

Owners Manual

T395 Tapping Tool

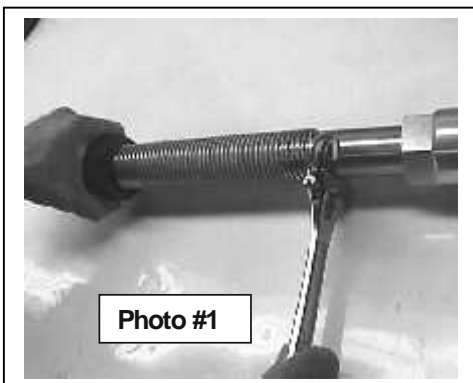
IMPORTANT! INCORRECT OPERATION OF THIS TOOL MAY RESULT IN PROPERTY DAMAGE, ENVIRONMENTAL DAMAGE OR PERSONAL INJURY TO THE OPERATOR AND/OR BYSTANDERS. DO NOT OPERATE THIS TOOL UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ, FULLY UNDERSTOOD AND FOLLOWED.

Safety:

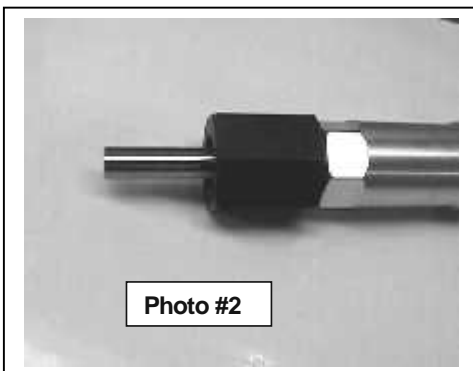
1. Only allow trained personnel to operate this machine and store this manual in the toolbox provided.
2. Always check that the cutters and drills are in good operating condition before proceeding with the drilling operation. Do not use damaged components.
3. Always double check the operating pressure and the medium carried by the main to be drilled. An attempt to tap a main beyond the pressure limit of this tool or any of the fittings used may result in property damage, environmental damage or personal injury. Note, corrosive media may “eat” through the tool or its seals. Also toxic and/or designated substances will not be totally confined by this tool, which will result in small “spills” on removal of the tapping tool from valve and in routine tool cleaning. Read and understand the Material Safety Data Sheet (MSDS) for the medium in the main and take all protective measures suggested. Ensure that the media does not “attack” the stainless steel, bronze, or rubber seals in this tool before attempting any tapping operation.
4. This tool can be operated with a power tool. Read, understand and follow all safety precautions associated with that power tool. Air powered ratchets are generally a safer choice due to the inherent explosion and shock hazard associated with electrical tools.
5. When drilling into the main, the operator must evenly and carefully feed the tool. Excessive feed may result in the cutter suddenly stopping which will cause the power tool driver to suddenly twist and wrench the operator’s arm. Install and use the auxiliary handle on the drill if possible.
6. Ensure that the main being tapped is securely mounted to avoid any movement during the tapping operation.
7. When working below grade always ensure an adequate escape route before starting the tap.
8. Do not use this tool to support the worker in any way.
9. Modification to this tool, or damage to this tool due to corrosion or misuse or due to use of non-approved accessories and parts will render all warranties and liabilities null and void.

Preliminary Planning:

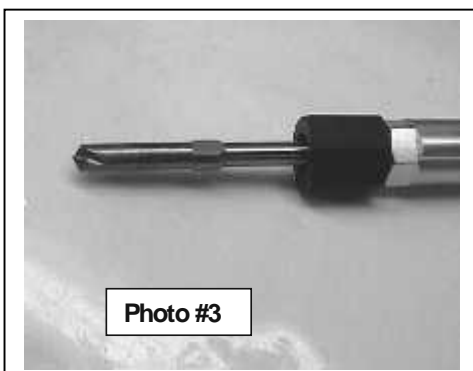
1. Select which “corporation stop” or valve is to be used. (A corporation stop is a valve with a square lug for a wrench instead of a hand wheel to open and close the valve. This is to ensure that the valve is not operated inadvertently or by unauthorized personnel. Typically, corporation stops have male NPT inlet threads that screw directly into a service saddle or “threadolet” without the need for an intermediate “close nipple” as an adapter.) Any valve, which has an adequate pressure rating, is made of a material compatible with the media, is short enough and opens in a manner that will allow the cutter to completely pass through it unhindered, may be used. That is usually a ball, plug or gate valve.
2. Assemble the tool for use and determine the travel required for tapping operation. Select the correct valve adapter, cutter and extension, according to the type of pipe you are going to drill through and what type of corporation stop will be used.



- a) Extend the tool by turning the sleeve counter-clockwise in relation to the bronze feed screw. Inspect the “o-ring” seal in the valve adapter (replace if damaged) and holding the bronze feed screw by the flats, assemble the valve adapter onto the bronze feed screw. This should be done by hand as the operator will feel first the seal engaging and then feel the adapter reach an abrupt stop as the bronze feed screw “bottoms out” in the valve adapter. See photo #1 at left. Collapse the tool by turning the sleeve clockwise in relation to the bronze feed screw.

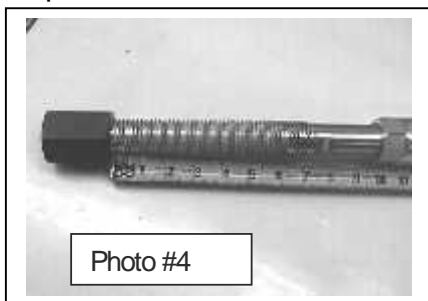


- b) Select the adapter and the cutter to be used for this particular operation. Note that the pilot drill may not be required depending on the actual cutter selected. Screw the adapter into the shaft. See photo #2 at left.
- c) Inspect the selected cutter to ensure that it is in good working order and screw it into the adapter. See photo #3 below.



- d) Inspect the pilot drill to ensure that it is in good working order. The purpose of the pilot drill is to capture the coupon when using a CI/DI cutter. Pay particular attention to the coupon retention device, as coupon may not be retrieved if this device is damaged. The PVC cutters do not use a pilot drill due to coupon retention being incorporated into the cutter design. The CI/DI drills also have no provision for a pilot drill.

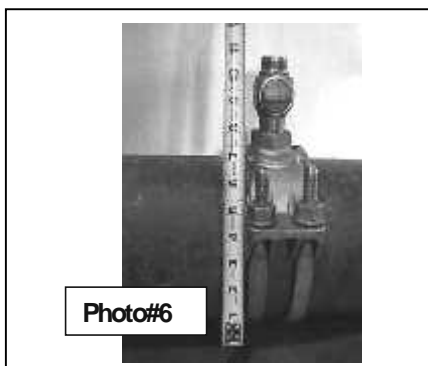
- e) Attach the selected service saddle to the main in accordance with the manufacturer's specifications.
- f) Apply pipe sealant to the threads on the "corporation stop" or valve and tightly thread it into the saddle or threadolet to assure a leak proof assembly. Ensure that it is in the CLOSED position.



- g) Unscrew the sleeve back up the bronze feed screw. Measure the distance from a datum such as the wrench flats on the feed screw to the end of the sleeve. In photo #4 at left it should measure 6 3/4". Note that the stroke distance may be affected by various valve adapter / cutter combinations.



- h) Measure the distance from the surface of the pipe to the outlet end of the valve as shown in photo #5 at left. This is the minimum amount of stroke required before making contact with the pipe. (In the illustrated example this is 4"). Record this dimension. If this distance is within 1 inch of the stroke distance from step (g) then the machine may not have enough travel to safely complete the tap and this operation must be aborted and reconfigured for a different valve and/or saddle.



- i) Measure the distance from the far surface of the pipe to the outlet end of the valve as shown in photo #6 at left. This is the maximum amount of stroke required to break through the far side of the pipe. (In the illustrated example this is 10-1/2".) Record this dimension. If this distance is less than the stroke distance from step (g) then the machine has enough travel to penetrate the far side of the pipe. Caution should be used to prevent this from happening.

Tapping into the Main:

1. Attach the fully assembled and fully extended tapping tool to the outlet thread of the valve by the valve adapter. Pipe sealant is not required in the temporary assembly between the valve and the valve adapter but it should be snug enough not to leak.
2. Open, close and re-open the valve or the “corporation stop”, this is to ensure that the pilot drill or the cutter does not interfere with the operation of the valve. In the event of interference in closing the valve, another valve must be used and the whole procedure must be re-started.
3. Turn the sleeve clockwise until the cutter contacts the main, then back the sleeve up one turn. Using the ratchet wrench, or a power tool, rotate the drive shaft at the hex while continually applying pressure by turning the sleeve. Do not apply too much pressure on the cutter. Gentle feeding will produce superior cutting and extended cutter life. Continue to drill through the main until no resistance is felt when advancing the feed. Stop immediately. Continuing past this point could cause penetration through the far side of the pipe. This could result in extensive property damage and/or serious injury.
4. The drilling into the pipe is now complete. Remove the ratchet or power tool from the hex on the drive shaft. The valve and saddle as well as the tool are now under pressure. **Turn the sleeve counter-clockwise until the sleeve pops out past the threaded portion of the bronze screw, so that the wrench flats are visible - photo #7. This will indicate that the cutter has cleared the valve.** Close the corporation stop or valve. Should it be difficult to close the valve, rock the valve open and closed until it can be completely shut-off. It is vital that the valve is closed before proceeding.
5. Place a wrench on the valve to prevent it from disconnecting, as the valve adapter is unscrewed with another wrench. The tool will suddenly come free and any media contained in the tool will spill. If the drilled pipe was dry, be aware that the cutter may be hot.
6. The new service line may now be attached to the outlet end of the valve. After that, all that is required is to open the valve to activate the newly installed system.
7. To remove the coupon from the cutter, turn the sleeve clock-wise until the cutter is exposed. Shell cutters have a hole or slot to allow the coupon to be pushed out. Remove the cutter if required, in order to make coupon removal easier.
8. Remove the valve adapter, drill or cutter, pilot drill (if used) and extension from the tool. Turn the sleeve clockwise until the tool is fully collapsed. Wipe all the components until clean and dry and store them in the toolbox.



Photo #7

Cleaning and maintaining this Tool:

1. Tool Disassembly Procedure

- a) Turn the sleeve clockwise until most of the threads of the bronze feed screw are hidden and the tool is fully collapsed. Place the tool horizontally on a table.
- b) Unscrew the two set screws from the end cap. Remove the snap ring from the shaft, and after this remove the washer too.
- c) Unscrew the end cap. Note that any media that has escaped the seal will collect under this cap and may be spilled at this time. Do not remove the “maintenance free” flanged bushing from the end cap unless replacement is intended. If the bushing must be removed use a 7/8” diameter pin to slowly press the bushing out. Using a hammer to do this will damage the precision recess in the end cap for the bushing.
- d) Pull the spindle, from the cap end and remove it from the tool. Turn the sleeve clockwise until the sleeve separates from the bronze feed screw. This completes the disassembly of the tool.

2. Part Cleaning Procedure

- a) Wash the parts in a degreaser tank and wipe each individual part until clean and dry.
- b) Be careful not to wash parts with materials that will corrode or degrade the parts in any way.

3. Tool Assembly Procedure

- a) Inspect the bronze feed screw and sleeve for any damage, replace if required. Lubricate the acme threads on the bronze feed screw with white Lithium grease. Place bronze feed screw inside sleeve and then turn the sleeve clockwise onto the bronze feed screw until the top end of the bronze feed screw is flush with the sleeve. Lubricate the o-ring that is just inside the top of the bronze feed screw.
- b) Inspect the spindle/cap assembly for any damage and replace if required. Insert the spindle into the top end of the bronze feed screw, female threaded end first, and slide the thrust washer over the spindle.
- c) Slide the cap over the spindle as far as it will go and thread the cap onto the sleeve. Install the steel washer over the spindle from the hex end. **Install the snap ring over the spindle with the sharp edge facing the hex. Do Not stretch the snap ring more than necessary, and ensure it sits into the groove.**
- d) Screw the two set screws into the cap, to prevent it from accidentally became loose.
- e) Wipe the tool down to remove excess lubricant and return the tool to the box.

Servicing this Tool

1. The above section “Cleaning and Maintaining this Tool” will take care of most of the service needs of this tool, with the exception of bushing replacement. If the bushing must be replaced, a Footage authorized dealer or Footage personnel should be consulted.

FOOTAGE TOOLS INC. LIMITED LIFETIME WARRANTY

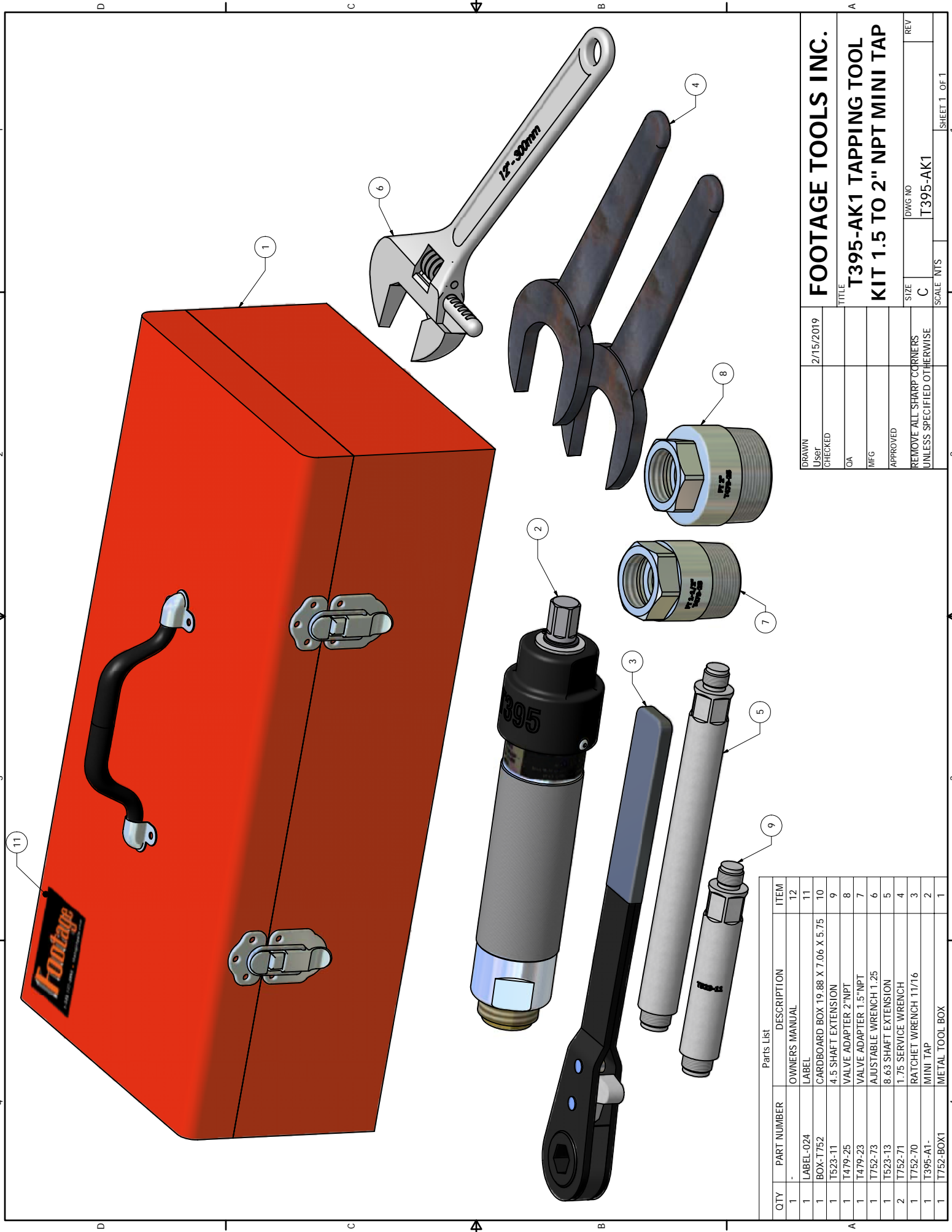
Footage Tools Inc. warrants its Tapping Tool to be free from manufacturer defects for the life of the tool, upon delivery to the end user. Should any part fail due to defects in material or workmanship, Footage Tools Inc. will furnish a new part, free of charge, F.O.B. their factory in Toronto, Canada. Parts claimed to be defective must be held for inspection by Footage Tools Inc. or an authorized repair center. This warranty covers only workmanship and materials and does not cover failure of parts as a result of negligence or improper use of the tool. Parts that have been repaired or altered by anyone other than Footage Tools Inc. or an authorized repair center, are also excluded from this warranty.

Shipping costs to and from the factory or repair centers are the responsibility of the customer. Tapping Tools must be operated in appropriate conditions and maintained properly in order to be covered by the lifetime warranty. The purchaser of this equipment is responsible for the manner in which it is used and Footage Tools Inc. disclaims all responsibility for any consequential damages.

• SUPPORT

Should this guide not have the information you require, consult the Service and Parts Manual available for this product.

If you require further information, contact your local distributor or Footage Tools Inc. at our toll-free number: 1 (888) 737-3668.

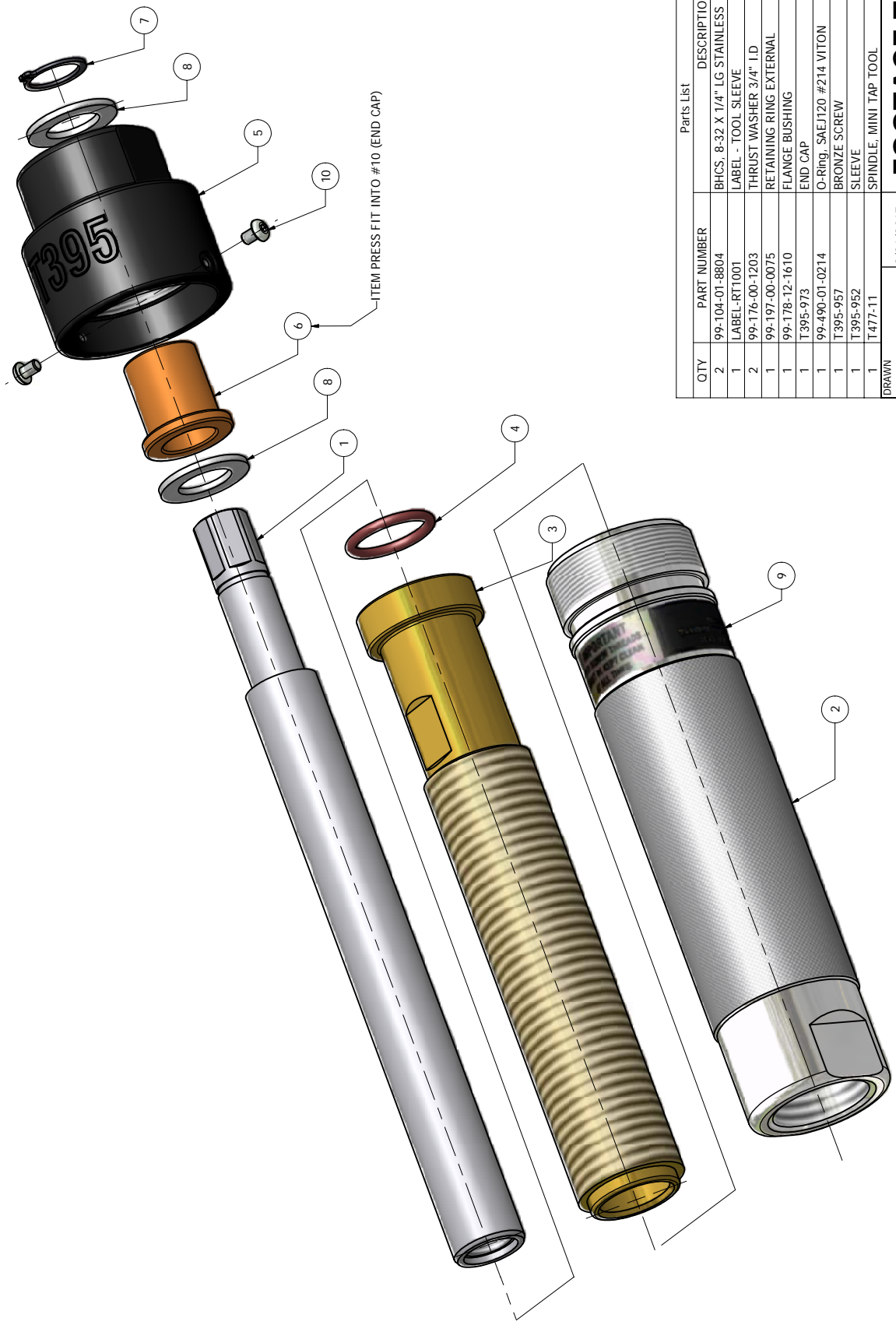


Parts List

QTY	PART NUMBER	DESCRIPTION	ITEM
1		OWNERS MANUAL	12
1	LABEL-024	LABEL	11
1	BOX-T752	CARDBOARD BOX 19.88 X 7.06 X 5.75	10
1	T523-11	4.5 SHAFT EXTENSION	9
1	T479-25	VALVE ADAPTER 2" NPT	8
1	T479-23	VALVE ADAPTER 1.5" NPT	7
1	T523-13	AJUSTABLE WRENCH 1.25	6
2	T752-71	8.63 SHAFT EXTENSION	5
1	T752-70	1.75 SERVICE WRENCH	4
1	T395-A1-	RATCHET WRENCH 11/16	3
1		MINI TAP	2
1	T752-BOX1	METAL TOOL BOX	1

DRAWN	2/15/2019	
USER		
CHECKED		
QA		
MFG		
APPROVED		
REMOVE ALL SHARP CORNERS UNLESS SPECIFIED OTHERWISE		
SCALE	NTS	
DWG NO	T395-AK1	
REV		

FOOTAGE TOOLS INC.
T395-AK1 TAPPING TOOL KIT 1.5 TO 2" NPT MINI TAP



ITEM PRESS FIT INTO #10 (END CAP)

QTY		PART NUMBER		DESCRIPTION		ITEM	
2	99-104-01-8804	BHCS, 8-32 X 1/4" LG. STAINLESS				10	
1	LABEL-RT1001	LABEL - TOOL SLEEVE				9	
2	99-176-00-1203	THRUST WASHER 3/4" I.D				8	
1	99-197-00-0075	RETAINING RING EXTERNAL				7	
1	99-178-12-1610	FLANGE BUSHING				6	
1	T395-973	END CAP				5	
1	99-490-01-0214	O-Ring, SAEJ120 #214 VITON				4	
1	T395-957	BRONZE SCREW				3	
1	T395-952	SLEEVE				2	
1	T477-11	SPINDLE, MINI TAP TOOL				1	
DRAWN		3/31/2017					
User							
CHECKED							
QA							
MFG							
APPROVED							
REMOVE ALL SHARP CORNERS							
UNLESS SPECIFIED OTHERWISE							
SCALE		NTS					
TITLE		FOOTAGE TOOLS INC.					
DWG NO		T395-A1-					
REV		C					
SHEET 1		OF 1					