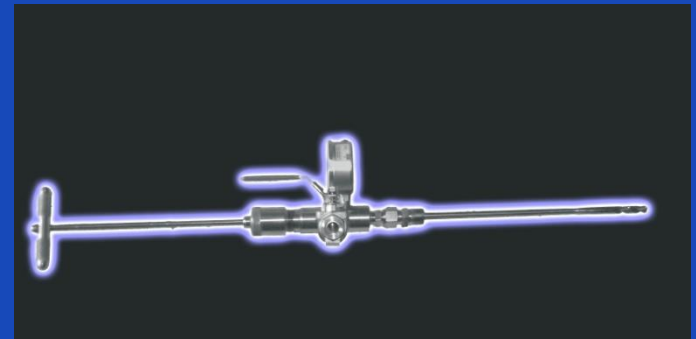
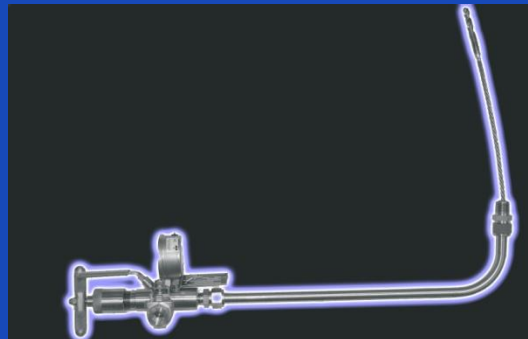
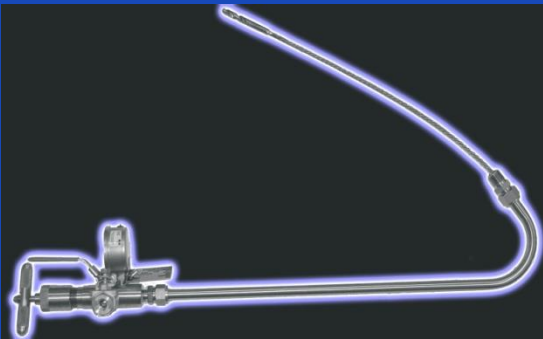




American Maintenance Systems



Flow Boss™ Cleaner Instructions



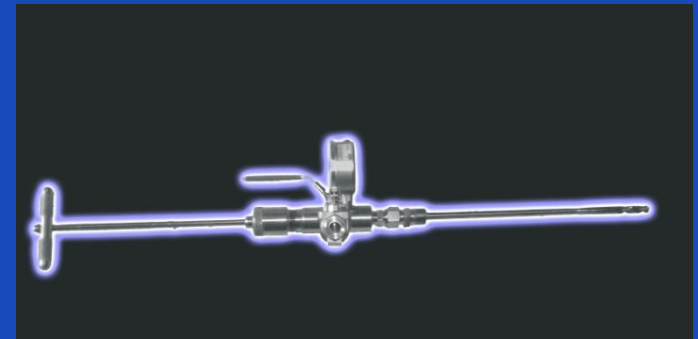
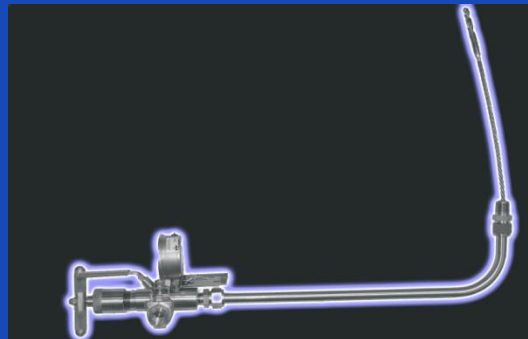
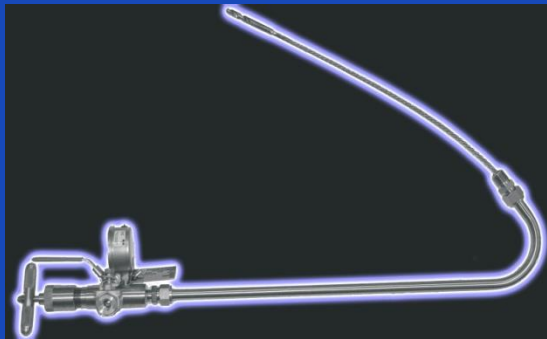


American Maintenance Systems



Introduction

When used according to the instructions, FLOW BOSS™ Cleaners allow clogged bleeders, drains, vents and instrument tap valves to be cleaned safely and efficiently while containing process materials.





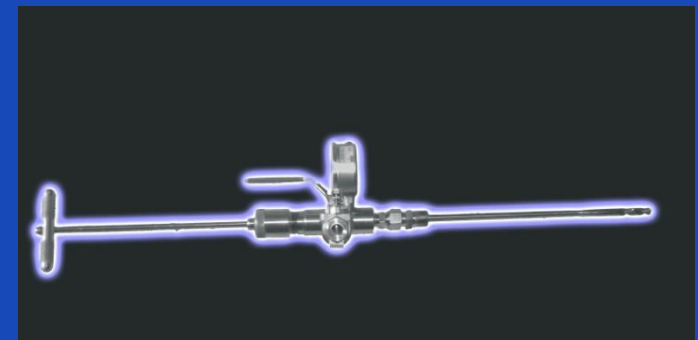
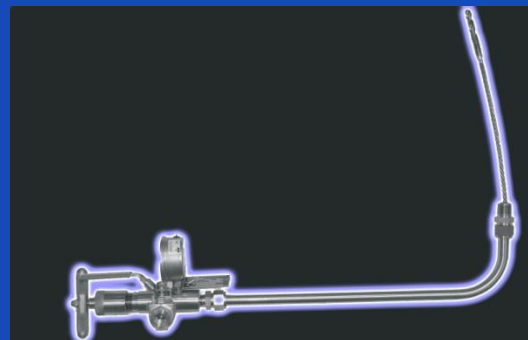
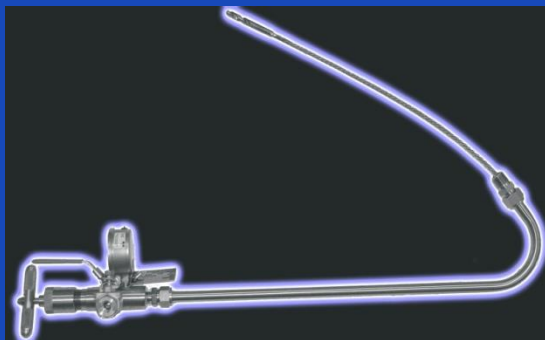
American Maintenance Systems



Inspection & Maintenance Procedures

Attention: These tools are designed and rated for temperatures and pressures when used strictly in accordance with these procedures.

Before operating a FLOW BOSS™ Cleaner, the parts of the tool must be inspected. If any of the parts are damaged, they must be replaced with the factory parts kit or returned to the factory for repair. If you are using the factory parts kit, remove the nut on the handle plus the tube fitting at the body then remove the internal parts for complete field replacement. **WARNING: Never attempt repairs without a factory parts kit or factory training technician.**





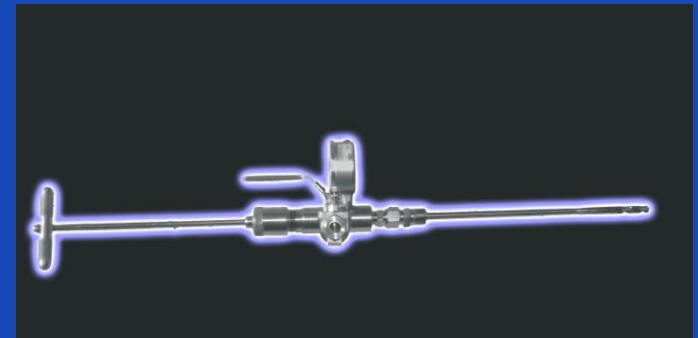
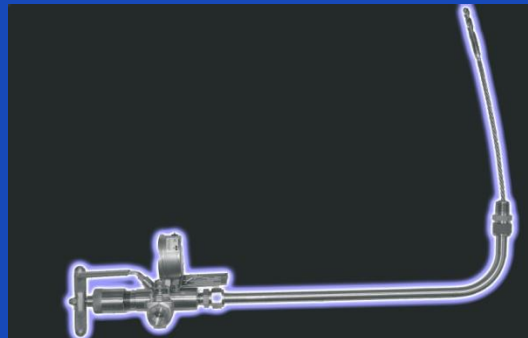
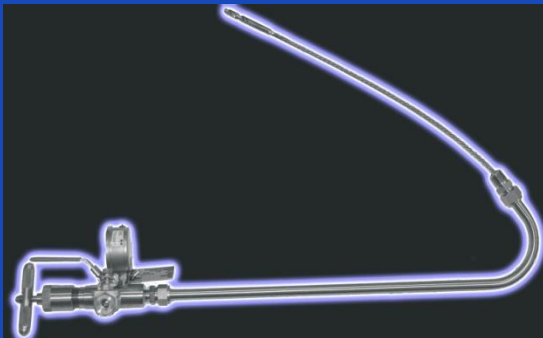
American Maintenance Systems



Let's review the parts of the FLOW BOSS™ Cleaner. The wire rope is a cable that is used in the Angle 90 and Angle 60 models. The cable must not be unwound, separated, kinked, corroded or have broken strands.



Check Here



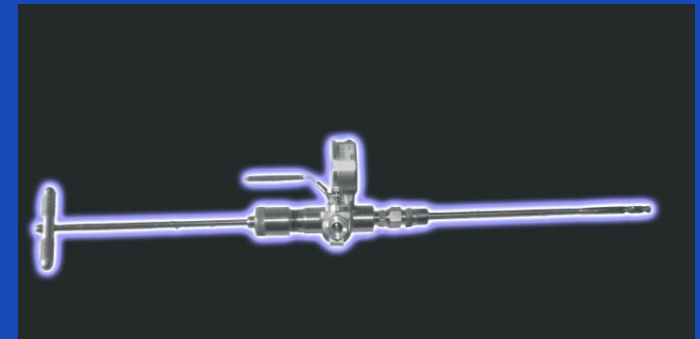
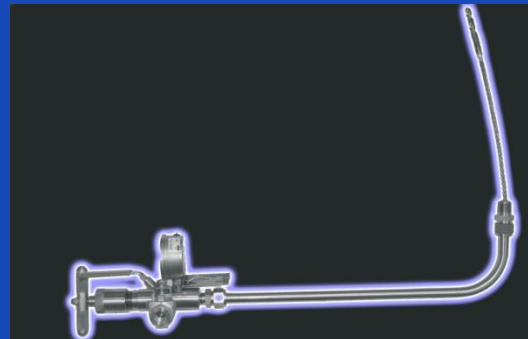
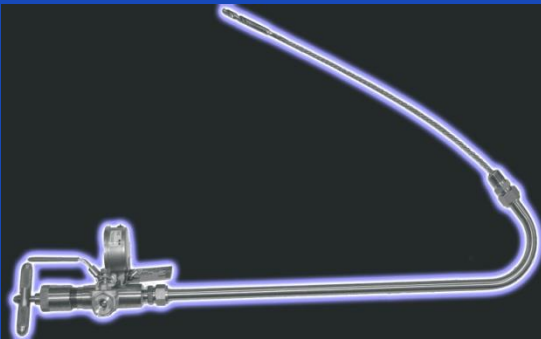


American Maintenance Systems



Inspect the tubing for bends, dents, crushing, cracking or other damage.

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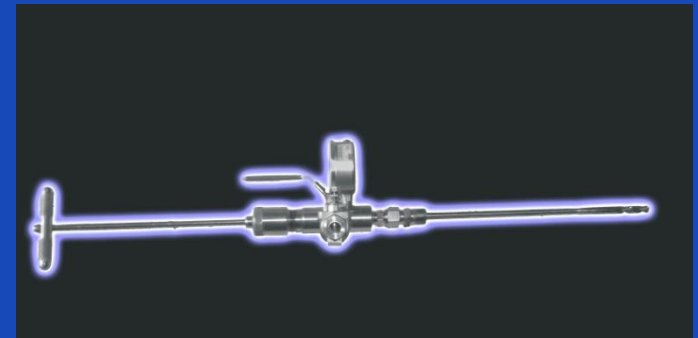
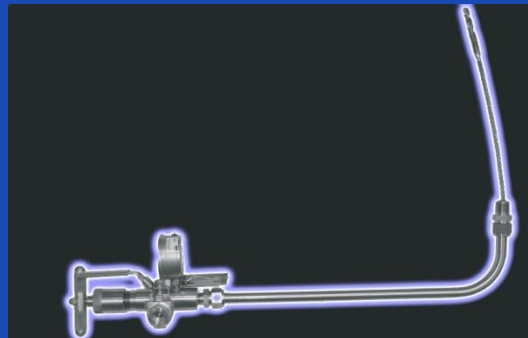
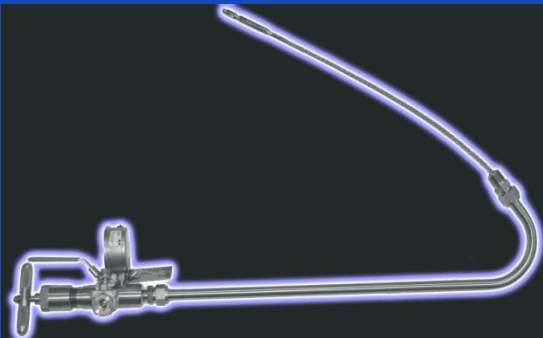
American Maintenance Systems



The safety stop or blowout preventer stops the retracting handle. This part can be inspected by fully retracting the handle until it stops. The stop verifies the blowout preventer is in place and functional.



Pull handle to a mechanical stop



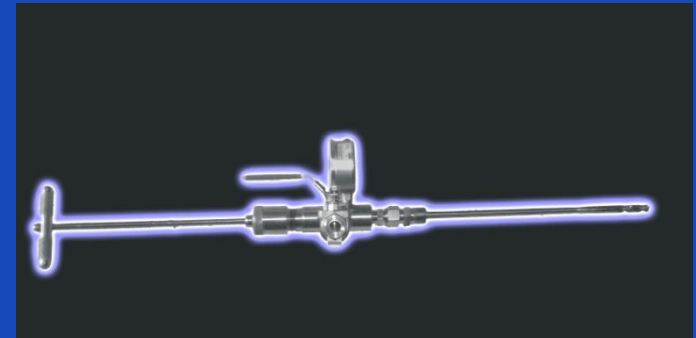
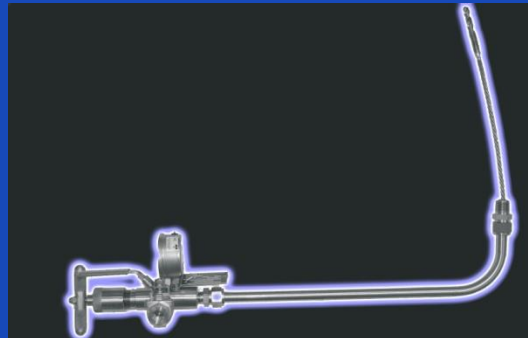
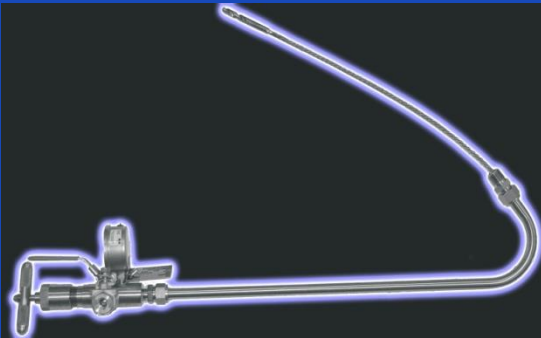


American Maintenance Systems



The cutter or drill bit must be sharpened before use if it is dull, and the cutter must not be broken.

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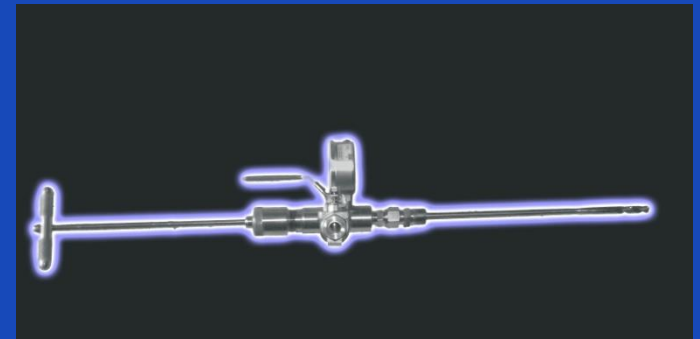
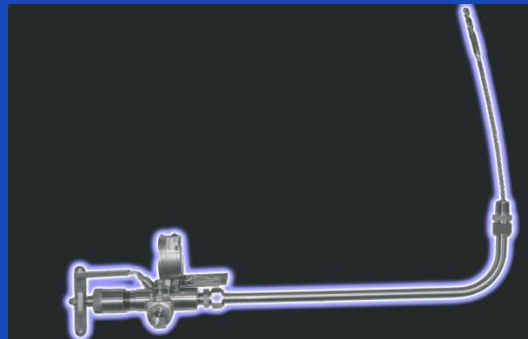
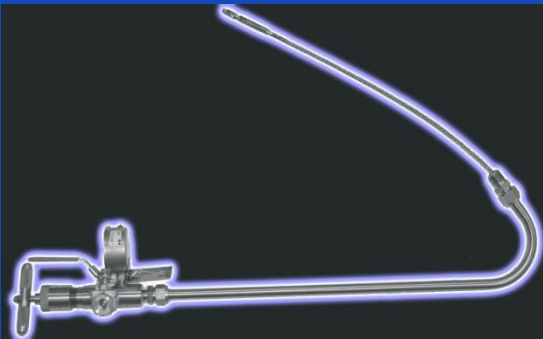


American Maintenance Systems



Inspect the push rod to ensure it is not bent or damaged

Check Here

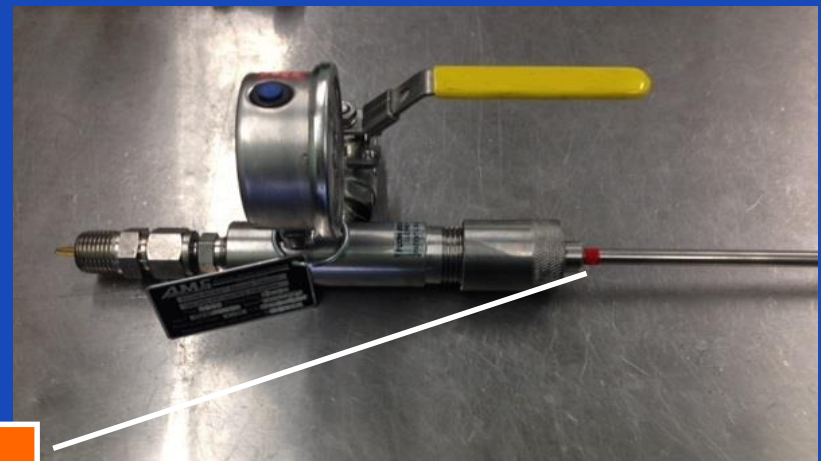




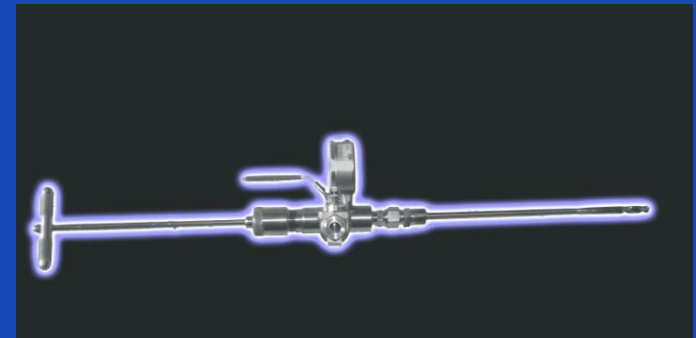
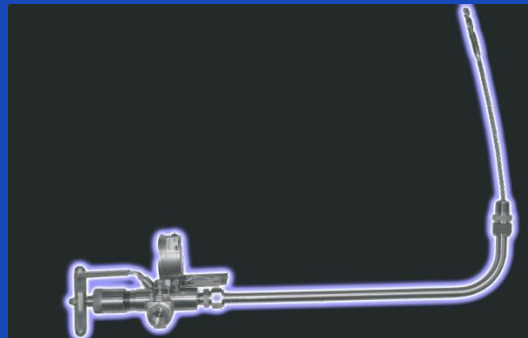
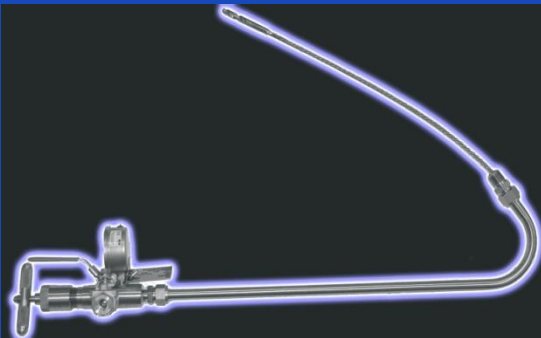
American Maintenance Systems



Inspect the push rod to ensure it is marked in red with a fully retracted position. This prevents closing process valve before tool is fully withdrawn from process.



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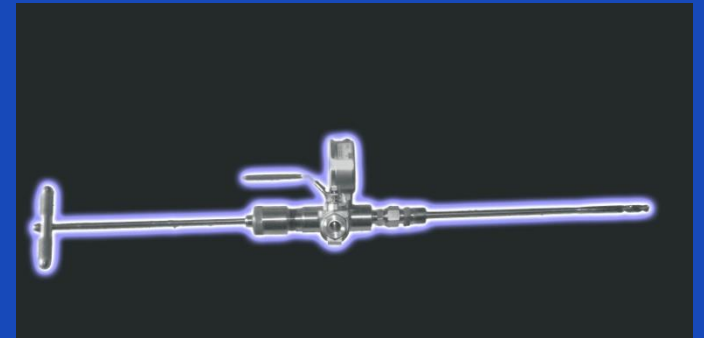
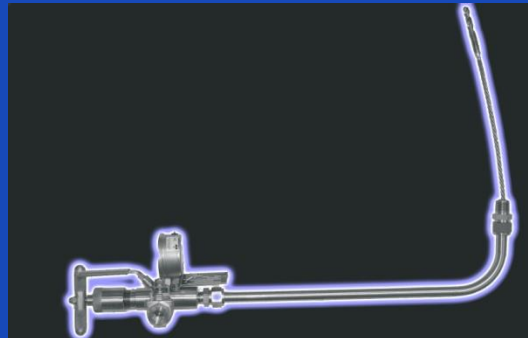
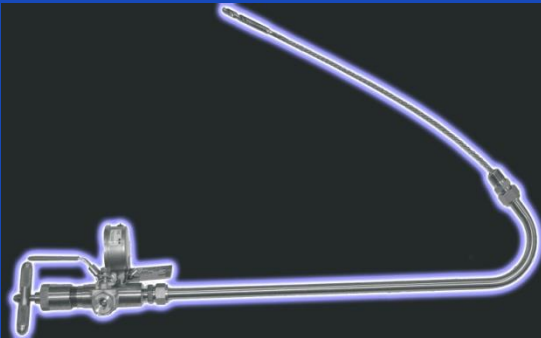


American Maintenance Systems



Measure the length of the pushrod when fully retracted. Note this length.

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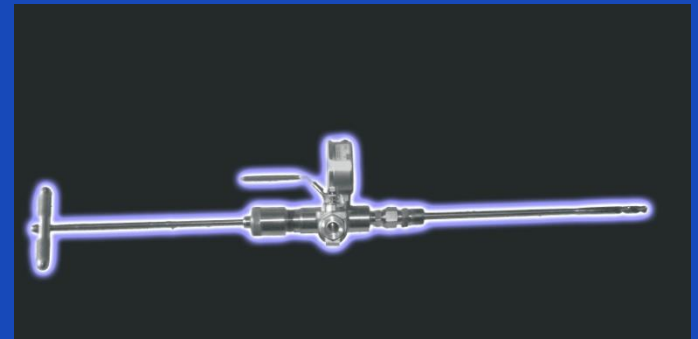
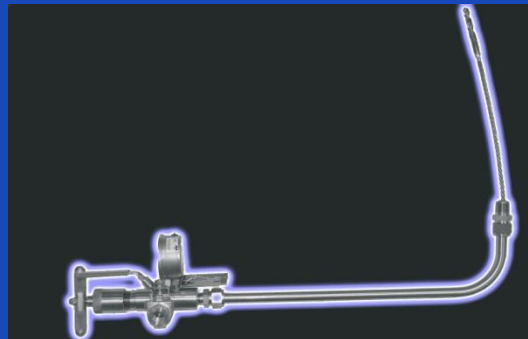
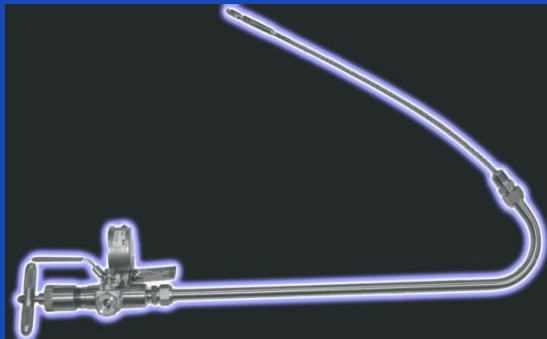
American Maintenance Systems



The packing gland must be inspected to assure it is in good condition and afterwards is leak tight.



Check Here



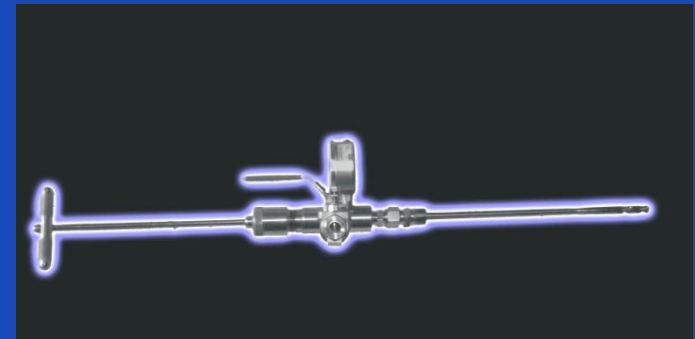
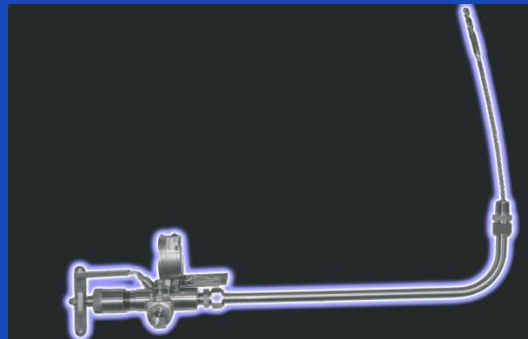
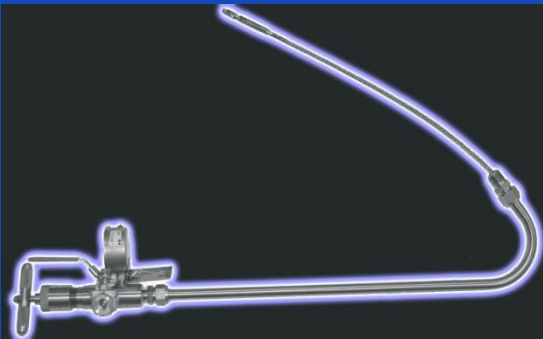


American Maintenance Systems



Check to be certain that packing gland nut is securely fastened and that the packing does not leak

Check Here





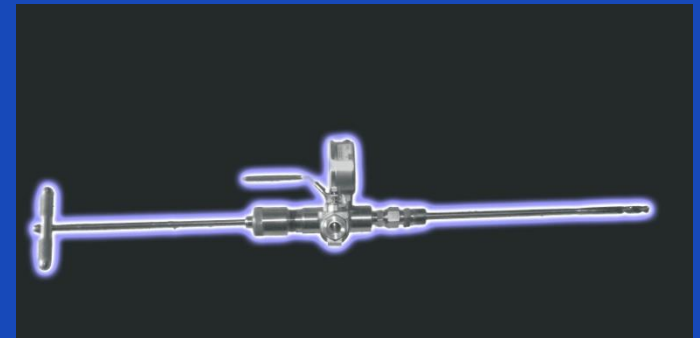
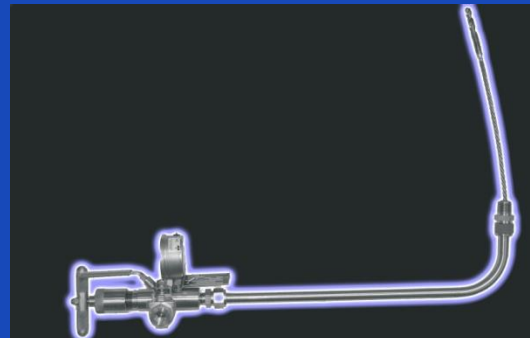
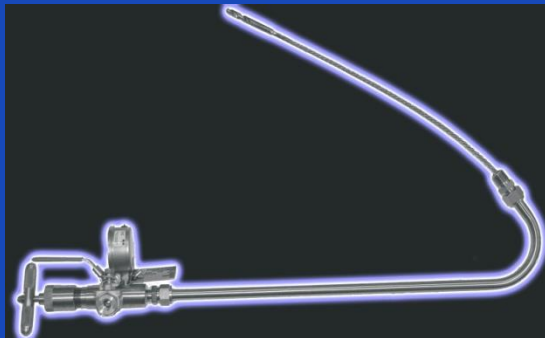
American Maintenance Systems



Inspect the conditions of the fittings and joints to ensure they are not damaged or leaking during pressure testing.



Check Here





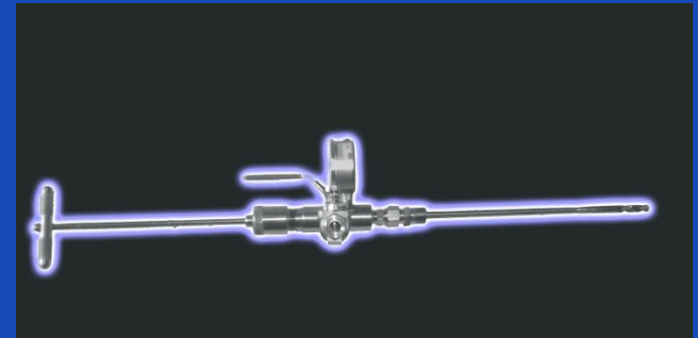
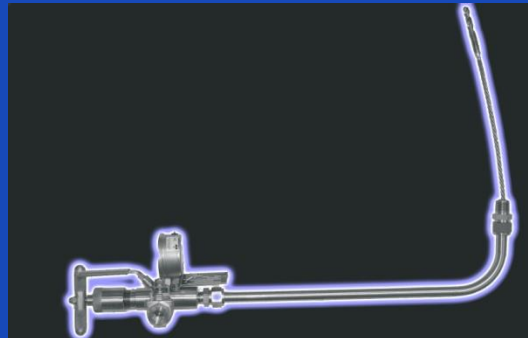
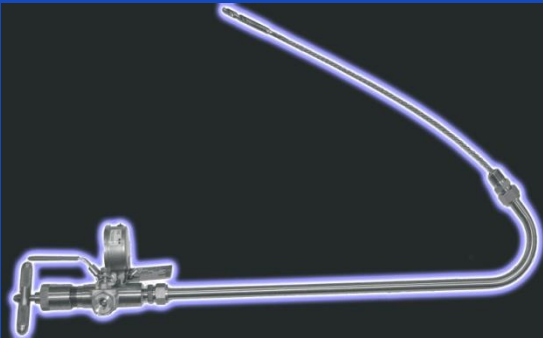
American Maintenance Systems



The pressure gauge must not fail to zero, be broken, or damaged. Do not use FLOW BOSS™ Cleaner without a properly functioning pressure gauge.



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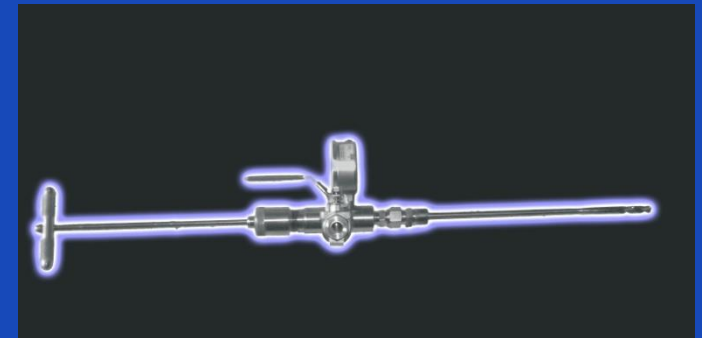
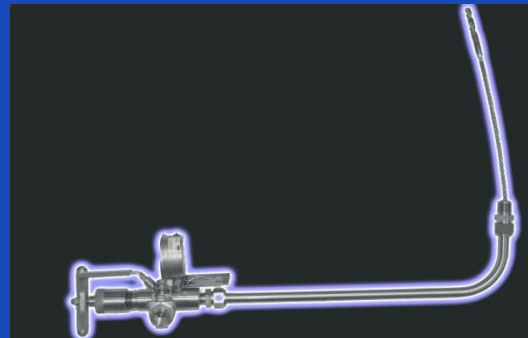
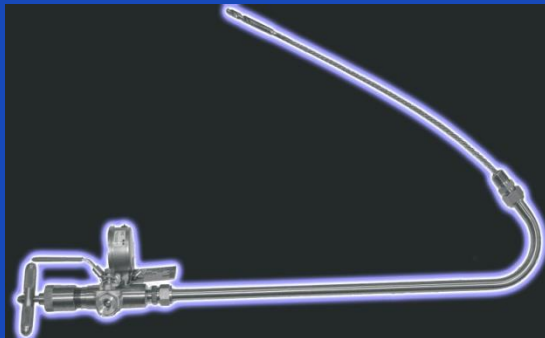
American Maintenance Systems



When inspecting the vent valve, there should be no valve leaks, the handle should turn, and the safety locking lever must be present and functional.



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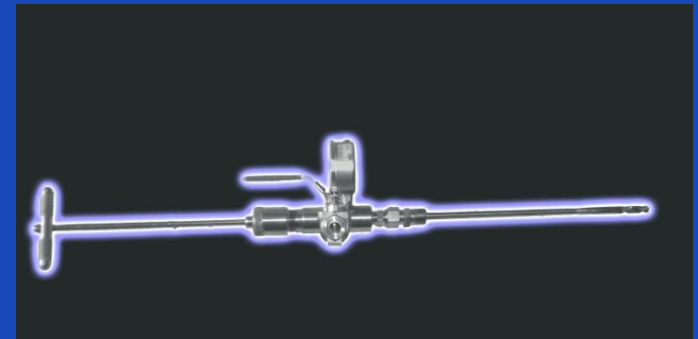
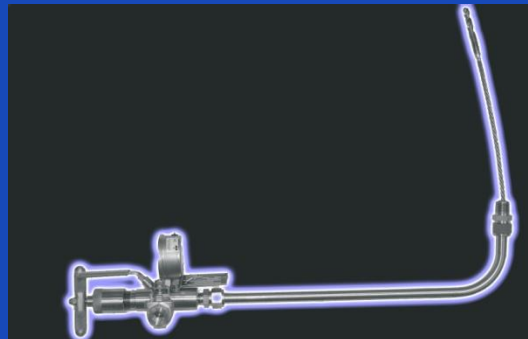
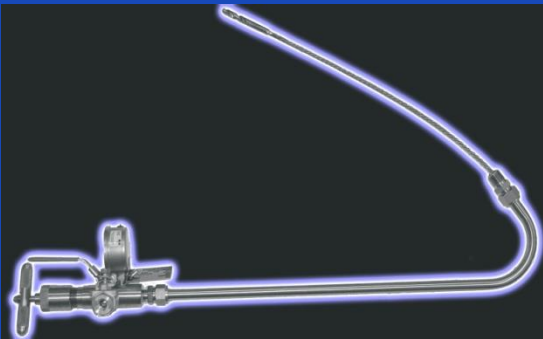




American Maintenance Systems



The FLOW BOSS™ Cleaner must be hydrotested prior to each use on the test bench, bringing the pressure up to operating pressure on the gauge. If the tool leaks at the joints, they must be tightened but not overtightened. If the tool leaks at the packing gland, tighten the packing or replace the packing. If the tool leaks anywhere else, tighten until the leaking stops. If leaks persist, do not use the tool.

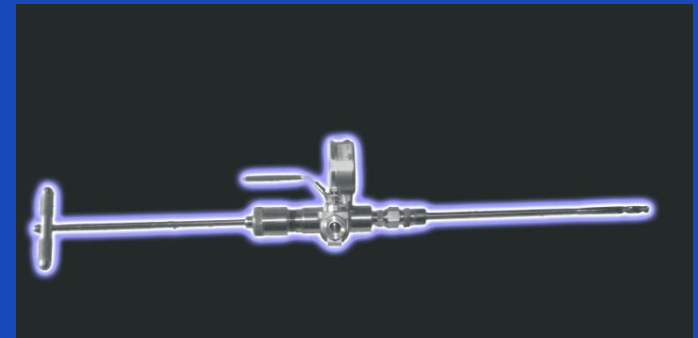
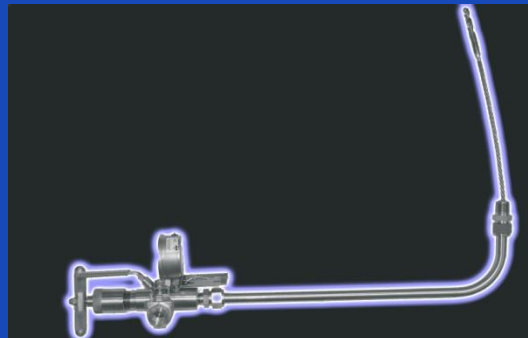
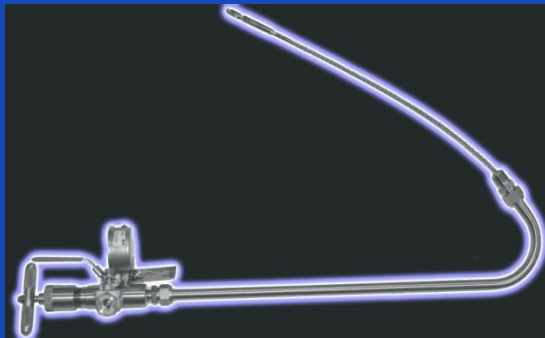




American Maintenance Systems



Caution: Do not exceed the pressure or temperature of the tool – refer to the data plate. If data plate is missing or illegible, do not use tool. **Warnings:** Do not flow process material through the 1/4 turn ball valve with the process valve open. The pressure and temperature rating is based on zero process flow. Do not use a hammer or any other tool to strike or add leverage.

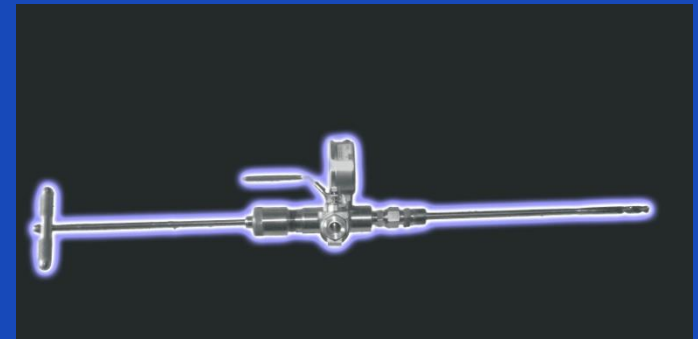
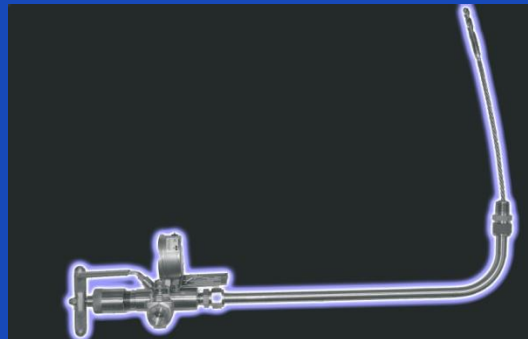
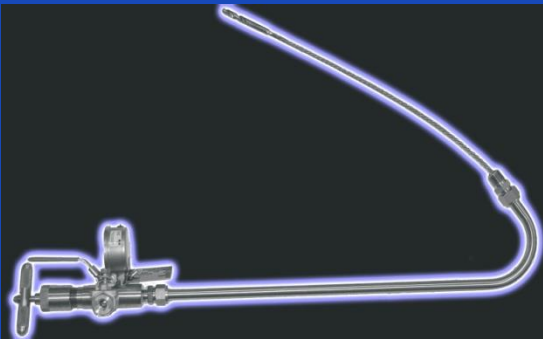




American Maintenance Systems



When the FLOW BOSS™ Cleaner passes all inspection and maintenance procedures, it is ready for use. However, do not use without instructions and training.



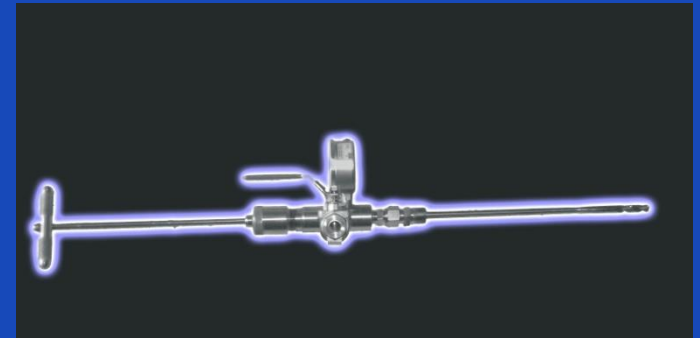
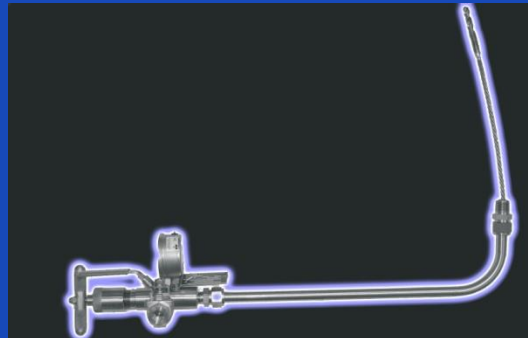
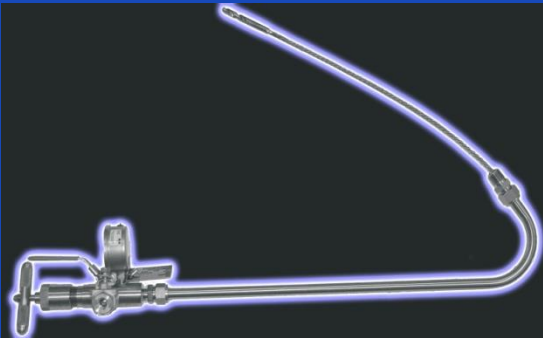


American Maintenance Systems



Operating Procedures

Be certain the packing gland is tight and will not leak during use.

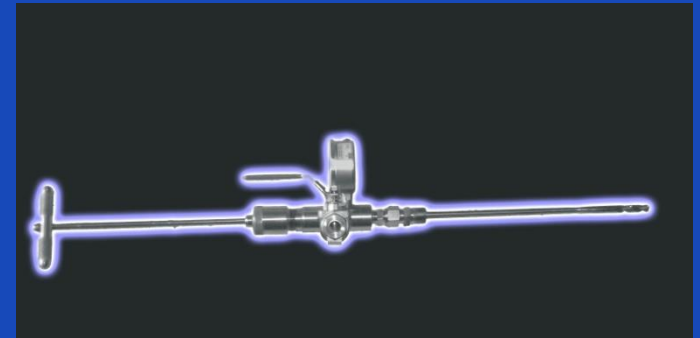
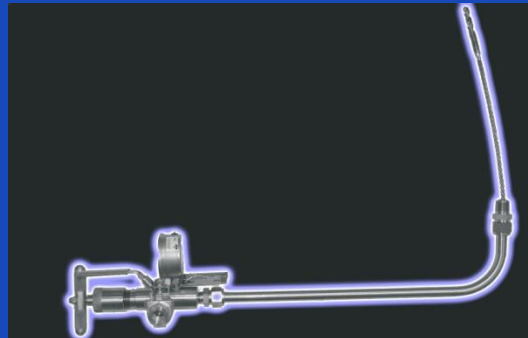
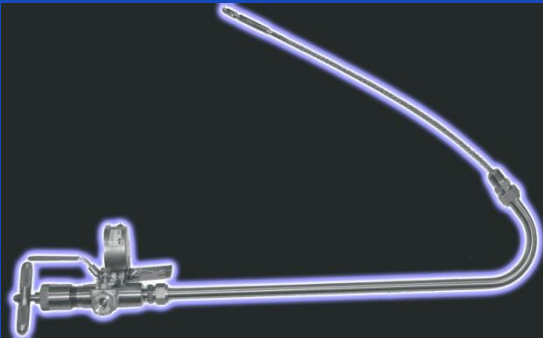




American Maintenance Systems



Check the threads on the process connection, and clean the threads and retap if necessary to ensure a proper fit to the FLOW BOSS™ Cleaner.

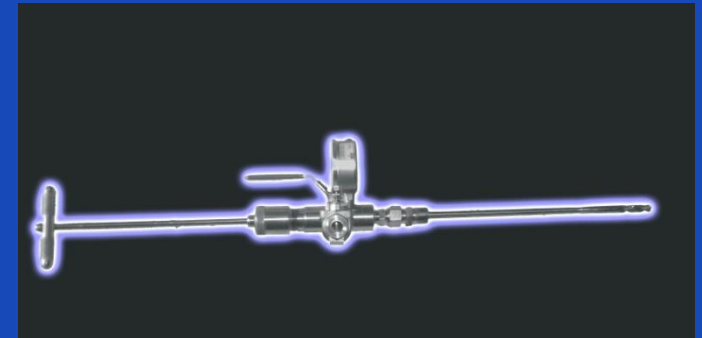
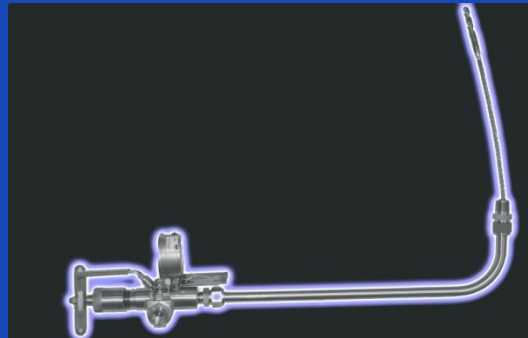
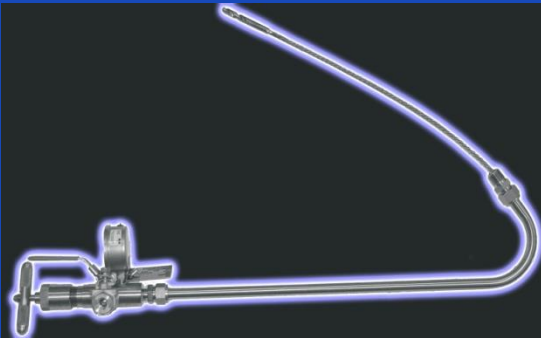


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Close the vent valve on the FLOW BOSS™ Cleaner by using the 1/4 turn ball valve on the side of the tool.

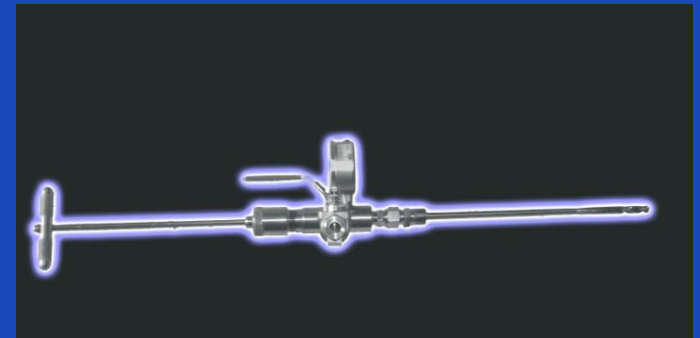
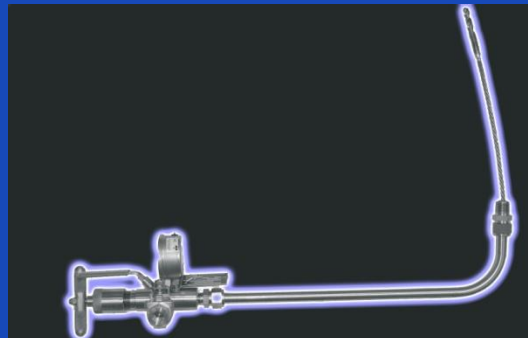
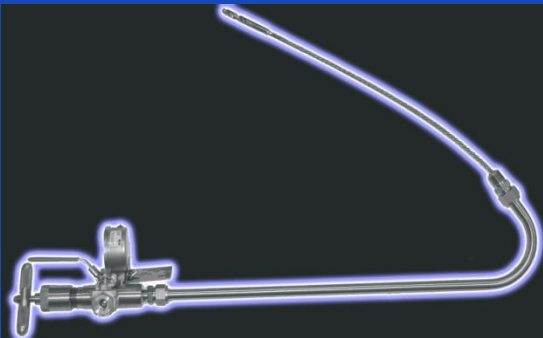




American Maintenance Systems



Attach the FLOW BOSS™ Cleaner to the process connection to be cleaned and tighten sufficiently to prevent any leaks.

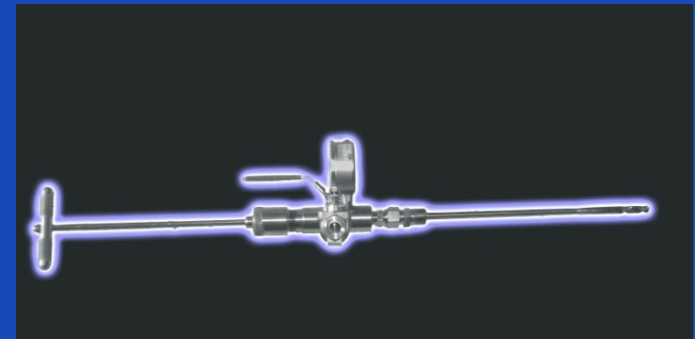
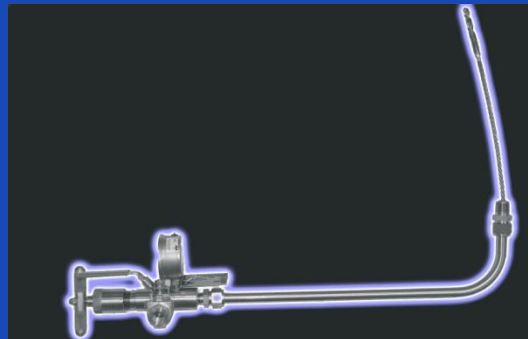
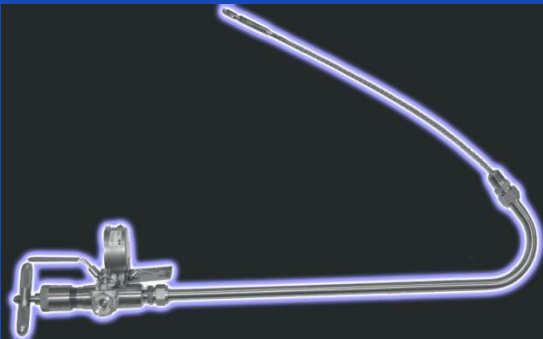




American Maintenance Systems



Open the process bleeder valve to the full open position.

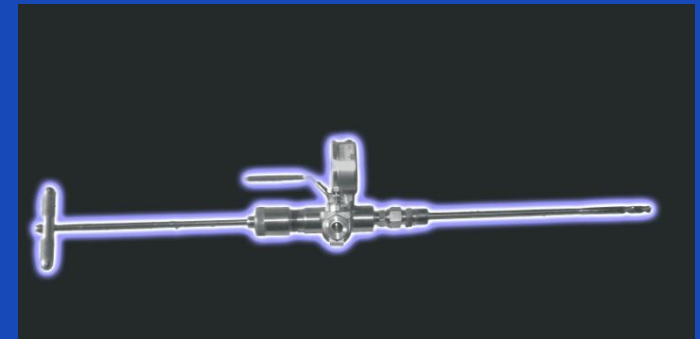
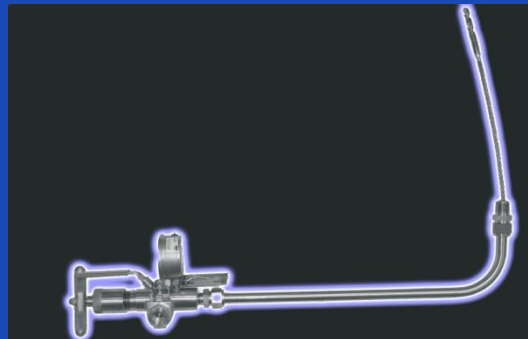
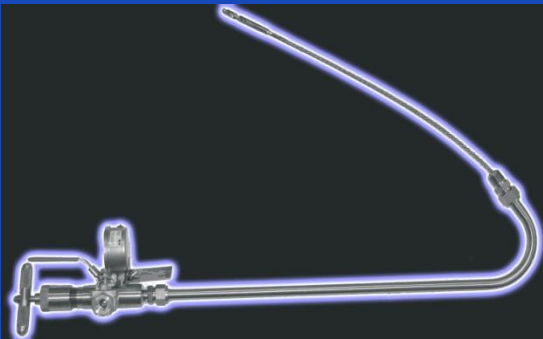




American Maintenance Systems



While pushing tee handle and push rod into the FLOW BOSS™ Cleaner, rotate the tee handle in clockwise direction to the full insertion position.

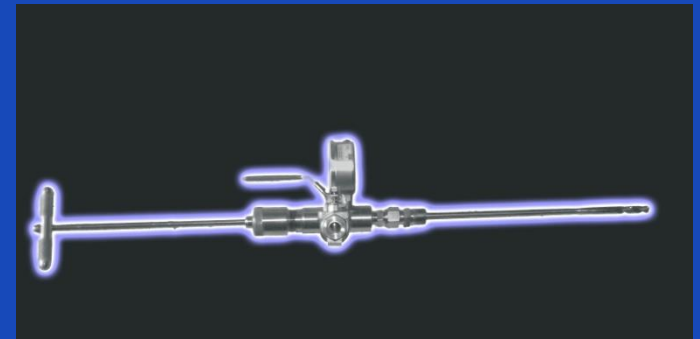
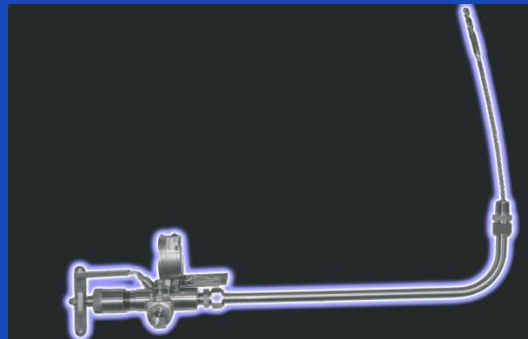
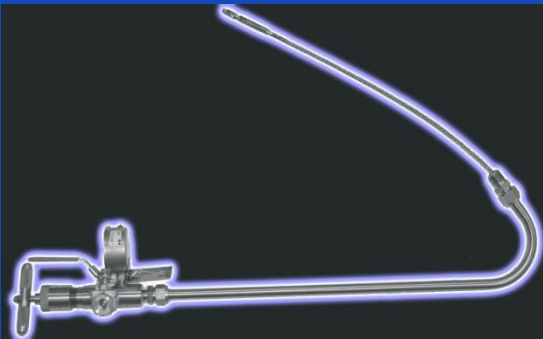
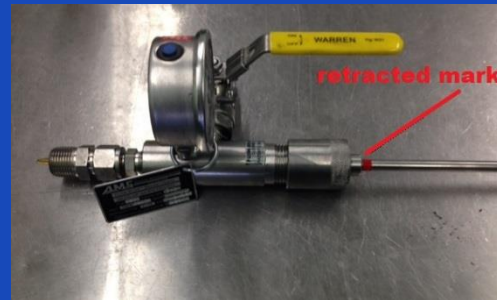




American Maintenance Systems



While pulling tee handle from the FLOW BOSS™ Cleaner, rotate the tee handle in the clockwise direction to the fully retracted position as seen at the red retracted mark. Note length with tape measure (from slide 10).

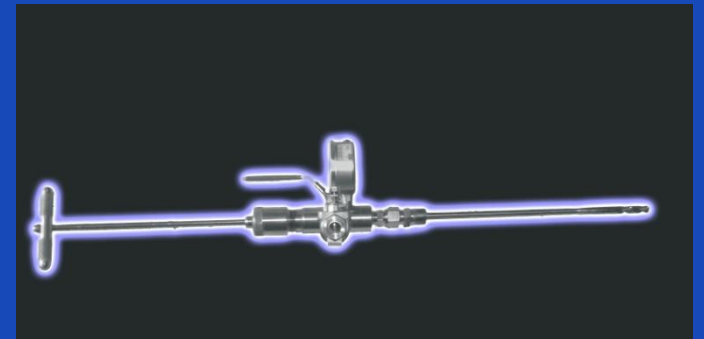
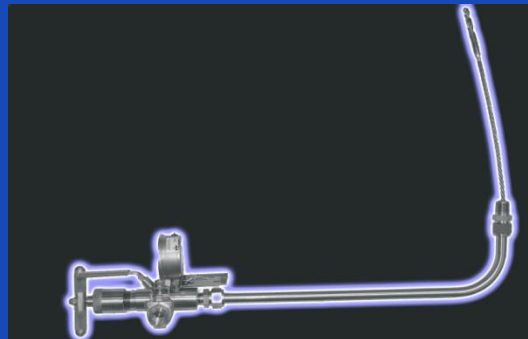
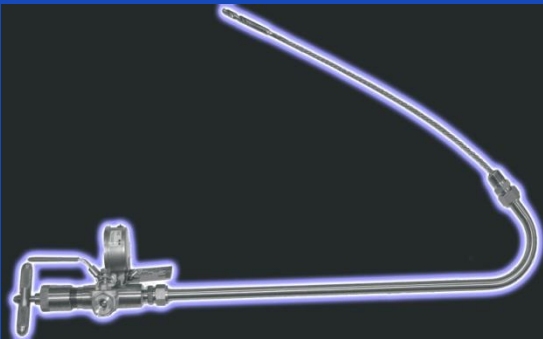


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Close the process bleeder valve and wait one minute for pressure and temperature to stabilize.

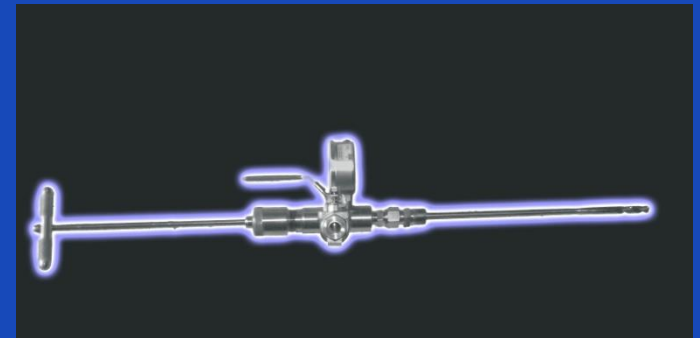
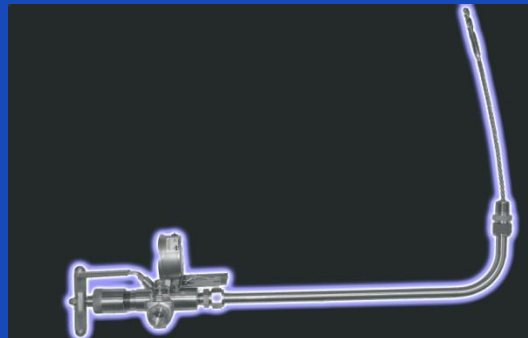
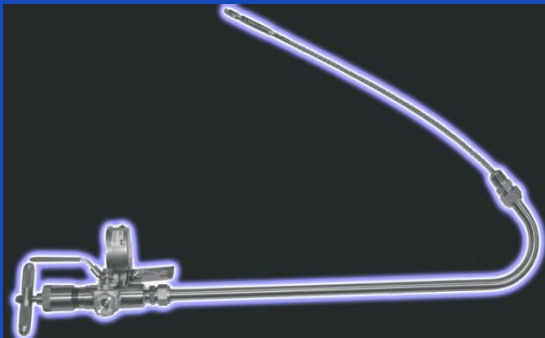




American Maintenance Systems



Vent any remaining pressure contained in the FLOW BOSS™ Cleaner through the 1/4 turn ball valve.

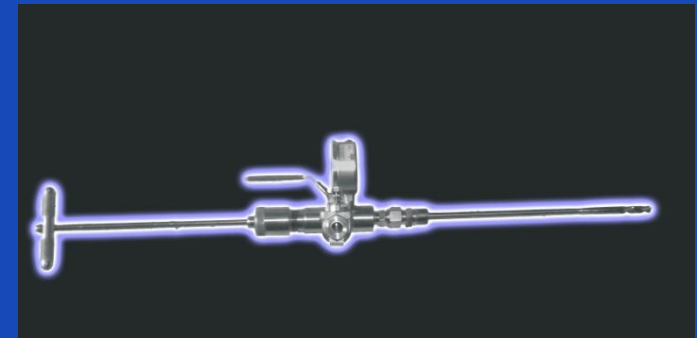
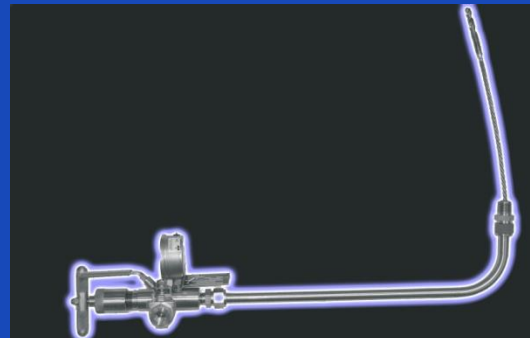
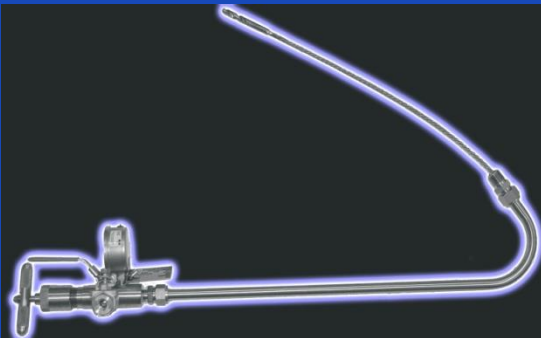




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Remove the FLOW BOSS™ Cleaner from the process connection and re-inspect the tool for damage. Clean the Bleeder Cleaner with a suitable solvent.



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S M P

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