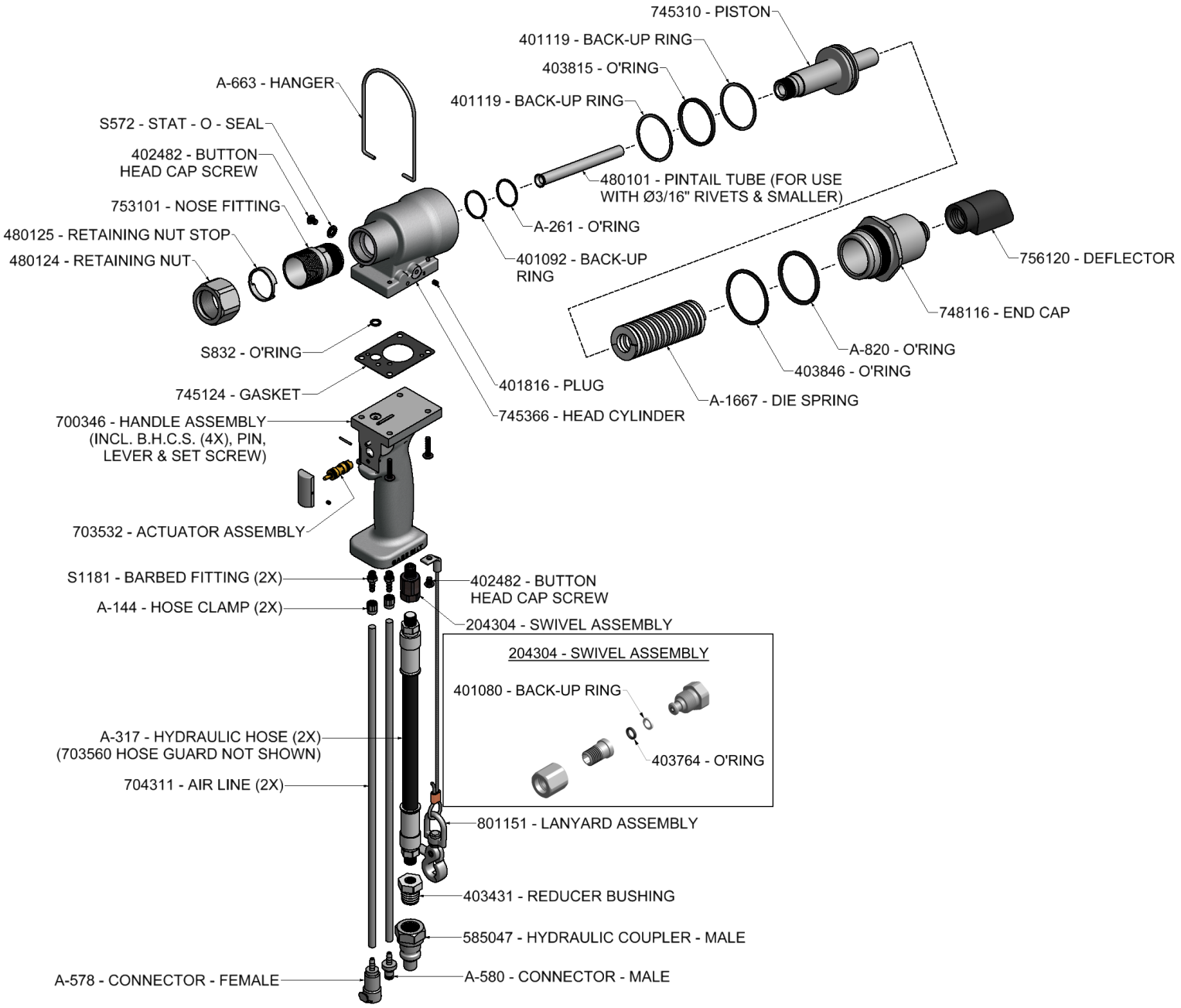


INSTALLING POPPET VALVE ASSEMBLY (703651)

1. **After replacing o'rings on poppet valve assembly (703651), insert poppet valve assembly (703651) into handle assembly (700344) (Note direction in picture provided) and push with thumb until it stops.**
2. **Reinsert pin into hole on handle assembly (700344).**
3. **Re-attach the lever and tighten set screw.**

   Note: View above shows proper orientation of lever.

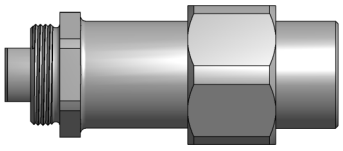
PARTS LIST


745310 - PISTON
401119 - BACK-UP RING
403815 - O'RING
401119 - BACK-UP RING
A-663 - HANGER
S572 - STAT - O - SEAL
402482 - BUTTON HEAD CAP SCREW
480101 - PINTAIL TUBE (FOR USE WITH Ø3/16" RIVETS & SMALLER)
753101 - NOSE FITTING
A-261 - O'RING
480125 - RETAINING NUT STOP
480124 - RETAINING NUT
401092 - BACK-UP RING
756120 - DEFLECTOR
748116 - END CAP
A-820 - O'RING
403846 - O'RING
A-1667 - DIE SPRING
S832 - O'RING
401816 - PLUG
745124 - GASKET
745366 - HEAD CYLINDER
700346 - HANDLE ASSEMBLY (INCL. B.H.C.S. (4X), PIN, LEVER & SET SCREW)
703532 - ACTUATOR ASSEMBLY
S1181 - BARBED FITTING (2X)
402482 - BUTTON HEAD CAP SCREW
A-144 - HOSE CLAMP (2X)
204304 - SWIVEL ASSEMBLY
204304 - SWIVEL ASSEMBLY
401080 - BACK-UP RING
403764 - O'RING
A-317 - HYDRAULIC HOSE (2X) (703560 HOSE GUARD NOT SHOWN)
704311 - AIR LINE (2X)
801151 - LANYARD ASSEMBLY
403431 - REDUCER BUSHING
585047 - HYDRAULIC COUPLER - MALE
A-578 - CONNECTOR - FEMALE
A-580 - CONNECTOR - MALE

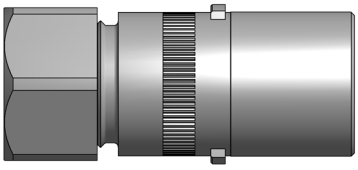
GB745SHAVT ACCESSORIES

Approved for use on Gage Bilt CE installation tools and/or other manufacturer's CE approved tools of similar design.
(Sold Separately)

Adapter Assembly
#353204
Adapts all offset
204 series noses
(Sold Separately)



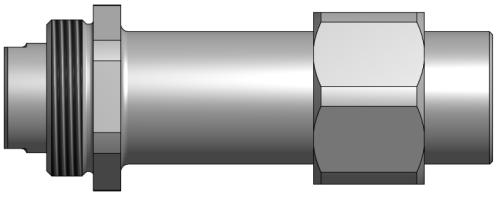
Adapter Assembly
#745751
Adapts all offset 731 and 752 series noses
(Sold Separately)



NOSE ASSEMBLY SELECTION CHART

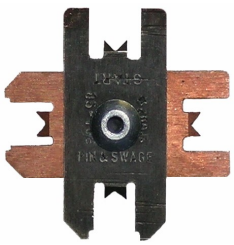
PLEASE CONTACT GAGE BILT FOR NOSE ASSEMBLY OPTIONS.

Adapter Assembly
#745205
Adapts all offset 205 series noses.
(Sold Separately)



Grip Gage for CHERRYMAX® and CHERRYLOCK® rivets #269G3
(Sold Separately)

Grip Gage for NAS Lockbolts and blind fasteners #GB105093
(Sold Separately)



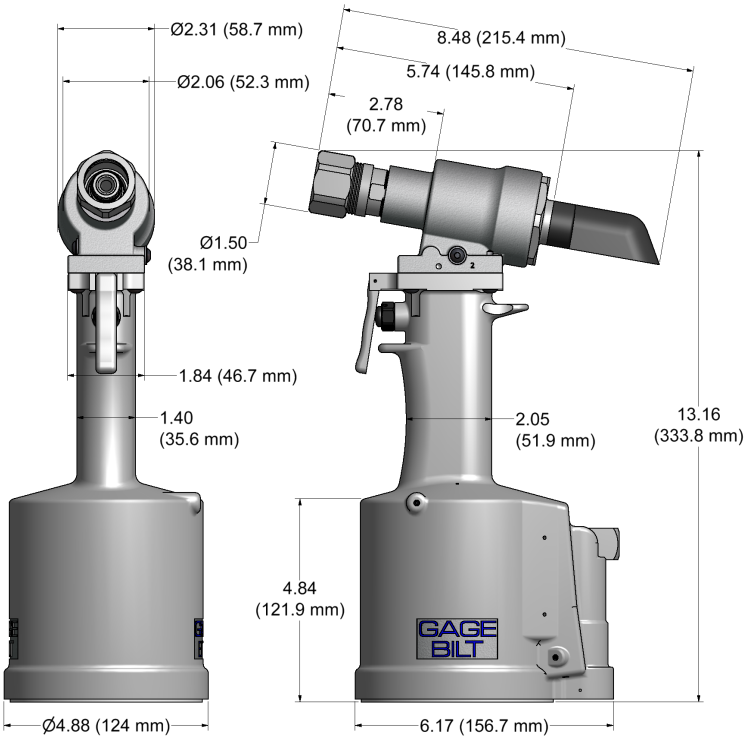
Gage Bilt also supplies pin & collar swage inspection gages to certify swage installation.
(Sold Separately)

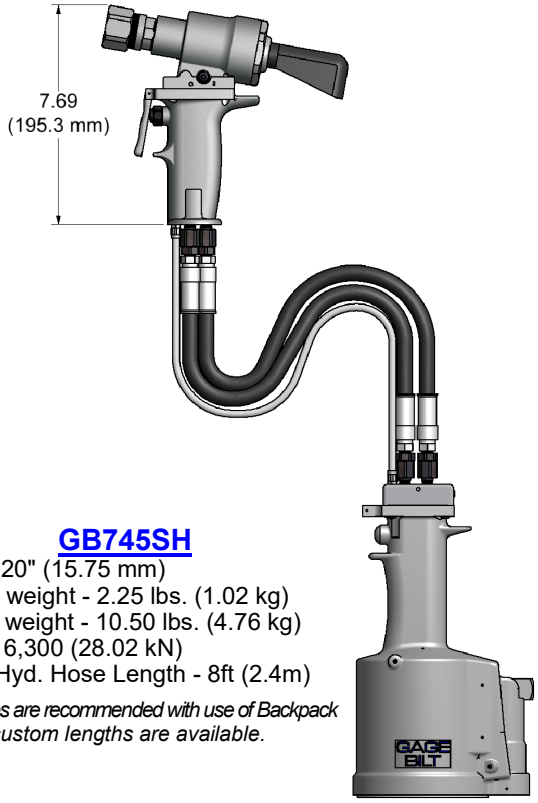
ALTERNATIVE STYLES

(Sold Separately)

GB745

Stroke - .620" (15.75 mm)
Tool weight - 7.20 lbs. (3.26 kg)
Pull load - 6,300 (28.02 kN)

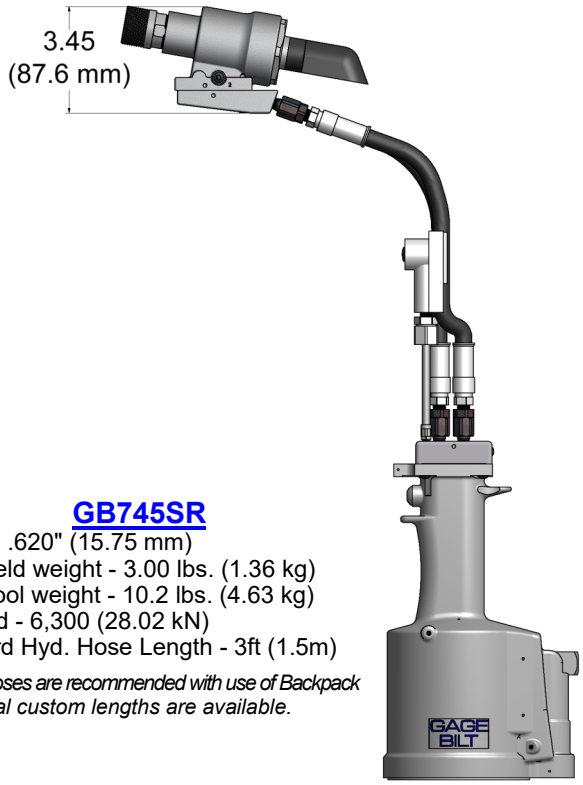




GB745SH

Stroke - .620" (15.75 mm)
Hand held weight - 2.25 lbs. (1.02 kg)
Entire tool weight - 10.50 lbs. (4.76 kg)
Pull load - 6,300 (28.02 kN)
Standard Hyd. Hose Length - 8ft (2.4m)

5ft Hyd. Hoses are recommended with use of Backpack
Additional custom lengths are available.



GB745SR

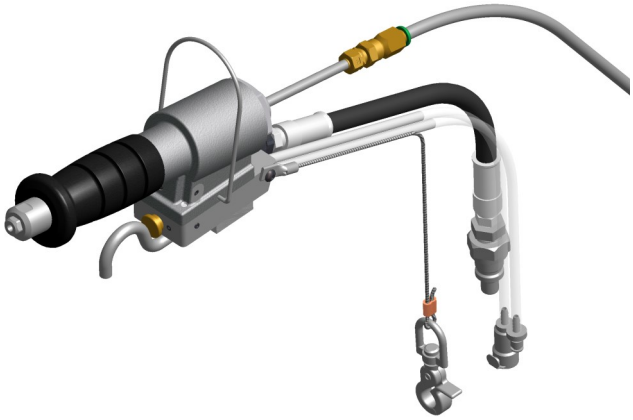
Stroke - .620" (15.75 mm)
Hand held weight - 3.00 lbs. (1.36 kg)
Entire tool weight - 10.2 lbs. (4.63 kg)
Pull load - 6,300 (28.02 kN)
Standard Hyd. Hose Length - 3ft (1.5m)

5t Hyd. Hoses are recommended with use of Backpack
Additional custom lengths are available.

ALTERNATE STYLES & GB745SHAVT ACCESSORIES Cont.

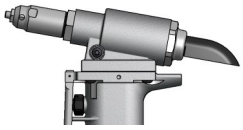
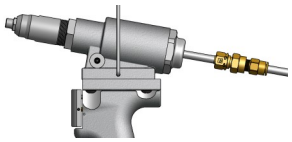
Approved for use on Gage Bilt CE installation tools and/or other manufacturer's CE approved tools of similar design.
(Sold Separately)

Inline (SRA)



Pistol Grip (SHA)

All SRA and SHA tools require a powerunit to operate.
Please contact GAGE BILT for more information.

Description *Image may not reflect actual tool*		Pistol Grip	Inline
	Pintail Deflector	SHA	SRA
	Vacuum Bottle	SHAV	SRAV
	Vacuum Tube	SHAVT	SRAVT

Tools with hose kits available to 26 ft (7.92 m)

Tool specification's vary based on application

Catcher Bag-Stem
#704214
(Sold Separately)

Catcher Bag-Stem
#756610
(Sold Separately)

Tool Stroke Depth Gage
#A-1935
(Sold Separately)

Image may not reflect actual gage

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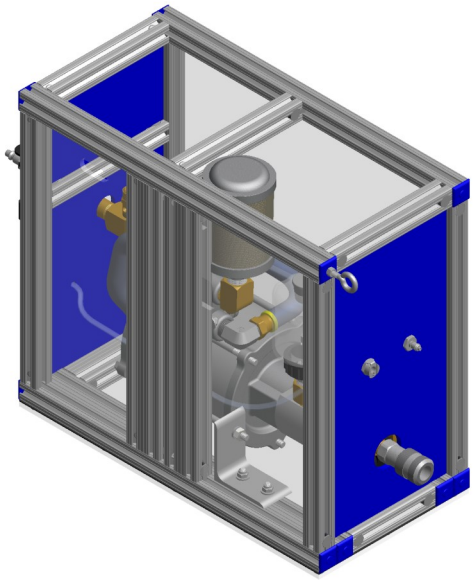
POWERUNITS

Approved for use on Gage Bilt CE installation tools and/or other manufacturer's CE approved tools of similar design.
(Sold Separately)

GB808
POWERUNIT
(Sold Separately)

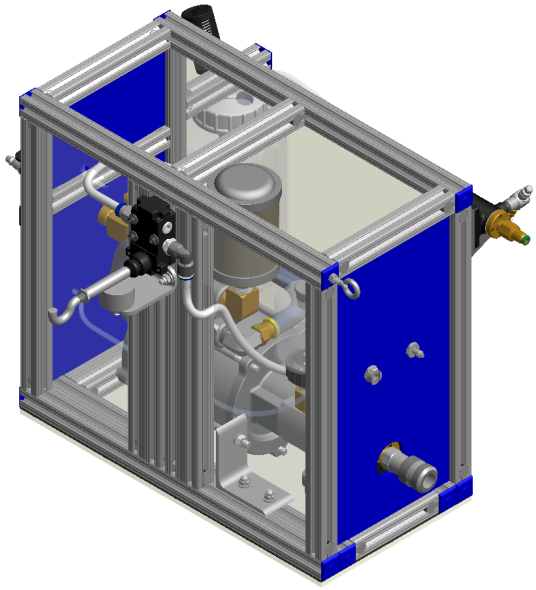


*GB808 WHEELS OPTIONAL

Hose Kits available to 26 ft (7.92 m)
Pressure 4,000 lbs. (177.93kN) @ 90 PSI (6.2 bar)
Fast Acting Cylinder
Requires 1/2" (12.7 mm) Air Hose
POWER: 80-100 PSI compressed air (5.2-6.9 bar)
GB808 Dimensions & weight shown below.
For all other models dimensions & weights contact Gage Bilt.

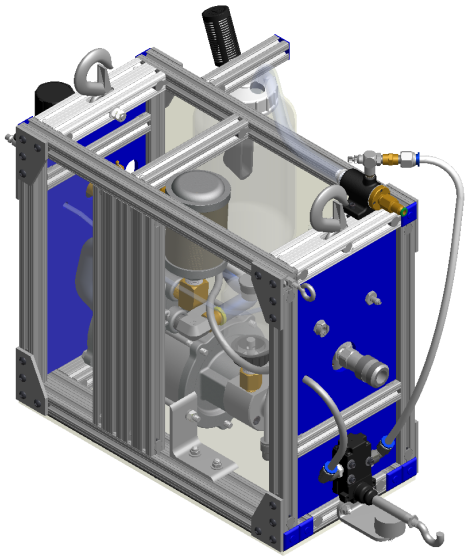
WEIGHT: 40 lbs (18.1)
HEIGHT: 16.5" (419.1 mm)
WIDTH: 9.0" (228.6 mm)
LENGTH: 24" (609.6 mm)

GB808V
POWERUNIT WITH VACUUM
(Sold Separately)

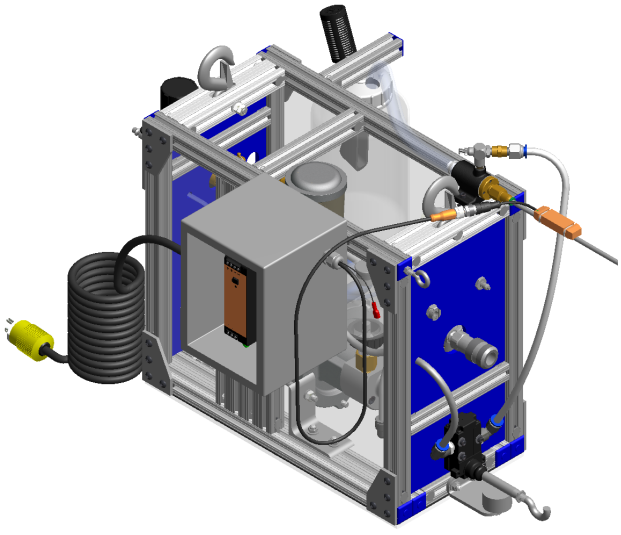


Hose kits available up to 26 ft. Contact Gage Bilt for all other hose lengths.

GB808HVB
HANGING POWERUNIT WITH VACUUM
(Sold Separately)



GB808HVB-100
HANGING POWERUNIT WITH VACUUM & PINTAIL SENSOR
(Sold Separately)



***GB808HVB VIDEO AVAILABLE AT:** http://www.gagebilt.com/rivet_tools_videos.php

Images may not reflect actual tool