

Operating Instructions

Cordless Center Punch Tool



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Warranty and Safety Guidelines

WARRANTY

Refer to website for warranty information: <http://www.band-it-idex.com/warranty.html>

NOTE: Any performance data published herein is based on laboratory tests, which cannot duplicate conditions that may be encountered in field installations. Such conditions may vary results substantially from those shown (such as abuse in handling and installation, failure to follow recommended handling and installation practices, abnormal environmental conditions, disregard of operating instructions for BAND-IT tools or non-recommended combinations of BAND-IT products). BAND-IT cannot be responsible for performance characteristics from such variables.

Safety Guidelines

WARNING:

Always wear safety glasses when operating this tool and keep both hands and clothing away from clamp being tensioned. Squeezing force can reach as high as 2 tons. Never attempt to clamp objects which can shatter or otherwise cause bodily harm. Tensioning the clamp can be stopped immediately by releasing the trigger. Detailed instructions are in this manual and the operator is advised to read it and become familiar with operating the tool.

IMPORTANT FOR HOSE APPLICATIONS:

- When clamping a hose end, remember that a tighter clamp keeps the fitting more secure, but excess tension can damage the hose. A fitting stem must have prominent barbs for proper retention inside the hose, but must not be sharp to prevent cutting into the hose. Hose, fitting, and clamp must be compatible with each other and the environment used in. If in doubt, consult the hose or fitting manufacturer or call BAND-IT.
- Improperly tightened clamps may result in dangerous hose assemblies, which could cause injuries or property damage.
- Abuse or use of a hose outside the manufacturers recommended conditions may cause it to quickly deteriorate and become a safety hazard. This could result in serious injury or property damage. Inspect and test hose assemblies frequently.

Clamping objects other than hose requires similar precautions.

Use only with BAND-IT 5/8" GCS and 201 SS Preformed Clamps

Use of Alternate Drills

CAUTION!

This tool is designed to work solely mounted to the **Metabo BS 18 LTX series cordless drill**. Use of any other drills in place of these Metabo BS 18 LTX drills may result in unsatisfactory performance, hazards to the operator and/or the tool, or unsafe clamps. Disregard of this caution voids the warranty of the tool and releases BAND-IT of any and all liabilities arising from such misuses.

Setup Instructions

1. Read safety instructions and operator's manual for the Metabo BS 18 LTX cordless Drill. Check to make sure drill is properly set up for use with Band-It Center Punch Tool as follows:
 - a. Drill spindle has a Clutch Assembly (Band-It # UL4001)
 - b. See page 6 for recommended Drill speed and torque settings.
2. Charge Drill Battery according to the operator's manual.
3. To mount the Drill onto the Band-It Center Punch Tool:
 - a. First, using the two #10-32 x 3/8" screws (M06187), tighten the Tool Body Adapter (M07697) on the Tension Tool (CP0001) with 20–30 in-lbs.
 - b. Place the Adapter Collar (M08288) over the Tool Body Adapter.
 - c. Orient the Drill Clutch Pin (M07187) horizontally (see page, 5 Figure 2).
 - d. Carefully place the Tool Body Adapter over the Drill's collar. If there is any additional resistance, gently rotate the Tension Tool until the Tension Screw engages with the Drill Clutch (M04298) (see page 5, Figure 3), and rotate Tension Tool to the desired orientation.
 - e. Position Tool Body Adapter to butt-up against the shoulder of the drill.
 - f. Slide the Adapter Collar against this shoulder and fasten to 40–60 in-lbs.
4. This tool was designed for and can only be used with BAND-IT 5/8" Center Punch Clamps. Do not attempt to use on any other type of clamp style.

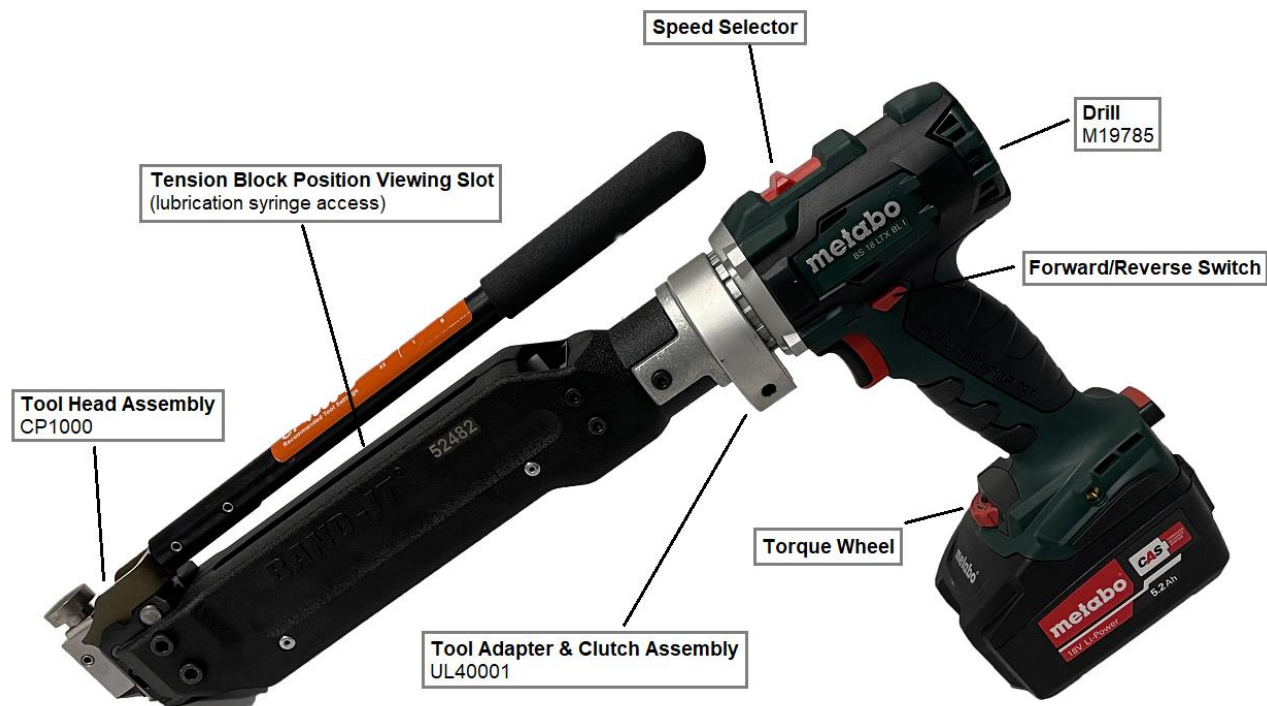
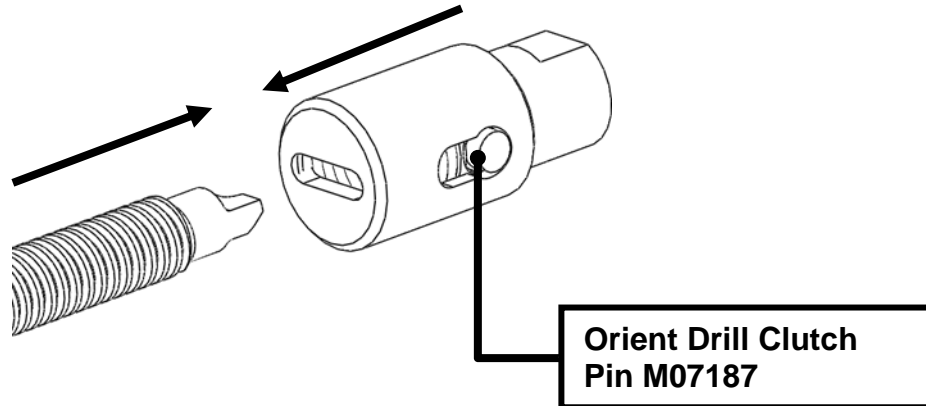
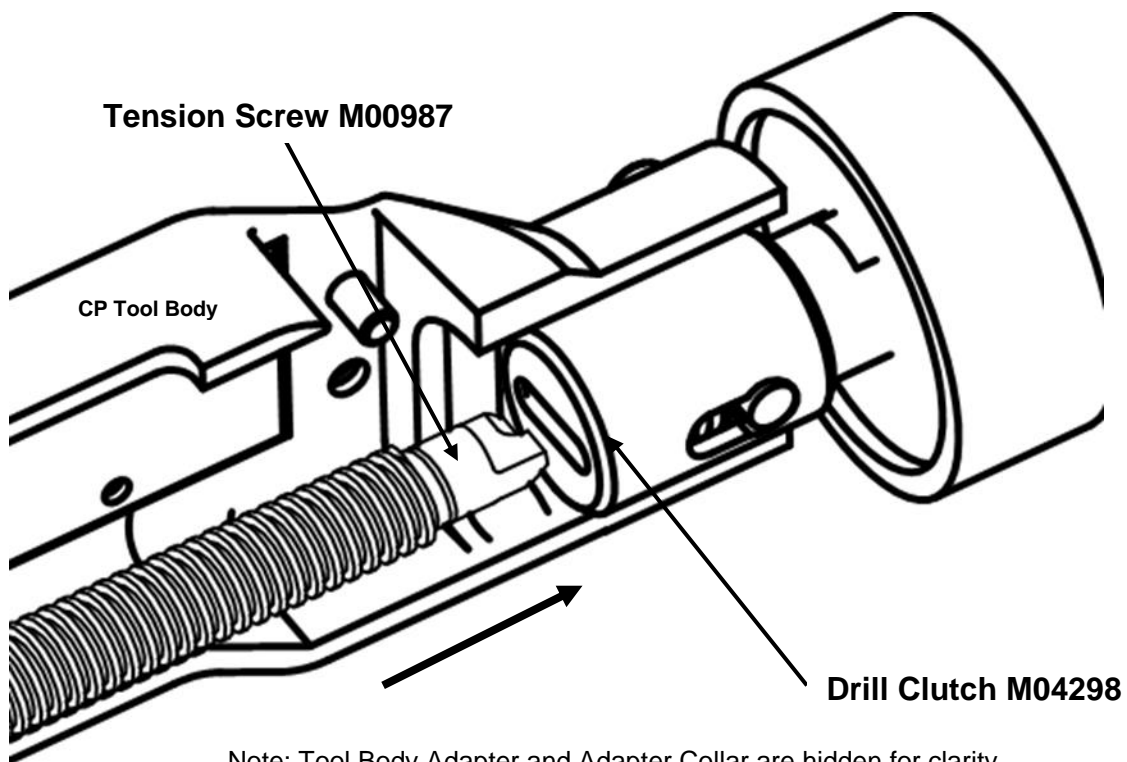


Figure 1



NOTE: Alignment is critical for proper tool function.

Figure 2: Align the pin within the drill clutch



Note: Tool Body Adapter and Adapter Collar are hidden for clarity

Figure 3: Align the end of the Tension Screw with the slot in the end of the Drill Clutch during assembly, as shown above.

Tool Settings

Recommended Drill Torque Dial Settings:

Drill Model: Metabo BS 18 LTX		
Clamp Material	Speed	Clutch
GCS	1	4
201 SS	1	7

Band-It recommends hearing protection if this setting is used for an extended time.

NOTE: These torque settings are suggested settings only; individual tools should be adjusted for the clamping application. Inspect lock per instructions on page 9-11.

Important: Changing speed and clutch settings will alter tension output. Drill Trigger should be depressed fully by the operator to attain correct, and consistent, tension when installing clamps. Tension output may vary from tool to tool, at the same setting, depending on condition and wear of internal components.

Caution: Improperly tightened clamps may result in dangerous assemblies, which could cause injuries or property damage.

Using correctly sized clamps (diameter) will, in most cases, eliminate the need to pull on clamp tail more than once. Tension Block moves approximately 5". On occasion, if needed, large size clamps can be installed by taking several bites (clamp tail feeds out through back of tool). Position of Tension Block, containing gripper, can be monitored through viewing slot just under cut-off handle. The tool features a built-in disengaging mechanism to prevent tension screw from jamming up. At the end of the Tension Block travel the safety clutch will engage and the user will hear a ratcheting sound. Excessive use of this feature will wear the Drill Clutch mechanism and/or Tension Screw out prematurely.

Battery Recommendation: In order to maintain consistent tension when installing clamps, Band-It recommends that the drill be recharged once the indicator on the battery drops to 1 out of 4.

Parts List

Notes:

Apply Item 4 (Super Lube) to:
Item 3 (Cutter Knife) at contact
point with item 15 (Tool Head) and
item 18 (Rollers)
Inside slot profile of item 33 (Tension
Block)

Apply Item 3 (Grease) to:
Item 7 (Tension Screw) threads
and grooved end
Item 11 (Cutter Blade) counter-bore
only, after item 35 (Bearing Tip)
has been installed.

Tighten the following:
Item 6 (1/4-28 X .5 Screws)
to 90 – 110 in-lbs.
Item 13 (1/4-28 X .75 Screws)
to 90 – 110 in-lbs.
Item 24 (#10-32 Screws)
to 60 – 70 in-lbs.

* Permatex P/N: 82325 or Equivalent

**T32190 Punch Repair Kit includes a
punch holder that is not compatible
with CP4000-D. Do not use.

ITEM NO.	PART NUMBER	QTY	DESCRIPTION
1	A33887	1	SPR, COMP, .18 DIA X .813L
2	A53587	2	SPR, COMP, .30 DIA X 1.0, #20.5
3	C23199	-	LUBRICANT, MOLY, SYRINGE
4	I16387*	-	LUBRICANT, SUPER LUBE W/ TEFLON
5	J64387	1	PIN, SPRING, .187D X .625L
6	J67287	4	SCREW, CAP, 1/4-28 X .50 L
7	M00987	1	TENSION SCREW
8	M01388	1	PIN, .187 DIA X 1.50 LONG
9	M01487	1	PIN, DOWEL, 1/4D X 1.5L
10	M01787	1	PLATE, BACK
11	M02187	1	CUTTER BLADE, CP
12	M02287	1	TIP, LOAD BEARING
13	M02587	2	SCREW, CAP, 1/4-28 X .75 L
14	M02687	1	CUTTER KNIFE, CP
15	M02887	1	TOOL HEAD, CP
16	M02987	1	SLOT PLATE, CP
17	M03087	1	CAM, CUT-OFF, CP
18	M03287	2	ROLLER, CUT-OFF
19	M04187	1	PUNCH HOLDER, CP
20	M04287	1	PUNCH ARM, CP
21	M04387	1	TRIPPER BRACKET
22	UL1219	1	HANDLE ASSEMBLY: INCLUDES HANDLE, HANDLE GRIP, AND PINS
24	M06187	4	SCREW, CAP, #10-32 X .375 L
25	M06587	1	BALL, 1/4" DIAMETER
26	M07387	1	BODY, LEFT
27	M07487	1	BODY, RIGHT
28	M07587	2	WEAR PLATE
29	M07987	2	THREADED INSERT, #10-32
30	M08087	4	RIVET, BLIND, .125 X .328 LONG
31	M08187	4	WASHER, .128 ID X .238 OD
32	M08887	1	GRIPPER
33	M09087	1	TENSION BLOCK
34	M09187	1	GRIPPER GUIDE
35	M05387	1	BEARING TIP
36	M88787	1	PIN, CLEVIS, 1/4 X 1-1/4
38	T32190**	1	PUNCH REPAIR KIT INCLUDES RETAINING BALL AND PUNCH

Exploded View

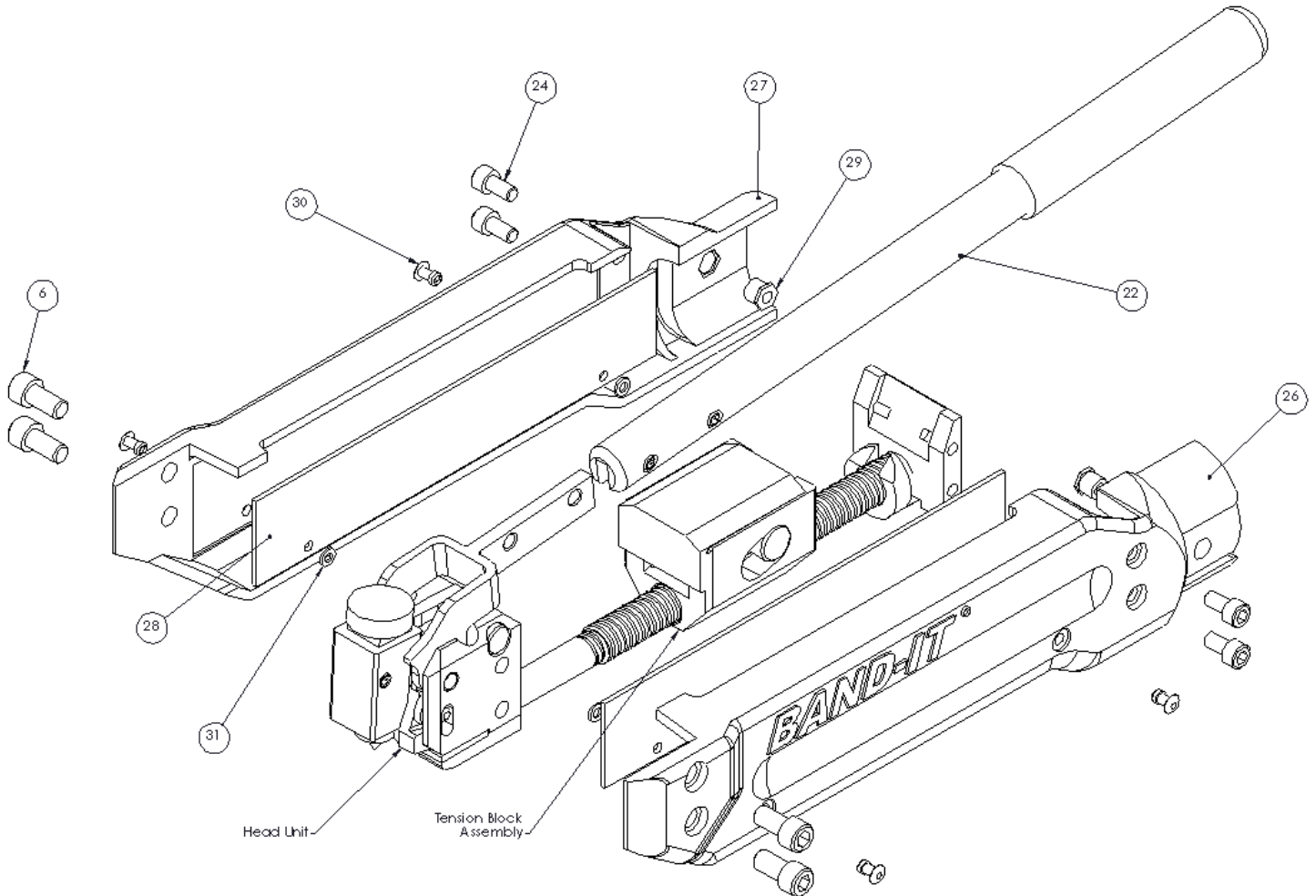


Figure 4

Tension Gripper Assembly

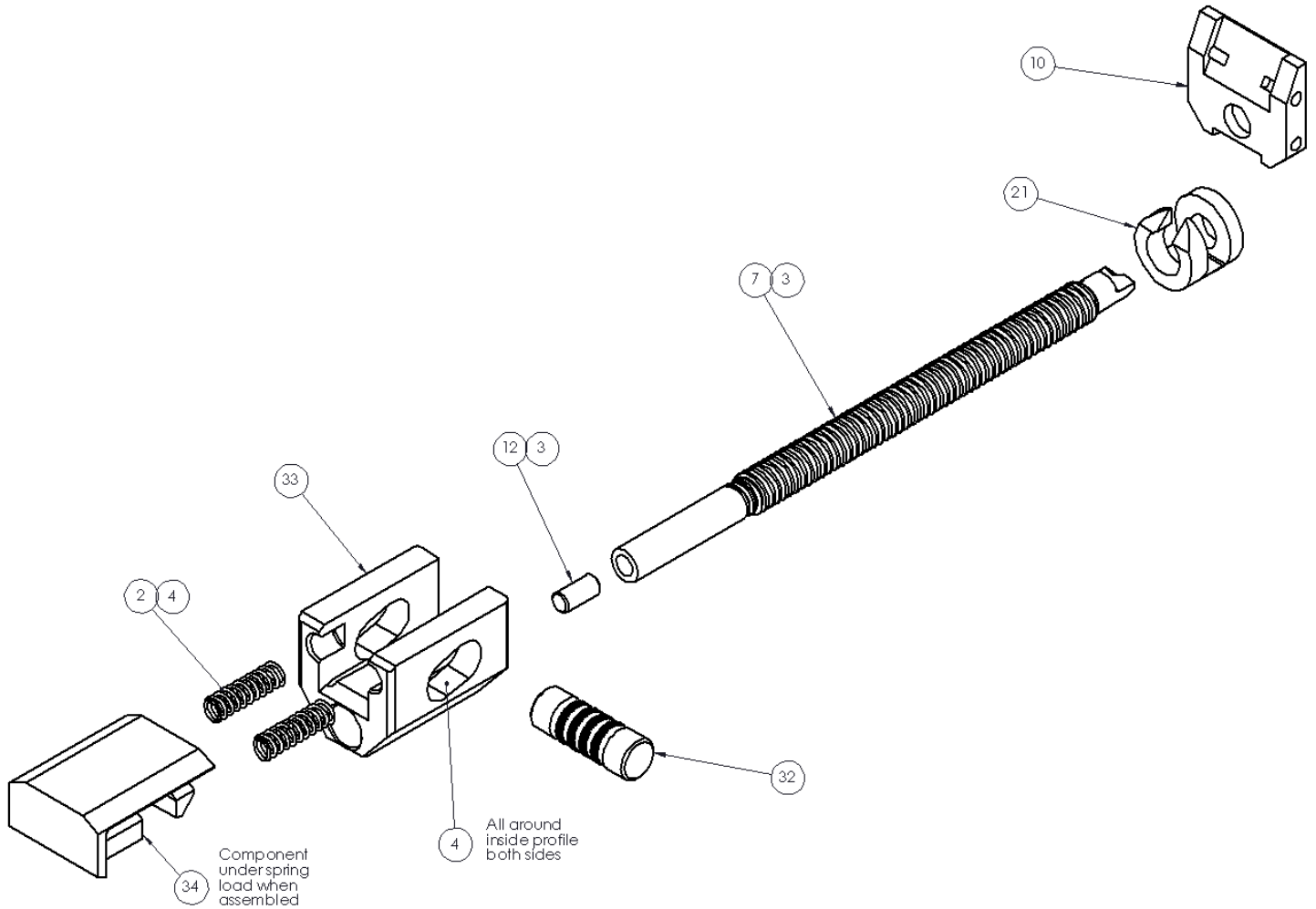


Figure 5

Tool Head Assembly

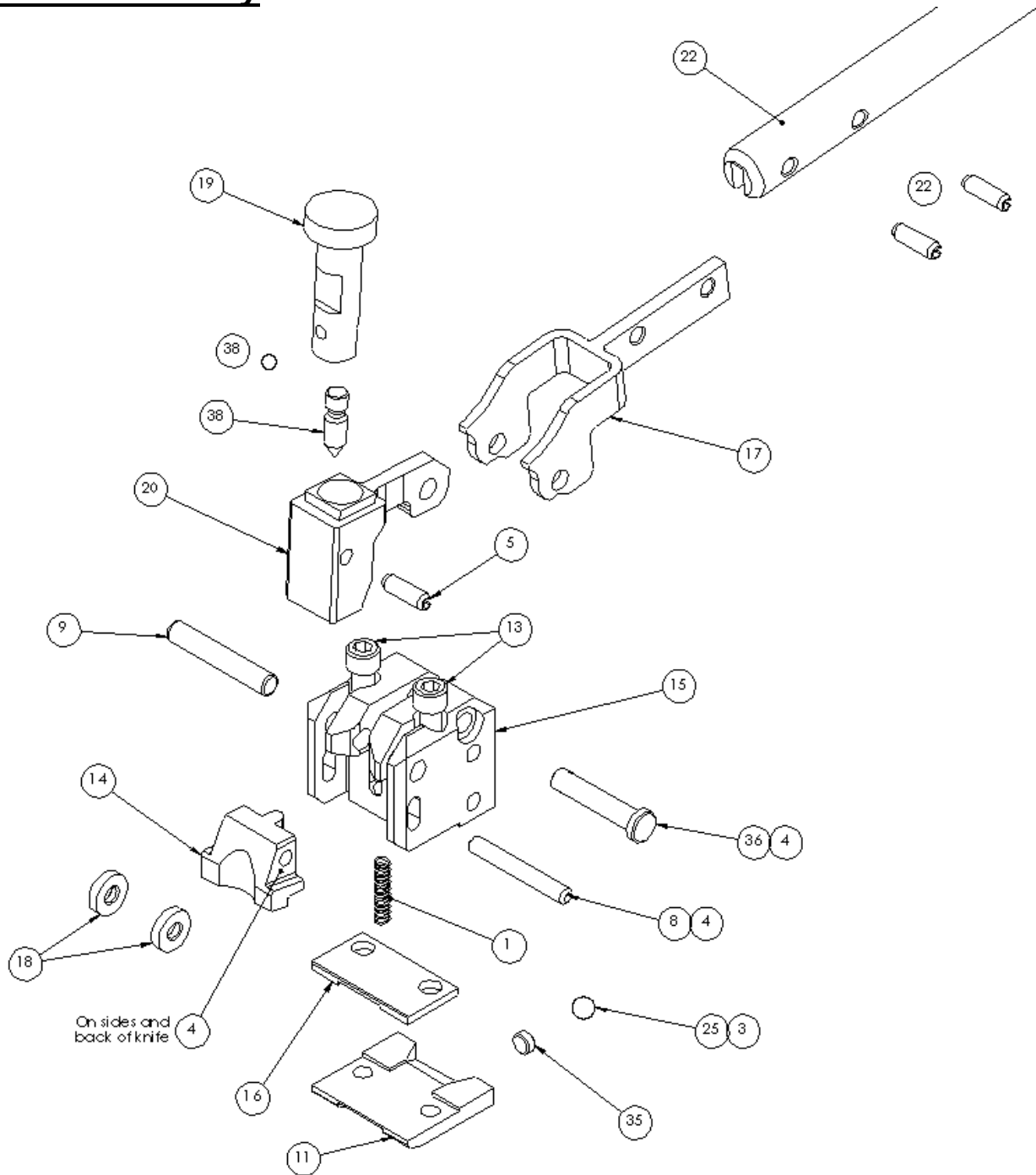
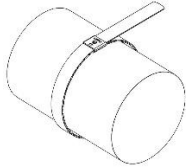
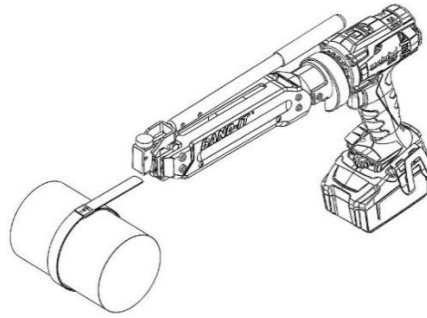


Figure 6

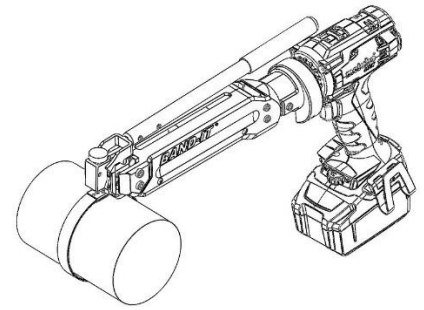
Clamp Application: Center Punch Clamps



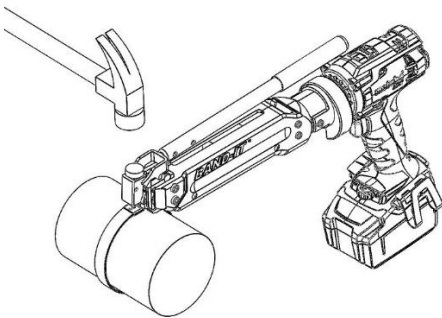
1. Position the clamp on the object you are clamping.



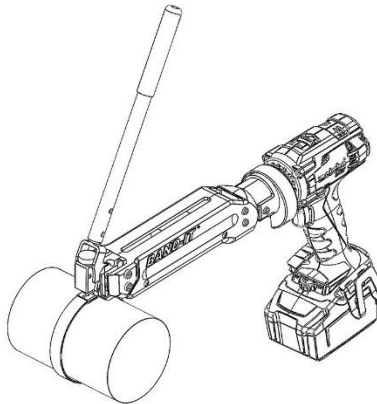
2. Actuate drill until tension block is all the way forward against the tool body. Insert clamp tail into tool head slot. Set drill to clockwise rotation.



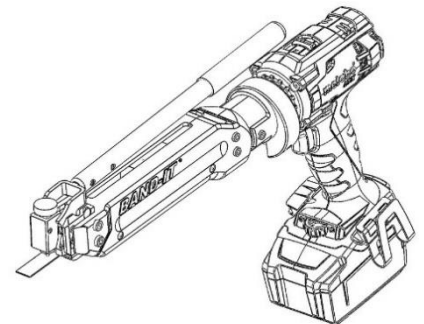
3. Actuate drill until drill's built-in clutch disengages. If tension block comes near its end of travel, release actuator switch and reverse drill to pull more on clamp tail. Excessive use of disengaging drill clutch indicated by loud ratcheting sound leads to premature wear of tension screw.



4. Secure buckle by hitting head of punch holder 3-5 times with a hammer or mallet.



5. Pull the cut-off handle forward to cut off tail, then return handle to the down position.



6. Reverse drill and feed clamp tail out of tool.

Clamp Inspection

Inspect buckle on the completed clamp.

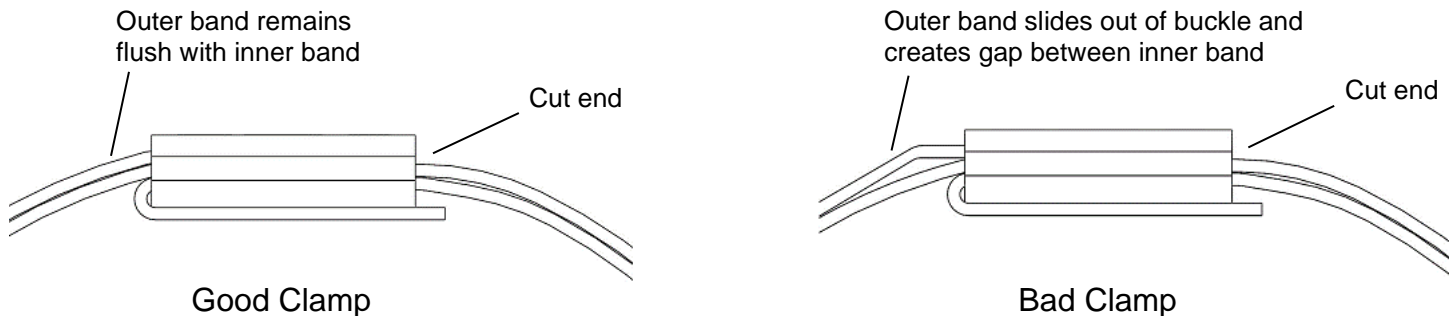


Figure 7

Important: Visually inspect lock formed in band as shown. If the top band has slipped out from the punched buckle, remove clamp and install a new one. A bad clamp may indicate that the punch was not deep enough to secure the band in place.

NOTE FOR HOSE APPLICATIONS:

When applying clamps on soft, thick-walled hose, tension clamp then wait a full 30 seconds. Clamps may be re-tensioned by squeezing the Drill Trigger on the power unit a second time prior to forming the lock and cutting the excess clamp tail. This allows hose to “settle” under the band of the clamp. This hose material attribute is called Cold Flow.

Trouble-Shooting

1. **Outer band slides out of buckle after installation:** Inspect dimple depth created by punch. If not adequate, increase hammer force applied to punch.
2. **Drill clutch releases prematurely:** Make sure Tool is fully seated on Drill (per page 4). If problem persists, contact BAND-IT technical support.
3. **If tool does not cut off tail:**
 - a. Check the torque wheel to make sure it is on the recommended setting.
 - b. Inspect Gripper for wear or debris, which can impact the tool's ability to achieve the required tension for cut-off. See page 15 for instructions on how to access the gripper for cleaning or replacement.
 - c. Inspect the slot plate for wear. Excessive wear may allow the clamp buckle to interfere with cut-off. In this case, the Slot Plate will need to be replaced.
4. **Tool does not fully tension clamp:** Check gripper assembly and tension screw for excessive dirt/grime build up. Lubricate tension screw if needed (see page 14).

Note: To mitigate Drill Clutch wear, do not over-use the Drill Clutch. When tensioning a clamp, let the Drill Switch go as Tension Block nears its end of travel. Reverse drill and send Tension Block all the way forward for a second pull on the band.

Maintenance

1. Approximately every 500 clamps lubricate Tension Screw with molybdenum disulfide lubricant or equivalent. Make sure the Tension Block is all the way forward against the Tool Head. Remove cap from syringe and insert tip of syringe into slot on top of tool body. Press the tip against the Tension Screw just behind the Tension Block and squeeze out approximately 1/2" long bead of lubricant. Remove Syringe and actuate tool without a clamp a couple of times to spread lubricant evenly on tension screw. To order more lubricant, specify BAND-IT #C23199
2. Every 500-1000 clamps, depending on torque setting, inspect and repack front bearing with same lubricant. Turn load bearing tip and small bearing tip over for a new bearing surface.

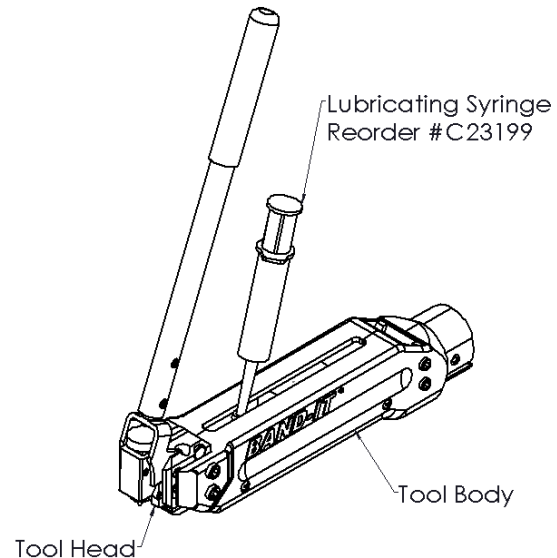


Figure 8

Bearing Detail

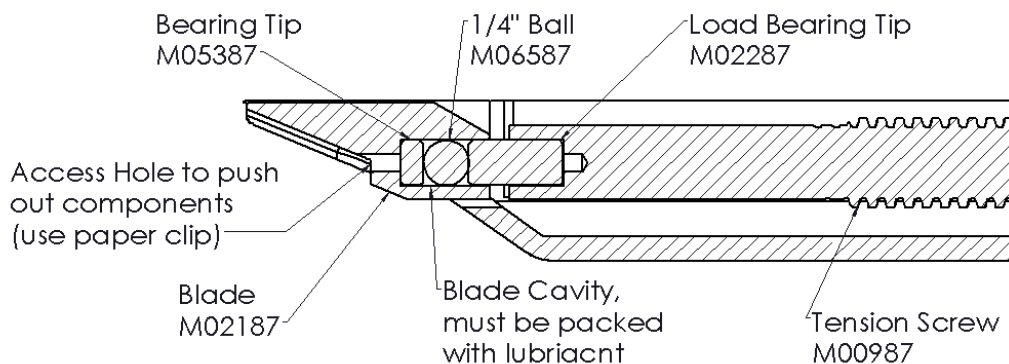


Figure 9

3. To gain access to bearing components: First, back off Tension Block if flush with Tool Head. Then remove Tool Head Mounting Screws (4 places). Tool Head Assembly should now pull free from Tool Body. Use a paper clip or other thin object to push bearing components out of Blade. Wipe lubricant from components. If ball or bearing tips appears heavily worn, replace with new one. Note: 1/4" ball is made from hard tungsten carbide material, do not replace with regular ball bearing. (Smooth indentation from ball in the bearing tips is normal).
4. To re-assemble bearing components: wipe blade cavity clean. Push small bearing tip into blade cavity. Apply lubricant to ball and push into Blade cavity and fill remaining space with lubricant. Push load bearing tip firmly into blade cavity, some lubricant will be squeezed out. Re-attach Tool Head to Tool Body, making sure that load bearing tip extends into Tension Screw.

5. **To Replace Gripper:** Make sure Tension Block is all the way forward against the tool head. Remove drill. Remove tool adapter body. Remove one side of the tool body or the other, not both. Slide Gripper out sideways and replace with a new one. Re-attach Tool Body side. **Caution:** Do not push or move Tension Block while Gripper is out of tool.

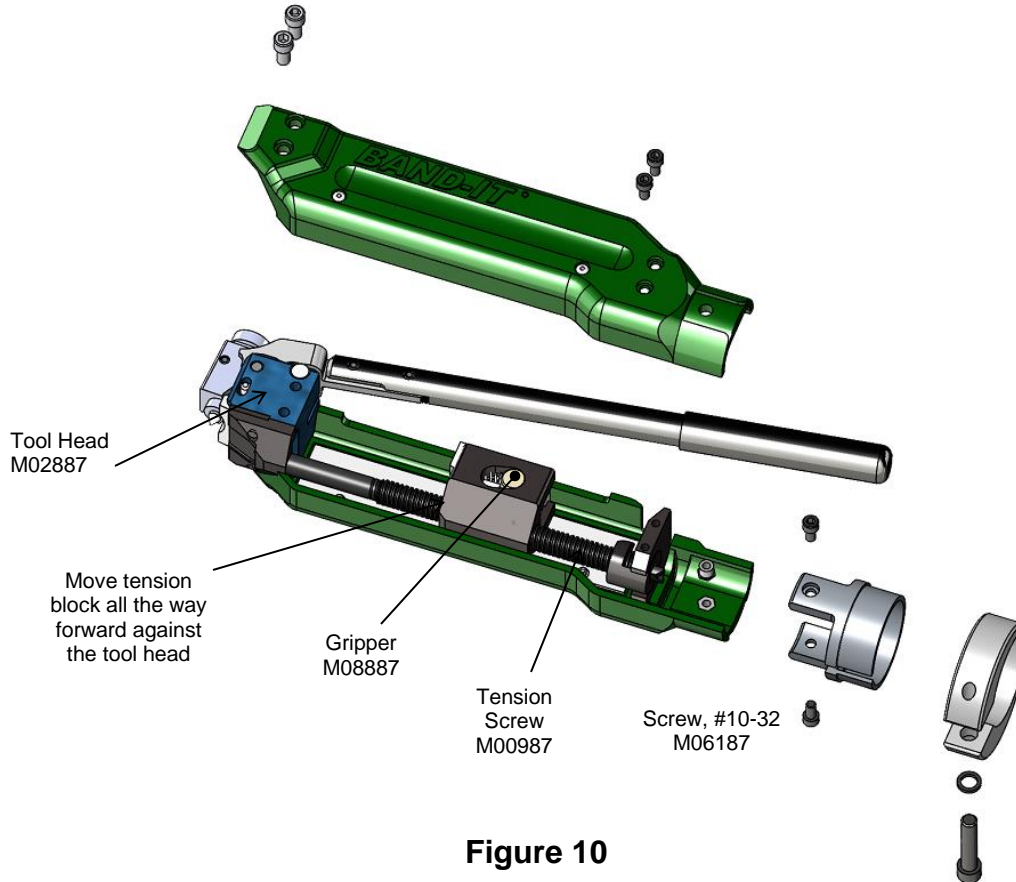


Figure 10

6. **To Replace Tension Screw:** Move Tension Block all the way back (away from Tool Head) using drill in tensioning mode (clockwise). Remove Center Punch Tool from Drill. Remove the Tool Adapter from the tool. Remove Blade and load bearing tip from Tensioning Screw (see bearing detail). Remove one side of the Tool Body or the other, not both. Grasp the smooth barrel on Tension Screw and pull all the way forward until Tension Block is against the Tool Head. If Tension Screw is stuck, use a punch and tap the center of the screw from the back end of the tool. Turn Tension Screw out of Tension Block. Lubricate new Tension Screw with Molybdenum Disulfide lubricant, or equivalent. Install new Tension Screw in reverse order; making sure that back end of Tension Screw extends well beyond the back end of the Tension Block. Push the assembly all the way back and extend the round portion of the Tension Screw through holes on the tripper bracket and back guide plate. Reinstall Tool Body side. Reinstall Blade and tighten the Blade Mounting Screws approximately 120 in-lbs. Reattach Tool Adapter to Center Punch Tool. Reattach Tool to Drill and drive Tension Block all the way forward.

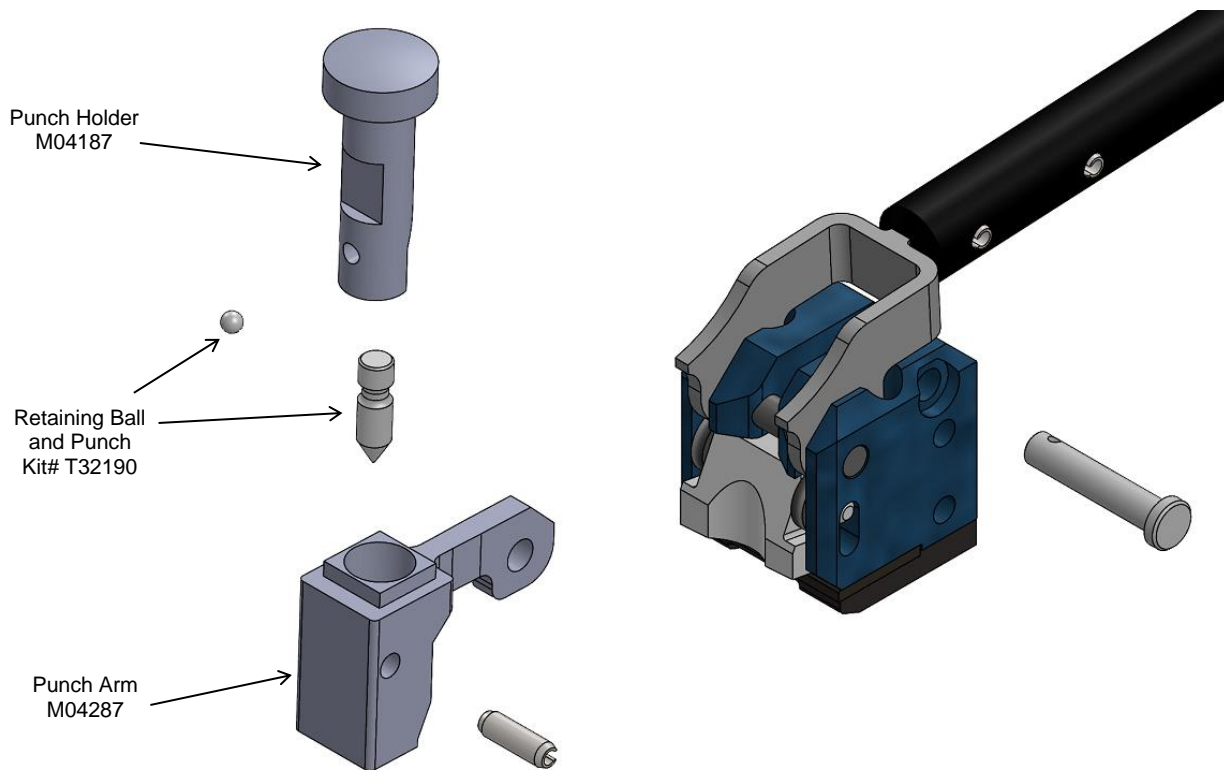


Figure 11

- To Replace Punch:** Back off Tension Block if flush with Tool Head. Remove Tool Head Mounting Screws (4 places). Tool Head Assembly should now pull free from Tool Body. Slide clevis pin out from Tool Head to release Punch Assembly. Press out spring pin so that Punch Holder can be removed from Punch Arm. Remove retaining ball and replace punch. To reassemble, repeat these steps in reverse order.

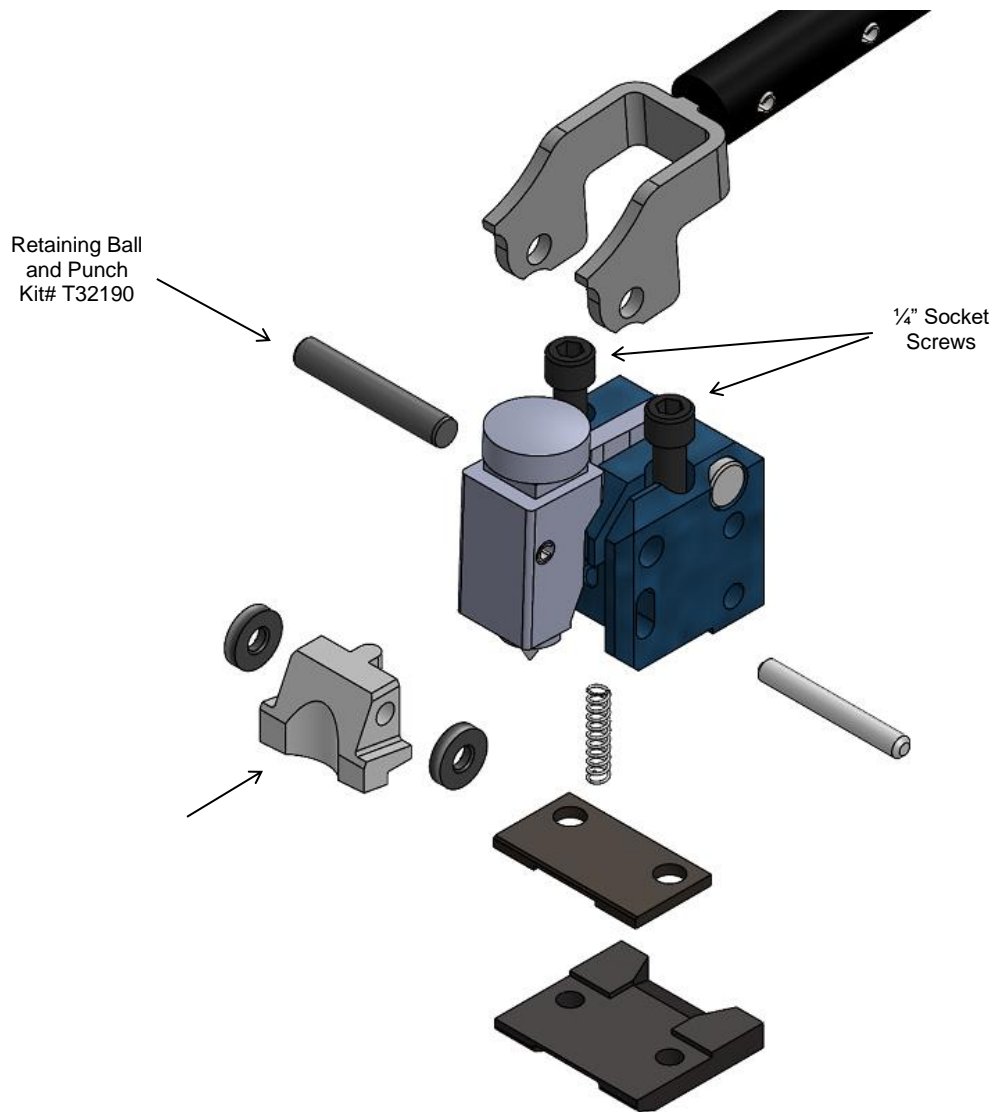


Figure 12

8. To Replace Knife, Blade or Slot Plate: Remove Tool Head following same steps to replace Punch. Slide 1/4" dowel pin out from Tool Head and remove Cut-off Handle/Cam subassembly. Remove both 1/4" socket head screws. Blade, Slot Plate and Spring can now be removed. To remove Knife, slide 3/16" pin out from Tool Head to free Knife and Cut-off Rollers. When reassembling, Knife, Rollers and 3/16" pin must be assembled before installing spring, Slot Plate and Blade. After reassembling, tighten 1/4" socket screws to 90-110 in-lbs.

Note: Drills needing repair must be returned to Band-It.