

ORIGINAL INSTRUCTIONS

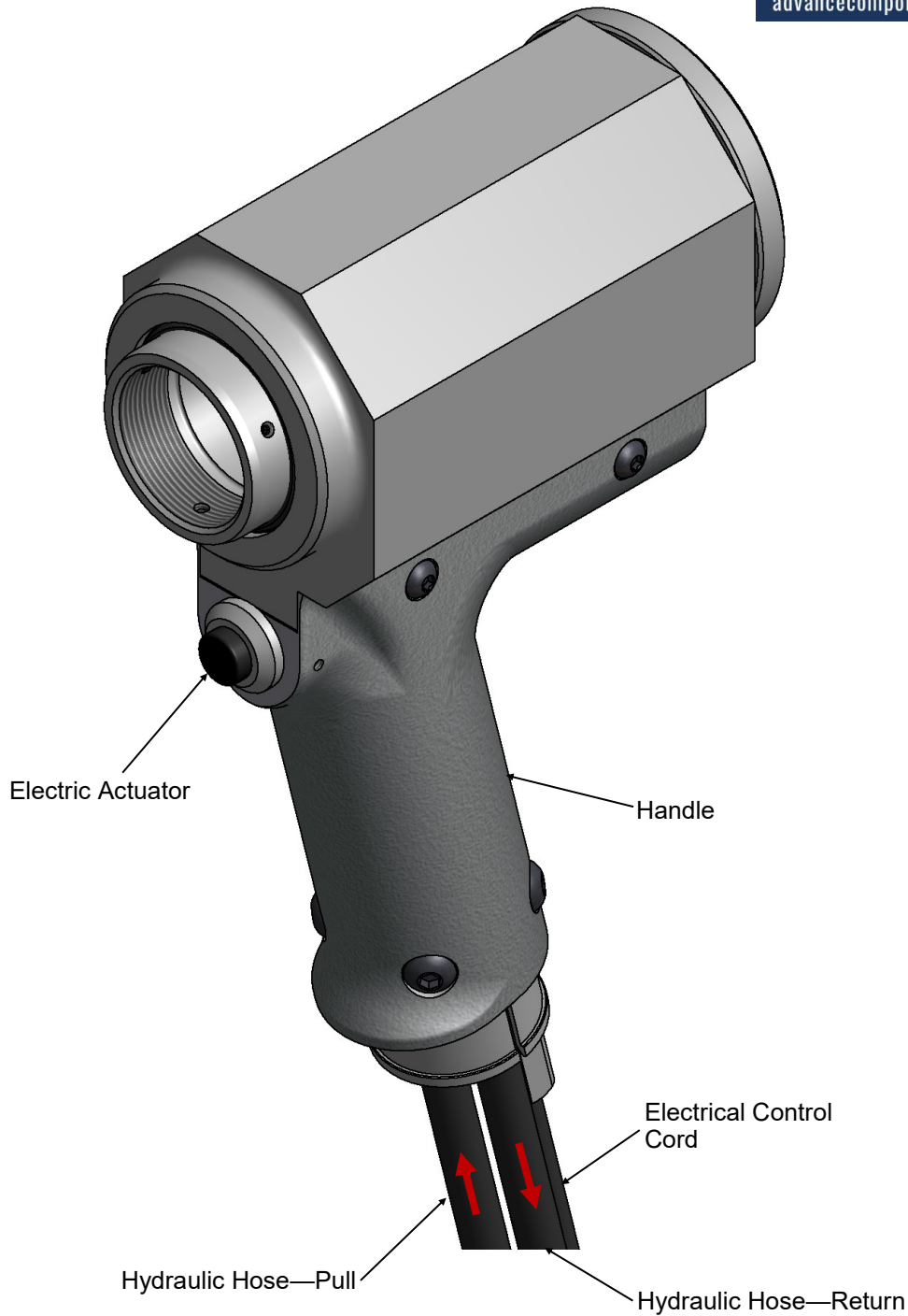
# GB20SF INSTALLATION TOOL

MASTER DISTRIBUTOR



**ADVANCE**  
COMPONENTS

[advancecomponents.com](http://advancecomponents.com) 972.446.5500



# GAGE BILT



MADE in USA

## 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 12100:2010

EN ISO 13849-2:2012

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

**EQUIPMENT DESCRIPTION:** GB20SF FASTENER INSTALLATION TOOL

This product specified above conforms to the above directives and standards.

SIGNATURE:



NAME: BRIAN LEIGH  
PRODUCT MANAGER

### 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.

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 1 year after the receipt of the material by the customer.

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

## DESCRIPTION



**⚠ WARNING:** Any other use is forbidden.

The GB20SF is a hydraulic installation tool designed specifically for the efficient installation of 1/2", 5/8", 12mm, 14mm & 16mm diameter BobTail® fasteners. It weighs approximately 11 lbs. (4.99 kg) and can be operated in any position. It has a 2.00" (5.08cm) fastener stroke and a maximum rated pull load of 20,650 lbs. (92kN) @ 7,000 psi. (483 bar) and a maximum rated return load of 9,500 lbs. (42 kN) @ 5000 psi. (345 bar).

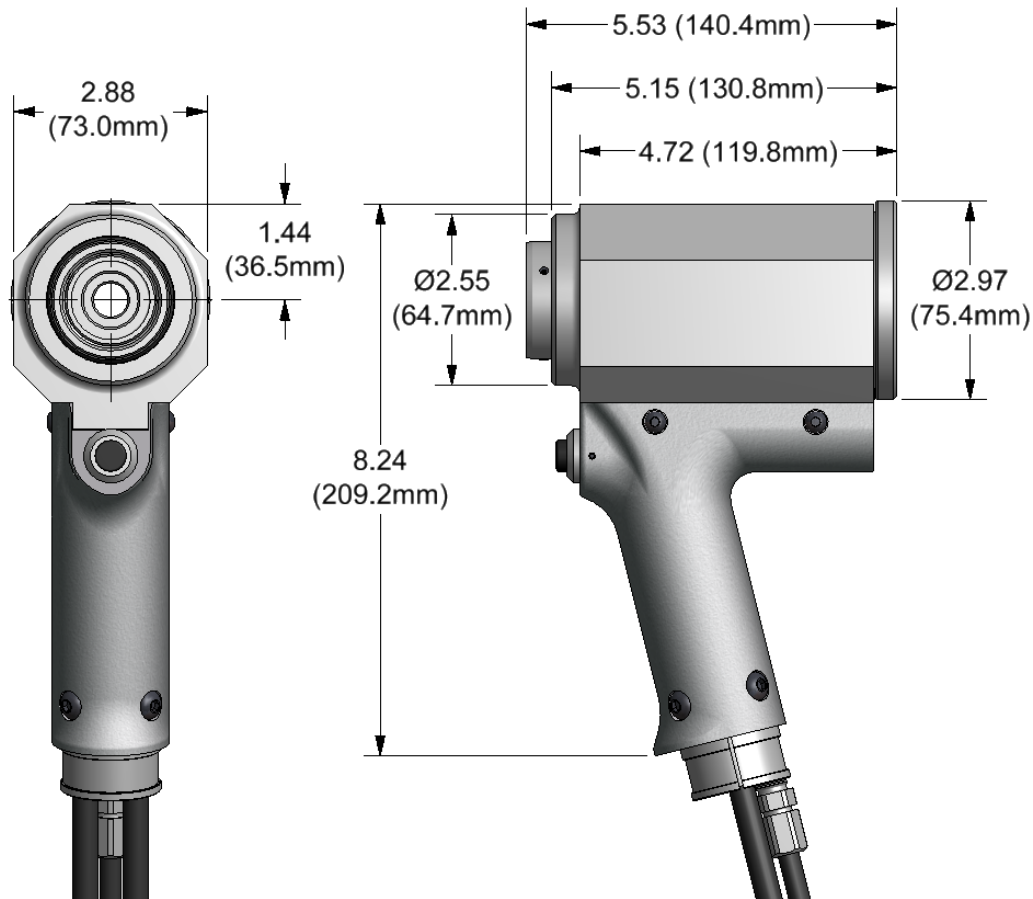
The GB20SF (Electric actuated) installation tool operates on hydraulic pressure developed by the GB940 Powerunit. Set both pull and return pressures per instruction manual for diameter of fastener being installed. The tool comes equipped with 2 feet (.61 m) of hydraulic hoses and couplings, electric switch and cord.

ALL GAGE BILT HYDRAULIC INSTALLATION TOOLS ARE COMPATIBLE WITH HUCK® POWERUNITS. NOSE ASSEMBLIES ARE NOT FURNISHED WITH THESE TOOLS AND MUST BE ORDERED SEPARATELY. (See nose assembly selection chart on pg. 14).

## ENVIRONMENTAL USE

**⚠ WARNING:** Do not operate in an explosive atmosphere.

The GB20SF can be operated between 0°F - 125°F (-17.8°C / 51.7°C)



## SPECIFICATIONS

Weight	- 11 lbs. (4.99 kg)
Hyd. pressure req'd	- 7,000 psi (483 bar) PULL 5,000 psi (345 bar) RETURN
Hyd. Power Source	- GB940 Powerunit or equivalent
Hydraulic Oil	- See power unit for hydraulic oil specifications
Setting stroke	- 2.00" (5.08cm)
Maximum Rated pull load	- 20,650 lbs. (92 kN) @ 7,000 psi (483 bar)
Noise level	- No noise hazards identified. (20 max dB(A))
Vibration	- Tested – No vibration hazards.
Max Flow Rate	- 2 gpm (7.57L/M)
Max Inlet Temperature	- 125° F (51.7° C)



## TERMS AND SYMBOLS



- Product complies with requirements



- Read manual prior to using equipment



- Hearing protection and eye protection



- 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 warnings 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 should 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 warnings; 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 periodically to verify all ratings and markings required are legible. The employer/user shall contact the manufacturer to obtain replacement marking labels when necessary.
7. Air under pressure can cause severe injury.
8. 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.
9. Never direct air at yourself or anyone else.
10. Whipping hoses can cause severe injury. Always check for damage or loose hoses and fittings.
11. Cold air shall be directed away from hands.
12. Whenever universal twist couplings (claw couplings) are used, lock pins shall be installed and whipcheck safety cables shall be used to safeguard against possible hose-to-tool or hose-to-hose connection failure.
13. Do not exceed the maximum air pressure stated on the tool or manual.
14. Never carry an air tool by the hose.

## ADDITIONAL SAFETY RULES FOR HYDRAULIC POWER TOOLS:

1. Do not exceed the maximum relief-valve setting stated on the tool and manual.
2. Carry out a daily check for damaged or worn hoses or hydraulic connections and replace if necessary.
3. Use only clean oil and filling equipment.
4. Power units require a free flow of air for cooling purposes and should therefore be positioned in a well ventilated area free from hazardous fumes.
5. Ensure that couplings are clean and correctly engaged before operation.
6. Do not inspect or clean the tool while the hydraulic power source is connected. Accidental engagement of the tool can cause serious injury.
7. Do not install or remove the tool while the hydraulic power source is connected. Accidental engagement of the tool can cause serious injury.
8. Be sure all hose connections are tight.
9. Wipe all couplers clean before connecting. Failure to do so can result in damage to the quick couplers and cause overheating.
10. Max. hydraulic tool inlet temp. 125°F 51.7°C

## 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 or accessories, or even the inserted tool/nose assembly itself can generate high-velocity projectiles.
3. Always wear impact resistant eye protection during operation of the tool. The grade of protection required should be assessed for each use.
4. The risk to others should also be assessed at this time.
5. Ensure that the workpiece is securely fixed.
6. Check that the means of protection from ejection of fastener and/or stem is in place and operative (such as the deflector).
7. 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 recommended 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. Use hearing protection in accordance with employer's instructions and as required by occupational health and safety regulations.
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



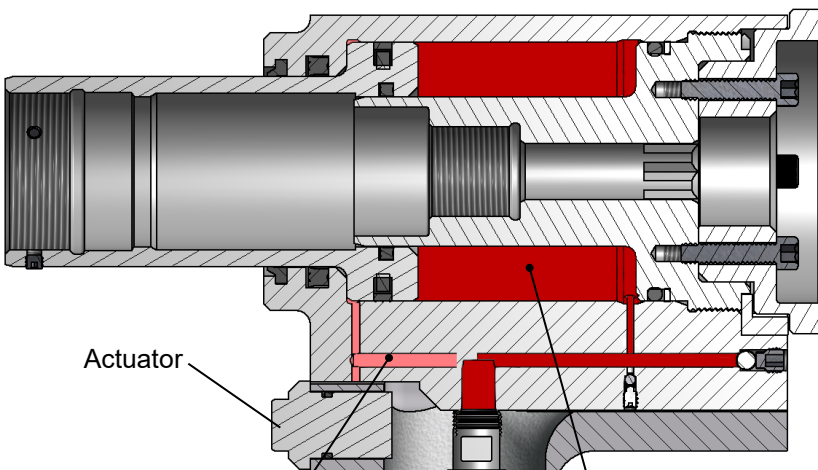
When the tool is connected to a powerunit, operation is controlled by an electric actuator in the handle. When the actuator is depressed, a directional valve in the powerunit directs oil to the rear side of the piston forcing it and the nose assembly collet forward. This action causes the puller jaws to clamp onto the fastener and pull the sheets together. The anvil is forced forward, swaging the collar into locking grooves of the fastener.

When the actuator is released the directional valve reverses oil flow to the front of the piston and pushes the nose assembly off of the swaged fastener.

## HYDRAULIC DIAGRAM

### SWAGE FORWARD Cycle

← Piston Travel

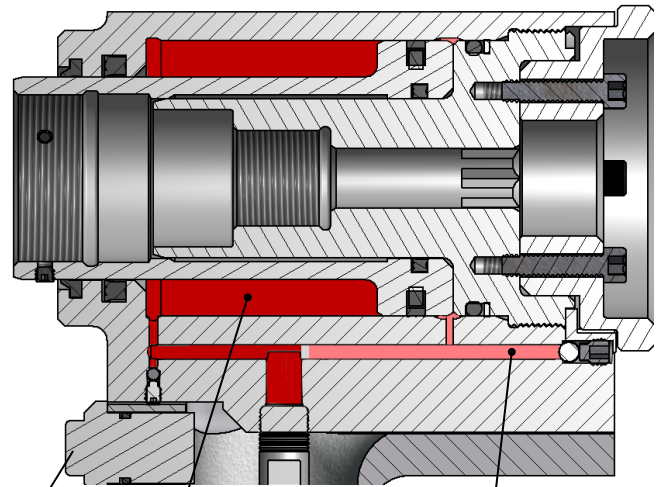


RETURN Pressure

SWAGE Pressure

### RETURN Cycle

Piston Travel →



Actuator


RETURN Pressure

SWAGE Pressure

Unpressurized Oil goes to hydraulic hose not shown.  
Hydraulic Oil in both hoses at all times.

NOTE: Fire resistant oil may be used if it is an ester based oil such as HFD, Quintolubric® or equivalent.

**DO NOT USE WATER BASED OIL AS SERIOUS DAMAGE TO THE EQUIPMENT WILL OCCUR.**

 Pressurized Oil

 Unpressurized Oil

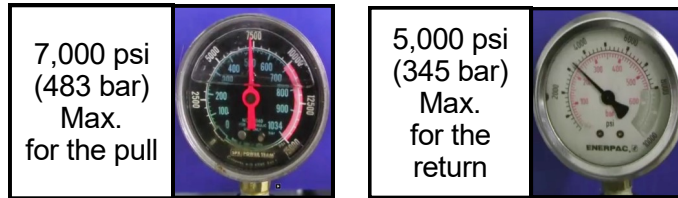
Images may not reflect actual tool

## HOW TO SET-UP THE GB20SF



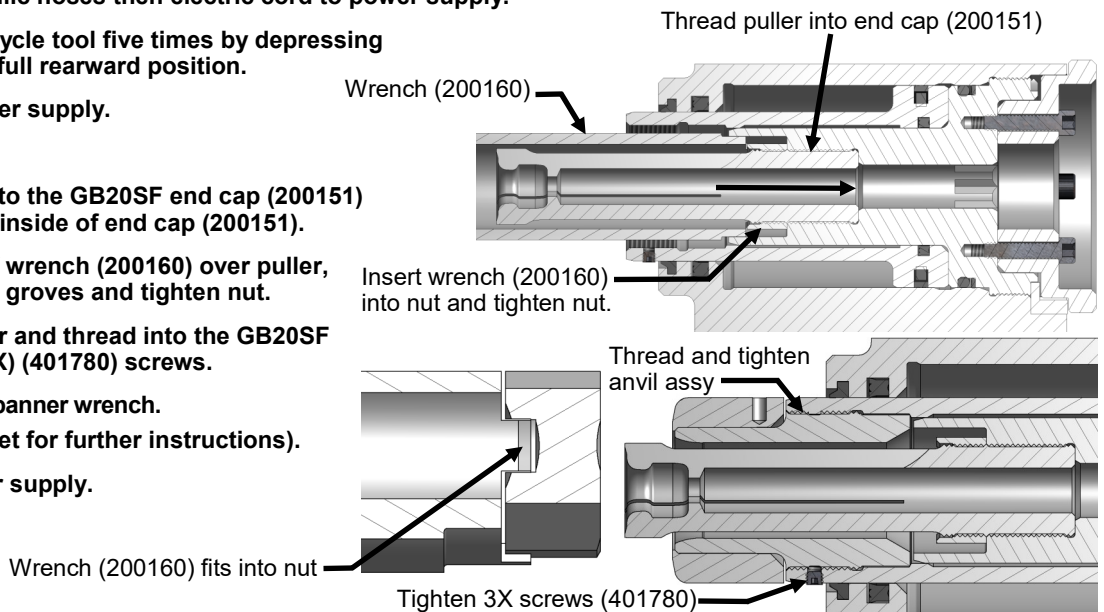
- ⚠ WARNING:** Only qualified and trained operators should install, adjust or use the assembly power tool for non-threaded mechanical fasteners.
- ⚠ WARNING:** Operator **MUST** read and understand all warnings and cautions.
- ⚠ WARNING:** It is required that eye protection, hearing protection and safety boots be worn at all times while handling this equipment.
- ⚠ WARNING:** The users or the user's employer should assess specific risks that could be present before each use based on their application.
  - *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.*
  - *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.*
  - *Verify that hydraulic hose fittings and couplings, air and electrical connections are secure before each use.*
- ⚠ WARNING:** Be sure to connect tool's hydraulic hoses to POWERUNIT before connecting tool's control cord assy. Severe personal injury may occur if not done in this order.
- ⚠ WARNING:** Do not carry from hoses or use as a hammer.
- ⚠ WARNING:** Do not use in explosive atmosphere.
- ⚠ WARNING:** Ensure air hose is securely connected to avoid possible hose whipping.
- ⚠ WARNING:** Always disconnect air supply, where applicable, when tool is not in use to prevent accidental start-up.
- ⚠ WARNING:** Do not use water based oil as serious damage to the equipment will occur.
- ⚠ WARNING:** Do not operate when recommended pressures are exceeded as it could cause severe personal injury and or damage the equipment.
- ⚠ WARNING:** Use only Gage Bilt hydraulic hoses and couplings, or equivalent, rated for 10,000 psi. (689.5 bar) working pressure.
- ⚠ CAUTION:** Do not use beyond the design intent.

1. Set hydraulic power unit to the recommended pressure, 7,000 psi (483 bar) Max. for the pull and 5,000 psi (345 bar) Max. for the return. Gage Bilt pressure gage assy (942280) (sold separately) is recommended to aid in this procedure. "See hydraulic power unit manual for correct procedure when adjusting pressures".



**Note:** Power units require a free flow of air for cooling purposes and should therefore be positioned in a well ventilated area free from hazardous fumes.

2. Turn off the hydraulic power unit. Wipe all couplers clean before connecting. Failure to do so can result in damage to the couplers and cause overheating. Connect hydraulic hoses then electric cord to power supply.
3. Turn hydraulic power unit on and cycle tool five times by depressing actuator to ensure piston is in the full rearward position.
4. Disconnect electric cord from power supply.
5. Attach nose assembly.
  - 5a. Thread assembled puller into the GB20SF end cap (200151) until puller bottoms out on inside of end cap (200151).
  - 5b. Collapse puller, slide i.d. of wrench (200160) over puller, insert wrench keys into nut grooves and tighten nut.
  - 5c. Install anvil assy over puller and thread into the GB20SF piston (200152). Tighten (3X) (401780) screws.
  - 5d. Tighten anvil assy using a spanner wrench.  
(See proper data sheet for further instructions).
6. Re-connect electric cord into power supply.



## HOW TO USE THE GB20SF



- ⚠ WARNING:** Only qualified and trained operators should 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 should assess specific risks that could be present before each use based on their application.
  - *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.*
  - *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.*
  - *Verify that hydraulic hose fittings and couplings, air and electrical connections are secure before each use.*
- ⚠ WARNING:** Be sure to connect tool's hydraulic hoses to POWERUNIT before connecting tool's control cord assy. Severe personal injury may occur if not done in this order.
- ⚠ WARNING:** Do not carry from hoses or use as a hammer.
- ⚠ WARNING:** Do not use in explosive atmosphere.
- ⚠ WARNING:** Ensure air hose is securely connected to avoid possible hose whipping.
- ⚠ WARNING:** Always disconnect air supply, where applicable, when tool is not in use to prevent accidental start-up.
- ⚠ WARNING:** Do not use water based oil as serious damage to the equipment will occur.
- ⚠ WARNING:** Do not operate when recommended pressures are exceeded as it could cause severe personal injury and or damage the equipment.
- ⚠ WARNING:** Use only Gage Bilt hydraulic hoses and couplings, or equivalent, rated for 10,000 psi. (689.5 bar) working pressure.
- ⚠ CAUTION:** Do not use beyond the design intent.

## BOBTAIL® FASTENERS

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. Push the nose assembly over the end of the fastener until it bottoms out.



4. Press actuator and hold until the collar is swaged and the anvil is ejected off of the collar and the tool is released from the fastener.
5. Release actuator.
6. Repeat steps 1-5.

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 should 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 SDS documents for all applicable materials.
- ⚠ WARNING:** Be sure to connect tool's hydraulic hoses to POWERUNIT before connecting tool's control cord assy. Severe personal injury may occur if not done in this order.
- ⚠ WARNING:** **DO NOT** use water based oil as serious damage to the equipment will occur.

### Note:

- Dispose of hydraulic oil in accordance with manufacture safety datasheet.
- All tool materials are recyclable except rubber o'rings, seals and wipers.
- Fire resistant oil may be used if it is an ester based oil such as HFD, Quintolubric® or equivalent. **DO NOT** use water based oil as serious damage to the equipment will occur.
- Hydraulic oil shall meet DEXRON® III, DEXRON® VI, MERCON®, Allison C-4 or equivalent ATF specifications.

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 (pg. 12) for tool repair.
- \*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.
- \*Only use a hydraulic power source equipped with relief valves and pressures set within specific limits (See required max pressure for pull and return).
- \* 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.
- \*Keep nose assemblies, especially jaws, clean and free of chips and debris. Apply Loctite® C5-A® anti-seize lubricant (408183) or equivalent to outside of puller and inside diameter of anvil. See nose assembly data sheet for more instructions.
- \*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.
- \*Depending on length of use or severity, replace all seals, wipers and back-up rings at regular intervals or whenever disassembled.
- \*Powerunit maintenance instructions and repair can be found in the appropriate POWERUNIT instruction manual.

SEE TROUBLESHOOTING (PG. 11) AND OVERHAUL (PG. 12) FOR FURTHER GUIDANCE.

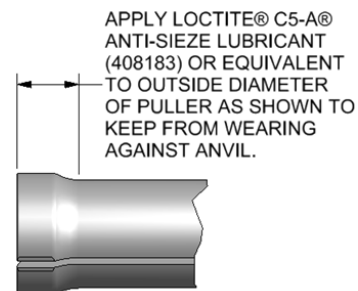
## CLEANING PROCEDURE

Daily cleaning of the nose assembly will greatly reduce downtime and increase life of components. Follow instructions below. When clean, apply Loctite® C5-A® anti-seize lubricant (408183) or equivalent to outside of puller and inside diameter of anvil. See nose assembly data sheet for more instructions.

### CLEANING

Clean nose assy daily or as often as needed.

1. Dip into mineral spirits or similar solvent to clean jaws and wash away metal chips and debris. **DO NOT** allow jaws to come in contact with other solvents. **DO NOT** let jaws soak. Dry jaws immediately.
2. Disassemble nose assy and use a sharp "pick" to remove embedded particles from grooves of jaws.



## 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 malfunction or damage.



## TROUBLESHOOTING



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

1. **NO OPERATION WHEN ELECTRIC ACTUATOR (240122) IS DEPRESSED.**
  - a.) Check Powerunit power source.
  - b.) Control cord may be loose or damaged.
  - c.) Faulty ACTUATOR. Replace.
  - d.) Check hydraulic couplings; repair or replace.
2. **SLOW OR PARTIAL OPERATION WHEN ELECTRIC ACTUATOR (240122) IS DEPRESSED.**
  - a.) Low hydraulic pressure. Check powerunit, adjust.
  - b.) Polyseal (408546) on the piston (200152) could be worn or damaged. Replace.
  - c.) Excessive wear or scoring on moving parts. Check and replace faulty parts.
  - d.) Check hydraulic couplings; repair or replace.
3. **TOOL OPERATES IN REVERSE.**
  - a.) Tool stops in forward 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. (See *hydraulic thread preparation pg.10*).
5. **OIL LEAKAGE.**
  - a.) Hydraulic oil leaks from connections. Tighten threaded connections. Do not use Teflon® tape. (See *hydraulic thread preparation pg.10*).
  - b.) Oil leaks from tool. Determine source of leak and replace worn or defective o'rings and back-up rings.

**NOTE:** Fire resistant oil may be used if it is an ester based oil such as HFD, Quintolubric or equivalent.

**DO NOT USE WATER BASED OIL AS SERIOUS DAMAGE TO THE EQUIPMENT WILL OCCUR.**



- ⚠ WARNING:** Only qualified and trained personnel should 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 should 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 should be avoided (See SDS 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:** Do not use water based oil as serious damage to the equipment will occur.

### Note:

- Dispose of hydraulic oil in accordance with manufacture safety datasheet.
- All tool materials are recyclable except rubber o'rings, seals and wipers.
- Fire resistant oil may be used if it is an ester based oil such as HFD, Quintolubric® or equivalent. **DO NOT** use water based oil as serious damage to the equipment will occur.
- Hydraulic oil shall meet DEXRON® III, DEXRON® VI, MERCON®, Allison C-4 or equivalent ATF specifications.

If a tool is performing poorly or leaking, a complete overhaul may be necessary. Service Kit (GB20SFKS) contains a complete set of o'rings, polyseals and back-up rings.

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 control cord assy (585034) from power supply.
2. Disconnect hydraulic coupler-male (585047) & hydraulic coupler-female (585038) from power supply.
3. Remove hydraulic coupler-male (585047) & hydraulic coupler-female (585038) from hydraulic hoses (A-323) (2X) and drain into a container.
4. Loosen and remove socket head cap screws (400065) (4X) then remove the end cap cover (200150) and locking disk (200155).
5. Insert 1/2" (12.7 mm) hex key into the rear of the end cap (200151). Turn counter clockwise to unthread and remove the end cap (200151) from the rear of the cylinder assembly (200156).
6. Push piston (200152) rearward, draining any remaining hydraulic oil, and out of rear of cylinder assembly (200156).
7. Remove all O'rings, Back-up rings, Wipers, Polyseals and Glyd Rings. 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.
8. 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.

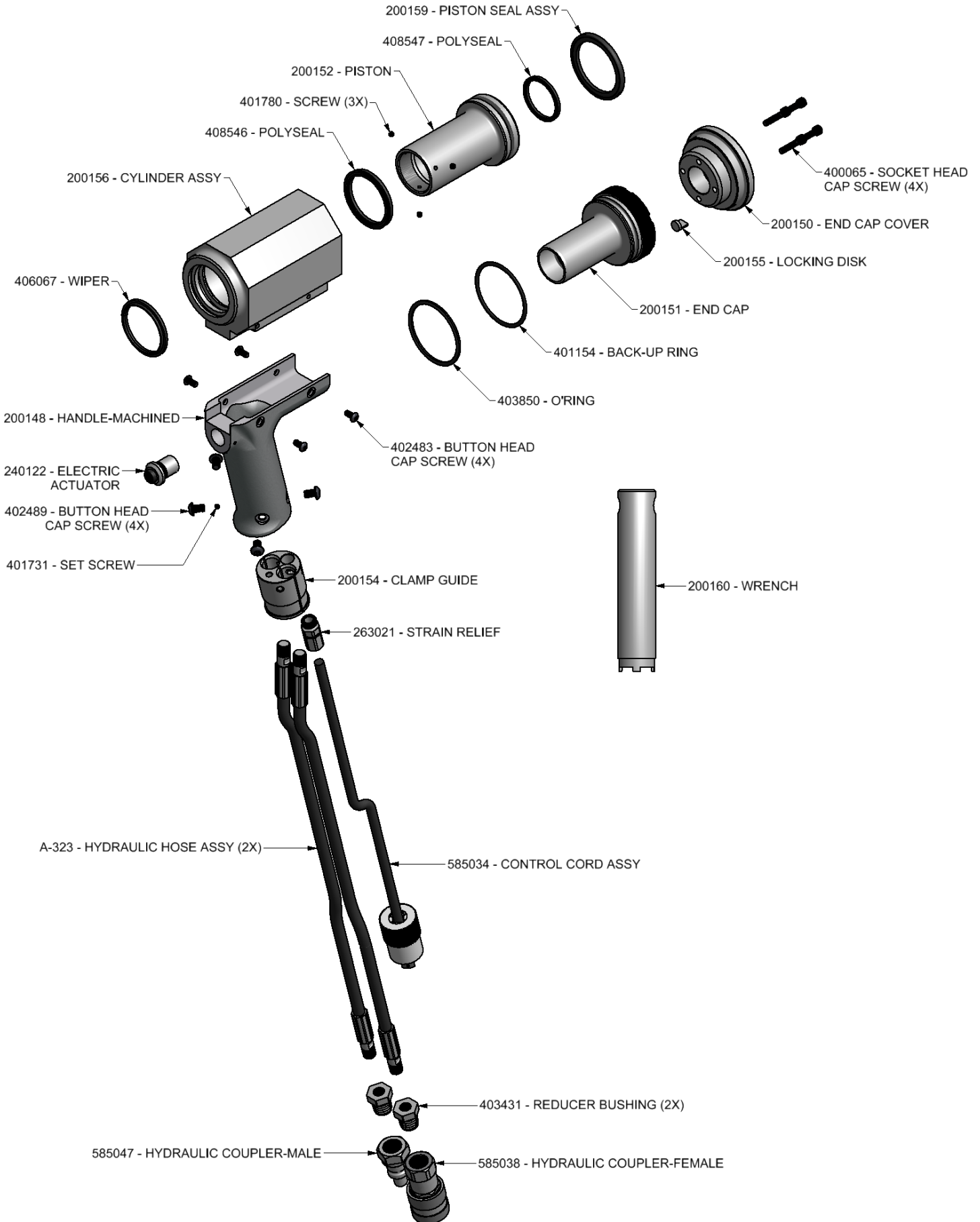
Coat hose fitting threads with a non-hardening Teflon® thread compound such as Slic-tite®. **DO NOT USE TEFLON® TAPE.** (See *hydraulic thread preparation pg.10*).

Apply hot glue to wire connections of the electric actuator (240122) to ensure wires **DO NOT** contact each other or handle assy. (Electric actuated installation tool **GB20SF only**).

## TOOL DISPOSAL

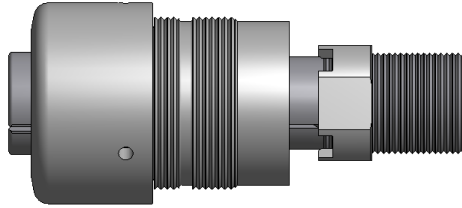
1. When tool life is met, drain hydraulic oil from tool and dispose of the hydraulic oil in accordance with SDS datasheet.
2. Disassemble tool and remove all rubber o'rings, seals, wipers and hydraulic hoses. All tool materials are recyclable except rubber o'rings, seals, wipers and hydraulic hoses.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

# GB20SF PARTS LIST (Electric Actuated)





**GB20SF SELECTION CHART**  
(Sold Separately)



FASTENER	DIA.	NOSE ASSEMBLY	GRADE 5 PULL PSI	GRADE 5 RETURN PSI	GRADE 8 PULL PSI	GRADE 8 RETURN PSI	CLASS 8.8 PULL PSI	CLASS 8.8 RETURN PSI	CLASS 8.8 PULL PSI	CLASS 8.8 RETURN PSI
BobTail®	1/2"	BOB16-20SF-10	3100	1600	4400	2300	-	-	-	-
	5/8"	BOB20-20SF-10	5600	2900	7000	3600	-	-	-	-
	12mm	BOB12MM-20SF-10	-	-	-	-	-	-	4200	2200
	14mm	BOB14MM-20SF-10	-	-	-	-	4400	2300	5600	2900
	16mm	BOB20-20SF-10	-	-	-	-	5600	2900	7000	3600

**THE GB20SF 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. -10 = 1.0 inches)  
8/20

See [gagebilt.com/nose\\_assemblies.htm](http://gagebilt.com/nose_assemblies.htm) for nose assembly information (data sheets).